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TEACHING FOR SUCCESS™

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Jack H. Shrawder
Coeditor, *TFS*

Secrets of Success— The Learner's Role



▲ *One of the most common mistakes students can make is to wait too long to test themselves after encountering new material.*

In the November 2000 edition of *TFS*, we began the exploration of Reconfirmation, the fifth phase of the Teaching For Success, PIE-R3, Instructional System.

Reconfirmation defines the point in the teaching/learning process where it is time for the learners to show what they know. This month the focus is on what your students should learn to do during this phase.

Outstanding students achieve more because they know how to learn by con-

tinually testing themselves for subject mastery. Struggling students, on the other hand, may fail because they haven't developed self-test skills. To assist your students, help them make self-testing during learning a routine.

One of the most common mistakes students can make is to wait too long to test themselves after encountering new material. Research shows that waiting more than 24 hours to review and test oneself reduces retention markedly. Practiced faithfully, a learn, check, sleep, check

pattern noticeably boosts learning.

You can help your students learn more in less time by leading a discussion on practical ways for them to show they know. Brainstorm a list of out-of-class self-check activities and their application. Some examples are:

- Create a set of flash cards useful for language or definition learning.
- Make a mistake analysis chart good for pinpointing habitual mistakes in mathematics or English grammar.
- Form a testing partnership with a study buddy.
- Draw a flow chart helpful when learning processes.
- Write an outline from memory an excellent check for mastery of textbook reading assignments.
- Create a theory/application T chart.
- Keep a learning log record the most important items that were learned each day.
- Use imagination to practice a new skill.

It is essential that your students understand the importance of self-testing and that just reading the assigned chapter, article, etc. is not enough.

To encourage use of these strategies, ask your B and below students to turn in a personal reconfirmation plan.

When you help your students identify and employ reconfirmation strategies you are teaching for success.

Eight Steps to Making Your Class More Creative

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Step 2. Create a supportive physical environment

Not every class has the luxury of a perfectly configured space. If you are not fortunate enough to have a modern well-equipped classroom, you still have an excellent opportunity to create a physical environment most conducive to creativity.

Elements to consider include proper lighting, freedom from noisy distractions and comfortable chairs. Beyond those basics, consider visual creativity enhancers: posters, plants, decorations, art. The key with all things visual is to keep them changing.

A poster of Albert Einstein makes an impact when it is first viewed; after two weeks it is no longer noticed. A good way to keep the visual surroundings fresh is to collaborate with a group of your peers and rotate visual materials among the group so that each class sees fresh material at least twice per month.

A community bulletin board is a great creativity enhancer when used properly. The best approach is a large white board with a plentiful supply of colorful markers, placed in a central spot within the class space. Encourage free expression — doodle art, thoughts for the day, challenging questions, straw polls — the opportunities are endless. The creativity will often amaze you and spark some useful new approaches.

Unfortunately, in our new global environment, your class may be located in six different buildings in three time zones. Distributed classing carries with it real challenges to all normal class-building efforts. However, with the pervasive use of collaborative PC software and the Internet, it is possible to create a virtual class space that is visually stimulating. The challenges of fostering a creative atmosphere in a geographically dispersed class deserves a full article of its own, so we will not deal further with it now.

Creating a MAP for creativity

Motivation Without the motivation to do so, it is unlikely that a person would complete a creative act, regardless of the person's abilities.

Abilities Without the abilities needed to do the creative act, it is highly unlikely that the individual will do the act.

Practice Without practice, the ability to generate novel and useful responses to problems and challenges will not be developed.



▲ *Make it an environment in which students can stumble and even look foolish, but always feel appreciated and secure.*

This step is the simplest to explain and possibly the hardest to accomplish. Creativity flowers in an environment of trust and approval. Students who feel safe and supported will take the risks involved in floating new ideas; those who don't, won't.

As teacher, you set the tone for the initiative. Make it an environment in which students can stumble and even look foolish, but always feel appreciated and secure.

Step 2 resources

- ❑ Establishing Environments for Creativity <http://www.cre8ng.com/newsletter/news14.html>
- ❑ Creativity Connections <http://www.athensnewspapers.com/education/cms/guyuga.html>
- ❑ What is Creativity? Children Know <http://www.kidbeing.com/page14.htm>

See TFS January 2001 for Step 1. Understanding Creativity. Coming in TFS March 2001 is Step 3. Make Opportunities for Knowledge-sharing .

