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The TIPSTER

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Valdosta State University
College of Education

Georgia Systemic Teacher Education Program

GSTEP Teacher Induction

Science Museums in Your Own Back Yard!



Dr. Brian Gerber

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In 2005, Valdosta State University (VSU) was awarded SciTrek, the fifth largest interactive science museum in the nation and formally located in Atlanta. Plans are currently in motion to establish a Center for Science and Mathematics Education at VSU and construct a 32,000 sq ft facility to house a new interactive science museum. We have the resources and desire to establish a model science education program with proven student achievement results. However, I would like to focus some attention on informal science experiences, such as visiting an interactive science museum, in which teachers may engage their students.

Frequently I hear teachers tell me that their students have never been to the beach, yet we live so close to both the Atlantic and Gulf coasts. Even worse, I have heard many stories of high school students who have rarely, if ever, even ventured outside their county.

Experiencing different cultures, peoples, and environments enrich our lives, expand our knowledge, and foster tolerance and understanding of the differences that make up the fabric of our society and our personal lives. Toward that end, where can teachers take field trips, if budgets allow, or direct students to go if they have the opportunity? Better yet, where are places teachers can go to expand their content knowledge, get ideas for content presentation, and have fun all at the same time?

The following is a list of local and regional informal field trip possibilities for groups or individuals. Go ahead and explore the wonderful educational opportunities available to you and your students right out your backdoor!

Local

Langdale Park

http://www.n-georgia.com/lowndes_co.htm
(Blackwater River Geology & Ecology)

Grand Bay

<http://georgiawildlife.dnr.state.ga.us/content/displaycontent.asp?txtDocument=316>
(Carolina Bay Ecology)

Lake Louise

http://www.valdosta.edu/phy/geo/lake_louise.htm
(Blackwater Sinkhole - Hydrology, Geology, Ecology)

Oris Blackburn Park

http://www.n-georgia.com/lowndes_co.htm
(Hydrology & Forest Ecology)

Wild Adventures

<http://www.wild-adventure.com/welcome.asp>

(Amusement Park Math & Physics & Wild Animals)

Agirama (Tifton), history museum

<http://www.agrirama.com/>
(Applied Science)

VSU Planetarium & Observatory

http://www.valdosta.edu/phy/dept_facilities.htm
(Astronomy)

Sewage Treatment Plant

www.valdostacity.com/CityDepartments/index.cfm?Fuseaction=UtilityServices
(Sustainable Environmental Management)

Southern Georgia Region

Reed Bingham State Park

<http://gastateparks.org/info/reedbing/>
(Water Cycle Dynamics)

Providence Canyon State Park

<http://gastateparks.org/info/providence/>
(Erosion Features)

Sapelo Island

<http://www.uga.edu/ugami/>
(Barrier Island Ecology)

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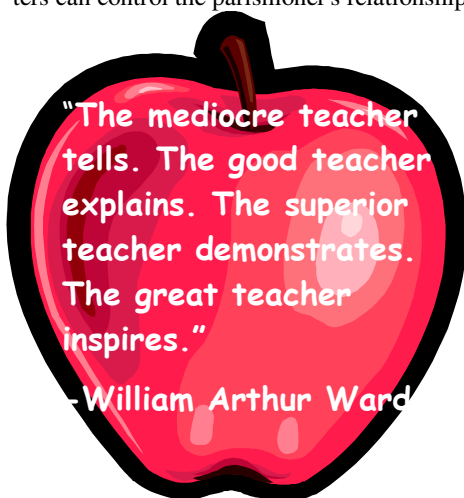
Beyond the Teacher as Role Model: Getting to the Heart of Professional Ethics



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In Hamlet, Shakespeare wrote "This above all, - to thine own self be true; And it must follow, as the night the day, Thou canst not then be false to any man." Some truths rise above the ordinary strictures of how we conduct our lives to become lodestars for moral living. Another of these fundamental principles is that "the love of money is the root of all evil." To become a professional requires a clear understanding of how a professional conducts himself or herself. More than the amount and nature of the training required or the amount of autonomy the individual has, whether he or she understands what lies at the root of the professional relationship and acts accordingly is the measure of both professionalism and character.

At the very heart of professional ethics, as in so much of life, lies the issue of power. The paradigmatic professions, law, medicine (including allied professions, such as psychology, dentistry, veterinary science and the like), and, to a large extent, the ministry have long recognized that the relationship of the professional and his or her client, patient, or parishioner is asymmetrical, that is, the professional has power over the client, patient, or parishioner. In the professions of law and medicine that inequality is a result of the disparity of knowledge about the client's or patient's circumstances or condition. Ministers can control the parishioner's relationship



to the divine and to the community of believers. Like doctors, they too may engage in a therapeutic relationship with members of their congregations.

This disparity of knowledge also exists between the teacher and student, but the nature of the teacher-student relationship is qualitatively different from that of the attorney, doctor or minister. Bull (1993) wrote "Teaching. . . carries with it moral imperatives—more in public schools because [it is] a compulsory intimate relationship that is asymmetrical and pervasive" (p. 72). However, the compulsory, intimate, and pervasive aspects of the relationship between students and teachers merely intensify its asymmetry. The relationship of students and teachers is compulsory because students are required to enter into it. They are required to attend school and moreover they, unlike the clients, patients, or congregants, have virtually, no choice over the professional with whom they have a relationship. Aside from the criminal justice system and the military, virtually every other professional relationship contains an element of voluntariness. In addition, the law, whether by state statute or local school board policy, requires students to respect and obey their teachers.

