Message From The President

"You may ask yourself: Well, how did I get here?"
—Talking Heads, Once in a Lifetime

Tom Thibodeau - Assistant Provost, New England Institute of Technology

Ben Franklin said that, "Experience keeps a dear school, but fools will learn in no other." He would be very proud of me… I followed his word to the letter – or was I not supposed to do that? Oh well! Regardless of Ben's maxim, we all have learned from experience and I hope we all continue to learn wherever and whenever we can.

Your story may be similar to mine. I started out getting a degree in Secondary English Education in 1975 only to find a closed job market in high school teaching. I went back to school and got a Master's Degree in Broadcasting in 1978 only to find a job market that paid so low that it was better to work for my brother's law firm doing real estate titles than to work in video or TV. I finally did get a job as a videographer and then as an online videotape editor, only to find that the "tape" part of the job title was going to fade away. So when I got a chance to start teaching video production at a local technical college full time, I took it and in the process learned how to edit video using a computer. The rest I guess is history (mine at least) as using a computer to edit led me to using a computer and other technology for teaching that in turn led me to faculty development by helping others learn the technology. There was nothing particularly linear about the process... it just all evolved.

As I reflected upon this circuitous path I realized that I ended up doing exactly what I started out to do – teach. Every job and experience I had developed a new skill or knowledge and prepared me for the next "step." Isn't that also the goal of a college education? Isn't that what we are trying to do with our students? Aren't we trying to give them enough knowledge and experience so that they are ready for the "real world" and thereby can avoid Ben's dictum?

This year the NEFDC Fall Conference is entitled Better Teaching — Better Learning: Reflective Practices for Faculty and Students, and we have joined with two partners, the Colleges of Worcester Consortium (COWC) and The Association for Authentic, Experiential and Evidence-Based Learning (AAEEBL). Together, with the help of our keynote speaker, Dr. Dan Willingham of the University of Virginia, we hope to guide our members through an exploration of the power of reflection to promote a successful college education. Dr. Willingham's book, **Why Students Don't Like School**, asks us as teachers a lot of questions. It also provides lots of evidence-based answers, drawn from cognitive science research, that we hope will get you to re-think and reflect on just what you are doing in the classroom with your students.

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From the Editors:

One of the many wonderful things about the NEFDC is its diversity. We represent a wide range of institutional types and higher-education professionals, as well as a broad spectrum of ideas. Innovation and experimentation are at the heart of progress toward better teaching and better learning, and bringing together a diverse range of voices and views will be critical to achieving this goal. The Fall, 2010 issue of the Exchange contains fresh insight and stories of innovative approaches to improve student learning, whether through formal or informal reflective practices, supplemental instruction, or other novel practices. From our Keynote speaker at the upcoming fall conference, Dan Willingham, we have an illuminating excerpt from his book, **Why Don't Students Like School?**, which, among other things, will help you to think hard about *thinking*. As always, we hope you can join us at the conference (more information is available in the issue.)

We welcome your feedback and encourage contributions to future issues. If you'd like to submit an article for our Spring, 2011 newsletter, please send a Word document to Gouri Banerjee at banerjee@emmanuel.edu. More information, including guidelines for submissions, may be found at www.NEFDC.org.

In This Issue...

New England Faculty Development Consortium
The Colleges of Worcester Consortium
The Association for Authentic, Experiential and Evidence-Based Learning

present

Fall 2010 CONFERENCE

Better Teaching – Better Learning:
Reflective Practices for Faculty and Students
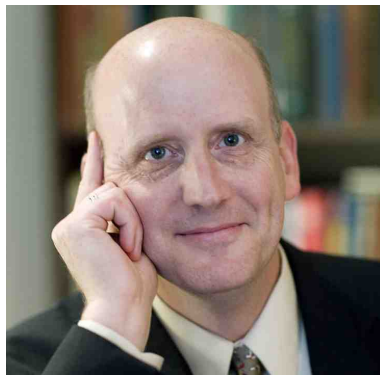
Friday, November 19, 2010
8:30 am to 5 pm
College of the Holy Cross
Worcester, MA

Keynote Speaker:
Dan Willingham, Ph.D.

Pre-Conference Workshop
Portfolios: Evidence-Based Learning and the Challenge to Faculty Development

Thursday, November 18, 2010
1 to 4 pm
Salisbury Room, Courtyard Worcester

Daniel Willingham earned his B.A. from Duke University in 1983 and his Ph.D. in Cognitive Psychology from Harvard University in 1990. He is currently Professor of Psychology at the University of Virginia, where he has taught since 1992. Until about 2000, his research focused solely on the brain basis of learning and memory. Today, all of his research concerns the application of cognitive psychology to K-12 education. He writes the "Ask the Cognitive Scientist" column for American Educator magazine, and blogs at the Washington Post. He is also the author of Why Don't Students Like School? (Jossey-Bass). His writing on education has been (or is being) translated into Chinese, French, Korean, Thai, Portuguese, and Russia.

I have been re-thinking quite a bit in preparation for this conference. Here's an example: I used to think that PowerPoint was a great tool for teaching. I was very excited about the possibilities. It was one of the first things I did in Faculty Development… but I seemed to have helped create a monster. It is not PowerPoint's fault. It is a good tool - potentially. Unfortunately, most often it is used very poorly, mainly because it is too often used *as* the presentation or lesson instead of the support for the lesson. And what does the student learn from the use of the software? My guess is that they usually learn that class is nothing more than a collection of facts and content that I must process, and repeat back to the professor. I am now of the opinion that class time is far too important to waste on content! Sure, content is important, but it cannot be learned completely devoid of context or without connecting it to the student's own knowledge and experience in a deep and relevant way. Experience indeed keeps a "dear school"; the challenge is finding ways for students to integrate these experiences into a meaningful, context-rich whole.