***One pound of learning
requires ten pounds of
common sense to apply it.***

—*Persian Proverb*

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The Cure for the Boring Review? Relay Races—Here's How

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Practice, practice, practice! There are many times in the mathematics classroom when it is evident that the students would benefit from more practice on the problems being studied. Merely watching the instructor do problem after problem is not enough.

In all math classes, practice is a key to learning. However, students do not want to sit in their seats doing problem after problem. I have had much success with a fun way to practice and review math concepts that I call math relay races.

Like the traditional relay races, students work in teams and each person is responsible for completing one leg in the race. The teams sit in the same row of desks. Usually a team of four students makes a good size. Each student in each team will solve a problem and each team has the same set of problems. The first person has a complete problem. All of her teammates have a number missing in their problems. The missing number in each person's problem will be the answer to the problem of the teammate in front of that person.

Here is an example of a race I just used when studying percents: Student #1 solves the problem A radio costs \$40 with a tax rate of 6%. Find the tax. Student #1 should get the answer \$2.40. Student #1 gives the number \$2.40 to student #2 behind him. Student #2 has the problem 60% of what number is _____. Student #2 puts \$2.40 in the blank in her problem and solves the now-complete problem. She should get the answer \$4. Student #2 give the number \$4 to Student #3 behind her. Student #3 has the problem If you save _____ on a shirt at a 25% off sale, what was the original price? Student #3 puts \$4 in his blank and solves the problem. He should get the answer \$16. Student #3 gives the number \$16 to Student #4, who puts that number in her problem. Student #4 has the problem Find the interest earned on _____ deposited at 5% simple interest for 4 years. Student #4 should get the answer \$3.20.

Student #4 raises her hand and I record the order in which the teams finish. After all teams are finished, I ask the last persons on each team for their final answer without telling them if they are right or wrong until all teams have reported their answers. Each team with the correct final answer receives one point and the first team to finish with the correct answer receives two points. This rewards correct and careful work and also encourages speed. The winning team is asked to put their problems on the board. We discuss them as students correct any mistakes they may have made.

These relay races are an excellent way to review or warm up before a test or just to take some time to practice an idea before moving on. They are easily adapted to many other concepts such as solving algebra equations or simplifying expressions.

The first time I try the races in a class, it takes a few minutes to explain the process. Sometimes a practice run with some basic problems is helpful to illustrate how one student must rely on the teammates in front of him or her. I allow students to talk to teammates during a race if they cannot do the problem they were given or if they question the answer the teammate in front passed back. It does not take long for the teams to realize the benefit of their teammates' correct answers.



▲ Each student in each team will solve a problem and each team has the same set of problems.

Examine Diversity in Learning

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One of the objectives in my educational psychology course is for students to recognize the impact of individual differences on learning. Although they may understand this in theory, they often lack the experience that demonstrates how this plays out in an actual classroom.



▲ Often a student from another group will say *Who cares!*

During an appropriate class meeting and after the students have briefly introduced themselves, I have them get into groups. I then pass out boxes of puzzles ranging in difficulty from 25 pieces to 200 pieces. They have 15 minutes to complete the puzzles.

As might be expected, the group with the simplest puzzle finishes first and someone in the group proudly announces *We're done!* Often a student from another group will say *Who cares!*

Some groups will try and speed up to be the next group to finish, encouraging competition. Others will continue to work diligently, ignoring the enthusiasm of the second group that completes the puzzle.

By this time someone in the group with the 100-piece puzzle usually groans *We'll never get this done.* At the end of the allotted time, I encourage the class to react and reflect upon the activity.

Students are anxious to share how they felt to be the class leaders, what it felt like to have to compete, and how it felt to know they would never be able to complete the puzzle in the time given.

The activity provides the students with a simple, personally relevant discussion of how to create a positive learning environment.

How to Get Great Class Participation

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Do any of these situations sound familiar:

- The sleepy 8 AM class who do not seem to have the energy or motivation to raise their hands or relate very much on task information?
- The class with a few highly motivated, communicative students who eventually monopolize student participation?
- The introductory class with a few students who do not know how to ask or answer higher level questions?

It is frustrating for the instructor who wants a high rate of class participation to address these issues, and if these issues aren't resolved early in the semester, they tend not to go away.

There are no easy answers to be found, but here is a plan that works to improve class participation.

The goals are:

- To motivate the student to want to participate;
- To help you identify students who may need special assistance in communication skills;
- To ensure that student participation is spread around and not monopolized by a few;
- To measure the amount and types of participation on a weekly basis;
- To be able to evaluate student participation so that at the end of the semester, you have some objective criteria to use in determining a grade.