The relationship of students and teachers is also intimate in the sense that teachers, especially at the lower grades, act as quasi-parents to the student. Teachers may be the repository for secrets the child cannot confide in anyone else. In some instances they can be closer to the child than his or her own parents. In many respects children transfer the trusting relationship they have with their parents to their teachers. Sadly, if the parent-child relationship is dysfunctional or characterized by lack of trust they will transfer that to their relationships with their teachers too. And it is a pervasive relationship. Students spend many hours a day in school. They spend far more time with their teachers than a client does with an attorney or accountant, a patient with his or her doctor or pharmacist, or a congregant with a minister. Typically, elementary school students spend six hours a day for 180 days with their teachers and secondary students spend 180 hours a year with a given teacher.

Finally, there is the issue of vulnerability. As previously mentioned many students trust adults based on their home experiences, but the special vulnerability of students is also a product of their inherent characteristics. They are young and lack the wisdom and judgment that comes from experience. They are, in

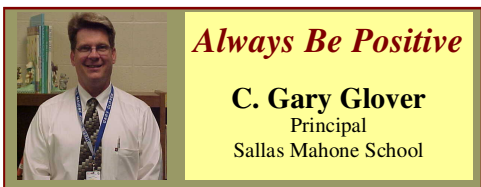
short, naive and at the same time often completely unaware of their naivety and vulnerability. They may act as though they were invincible, and who has not experienced that frisson of pity when a young person's belief in his or her invincibility has led to tragedy. But make no mistake, regardless of their bravado, young people are simply not as able to act in their own best interests as adults. John Rawls, the philosopher and political theorist, challenges his readers to construct a political and legal system as if they did not know their position in society, which encapsulates yet another fundamental ethical principle. "Do unto others as you would have them do unto you." The challenge for those who hold power is to construct relationships as if they did not know their position within that relationship. For professionals this means to construct relationships as if you do not know whether you are the professional or the client, patient, parishioner, or student. Sometimes in my courses, I refer to empathy, the ability to put yourself in the place of another as the "queen of virtues." How we use the power we have, whether we can put ourselves in the place of the powerless is the essence of professional ethics and the true test of our character.

Bull, B. L. (1993). Ethics in the preservice curriculum. In Strike, K. A. & Ternasky, P. L. (Eds.). *Ethics for professionals in education: Perspectives for preparation and practice*. New York: Teachers College Press.



The secret of education is respecting the pupil.
-- Ralph Waldo Emerson

The Principal's Perspective



Perhaps the wisest decision I made this year as a first year principal was to form a hiring committee composed of myself, my assistant principal, two teachers and one parent. We interview teaching candidates with an extensive variety of informative questions. I always attempt to put a candidate at ease by instructing them to "answer these questions from your heart." Members of the committee examine their resume during the interview. We look at GPA's, organizations and accomplishments. All of this is very important. However, the most important quality in my opinion cannot be included on a resume. I want to see their energy and enthusiasm. I must be convinced that the candidate has a positive attitude, a desire to continue learning and a passion towards helping others. After all, the most satisfying work on this earth is.....helping others.

The interviewing process has been extremely satisfying this year. We have had the pleasure of interviewing numerous candidates with wonderful, positive attitudes. We ask them their grade level preference and the overwhelming response is, "it doesn't matter to me, I just want to teach." What a marvelous answer. Will this answer be the same if

asked ten years from now? Absolutely, but only if these teachers maintain a positive attitude, a desire to be a lifelong learner and a passion towards helping other people. How can this be accomplished? Too bad we can't just put our positive attitudes in a can and drink from it each time we have a bad day. It is much more complicated than that but there are ways to maintain our enthusiasm for this noble profession.

I believe that your attitude is more important than your aptitude in determining your success in life. Here are three suggestions for teachers or anyone who wants to maintain their enthusiasm and positive attitude:

1. Make a choice each day to be positive.

You must make it a habit to wake up each day and decide that you will only dwell on positive ideas and thoughts. Make the effort to concentrate on what you have and not what you don't have. Only you can decide what you think. Choose to think about the profound impact you have on the students you teach. Consider keeping a journal and write down at least one good thing in your life each day. Make sure to write in your journal during the summer, Christmas and Thanksgiving Holidays, spring break and other holidays throughout the year.

2. Keep you conversations positive.

I conclude each morning announcement by saying, "Make it a great day or not, the choice is yours." If you hear a colleague creating a negative situation through conversation, un-

derstand that they have made a choice to have a negative day. Bring up positive things to talk about at all times. Do not even talk about it if it's negative. Your constant positive conversation and the fact that YOU don't talk negatively about people or situations may cause others to follow your lead.

3. Walk away. I would love to take credit for this one but I read an article by Wolf J. Rinke who is a motivational speaker. He realistically pointed out that there are times when talking positively doesn't work. For these situations, simply walk away. You are not obligated to participate in a conversation if it is laced with negativity. If the negative talk of others is too much for you to take, politely exit and spend your time somewhere else. Be careful because being surrounded by negativity can rub off on you.

I love what I do. Each day that I go to work is an opportunity to help people. I work with a group of teachers and staff who take tremendous pride in helping students. They love their students and it shows. They are passionate about teaching. You will succeed faster; live a happier, healthier and more prosperous life if you remain passionate throughout your career.



TechnoInfo Corner



Ethics and Education

Dr. Diane Judd

Early Childhood & Reading Education
Chair, GSTEP Technology
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The dictionary describes ethics as rules of conduct of a particular group. As educators in the State of Georgia, we have rules of conduct. The Georgia Department of Education Code of Ethics for Educators serves as a guide of ethical conduct for educators (www.gapsc.com/Professionalpractices/NEthics.asp).

Since ethics is also an important issue for students, I would like to share some websites that may be helpful when presenting and discussing ethics with your students.

The National Character Education Center (www.ethicsusa.com/elinks.cfm) has links to classroom resources for ethics.