An excerpt from, Why Don't Students Like School?
Dan Willingham - University of Virginia

What is the essence of being human? What sets us apart from other species? Many people would answer that it is our ability to reason—birds fly, fish swim, and humans think. (By thinking I mean solving problems, reasoning, reading something complex, or doing any mental work that requires some effort.) Shakespeare extolled our cognitive ability in Hamlet: "What a piece of work is man! How noble in reason!" Some three hundred years later, however, automotive entrepreneur Henry Ford more cynically observed, "Thinking is the hardest work there is, which is the probable reason why so few people engage in it." They both had a point. Humans are good at certain types of reasoning, particularly in comparison to other animals, but we exercise those abilities infrequently. A cognitive scientist would add another observation: Humans don't think very often because our brains are designed not for thought but for the avoidance of thought. Thinking is not only effortful, as Ford noted, it's also slow and unreliable.

Your brain serves many purposes, and thinking is not the one it serves best. Your brain also supports the ability to see and to move, for example, and these functions operate much more efficiently and reliably than your ability to think. It's no accident that most of your brain's real estate is devoted to these activities.

Compared to your ability to see and move, thinking is slow, effortful, and uncertain. To get a feel for why I say this, try solving this problem:

In an empty room are a candle, some matches, and a box of tacks. The goal is to have the lit candle about five feet off the ground. You've tried melting some of the wax on the bottom of the candle and sticking it to the wall, but that wasn't effective. How can you get the lit candle five feet off the ground without having to hold it there?

Twenty minutes is the usual maximum time allowed, and few people are able to solve it by then, although once you hear the answer you will realize it's not especially tricky. You dump the tacks out of the box, tack the box to the wall, and use it as a platform for the candle.

This problem illustrates three properties of thinking. First, thinking is slow. Your visual system instantly takes in a complex scene. When you enter a friend's backyard you don't think to yourself, "Hmmm, there's some green stuff. Grass, perhaps? What's that rough brown object sticking up there? A fence?" You take in the whole scene—lawn, fence, flowerbeds, gazebo—at a glance. Your thinking system does not instantly calculate the answer to a problem the way your visual system immediately takes in a visual scene. Second, thinking is effortful; you don't have to try to see, but thinking takes concentration. You can perform other tasks while you are seeing, but you can't think about something else while you are working on a problem. Finally, thinking is uncertain. Your visual system seldom makes mistakes, and when it does you usually think you see something similar to what is actually out there—you're close, if not exactly right. Your thinking system might not even get you close; your solution to a problem may be far from correct. In fact, your thinking system may not produce an answer at all, which is what happens to most people when they try to solve the candle problem.

If we're all so bad at thinking, how does anyone get through the day? How do we find our way to work or spot a bargain at the grocery store? How does a teacher make the hundreds of decisions necessary to get through her day? The answer is that when we can get away with it, we don't think. Instead we rely on memory. Most of the problems we face are ones we've solved before, so we just do what we've done in the past. For example, suppose that next week a friend gives you the candle problem. You would immediately say, "Oh, right. I've heard this one. You tack the box to the wall." Just as your visual system takes in a scene and, without any effort on your part, tells you what is in the environment, so too your memory system immediately and effortlessly recognizes that you've heard the problem before and provides the answer. Most people think they have a terrible memory but your memory system is much more reliable than your thinking system, and usually provides answers quickly and with little effort.

We normally think of memory as storing personal events (memories of my wedding) and facts (breakfast is eaten in the morning). Our memory also stores strategies to guide what we should do: where to turn when driving home, how to handle a minor dispute when monitoring recess, what to do when a pot on the stove starts to boil over. For the vast majority of decisions we make, we don't stop to consider what we might do, reason about it, anticipate possible consequences, and so on. When you feel as though you are "on autopilot," even if you're doing something rather complex, such as driving home from school, it's because you are using memory to guide your behavior. You have practiced the task so many times that you can rely on memory to get it done.

The implications for education sound rather grim. If people are bad at thinking and try to avoid it, what does that say about our attitude toward school? Fortunately, the story doesn't end with people stubbornly refusing to think. Despite the fact that we're not that good at it, we actually like to think. But because thinking is so hard, the conditions have to be right for this curiosity to thrive, and we quit thinking rather readily.

Solving problems brings pleasure. There is a sense of satisfaction, of fulfillment, in successful thinking. In the last ten years neuroscientists have discovered that there is overlap in the brain areas and in the chemicals that that are important in learning and that are important in the brain's natural reward system. Many neuroscientists suspect that the two systems are related.

It's notable too that the pleasure is in the solving of the problem. Working on a problem with no sense that you're making progress is not pleasurable. In fact, it's frustrating. Then too, there's not great pleasure in simply knowing the answer. I told you the solution to the candle problem; did you get any fun out of it? Think how much more fun it would have been if you had solved it yourself—in fact, the problem would have seemed more clever, just as a joke that you get is funnier than a joke that has to be explained. Even if someone doesn't tell you the answer to a problem, once you've had too many hints you lose

the sense that you've solved the problem, and getting the answer doesn't bring the same mental snap of satisfaction.

Mental work appeals to us because it offers the opportunity for that pleasant feeling when it succeeds. But not all types of thinking are equally attractive. People choose to work crossword puzzles but not algebra problems. A biography of the singer Bono is more likely to sell well than a biography of Keats. What characterizes the mental activity that people enjoy?

The answer that most people would give may seem obvious. "I think crossword puzzles are fun and Bono is cool, but math is boring and so is Keats." In other words, it's the content that matters. We're curious about some stuff but not about other stuff. Certainly that's the way people describe our own interests—"I'm a stamp collector" or "I'm into medieval symphonic music." But I don't think content drives interest. We've all attended a lecture or watched a TV show (perhaps against our will) about a subject we thought we weren't interested in, only to find ourselves fascinated; and it's easy to get bored even when you usually like the topic. I'll never forget my eagerness for the day my middle school teacher was to talk about sex. As a teenage boy in a staid 1970s American culture, I fizzed with anticipation of any talk about sex, anytime, anywhere. But when the big day came my friends and I were absolutely disabled with boredom. It's not that the teacher talked about flowers and pollination; he really did talk about human sexuality—but somehow it was still dull. I actually wish I could remember how he did it; boring a bunch of hormonal teenagers with a sex talk is quite a feat.