Most teachers who do not specifically teach communication or speech have only limited time to address class participation. This plan assumes that you have primary responsibility to teach as you see fit.

This plan does not take up a lot of your time in or out of class. However, it does require making some changes in your class procedures.



▲ *There are no easy answers to be found, but here is a plan that works to improve class participation.*

Summary of plan

At the beginning of the semester, you explain the importance of class participation to the class and that you will evaluate student participation at the end of the semester and assign a grade to each student that will impact the final semester grade. Hand out a Student Participation Record Form to each student.

Explain that once a week you will collect these forms, record them on a master record and then return them to the students for another week.

It's the students' responsibility to briefly record on the form their contributions in participation. Symbols representing forms of participation make record keeping quite simple. For example:

Key Code

??= asked a question

A?=answered a question

C= comment

MI=media issue

V=volunteered and selected for activity

Next to each symbol the student writes a brief one-sentence summary about the specific student participation unit. Then you record only the symbols of participation for each student once a week and return the form to the student. It is easy to see quickly who is participating and who is not.

Then you can focus on the nonparticipating students during the next week. Highlight the master record to indicate students who are offering superior participation. At the end of the semester, collect the student record forms and compute a grade based on the quantity and quality of the student's participation.

The Internet and Stress Management

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My technology unit turned out to be a useful part of my one-credit hour class in stress management. Keeping up with technology is a huge stressor for most people, including me.

Just developing the unit and wondering if it would be worth one session of my precious ten class periods was stressful. So when I told my students that there would be a technology component to the class, I was not surprised to hear a lot of grumbling and anxiety.

To help students cope, I first gave a lecturette on the topic How do you handle change? I then asked them to classify their own style of coping with change. The categories: passive reactor, reluctant adapter, opportunity seeker and change agent. An older student insisted that I add a separate category for her denier!

We then discussed their reactions to the upcoming technology assignment. What were students telling themselves that was causing stress? Could they adopt a different approach to change? Instead of just talking about stress, this activity allowed students to experience it and deal with it in the present. By trying on new attitudes, the students seemed able to lower their barriers to change.

Thus fortified, we met at the computer lab. Using specified guidelines, each student visited at least two sites on the Internet related to stress management. Their assignment? Write a critique of the assigned articles or activities using specified guidelines.

All in all, the lecture, discussion and lab activity fit easily into a one-hour-and-fifteen-minute class period.

The high tech of the Internet can be another ally for students who need help managing stress.



TFS Web Review: Algebrahelp.com

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This is a terrific resource for students when they get stuck on a problem and cannot reach you or the math lab.

I don't know about your college, but at Delaware County Community College, it seems as if the math lab is the busiest place on campus. I have noticed the same thing at other colleges where I have worked.

In particular, it seems that students need a lot of help with remedial and college algebra. Even though I am an English teacher, I hear the math troubles and woes from my students, as I'm sure many other teachers do as well, so I decided to search for a website that might help.

Although www.algebrahelp.com probably won't solve all of your students' algebra concerns, it is certainly a step in the right direction. Non-math teachers can refer students to this site when they hear of algebra trouble from their students, while math teachers may want to use it more widely in their classroom. Here are some suggestions.

Algebrahelp.com is divided into four major sections. The first section is the Lessons Index. In this section, the basic prin-

ciples of algebra, like combining like terms and using the FOIL method, are explained with the help of simple, clear graphics. Students can access this section for review of concepts they didn't quite grasp in class. In many of the lessons, there is an option of hearing the lesson through RealAudio. This is a great feature for auditory learners.

There is also a Worksheet Index section. Here students can practice algebra problems on-line or print out a worksheet to complete off-line. Each worksheet has an answer sheet that not only shows the correct answer but also shows how to arrive at that answer step by step; in other words, it shows the work. This is a great resource to send students to so they can get extra practice with problems they are having difficulty with.

Another major section is the Resources Index. This section includes re-

sources students can use to solve algebra problems or just improve their knowledge. A formula chart, perfect squares chart, and math glossary are a few of the helps this section contains.

Perhaps the most impressive section is the Calculators Index. There are over 17 different calculators; each will show how to solve whatever problem the user plugs into it (provided that the problem is an example of the particular type of problem that the calculator was designed to solve).

For example, suppose a student of yours has an equation homework problem that she just can't figure out. By using the equations calculator, all she has to do is enter the problem into the on-line calculator, and it will solve the problem step by step. Pretty neat, huh?