Character Counts

(www.charactercounts.org/howto/teaching-tools.htm) provides lesson plans, booklets, and other resources for teachers to work with students on ethical values: *trustworthiness, respect, responsibility, fairness, caring, and citizenship.*

The Center for Advancement of Ethics and Character at Boston University School of Education

(www.bu.edu/education/caec/files/forstudents.htm) published a list of recommended books on ethics and building character for kindergarten through high students. An

example of one of the recommended books for building the character of responsibility at the first grade level is *Horton Hears a Who!* by Dr. Seuss. *The Old Man and the Sea* by Earnest Hemingway is recommended for building the character of diligence at the high school level.

The previous links represent only a small fraction of the websites that could assist you with information about ethics. Search engines can be a valuable tool for educational information.



Planting a Seed



Teacher Ethics

Cheryl Rice

S. L. Mason Elementary
NBCT



Having taught special education and regular education, I have dealt with a number of issues faced by teachers in both fields. These include: effective classroom management, addressing the needs of diverse learners, labeling and inclusion of children with special needs, equitable funding for resources and services, teacher and school accountability, class size, parent involvement—the list goes on and on. Opinions certainly vary about all issues in education; however, one of special concern is that of teacher ethics. What are some of the ethical dilemmas teachers face? What are the pitfalls that beginning teachers and student teachers need to avoid? What can be done to avoid these pitfalls?

As teachers, we encounter a variety of situations almost daily that deal with ethical topics and we must often reexamine our personal values and beliefs in order to appropriately address these issues. We are in the position to profoundly impact the lives of numerous students daily; therefore, we must be mindful of how what we say and do directly affects our students, academically, socially, and certainly ethically.

It is common sense that early childhood professionals should not physically harm a child, but many people may not think about their interactions with young children that could be defined as disrespectful or degrading in regards to small children. For example, the way we speak to and speak about children has a significant effect on their overall well-being. Unfortunately, I have been in situations where I have heard teachers speak negatively about their students directly in front of the students, as if no one was else

around. During one instance, a speech therapist came to pick up a child, and the teacher said, "You can have him; I don't want him in my room!" This is never appropriate, and should be avoided at all cost. Granted, teachers need to vent at times if they are having ongoing difficulties with certain students, but this should never be discussed in front of the students in question or any other children. This creates an atmosphere of disrespect and is counter-productive to improving behavior. In fact, it may increase inappropriate behaviors because the students may feel that their teacher doesn't really care about them if she speaks openly about her students' negative behaviors.

Similarly, teachers should avoid constantly discussing their students' behaviors and/or academic performance with *other teachers* (even in private) if the discussions do not directly benefit the students. (For example, during an IEP meeting, this information may be necessary; in the teacher's lounge, it is NOT.) Further, it is NEVER appropriate to discuss our students in public places, like groceries stores, at the mall, or anywhere where someone nearby may overhear the information. This is a direct breach of confidentiality and just isn't good for school morale. Although teaching young children can be stressful for many reasons, teachers should refrain from openly commenting about their students. If serious problems persist, it should be discussed with administrators and of course, the students' parents.

Another important thing to consider when working with young children is avoiding participation in *any form* of discrimination based on race, ethnicity, religion, gender, national origin, culture, disability, age or sexual preference. Most teachers embrace and respect all their students' differences; however, even subtle discrimination is inappropriate and should be avoided. For example, it is a form

of subtle discrimination when teachers call on boys more in math classes because they assume boys are better in math, when teachers only call on brighter students, when teachers do not include students with special needs in classroom activities, or when teachers place any value judgment on a child's family life or culture. I encountered an opportunity to discuss life style with my second graders last year when I adopted a little boy after fostering him for a few years. One of my students argued that adoption was wrong because it was wrong for birth parents to give up their children and that it should be "against the law." I respectfully acknowledged his opinion and began a discussion about the adoption process and about how families are all different and should be respected regardless of the circumstances. Although opinions vary, we should be careful not to impart our values on children whose family styles differ greatly from what we believe is "right," and we should help our students learn to respect the differences of others as well by being role models.

Finally, we must be mindful of the role that parents play in the lives of our students. Even though we may have the professional degree, the parent is still in charge and should have a major part in the decisions involving their child's education. It reminds us that it is our responsibility to involve the child's family in their education, and to respect the wishes of the parents in regards to childrearing values, even if they conflict with our own. This calls for open and ongoing communication with families to collaboratively determine what is best for our students. We owe it to ourselves, our students and their families to "put our best foot forward" and to maintain an atmosphere of respect in our classrooms.



The U.S. Constitution

Linda Meadows

Cook County High School
NBCT



The key to this whole story is the US Constitution, or more specifically, the Eighth Amendment to that Constitution. Teaching the US Constitution to high school students can be a challenge because students often see the document as boring and archaic. I refuse to let his misconception prevail in my classroom. This applies to my Advanced Placement United History students, as well as my regular US History classes and remedial learners.

Learning Focused Strategies and the learning environment at Cook High School provide me with a perfect stage upon which I am able to teach "my way." Cook High School's administrators have encouraged us to be reflective teachers, much as the National Board Certification process challenged me to do soul-searching to evaluate my strengths and weaknesses as a teacher. Consequently, I use a variety of techniques which I have learned in reflective practices as I hook my learners into learning about that "boring old document."

To achieve my objective, I devised a work exemplar dealing with teaching the US Constitution and I entwined a family story about my having gotten a pardon for my husband's 4th great grandfather for a cattle theft

conviction of the 1790s. That's right! My children and grandchildren had a cattle thief among their forebears. (See [Attachment 1](#) and [Attachment 2](#).)

This posthumous pardon for a cattle thief is a story worthy of hearing. I am a firm advocate of the belief that the Constitution is just as viable a part of our lives, as are the stories told about our individual freedoms. When students realize that we do not exist in a vacuum and that knowledge of our basic freedoms is empowerment, they want to learn.