So, if content is not enough to keep your attention, when does curiosity have staying power? The answer may lie in the difficulty of the problem. If we get a little burst of pleasure from solving a problem, then there's no point in working on a problem that is too easy—there'll be no pleasure when it's solved because it didn't feel like much of a problem in the first place. Then too, when you size up a problem as very difficult, you are judging that you're unlikely to solve it, and are therefore unlikely to get the satisfaction that comes with the solution. A crossword puzzle that is too easy is just mindless work—you fill in the squares, scarcely thinking about it, and there's no gratification, even though you're getting all the answers. But you're unlikely to work long at a crossword puzzle that's too difficult. You know you'll solve very little of it, so it will just be frustrating.

This analysis of the sorts of mental work that people seek out or avoid also provides one answer to why more students don't like school. Working on problems that are of the right level of difficulty is rewarding, but working on problems that are too easy or too difficult is unpleasant. Students can't opt out of these problems the way adults often can. If the student routinely gets work that is a bit too difficult, it's little wonder that he doesn't care much for school. I wouldn't want to work on the Sunday New York Times crossword puzzle for several hours each day.

So how can we use this information to help students like school?

First, be sure that there are problems to be solved. Again, by problem I don't necessarily mean a question addressed to the class by the teacher, or a mathematical puzzle. I mean cognitive work that poses moderate challenge, including such activities as understanding a poem or thinking of novel uses for recyclable materials. This sort of cognitive work is of course the main stuff of teaching—we want our students to think. But without some attention, a lesson plan can become a long string of teacher explanations, with little opportunity for students to solve problems.

Second, rethink how to make school material interesting. A common strategy is to try to make the material "relevant" to students. This strategy sometimes works well, but it's hard to use for some material. Another difficulty is that a teacher's class may include two football fans, a doll collector, a horseback riding competitor—you get the idea. Mentioning a popular singer in the course of a history lesson may give the class a giggle, but it won't do much more than that. I have emphasized that our curiosity is provoked when we perceive a problem that we believe we can solve. What is the question that will engage students and make them want to know the answer?

One way to view schoolwork is as a series of answers. We want students to know Boyle's law, or three factors contributing to World War I, or the religious themes in Hamlet. Sometimes I think that we, as teachers, are so eager to get to the answers that we do not devote sufficient time to developing the question. But as the information in this chapter indicates, it's the question that piques people's interest. Being told an answer doesn't do anything for you.

When you plan a lesson, you start with the information you want students to know by its end. As a next step, consider what the key question for that lesson might be and how you can frame that question so it will have the right level of difficulty to engage your students and so you will respect your students' cognitive limitations.

Third, reconsider when to puzzle students. Teachers often seek to draw students into a lesson by presenting a problem that we believe will interest the students (for example, asking "Why is there a law that you have to go to school?" could introduce the process by which laws are passed), or by conducting a demonstration or presenting a fact that we think students will find surprising. In either case, the goal is to puzzle students, to make them curious. This is a useful technique, but it's worth considering whether these strategies might be used not only at the beginning of a lesson but also after the basic concepts have been learned. For example, a classic science demonstration is to put a burning piece of paper in a milk bottle and then put a boiled egg over the bottle's opening. After the paper burns, the egg is sucked into the bottle. Students will no doubt be astonished; if they don't know the principle behind it, the demonstration is like a magic trick—it's a momentary thrill, but their curiosity to understand may not be long-lasting. Another strategy would be to conduct the demonstration after students know that warm air expands and cooling air contracts, potentially forming a vacuum. Every fact or demonstration that would puzzle students before they have the right background knowledge has the potential to be an experience that will puzzle students momentarily, and then lead to the pleasure of problem solving. It is worth thinking about when to use a marvelous device like the egg-in-the-bottle trick.

NEFDC Fall 2010 Conference Agenda

Special Event: Pre-conference Workshop

Portfolios: Evidence- Based Learning and the Challenge to Faculty Development

Thursday, November 18, 1:00 - 4:00 pm
Salisbury Room, Courtyard Worcester

Conference Schedule, Friday, November 19, 2010

8:00	*Continental Breakfast*
8:30 – 9:30	*Conference Registration*
9:00 – 9:15	*Welcome, Introductions*
9:15 – 10:30	*Keynote Presentation*
10:45 – 11:35	*Concurrent Session 1*
11:45 – 12:45	*Lunch/Roundtable Discussions*
1:00 – 2:30	*Concurrent Session 2*
2:45 – 3:45 or 4:15	*Concurrent Session 3*
3:45 or 4:15 – 5:00	*Poster Session (wine & cheese reception)*

To register online, please visit www.nefdc.org. At our website you will also find descriptions of the concurrent sessions and pre-conference workshop and information about overnight accommodations.

Connecting With Others

There are two dominant national organizations —POD (Professional and Organizational Development in Higher Education) and NCSPOD (The North American Council for Staff, Program, and Organizational Development)—whose members do faculty development work. Both have excellent fall conferences, with many sessions appropriate for faculty members interested in professional development. Visit their websites at www.podnetwork.org and www.ncspod.org.

The Benefits of Formal and Informal Reflective Practices

Art McGovern, Professor
Department of Psychology and Sociology, Nichols College

It is well established that reflective practices are an important aspect of educational efforts, and a great deal of research has focused on the use of reflective practices for teachers and teacher training. For example, Donald Schön (1983,1987) argued that beginners within any professional discipline could benefit from a process by which they considered their own day-to-day professional experiences with the help of more expert colleagues. According to Schön, "reflection-in-action" resulted in improved action and the "acquisition of artistry." Reflection helps teachers acquire necessary skills and knowledge by helping them re-evaluate their own learning and ponder alternative perspectives in their pedagogical beliefs and practices, which often leads to positive change (Elder & Paul, 1994).