Some examples of the other types of calculators include the factoring calculator, simplifying equations calculator and the percentage calculator.

This is a terrific resource for students when they get stuck on a problem and cannot reach you or the math lab. In fact, you could tell students to go there first before asking you for help. I imagine this could be a great time saver for math teachers.

What I like most about this site is its simplicity. There are no ringing bells or spinning graphics just clear information and help with algebra.

I think this site will especially appeal to nontraditional students who have never had algebra or computers in high school. Its user-friendly design should allay any fears.

The next time I hear troubled math students complain or worry about algebra, I will certainly refer them to www.algebrahelp.com.

TFS™ Super Ideas Contest

**You Could Win
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But, to win you must enter. Send your entries to us by mail, fax or e-mail by May 31, 2001. TFS™ offers two award categories: full-length Super Idea articles (approx. 500-700 words) and QuickTips (less than 250 words). In addition, all articles submitted will be eligible for publication in upcoming TFS™ issues. The



E-mail or send your entry today!

winners will be featured in the August 01 issue and notified after July 1, 2001. See page 2 for TFS™ contact information. Author guidelines and contest details available at: <http://teachingforsuccess.com/AuthorContest/author%20contest.html>.

All entries must include the author's name, department, college affiliation, address, phone and e-mail address if applicable. To deal successfully with today's legal environment in publishing, Pentronics Publishing must hold the copyright to all articles published.

Quick Questions— Awesome Answers

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QuickQuestions is a column designed to help you make small corrections to your course so that more of your students may reach their learning goals.

Were you faced with any new challenges this semester that will cause you to change your syllabus/expectations next semester? If so, what were the challenges and what will you change?

A A. I change my outlook every semester, which includes my syllabus, my exams, some assignments. I try not to form expectations of students before I get a chance to know them; I just let students know how I will grade and what is required, so THEY know what to expect from me--and if they don't do the work, they also know.

—Kay Roof-Steffen, *Eastern Iowa Community College, Muscatine IA*,
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A A. I teach Adobe Photoshop software in two classes next semester and the program had a major upgrade on 11/1/00.

I have to review and revamp much of my existing weekly syllabus and rewrite the instructions for most of the student projects. This means major study and exploration in order to feel comfortable in the classroom come January.

—Don Kouba, *Dept. Chair of Fine & Applied Arts and Coordinator of Photography, Prairie State College, Chicago Heights, IL*

A A. To make averaging their grades easier (for me and them) I decided to average with points rather than percents. Also, I believe that students do not like long syllabi, thus I worked to make mine more concise.

—Terra Stamps *Assistant Professor of Mathematics, Prairie State College, Chicago Heights, IL*

A A. The biggest challenge I've had this semester is dealing with plagiarism. In Freshman Composition I classes, students are going on-line and getting cyber-essays, printing them out, and presenting them as their own. My colleagues have also had problems with the same

thing happening to them. Some have been traceable, others have not.

One of the problems in my technical writing classes was fairly cut and dried--students printing multiple copies of the same document. However, I've also had students who plagiarized materials from sources that are virtually impossible to trace.

One electrical engineering technology student copied "How to install receptacles and switches" for a process analysis assignment from a brochure he picked up out of a rack at Home Depot!

The solution may turn out to be bothersome, but I've just about decided that technical writing students must turn in bonafide prewriting and drafts with their assignments or I will not grade them. That seems harsh, but given the number of cases of plagiarism I've experienced, something has to change.

Another change I'll make is writing about plagiarism and ethics. I'm working on assignments that will require students to write about the consequences of academic dishonesty and how cheating/ethics will affect them in the workplace.

—David Warner, *TFS* Partner Author, *Roane State Community College, Harriman, TN*,
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A A. I have found that students had more excuses than in the past for not attending class when a verbal assignment was due and more students were dropping the class than in the past.

For the first time, each student was given five short assignments that had to be presented on a preassigned date. If they did not present all five, they would not get credit for any of them.

This was an all-or-nothing assignment. I have decided to change the number from five to four and I will distribute an additional sheet explaining the assignment. I believe the students must learn the importance of being accountable.

This small assignment begins to address that concern. During a 16-week semester, they must attend class on eight

specific dates. They will attend more, but they are accountable for the eight that I have deemed necessary.