After all, how could a history teacher from South GA ever hope to convince the GA Board of Pardons and Paroles that they **did**

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Peeling the Onion Called Data

Dr. Polly Diamond

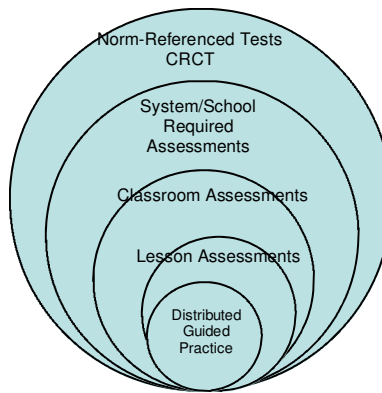
Math/Science Curriculum, Gifted Coordinator
Valdosta City Schools

Many times teachers are inundated with data that have little meaning for them. Children are tested for many different purposes, and teachers are tested too! Who could forget the Praxis II??? To make matters worse, the advent of high-stakes testing, much of which has been mandated through No Child Left Behind, the pressure on students and teachers to perform at high levels has increased exponentially.

How can teachers make sense of all this data? Perhaps using the onion analogy might help somewhat. There are many layers of testing that can be used for many different purposes. The closer to the center of the onion, the closer to the classroom teacher! The first layer contains norm-referenced tests, such as the ITBS, and high stake criterion-referenced tests, such as the CRCT, EOCT, and GHSQT.

Many times the norm-referenced test results are filed away and not much is done with them

beyond the school and system level. However, they do provide information for teachers as well. The class summary can instruct a teacher in how their class performed in specific areas. Given results over a period of several years, systemic weaknesses that appear year after year may help a teacher understand where instruction needs to be intensified.



The criterion-referenced test results are used to determine whether or not a school has made Adequate Yearly Progress (along with other indicators) and may determine whether or not a student is promoted to the next grade (3rd grade beginning 2004, 5th grade beginning 2005, and 8th grade beginning 2006). However, these results can also be used in a diagnostic sense to identify students who have weaknesses in certain areas. Further diagnostic testing can refine these results and help teachers understand what specific students need.

The second layer of the onion is system- and school-required assessments. These assessments are specific to systems and schools and may include system-wide tests in language arts, mathematics, etc. that are used throughout the school or throughout the system. Many times the purpose for these tests is to equate grades in a given subject throughout the school or system. That is, an A in Ms. Jones' class was earned the same way, on the same tests, that

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Problems Without Numbers: Promoting Problem Solving Every Day



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Promoting critical thinking is an often cited and admirable goal of educators. Mathematics teachers in particular lament the trouble students have with solving problems in unfamiliar situations. Perhaps we should examine how often we give them situations where they are presented problems to solve, where the problems are relevant, AND where students truly have an opportunity to solve them. Much of our instruction is delivered by the direct instruction model, and if we examine that model, we find there is no room for critical thinking. Students may be presented with a problem, but the teacher models the steps in solving that problem type, and students are then allowed to solve problems using exactly the same method. The teacher tells or directs, the student listens and performs, but the student is not asked to struggle with the method, to form an opinion, or to offer a conjecture or

possible way a situation might be handled. How can students learn to solve problems or to think critically with so few opportunities to do so?

In mathematics, students can have opportunities to be involved in problem solving when a problem is presented without numbers. Problems without numbers? What is a mathematics problem without any numbers? We will look at some examples and consider both the situation and the related questions that a teacher might pose, so we have a clear picture of this strategy and how we might use this method to promote problem solving. I will also offer some examples from other disciplines where teachers can promote critical thinking using the same process.

How do problems that are purported to promote problem-solving (often called word problems in mathematics) actually subvert the critical thinking process? In general, problems provide a situation, provide basic data necessary for solving the problem, and ask a question for which an answer must be provided. Consider this example:

The Dance Example: With Numbers

The 7th Grade Class is sponsoring a dance. You will charge admission of \$5.00 per person and you will have expenses of \$400 for the disc jockey, \$30 for tickets, and \$10 for

advertisement. Will the class make a profit if 80 people attend? What if 125 people attend?

What is the first thing students do with such a problem? They pull the numbers from the problem and begin some sort of computation. Generally, they do to the numbers whatever they have been doing in that day's lesson; e.g., if the lesson was on multiplication, students will try to multiply two of the numbers. After all, they reason, that is why the problem is in that section of the book!

Old math teacher stories say that if the numbers are large and fairly similar, students generally add. If the numbers are large, but one is much larger than the other, they will subtract. If one number is much smaller than the other, they might multiply. Division is generally off the radar screen. If the numbers are fractions or decimals, they always use the computation involved in that day's lesson. Despite teachers' hard work on the steps of problem solving, students see the numbers first and often do not see the words until the teacher forces the whole class to dissect the problem step by step.

One way to have students actually focus on which mathematical operations are needed is to leave out the numbers in the first presentation, and instead of asking, "How

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Linking Nutrition and Physical Activity to Academic Achievement



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Background Information on Physical Activity and Nutrition

Without a doubt there is a substantial link between nutrition and physical activity and academic achievement, and emerging research in this area is indicating a more substantial link than previously believed. Trends in the eating and physical activity habits of children and adolescents are startling and indicate the majority of American youth are sedentary and do not eat well. These unhealthful practices have both short- and long-term consequences, resulting in learning difficulties and health-related problems that begin during school-age years and continue into adulthood. The Na-

tional Association for Sports and Physical Education (NASPE), along with the Surgeon General of the United States, recommends that children engage in at least 60 minutes of age-appropriate physical activity all or most days of the week. Yet almost half of young people age 12 to 21 and more than a third of high school students do not participate in physical activity on a regular basis. In another study it was noted that 63% of children age six to thirteen do not participate in substantial physical activities to maintain appropriate weight levels or to increase cardiovascular health. Fewer than one in four American children get 30 minutes or more of physical activity per day — and more than three in four get no more than 20 minutes of vigorous physical activity per week.