The noted social theorist John Dewey (1933) viewed reflection as a specialized form of thinking, one that emancipates us from the reactive and automatic routines of activity and allows us to plan and direct our actions in light of our own goals, abilities, and expectations. According to Dewey, "It enables us to know what we are about when we act" (p. 17). Reflection can focus understanding, clarify thinking, help retain understanding, and result in new plans and strategies for further action that optimize the outcomes in our lives (Richardson & Morgan, 2003).

Given these characteristics of reflection, it is clear that there are powerful links between reflective practices and learning strategies, and students also benefit greatly from reflective practices. For example, transformative learning focuses on critical reflection and rational discourse (Mezirow, 1991). According to Mezirow, transformative learning occurs when individuals change their frames of reference by critically reflecting on their assumptions and beliefs, and when they consciously make and implement plans that bring about new ways of defining their worlds. Learners can change their beliefs, attitudes, and emotional reactions by engaging in critical reflection on their experiences, which in turn leads to a transformation of perspective. As Mezirow states,

> Perspective transformation is the process of becoming critically aware of how and why our assumptions have come to constrain the way we perceive, understand, and feel about our world; changing these structures of habitual expectation to make possible a more inclusive, discriminating, and integrating perspective; and, finally, making choices or otherwise acting upon these new understandings (p.167).

Given the rise of informational media saturated by consumerist agendas, the difficulty in distinguishing strategic action from communicative action, and the growing complexity of social issues, there is a distinct need for a population of active, reflective critical thinkers able to critique and if necessary liberate themselves from manipulative and self-defeating agendas. The promotion of the critical reflective processes inherent in transformative learning is one way to address this need.

However, the beneficial properties of reflection are not limited to formal critical reflective practices. The main point of this essay is that reflection does not need to be formally oriented to any particular learning outcome in order to be effective or beneficial. There is ample empirical evidence in the psychological research literature of a broad spectrum of benefits that arise from simple reflective writing practices (Harrist, Carlozzi, et al, 2006; King, 2001). Research spanning the last fifteen years has demonstrated that reflective autobiographical writing-- that is, writing about the thoughts and emotions surrounding important personal experiences or future life goals-- can significantly reduce health center visits (King & Miner, 2000), enhance immune system competence (Petrie, Booth, & Pennebaker, 1998), increase levels of mental well-being (Pennebaker, 1999), and even improve the chances of re-employment following job loss (Spera, Buhrfeind, & Pennebaker, 1994). In the college setting, research has demonstrated that autobiographical reflective writing about emotional experiences is associated with the same kinds of benefits, including health benefits (Pennebaker & Chung, 2007), improved academic performance (Lumley & Provenzano, 2003) and college adjustment (Cameron & Nicholls, 1998). Thus the potential benefits of reflective autobiographical writing make such writing practices a useful addition to the general college curriculum and do not require any specific topical connection to the curriculum other than the student's own experiences.

From a psychological standpoint, reflective practices, critical or not, are at the heart of who we are as people. In fact, many theorists identify reflective narrative processes with the creation and maintenance of our identities, our sense of ourselves within the world. The educational psychologist Jerome Bruner (1987) asserted that the self is a "perpetually rewritten story" and that "in the end we become the autobiographical narratives by which we tell about our lives" (p. 15). The philosopher Alasdair McIntyre (1981) asserts that we are "storytelling animals," that we make sense of the world and derive meaning about ourselves from our narratives. Thus reflective writing can be a central method of exploration and meaning making.

The tenets of narrative psychology specifically suggest that the formation and maintenance of the self depends on the construction of a cohesive life story, or narrative (Bruner, 1990; McAdams, 2001). McAdams (1996)

suggests that this story is constructed in order to integrate a person's disparate feelings, actions, and life events into a unified whole. According to McAdams, "A life story is an internalized and evolving narrative of the self that incorporates the reconstructed past, perceived present, and anticipated future" (p. 307). It is suggested that the mechanisms of this reflective process may depend on an interaction among life experiences, motivations, and self-regulation. Reflective writing may trigger important self-regulatory processes that help organize and integrate life experiences, help develop effective coping strategies, and in turn lead to higher levels of well-being and life satisfaction (King, 2001). As discussed earlier, reflective writing can focus understanding, clarify thinking, help retain understanding, and result in new plans and strategies for further action (Richardson & Morgan, 2003). Furthermore, writing may be superior to talk because it can lead to more explicitness in expression (Britton, 1993). The process of organizing and interpreting experience is likely to be sharper through writing because of the added deliberation over grammar and word choice.

Clearly, there is an educational significance to this autobiographical narrative process for college students. What these ideas suggest is that, on a practical level, autobiographical writing may be a significant addition to other efforts aimed at shaping students' college experiences in order to increase adjustment and success. Reflective practices in the form of autobiographical narratives may play a cohesive and integrative role, helping students make sense of their life experiences, clarify values and life goals, develop a stable identity, and provide direction for their life efforts.

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Seven Ways We Set Students Up to Fail

Ellen J. Goldberger, J. D.
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Thomas Edison famously said, "I have not failed. I've just found 10,000 ways that won't work." I've been teaching and talking to faculty and students since 1990, and have compiled a list of things we do and say in the classroom that make it harder for students to succeed. Here is a list of my top seven.

1. We teach students that time can be managed.

One of the first topics taught in freshman orientation and first-year seminars is "time management skills." The term is misleading and should be retired. We cannot manage time any more than we can manage gravity. When you fall on the ice, no one accuses you of having poor gravity-management skills. Time, like gravity, is out there; it's impersonal, and it cannot be managed.

What we really want to teach our students is not time management but self management, self-discipline, and that's what we should call it. It has nothing to do with time, but with choices and priorities: should I party or study? Should I go to class or sleep in? Should I start my paper now or pull an all-nighter? Calling it time management externalizes the center of control, as though time itself were the problem, a runaway train. Calling it self-discipline emphasizes the need for personal responsibility and more thoughtful choices.