—Velton Laceyfield, *Professor of Psychology, Prairie State College, Chicago Heights, IL*

A A. I have noticed a high absenteeism and tardiness rate lately. I have decided to have an attendance policy. For every x number of absences, the student's grade will be lowered one letter grade and every number of tardies is equal to one absence.

Some of my colleagues in other disciplines have noticed a change in the classroom dynamic (for the better) after holding individual conferences with the students.

Why not try that in math? I'm considering having 5-10 minute conferences with my students after the first exam (4th - 5th week of class); at least with those that are not doing well academically or behavior-wise.

—Becky Schantz, *Assistant Professor of Mathematics, Prairie State College, Chicago Heights, IL*

Do you insist on having your students calculate their own grade or do you do it for them?

A A. I naturally have grades calculated as I proceed through the semester it's my job. Any time students want to know points to date, it's very easy to show them and it's their right.

I have always given numeric points for everything assignments, exams, participation not attendance, but it really boils down to the same thing. Therefore, it looks much more objective and students can calculate their grade at any point in the semester, since they have my grading scale in their syllabus.

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How to Prevent Plagiarism

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Those dreaded research papers are time-consuming for students and teachers alike. Now, technology entices more students to take the easy way out. With many websites offering ready-made research papers on any topic, plagiarism is simply a click away.

To overcome this growing problem, try these ideas. The first one is appropriate for any course. The next one may be better suited to writing-intensive courses.

- ❑ Require students to turn in photocopies of all original sources.
- ❑ For books, photocopy all pages cited in the research paper.
- ❑ For shorter sources, photocopy entire document.
- ❑ For on-line sources, turn in printouts.

Require students to choose their research topics by mid-semester. Then, in advance of the final research paper, assign one or more short, documented essays (with photocopied sources) on some aspect of the research topic.

For example, if the topic is media violence, one essay could be about TV shows, another about song lyrics. Or, one essay may focus on specific examples, another on cause/effect.

If students are allowed to use portions of those essays in their final research paper, this second requirement provides many benefits. They include:

- ❑ The produce research papers that are more fully developed.
- ❑ These papers contain fewer errors because students learn correct documentation in increments.
- ❑ With a head start on the project, students have less temptation to cheat.

Both requirements greatly discourage plagiarism. Since using these ideas the past few years, I've received higher quality research papers. And with photocopies at hand, plagiarism is nearly impossible.

Management/Design

A Process Approach

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I gave a classroom assessment last week and one of my college algebra students wrote that she liked my instructional style because I give great notes so they do not have to read the book, thus eliminating useless information.

This comment reminded me of those dreaded questions that we, as instructors have all heard: Will this be on the test? , Is this important? , or Do I really need to know that? With respect to one s education, there is no such thing as useless information. Different information is useful in various situations. Granted, knowing that you are more likely to be attacked by a cow than a shark may seem useless unless you are a farmer.

My students think that my teaching them to think for themselves is useless information. This is especially the case in mathematics where it is very easy to be sucked into the philosophy of for this problem we.... It seems to me that my students would rather I teach them how to get from point A to point B than teach them how to read a map.

I suggest we move away from the individual problem mentality. Most of my students are beginning to appreciate understanding what they are doing. I convince them that understanding the process makes problems easier (because it does) and making sense of your answers is a great way to check yourself for possible careless mistakes. Just ask any of my remedial mathematics students and they will tell you, with a sigh and eyes rolling, that a calculator in my class is totally out of the question.

My goal is to encourage you to think process. Do not lower your standards, do not water down the material you teach and do not make your tests easier with the thought of helping your students. I believe it s an attainable goal for our students to see the underlying processes and understand and love the subject as much as we do.

Reflections

Why? Why is good question. Why should I improve? Why should I bother to set goals? Why should I worry about achieving specific outcomes. Why should I try new teaching strategies. Why should I work on developing new skills and gaining new knowledge?

Perhaps these personal reflection questions are best answered with a wonderful follow-up question, why not?

Why not experiment with new ways to make your teaching more effective and designed to enable your students to learn more in less time. Why not improve your communication, testing and grading procedures? Why not be an adaptive leader who can inspire students to do their best? Why not make this the class, this course and this term the best ever?



*Penny Shrawder
Artist, Coeditor*



*Jack H. Shrawder
Publisher, Coeditor*

We invite you to participate in the TFS Super Ideas Contest 2001. Just follow the author guidelines at <http://teachingfor success.com/AuthorContest/AuthorContest.html>. See page six for contest details. Enjoy the satisfaction of seeing your ideas in print, and being published may accelerate your career advancement.