The statistics are no better when it comes to nutrition. Only two percent of school-aged children consume the recommended daily number of servings from all five major food groups. Less than 20 percent eat five servings of fruits or vegetables a day, and only 30 percent consume the recommended serving amounts for the milk group which is a critical source of calcium. As milk consumption has

drastically decreased, consumption of carbonated soft drinks has increased by 41 percent between 1970 and 1994. Between 56 and 85 percent of children (depending on age and gender) consume soda on any given day; over a third of teenagers consume more than three servings of soda a day.

More than 80 percent of children and adolescents eat too much total fat (i.e., more than 30 percent of total calories from fat), and more than 90 percent eat too much saturated fat (i.e., more than 10 percent of total calories from saturated fat). Some of this fat intake is due to excessive frequent snacking; 98 percent of six to 18 year old students report having at least three snacks per day and more than 50 percent report five or more snacks each day. This type of unbalanced eating leads to lowered intakes of nutrients critical for growth, cognitive function, and prevention of chronic conditions. There are many negative health and learning consequences from poor nutrition and low fitness levels, with the most visible risk being overweight. Nine million children and adolescents between the ages of

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Problems Without Numbers... *(continued from page 5)*

much?" we should ask, "How?" Consider again the same problem given above about making a profit on a dance:

The Dance Example: Without Numbers

The 7th Grade Class is sponsoring a dance. You will charge a certain admission per person and you will have expenses for the disc jockey, for tickets, and for advertisement. How will you be able to decide whether you can make a profit? Why do you think this method will give you the right answer?

Students are asked to provide the method they will use for solving the problem and a rationale for using that method. Problem Solving is one of the five National Council of Teachers of Mathematics (NCTM) Process Standards. Looking at problems without numbers promotes considering the situation instead of the numbers, and the situation is the essence of the problem. The second question above, related to the "why will it work" notion, is part of the NCTM Process Standard identified as Reasoning and Proof. Students need to provide reasons why they solve a problem as they do, and to show justification for their answer.

After students decide on a problem-solving method, THEN AND ONLY THEN are

numbers provided, as in this second part to the example:

- a) Will you make a profit if 80 people come to the dance, you charge \$5.00 per person, the disc jockey charges \$400, the tickets cost \$30, and the advertising posters are \$10?*
- b) Will you make a profit if 125 students attend?*

If you think only 80 people will come, what could you do to ensure a profit?

How can teachers, already strapped for time, create problems such as these? The answer is already in your textbook. The problem above is very similar to problems found in almost every middle school textbook, and word problems appear in elementary and secondary books as well. Instead of having students turn to the lesson page and work the problem there, pose the problem, without the numbers, to them before they open the text. Have students decide, perhaps in pairs, the process they would use in solving the problem.

Another NCTM Process Standard, Communication, is involved when students talk with each other, and then share with the whole class, how they might solve a problem. An

answer might be as follows:

We would multiply the price of a ticket by how many people come to the dance. Then we would subtract all the money we have to spend for the dance. What we have left over will be profit.

Students should also learn to represent the problem solving steps in some symbolic way, possibly with words or boxes containing words representing the numbers and math operation symbols to indicate computation. This method uses algebraic thinking, where students use variables as placeholders for numbers. Students produce a Representation (another NCTM Process Standard) of the problem-solving process. An example is given below:

Number of tickets sold \times price per ticket – (DJ + Ticket cost + Ads) = profit

The use of variables is absolutely natural in such a situation, and promotes algebraic thinking as in the example below:

$$N \times P - (DJ + C + A) = PR.$$

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Science Museums... (continued from page 1)

Cumberland Island
<http://www.nps.gov/cuis/>
(Island Geology)

Okefenokee Swamp
<http://www.innatfolkston.com/nec/> ,
<http://www.okeswamp.com/>
(Swamp Ecology)

Callaway Gardens
<http://www.callawaygardens.com/>
(Botany & Entomology)

The Museum of Aviation, Warner Robbins
AFB (near Macon)
<http://www.museumofaviation.org/>
(Math & Physical Science)

Plant Hatch Nuclear Power Station, Baxley
www.eia.doe.gov/cneaf/nuclear/page_at_a_glance/reactors/hatch.html
(Nuclear Science)

Northern Florida

O'Toole's Herb Farm, (Madison, FL)
http://www.florida-secrets.com/Florida_Gardens/Otooles.htm
(Ethnobotany)

Wakulla Springs State Park
<http://www.floridastateparks.org/wakullasprings/default.asp>
(Fresh Water Ecology & Biodiversity)

Gulf Specimen Marine Lab
<http://www.gulfspecimen.org/>
(Oceanography)

Leon Sinks Geological Area
<http://www.floridaconservation.org/fltrails/region1/1leonsi.html>
(Physiogeography)

Florida Caverns State Park (Marianna, FL)
<http://www.floridastateparks.org/floridacaverns/default.asp>
(Mineralogy)

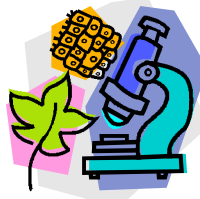
Challenger Learning Center (Tallahassee)
<http://www.challengertlh.com/index.aspx>
(Math & Physics of Space Exploration)

Mary Brogan Museum of Art and Science
(Tallahassee)
<http://www.thebrogan.org/>
(Informal Science)

National High Magnetic Field Lab
<http://education.magnet.fsu.edu/>
(Electricity & Magnetism w/ Lots of Math)

Tallahassee Museum of History and Natural
Science
<http://tallahasseeuseum.org/>
(Simple Machines)

Ichetucknee Springs State Park
<http://www.floridastateparks.org/ichetuckneesprings/default.asp>



Peeling the Onion Called Data (continued from page 5)

the A in Mr. Winter's class was earned. This layer may also include more standardized instruments, such as the DIBELS (a test designed for monitoring early reading development in fluency and other areas, depending on the age of the student.).