In my first-year seminar I group students and ask them to make a list of typical situations that call for self-discipline and organization; each group then writes its list on the board, with possible solutions. The ensuing discussion shows that time, as the song says, is on our side; what we need to do is use it well.

2. We impose the arbitrary rule that "I" is only for creative writing.

Many of our students find it difficult to research and write in an academic context, although they are constantly emailing, texting, Googling, surfing the web, composing Facebook entries, etc. One reason for their academic writer's block is that we tell students to write with an Invisible Hand (apologies to Adam Smith).

We encourage students to voice opinions and relate personal experiences in class, but (apart from "creative" writing—as if all writing isn't creative) their academic writing must be impersonal: third-person pronouns only. The result is anxiety caused by the disconnect between what should come naturally (finding and communicating information) and what students perceive as an unnatural act: the formal research paper.

One solution is to move beyond the arbitrary rule that formal writing must bleach out any reference to "I." The result is a more relaxed but not necessarily less rigorous student essay that combines information with a more natural form of evaluation and reflection. When students are allowed to write in the first person, the resulting work, not surprisingly, is more reflective, fresh and authentic.

Letters, journals, autobiographies, reflective papers, interviews, opinion columns and other assignments can help students write more fluently. If you feel that students should practice a more traditional form of academic writing, after the initial draft is completed, students can edit their (or another student's) first-person essay or research paper and transpose it into third-person format. It's an interesting exercise that accomplishes the twin goals of getting students to write with ease and edit with a critical eye for academic style.

A research element can also be added to any form of first-person writing. Examples include an opinion column that cites and quotes an article; a letter to a famous person that cites and quotes the person's work; a book review that cites title and author, with quotes from the work; journal entries that document the answer to a question posed in class.

To help students write with ease and confidence, allow them to write in their own voice; it is the most effective way to get the ink flowing.

3. We tell them that plagiarism can be avoided by knowing the rules.

This is like saying that obesity can be avoided by knowing the calorie counts of foods. Most students who plagiarize know the rules—they just don't obey them. Syllabi now include boilerplate language about the perils of plagiarism, and an anti-plagiarism cottage industry (software, academic support services, etc.) is devoted to helping students walk the line. Yet they still plagiarize. Why?

Students do not plagiarize because they are lazy or because they don't know what plagiarism is, or because they leave the assignment to the last minute. Procrastination is often associated with plagiarism, but it is not the cause; it is a symptom of an underlying disorder—fear. The time and inventiveness spent stealing the plagiarized material could have been used to do the work honestly, but many students are afraid that their own words and ideas won't measure up. My discussions with students have convinced me that fear of failure is the number one reason students procrastinate and plagiarize.

How can we address this problem? One option is to frame the assignment to focus on students' native curiosity and playfulness, to help them overcome their anxiety. One framework I've used is Private Investigator; they've all seen decades' worth of crime dramas where the detectives ask questions, comb through cartons of old records, do internet searches, find missing clues, make connections and report their findings. We discuss how doing a research paper is

similar to seeking clues in a case and writing up a report.

A second approach is to tell students, up front, that they are not expected to produce brilliant, original ideas; they are only expected to search for and find some good ideas from a wealth of sources, Easter eggs they bring home in a basket along with their thoughts and impressions. Taking the pressure off does not guarantee that students won't plagiarize, but it sets a more playful tone that puts their efforts in perspective and enables them to frame the typical research project with more enthusiasm and less anxiety.

4. We insist that size matters.

Unless we're buying shoes or a refrigerator, size doesn't matter. We should stop using page length as a proxy for quality and thoughtfulness in student writing. Students always ask "How long does it have to be?" My answer to this perennial question is "As long as it needs to be." Should the Gettysburg Address have filled 3-5 pages?

We have already made one decision for our students; they have to write a paper. If we also tell them how long it has to be, we run the risk of getting back filler (the Kitchen Sink School of composition). Students are left with the false impression that there is safety in (page) numbers. Longer is not necessarily better (think of those interminable papers and essay exams we've all read) but page guidelines send the message that writing and analysis must conform to a cookie-cutter shape and size. Instead of page length we should be discussing what makes—or breaks--a good essay.

Students should be paring, not padding; the best papers are clear, concise and confident in their own rhythm. If students were guided to right-size their papers rather than use a one-size-fits-all template, the focus would be redirected to the real goal: quality, not quantity.

5. We believe that class participation requires speaking.

Public speaking is an acquired skill, and yes, the classroom is a good place to get some practice. We've all had shy or disengaged students who cannot or will not speak in class, and we can either insist that they speak (and deduct points if they don't) or create a more flexible environment in which everyone can participate according to ability and comfort level. Ironically, once you take the pressure off, students are more likely to join in the conversation, and you'll get fewer "empty calorie" comments made just for the sake of participation points.

We all extol the benefits of good listening skills, and these can be recognized as a form of class participation by offering some simple options. Small-group work often allows shy students to open up. Students who do not join in class or small-group discussions can read (from notes or text) three main points at the end of class, or begin class by sharing a question or idea they jotted down during the last class, or recapping an important point they noted.

Students who have more serious problems speaking in a group can also participate by recording the comments in their working group and writing them on the board, or by bringing in relevant articles, videos, quotes and pictures, which can be shared in class. One extremely shy student acted as my technology expert in class, finding the online films, websites and videos I needed, running the computer, and helping students upload their final projects. As the semester wore on, he started commenting on some of the websites we found, comfortable in his perch behind the computer. These options can be suggested to students as a group, or in one-on-one conversations with those who seem to need them.

It's time that we viewed diverse personality and participation styles the way we acknowledge differences in learning styles. We can make room for many forms of class engagement and reassure students that there is a role for everyone in a community of learners.