The third layer is where testing becomes more familiar to teachers. This is the classroom test, typically designed by the teacher to measure student learning. A well-made classroom test is generally a good measure of student learning of the content taught. Results of classroom tests can inform teachers as to what needs to be re-taught and to whom. These are an excellent source of data to guide instruction!

However, using "canned" tests that come with the textbook series may be problematic, especially if the content of the test does not cover exactly what you have taught, in the way you have taught. Many times the wording on these tests can be "tricky" for students because it is so different from the way you as the teacher explained the concept.

The next layer, number 4, are lesson assessments. These are varied and may include strategies such as summarizing, questioning techniques, "ticket out the door," think-pair-share, to name a few. These are quick assessments of what was taught in a particular lesson that may shape the focus of subsequent lessons. You can quickly recognize what was misunderstood and what was grasped by students!

At the center of the assessment onion is distributed guided practice. This means that practice is alternated with instruction. Teach a bit, practice a bit, teach some more, practice some more. This allows even close monitoring of student learning. The teacher can circulate throughout the classroom and assist individual students during the learning process. A procedure or idea learned incorrectly is 100 times more difficult to re-teach. Therefore, it is best when teachers can catch errors early in the learning process and re-teach at that time.

This brief article can only cover a few of the strategies and uses of assessment data. Let me close by saying that every assessment has its purpose and correctly utilized can inform teachers and guide practice!

The U.S. Constitution (continued from page 4)

want to give a former Revolutionary Soldier a full and unconditional pardon? And how did perseverance in the face of adversity yield positive results for this effort?

So, I tell a story, show a few videos and Power Points, and students complete crosswords and word searches. Students learn information that is useful in their daily lives. Did I mention that they are not clock watchers during this period of study?

Upon further reflection, I can but wonder, "Am I too old for law school?"

After all, retirement looms on my horizon.



RESOURCES

Online

Prevent Child Abuse
<http://www.preventchildabuse.org>

Reach Every Child
<http://www.reacheverychild.com/>

Print

***Your First Year As a High School Teacher:
Making the Transition from Total Novice to
Successful Professional***

Authors: Lynne Rominger, Suzanne Laughrea,
& Natalie Elkin
Publication Date: 2001
Publisher: Prima
ISBN: 0-7615-2968-3

Notes from the GSTEP Director's Desk



Dr. Pamela Hertzog
GSTEP Director
Valdosta State University

The end of the school year is almost here. This year is a milestone for many of us. For you, it is the beginning of your teaching career, and for me, a veteran of 39 years, it marks the end. I have announced my retirement and will be leaving Valdosta State University at the end of summer session. As I reflect upon my years in the profession, I am moved how appropriate the Principles upon which the Georgia Systemic Teacher Education Program (GSTEP) is based are appropriate for educators at all career points. Thus, I would like to share them with you as my parting words of advice. These principles are as follows:

1. **The Process Principle.** Learning to teach is a career-long process of growth. As educators, we must continually involve ourselves in self-assessment, goal-setting, and goal monitoring to ensure we have the knowledge and skills necessary to produce student learning. Theories, information, and communities may change over time, and we must reconceptualize our work to meet these changes.

2. **Support Principle.** All educators share responsibility for supporting colleagues as professional peers. Many teachers leave the profession, and the major reason stated for this departure is the lack of coherent support. All of us -- teachers and administrators, pre-school through post-secondary education (P-16), state agencies, and policy makers -- need to work together to stop this landslide of resignations. Working

collectively, we can provide the professional support needed to help colleagues identify, confront, and break down work barriers they are experiencing.

3. **Ownership Principle.** Teachers create their own career paths and strive to grow professionally throughout their careers. As educators, we must base professional needs upon what will help promote our students' learning and then seek to gain such knowledge and skills. I challenge you to become highly engaged in professional communities where you can not only gain knowledge and skills to improve your practice, but also can make contributions that lead to improvements at your school.

4. **Impact Principle.** Effective practice produces evidence of student learning and achievement. As educators, we know what needs to be taught, what learning looks like, and how to use multiple assessment strategies to assess student learning. However, how many of us use information gained from these assessments to address the individual needs of children in our classroom? Better use of assessment data collected needs to be made! Use such data to organize instruction that can lead to still higher levels of learning for all children with whom you work.

5. **Equity Principle.** All students and teachers-- regardless of personal characteristics, backgrounds, or physical challenges-- deserve high expectations and strong support to achieve their best. Equity does not mean that you treat everyone similarly; instead it requires that reasonable and appropriate accommodations be made as needed to promote access and attainment for all.

6. **Dispositions Principle.** Positive and productive dispositions positively affect student learning, teacher growth, and school climate. Dispositions refer to attitudes towards students, colleagues, parents, and other aspects of school life. We communicate

them subtly, but unmistakably. To speak of teachers' dispositions is not to insist on similar personalities. Rather, dispositions refer to positive attitudes. Thus, professional growth requires critical, reflective attention to our own dispositions.

7. **Technology Principle.** Teachers use technology to facilitate teaching, learning, community building, and resource acquisition. Technology integration into the curriculum is critical for tapping the potential of technological innovations and infusing that potential into settings in ways that it can yield more powerful learning. Integrating technology requires that we have exposure to best practices, time with fluent mentors, and access to resources.

God bless you, and may you make a difference in the lives of the children with whom you work.



The BRIDGE is an online resource and community for teachers at all career levels, from novice to experienced.