6. We require everyone to join a group.

Classes that require group projects or presentations usually require everyone to join a group, even though, for some students, their commute, off-campus job or class schedule may prevent them from participating effectively in a group. I believe in the value of group work and justify it by telling students that few jobs in the "real world" allow us to sit at a desk and work alone. However, I now realize that the workplace differs from the classroom in one important respect: the workplace has a captive audience, everyone on site and accessible (physically or virtually) all day, all week. Students' lives and schedules are often on different tracks, their abilities are wildly divergent, and they encounter real, practical challenges in pulling group projects together.

I now limit my mandatory small-group work to in-class exercises and give students a choice when assigned out-of-class group projects. Students who opt to work in a group understand, up front, that they will all receive the same grade, no matter what level of effort is contributed by each—the "no crying in baseball" approach. The team sinks or swims together, benefits from members' multiplied energy and talents and works out its problems when they occur (with my help or not). What they cannot do is whine afterwards if someone did not pull his or her weight. Students are advised to choose their team members carefully, to assure a good fit in terms of schedules and commitment; so far, this approach has produced excellent results.

Students can also work independently or with one partner if they do not want to work in a group or do not have a schedule conducive to after-class meetings. Commuters, in particular, appreciate this option, which respects the fact that they have a different set of needs. In one class, two commuting students were working independently until they kept seeing each other in the library, realized that they had the same schedule and work habits, and decided to work together.

Finally, technology can play an important role in facilitating online student "meetings" when schedules conflict, and can be offered as an alternative to the traditional, face-to-face model.

7. Like umpires, we tell students "three strikes and you're out."

Some faculty warn students that if they are absent a certain number of days—three, four, five--they will receive an F for the course, unless they withdraw. This policy reflects a bygone era when college was a choice and not a

necessity, coursework was considered the student's primary "job," and most students graduated from one college in four years. Times change and the reality today is that students often have other priorities that compete for their time and commitment.

I record absences and emphasize the importance of regular class attendance and participation, not only for the absent student but for those who come to class and are faced with empty seats or missing group partners. But getting back to the top of this list—self-discipline and responsibility—I also frame the issue of absences in terms of choice. Excused absences (doctor's note or a field trip for another class) do not count against the student's grade. All other absences take one point off the top of the student's final grade for the course, no questions asked. I use a 100-point system (paper 20 points, quiz ten points, etc.), so if a student ends up with an 88 at the end of the semester and has six absences, the grade is lowered to 82 and converted to a letter grade (B-). The system applies for any number of absences, two or 22.

This policy recognizes that we all make choices, choices have consequences, and that students are members of the class until they decide not to be.

> **It's time that we viewed diverse personality and participation styles the way we acknowledge differences in learning styles.**

All of these suggestions reflect a common theme: an emphasis on choices, personal responsibility and flexibility that creates a more resilient, adaptable classroom environment geared to individual difference. If we believe that success comes in all shapes and sizes, we can begin by modeling that ideal in our classroom policies and practices.

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Supplemental Instruction: Then and Now For a Professor and a Student.

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In the Fall of 2007, we implemented a program titled Supplemental Instruction to address class performance in an introductory economics course at Western New England College. The Supplemental Instruction Program recruits undergraduate students to supplement an instructor's delivery of course material. At larger, research institutions, professors are familiar with using graduate students to assist in the delivery of course material. However at smaller, teaching schools, administrative officials usually boast to potential students that all classes will be taught by professors and not graduate students. The Supplemental Instruction Program does not intend to replace the work of an instructor, but rather serve as a complement to the "regular" course delivery. In this article we describe the program, its implementation at Western New England College, and the lessons we learned that might assist those participating in the program in the future (these experiences are featured in a paper presented at the 16th Annual American Society of Business and Behavioral Sciences Conference.) We also include an update on how this program has impacted the teaching and learning of both the instructor (Michael Enz) and the (then) undergraduate student serving as the supplemental instructor (James Tierney).

Supplemental Instruction was developed by Deanna C. Martin, Ph.D., at the University of Missouri, Kansas City in 1973. The program was developed to provide a valuable learning resource so students can increase their level of understanding in courses that students typically find challenging. Supplemental Instruction provides students with an alternative way to learn that complements the regular class meetings with the professor. In addition to lectures in the traditional classroom setting, meaningful discussions are held several times per week to encourage a more personal connection to the material and to provide an opportunity to stress key ideas.

During these discussion sessions students are able to ask questions directly to the supplemental instruction leader—an upperclassman that has performed well in the course. Having taken the course recently, the session leader can relate to the students and provide information on effective study strategies and tips to handle the difficulties in the class. The supplemental instruction leader not only holds these discussion sessions but also attends all lectures to fully understand the exact materials covered in lecture. By attending lecture and meeting with the professor the supplemental instruction leader has more than enough resources to provide the additional help needed for students struggling in the course. In addition, sessions were held during times that would work for the students in the class, hoping to capture the most students.

The Supplemental Instruction Program serves three main purposes in traditionally difficult courses—especially those with significant numbers of students receiving a "D", "F" and/or who withdraw from the course. The first is to increase retention. This objective is tracked by observing withdrawal rates for this course with and without the program. The second objective is to improve student grades in these courses. This objective can be tracked by observing average grades in the courses with and without the program. Finally, the third objective is to increase the graduation rate of the students. For the purpose of this paper, this objective cannot be empirically tracked; however, there is some anecdotal evidence. Seeing as many of the courses that are targeted by Supplemental Instruction are those needed to graduate, the program is a key resource in retaining students not only in the class but in the school as well.

During the 2007 – 2008 academic year at Western New England College, Michael was in charge of teaching two sections of Introduction to Microeconomics during the fall semester of 2007. In addition to being able to track statistics on grades and withdrawal rates, we also conducted a survey to gather anecdotal evidence. We also decided to hold several informal interviews with students who chose to participate at least once in the supplemental instruction meetings. Through these interviews we were able to ask several questions regarding the experience that the students had in this program. From the statistics and the interviews we learned that students performed better if they went to the supplemental instruction meetings, the overall class grades increased, the level of class discussion increased, and the withdrawal rate decreased[1].