Pre-service Teachers

- Quickly find resources about teaching and learning
- Publish your own work
- Participate in learning communities with practicing teachers

Practicing Teachers

- Quickly find credible, high quality resources for your professional development
- Submit your own resources
- Become a reviewer
- Publish your own work
- Participate in cross-career learning communities

www.teachersbridge.org

Greetings from the Editor

WOW! This is our last newsletter for this academic year. The year has flown by. Congratulations go to: **Beginning Teachers**, on the completion of your first of teaching; **Mentors** and **Administrators** for providing support for beginning teachers and student teachers; and **Student Teachers** on your graduation and the beginning of your career. We wish the best for all future endeavors and hope that this newsletter has been a resource that has been helpful for you. If so, we would love to hear about it. Send comments to spandrew@valdosta.edu. I must also say congratulations to **Contributors** for this issue and **Cindy Musgrove** and **Jessica Joy** from the GSTEP Office for all the work they do to support the production of the newsletter. One last person I must also say congratulations to is **Dr. Pam Hertzog** upon her retirement from VSU. She has truly been an inspiration to us all. Her presence in the VSU/Valdosta community will surely be missed.

Shirley Andrews



Student use of variables might not be quite as sophisticated as this example, but the transition to use of variables is an easy one, and students make that transition when given the opportunity, even in elementary grades, and certainly in middle grades.

At this point, teachers can promote algebraic thinking on higher and higher levels. The trick is to actually allow variables to actually vary. For example:

- a) *What happens if everything stays the same except that the DJ raises the price to \$600?*
- b) *How many people would need to attend the dance if your plan is to make \$500?*

Many other changes can be made using the variables above. One of the greatest values in these problems is that the variables actually assume different values, so there is a reason for using them, as opposed to many traditional algebra equations where there is only one value for a variable and one solution, and that solution could have been obtained simply by arithmetic rather than going to the trouble of writing an equation. Instead, one problem situation becomes the foundation for any number of critical thinking opportunities.

Keep in mind that the ability to present problems without numbers lies uniquely with the teacher. It is almost impossible for a textbook to provide this type of problem, because the presentation of the numbers would appear just under the problem without numbers, and students would simply skip over the problem-solving portion to the computational part.

How, in the all consuming busy day teachers have, do they have time to create problems without numbers? The answer is much simpler than you might think. The problems are already available in your text, but they have numbers. Prior to asking students to open their texts, provide the situation, and allow them to use their problem-solving skills.

Practice reading textbook problems and restating them into Problems Without Numbers. Try to make use of this strategy with introductory problems and with individual problems.

*The Penny/Nickel/Dime Problem:
With Numbers*

If I have 4 pennies, 7 nickels, and 3 dimes, how much money do I have in all?

The Penny/Nickel/Dime Problem: Without Numbers

If I have some pennies, some nickels, and some dimes, how can I decide how much money I have in all? Write a mathematical representation of how you would solve this problem.

After some work and sharing, students provide evidence of their thinking. For example:

Dimes are worth 10 cents, so I would count by tens with them. Then, because nickels are worth 5 cents, I would count on with them counting by fives, and then pennies are one cent each, so I could count on adding one for each penny.

Though other solutions might be more direct, this solution is perfectly correct, and after providing this explanation, students should be encouraged to provide some sort of symbolic representation of this method, even using stars, boxes, triangles, or other symbols as placeholders for the numbers of each type of coin. The teacher then provides the following questions sequentially:

If I have 4 pennies, 7 nickels, and 3 dimes, how much money will I have?

If I know I need to have 94 cents and I know I have 4 pennies and 4 dimes, how many nickels will I need?

What will I need to do to my representation if I know I might have some quarters?

There are many additional questions that should spring from such a problem solving opportunity, and teachers should make use of them.

How can such a method be used in other disciplines? Consider the following scenario from a Social Studies class where the topic is to be the causes of World War II. Instead of providing information and notes, the teacher begins the class with a problem solving situation, this time without countries or names of people:

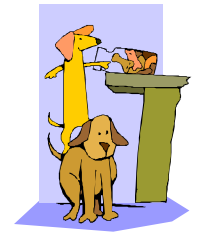
If you were the president or prime minister of a country, and you find that you need the raw materials, factory resources, and access to the deep water port of a neighboring country, what are some ways you might get what your country needs? Brainstorm about all of those factors and come up with one or more solutions to these problems.

This situation serves as an activating strategy and asks students to consider what they know, as well as to consider the problem of the country in need. Student answers will provide the springboard for consideration of many other factors related to the beginning of World War II.

As a lead in for work in English class on Jane Eyre, students could be asked how they might find an outlet to express themselves artistically if they were a female in the 1800s in Europe.

Problems Without Numbers - - - this strategy is easy to use and has the potential to provide

significant work in problem solving and critical thinking. How easy is it? Just turn to any page in a mathematics textbook where a problem is presented at the beginning of a lesson. Consider that



same problem as a general problem without numbers, pose it to your students, have students move from discussion and communication into some form of algebraic representation (even with very young students), and then provide some numbers with which they can work. The power of this method continues as the teacher manipulates which information is provided to students, so they sense continuity and continue to strengthen their grasp on the situation that was presented. Recognizing how mathematics relates to certain problem situations helps produce better problem solvers, but the “one problem, one set of numbers, get the solution, go on” method does not allow students to ingest context in any meaningful way.

Give students a chance to REALLY solve problems by using Problems Without Numbers, and you will see more involvement, more thinking, more communication, more algebraic representation, and more real problem solving.