One of the more important aspects of the program

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[1] There is a more complete discussion of the results in the author's 2009 paper, "How to Effectively Use an Undergraduate Teaching Assistant in an Introductory Level Economics Course," presented at the 16th Annual American Society of Business and Behavior Sciences Meetings, February 19 – 22, 2009.

that might be overlooked is promotion of the program. Both the faculty member and the student need to project a positive image of the program and stress its past successes. If the people who are in charge of implementing the program cannot present a positive image and thereby convince students that the sessions will be worth their time, then they cannot expect the students to participate. We made sure we promoted Supplemental Instruction as well as we could and avoided an approach that could be construed as simply running this program because the college wanted us to.

> # The program is a key resource in retaining students not only in the class but in the school as well.

Making sure the supplemental instruction leader is prepared for the session is essential in making the program work. The first way we accomplished this was by having weekly meetings between the leader and class instructor. During these meetings we discussed the topics of the week, what the students should be learning and how the material would be delivered during the week. Second, each time a homework assignment was issued to the students, we met to discuss the answers to the homework and the typical trouble spots that students had with the associated material. Finally we had James attend every lecture to see how the material is delivered. Thus, James was able to know exactly what to concentrate on when going over the material in his sessions and could provide alternate examples for the same material.

As the Supplemental Instructor, you cannot run the session as a lecture. Doing this makes the students feel like it is just a duplicate of what the professor is doing. Finding new, innovative ways to relay the messages of economics can be challenging but the payoffs are well worth it. Many times we would meet at the beginning of the week to brainstorm different ways to run lectures and the Supplemental Instruction sessions so we did not repeat our approaches. We also spent some time creating worksheets and group work assignments to use during the sessions. Once again, the sessions provided instant feedback regarding the information that was just presented in the lectures and we could easily identify the material the students in class were understanding and the material they were failing to understand. Finally we think it is important that a leader be willing to respond to some students' questions by admitting that he does not know. It is much better to not be able to give an answer than to give the wrong answer.

It is undeniable that the Supplemental Instruction Program presents additional time commitments from the primary instructor, ceteris paribus. This may appear to be a stumbling block in implementing the program. However, we would argue that even if the program does require more time, the increase in student learning is worth the time. In other words, this particular initial investment of time has far greater benefits than costs. We can separate the student learning into two categories. First, students perform better on homework assignments and exams. Second, students participate more in the class lectures after attending the supplemental instruction sessions. In fact, the overall impact on the primary instructor's time may not be an increase. It is true that you have to spend more time meeting with the supplemental instructor; however, when students attend the sessions they are less likely to attend the primary instructor's office hours. Depending on the magnitude of the two effects, an instructor might actually see a decrease in the amount of time spent on the class.

It has been a couple of years since our experience implementing the program, and the lives of both the instructor and student have changed. Michael Enz has since left Western New England College and is teaching at Framingham State College. James Tierney is now a Ph.D. student at the University of California – Irvine. We both would like to share how the program has affected our learning and teaching over this time. Michael provides the viewpoint of how the program can help a professor and James provides the viewpoint of how the program can help the undergraduate student.

Michael:

Even though I have not used Supplemental Instruction since leaving Western New England College, I think it has made me a better teacher. Both in my

office and during class, I ask students to help explain how they learn a particular topic in the hope that other students will hear the material in a different voice (like they would with a Supplemental Instructor). I also spend more time encouraging students to work with each other and to seek assistance with the peer tutors that are provided by the school. This program helped me realize the important role that students can play in helping each other learn the material. Prior to using the program, I was relatively hesitant in encouraging peer assistance; instead I urged that students get assistance from me.

Using the program has also changed my delivery of class material. I use more group work projects in class to promote learning from one another and getting the students used to explaining their answers. Finally, I am a lot less hesitant to collaborate with students on research projects. Through our work together in the program, I learned that students have a lot more interest in working on research projects than I thought. I now routinely mention the projects that I am working on and solicit assistance in the classes that I am teaching.

This program was a success for both the professor and the student. The following is the viewpoint from the student, James:

Since coming to the University of California — Irvine, I have continued to use the skills I developed as a Supplemental Instructor. The main way that Supplemental Instruction has helped me in my program is it has given me the experience necessary to become a very effective Teaching Assistant. The university does provide a very brief training session on how to be an effective Teaching Assistant but it did not compare to the knowledge I gained participating in the Supplemental Instruction program. I was able to bring alternative ways to teaching my students during discussion sessions because of this experience.

My time as a Supplemental Instructor has also helped me with my communication skills with professors. Prior to participating in the program, my communication was limited to the typical student/professor communication in the classroom. Michael made it easy to go to him with questions about teaching, and my experiences have helped me understand what to ask a professor as I help students understand concepts. I have been awarded a lecturer position this upcoming summer and I cannot wait to be on the other side of the coin as I have my own Teaching Assistant reporting to me. I think I am better prepared to mentor my own Teaching Assistant because of the experiences that I had in the Supplemental Instruction program.

The Supplemental Instruction Program was started to address student performance in traditionally difficult classes. This program was implemented at Western New England College in 2007 and used an introductory microeconomics class as one of its courses. The authors found the program to be highly effective at increasing student performance and lowering withdrawal rates. Within this article, we have provided advice if you are

> **Both the faculty member and the student need to project a positive image of the program and stress its past successes.**

considering implementing the program and how the program has affected the authors over the last couple of years. The program not only assisted the students who were enrolled in the course, but also the teaching and learning of the faculty member and student as they move forward in their careers.

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Measuring Transactional Learning Across Several Dimensions

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"How do I teach thee; Let me count the ways." Just as Shakespeare stipulates of love, so must we stipulate of teaching and learning. Even before Howard Gardner (1983; 1993) made us aware of the different and unique ways our students learn material, we had various taxonomies of knowledge. The existence of these taxonomies tells us that we can know something in more than one way. What opportunities could we be missing if we continue to assess our students in the same uni-focal manner by which many of us were assessed as students?