EVENTS

VSU 2005 Summer Terms

- * Summer Session I (May Term)
May 12-June 3
- * Summer Session II
June 8-July 26
- * Summer Session III
June 8-June 29
- * Summer Session IV
July 5-July 26
- * Summer Graduation - July 30

VSU 2005 Fall Term

- * First Class Day
August 15
- * Midterm
October 5
- * Last Class Day
December 5
- * Graduation - December 10



six and 19 are considered overweight. Roughly ten percent of two-to-five-year-olds and 16 percent of six-to-19 year-olds are overweight; these percentages have risen two-fold and three-fold respectively since 1980. Childhood weight problems are a medical concern, not a cosmetic issue. Poor nutrition, lack of physical activity, and being overweight can lead to complications such as elevated blood cholesterol and blood pressure, gallbladder disease, osteoarthritis and joint problems, asthma, Type II diabetes, depression, anxiety, and sleep apnea. Poor nutrition and lack of physical activity contribute to 27 percent of children age five- to ten-years having one or more adverse risk factors for heart disease. For overweight children, 61 percent of this age group has at least one risk factor for heart disease. These problems often continue into adulthood, as between 70 and 80 percent of overweight children and adolescents continue to be overweight or become obese as adults.

The Nutrition Link

Well-nourished students tend to be better students, while poorly nourished children tend to have weaker academic performance and score lower on standardized achievement tests. This link between nutrition and academic achievement exists for a variety of reasons. Inadequate consumption of foods from the various key food groups deprives children of essential vitamins, minerals, fats, and proteins that are necessary for optimal cognitive function. Iron deficiency has been linked to shortened attention span, irritability, fatigue, and difficulty with concentration, while low protein intake has been associated with lower achievement scores. Poor nutrition and hunger also interfere with cognitive function and are associated with lower academic achievement. Researchers in one study found that students who are “food-insufficient” have significantly lower math scores and are more likely to repeat a grade, see a psychologist, and be suspended from school. In another study researchers found that hungry children and those at risk for being hungry were twice as likely to have impaired functioning (as reported by parent or child); teachers reported higher levels of hyperactivity, absenteeism, and tardiness among hungry/at-risk children than among their peers who were not hungry. In a nutshell, it is hard to concentrate when you are hungry or poorly nourished.

The Physical Activity Link

Physical activity has also been linked to positive academic performance. A recent study

found that California schools with high percentages of students who did not routinely engage in physical activity and healthy eating habits had smaller gains in test scores than did other schools. Schools that offer intense *physical activity programs have seen positive effects on academic performance and achievement* (e.g., *improved mathematics, reading, and writing test scores, less disruptive behavior*), even when the added physical education time takes away from class time for academics. A recent national survey of 500 teachers and 800 parents conducted for The Robert Wood Johnson Foundation found that 90 percent of teachers and 86 percent of parents are convinced that *physically active children are better able to learn*. In a meta-analysis examining the effect of exercise on cognitive function that surveyed results from almost 200 studies including adults and children, the researchers found that *physical activity supports academic performance*.

Successes

The picture is not entirely bleak, there are some successes by schools that have taken a pro-active stance in promoting good nutrition and increased physical activity. The administrators at Whitefish Central School in Montana noted that most disruptive behavior in the school occurred between 40 to 60 minutes after lunch. In analyzing the situation, the administrators came to the conclusion that this disruptive behavior may be the result of students eating unhealthy foods, i.e. high in saturated fat and sugar content. Several changes were made: soda vending machines were replaced with bottled water and 100% fruit juice machines; candy was eliminated from vending machines and lunch menus; and increasing the nutritional content of lunch items in vending machines to include sandwiches, yogurt, fruit, milk, bagels, and salads. The result... *disciplinary referrals after lunch have fallen from an average of six to eight per day to one or two per week within two years of initiating the changes*.

In several independent studies, researchers have found overwhelming evidence that links physical activity programs and participation in daily physical education to stronger academic achievement, increased concentration, and improved math, reading, and writing test scores; along with significantly better school attendance.

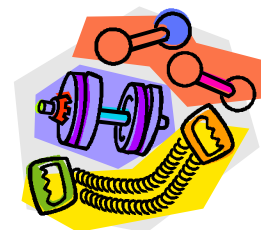
Ways to Improve the Link

What can we, as educators, do to improve this link? One thing to bear in mind is that regardless of our academic discipline we still have to *educate the whole child: mentally, physically,*

socially, and emotionally! Listed below are some tips to help develop a stronger link between nutrition and physical activity with academic performance.

1. Incorporate physical activity into your classroom activities on a regular basis.
2. Introduce nutrition information into reading, writing, math, science, and other assignments.
3. Begin class each day with fun physical activities such as line dancing, calisthenics, or other types of rhythm activities such as marching or musical “Simon Says”.
4. Model good habits of nutrition and physical activity. Participate with your students in physical activities; you may be surprised at the results!
5. Encourage your students to spend less time in front of the television, computer, and video games and more time engaged in physical activities.
6. Support quality daily physical education for all students!
7. Support the serving of more nutritionally sound meals at school.
8. Use alternate sources other than candy for “rewards” in your classroom.
9. Limit the number of sweets at class parties or celebrations.
10. Support adequate recess time for students to engage in active play.
11. Provide age appropriate and culturally sensitive instruction in health, nutrition, and physical education to help students enjoy a healthy and physically active lifestyle.

For additional information, please feel free to contact Dr. Andrews at sandrews@valdosta.edu. To find information on such items as Body Mass Index (BMI), physical activity recommendations for children, nutrition recommendations, and other related issues, please visit the Centers for Disease Control web site at www.cdc.gov and/or the Center for Health and Health Care in Schools site at www.healthinschools.org/sh/obesity.asp.



MOLDER OF DREAMS

*You are the molder of their dreams
The Gods who build or crush their young beliefs of
right or wrong.*

*You are the spark that sets a flame in a poet's hand,
or lights the flame of some great singer's song.*

*You are the god of the young--
the very young.*

*You are the guardian of a million dreams,
Your every smile or frown can heal or pierce a heart.*

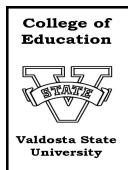
Yours are a hundred lives--a thousand lives.

*Your patient work, your touch,
makes you the Gods of Hope
who fill their souls with dreams,
who make those dreams come true.*

You are a teacher!

Author unknown

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