To illustrate this point I have used an example of categorical knowing in a class titled Seeking Meaning. The example, which uses a book plate taken from an older zoological manual in the Darwinian vein, pushes the students' conceptualization of the process of knowledge. Featured on the plate is a depiction of a striped creature with large jaws and sharp teeth. We discussed how to classify this creature in light of its stripes and also its elongated jaws, much like a dog's. But then we also had to consider its pouch. Can you imagine the difficulty for an 18th century Western European mind to know and understand the marsupial named Tasmanian Tiger? What else do we not know because we have yet to discover a category in which to fit it?

What limitations do we impose on our students' capacity to grow as knowing beings because we are limiting the categories within which we assess them? The point that I am driving at is that if we want our students to think and know in various and creative ways, we need to provide them active learning opportunities that cause them to branch out and explore new methods of encountering ideas in new learning environments. How much more could our students come to know if we enable them to demonstrate their learning capacity along multiple avenues of assessment?

I have used a multi-part project in a social justice class that allows me to assess a number of learning outcomes while engaging students more directly in a "content of understanding" rather than a "content of information." The project centers on poverty. I could lecture my students about the scourge of poverty and inform them how terribly it affects families. I could bombard them with unassailable statistics, and I could require them to regurgitate memorized statistics to me on an exam. According to Miller and Seller (1990) this would be *transmissive* learning, in which a body of information is transmitted to the students who in turn retransmit it. I prefer the regurgitation terminology that I picked up from a 6th grade lesson on Herring Gulls. These seabirds

ingest a slightly gross product and re-transmit it to their young as an even more gross product. I hope that imagery sticks with you enough to dissuade you from relying on transmissive-only learning strategies.

Miller and Seller put forward two higher forms of learning. The first is *transactional* and involves learning through interactive "transactions." Most constructive and group projects use this format in which two or more aspects of knowledge are brought together to reveal new knowledge. Group work achieves this well where students are guided into a synergistic collaboration. Prior to initiating this project my students have usually been working in groups to determine short answers to problems I set before them each class session, so they know the most important requirement of group work; they are being held to the fire. I trust that the the task I set before them may be answered; I don't faint at the deer in the headlights look they initially try on me (sometimes every single group session); and I trust them to come up with some intelligent response. I once read that in business negotiations, after the deal is placed on the table, the next person to speak loses the upper hand. The same thing goes with group work. After you set the task before your students, don't back down before their bewildered looks. If you do, they will retain the bewildered stance to the detriment of their education. If you hold your ground long enough for them to ask specific questions (not: "Wait, what are we supposed to?"), you have engaged them; the transactions have begun.

The second form of learning identified by Miller and Seller is called *transformative* learning, in which you transform the way students see themselves and the world on an intellectual, moral, or even spiritual plane. This part is not so easily achieved, and is also a challenge to assess. Sometimes the transformation is not fully realized by the student until sometime after the exercise is complete. My recommendation is that you shape projects that allow for transformation but assess for *transactional* capacity, observed by the expression of student ideas.

So how do you set up a series of transactions that also remains potentially *transformative*? I begin with a detailed, step by step, description in the syllabus. I include grading rubrics to which I refer the students often. At the start of the project they are asked to envision a (hypothetical) person or family unit of their choice. This step allows each group to be unique. Most avoid a single person and select intact families or single parent families. My primary requirement is that the family unit be subsisting at or near the poverty line for the Central

Massachusetts region. Beyond that they have plenty of leeway in deciding what their family's situation will be. They determine what sources of income are available to which family members, just so long as the total comes out at or near the poverty line. They also determine additional information, like where the family lives and what other challenges they face. They can identify their family's ethnic or cultural background, which usually opens a larger class discussion on stereotyping. The positive and generally achieved result is that no one is working with an "all x-people are poor" mentality, while any notable ethnic or cultural identities tend to reflect the dominant ethnicity or culture of each group. From a social justice standpoint, the ability to identify one's self with the poor is not a detrimental factor.

How do you envision an impoverished individual or family without objectifying actual people? One way is to do it on paper. The groups are required to carry out online research to find a home for the family. Some find low income or Section 8 housing, and others find low cost private housing. They can often take a cyber walk through the neighborhood using mapping websites. This allows the students to recognize services available and not available in the vicinity. They also determine transportation needs and costs. When it comes to developing a budget for the family, it is not surprising when some groups realize there is not enough money for things like car insurance, registration renewals, or even gasoline.

Part of my ability to assess student work is achieved by requiring a bulk of the information to be gathered during assigned in-class periods. Most groups manage to come up with a laptop to do online research, and others take turns using the computer in the class. They draw on the obtained information to fashion a budget with an annotated information list. This list tells me where information was obtained and who obtained each item. It is not unusual, nor unacceptable, to include anecdotal information where direct information is not readily available. One student, whose sister was a single-parent of three, going to school fulltime, and with a part time job, was able to determine how much support was available from food stamps and school lunch programs. Other students were more than willing to pull out their cell phones to make direct contact with service agencies.

Creating a budget and an information list was no simple project when done to standards, but it was not enough. Students balked most at the primary assessment vehicle. They had to create a short play showing the nature of the family's situation in a dramatic way. The play had to include every member of the group in a speaking or acting role. The group had to provide a script with stage directions, and the play had to be presented to the class, although some of the most effective groups opted to provide a digital film. Even though I experienced the most friction from this aspect of the project, it was also the aspect they seemed to enjoy the most. There was a great deal of fulfillment in the public presentation. To bring this part of the project to closure and bridge to the second phase, each student had to research services available from the Catholic diocese of Worcester and analyze what new services could benefit their family that might possibly be provided by the diocese. This material was worked into a paper that was assessed on relevancy of research, connection with the envisioned family, and expression of ideas in writing.

The service analysis paper also initiates the second part of the project. Students returned to their groups and combined their analysis to fashion a services matrix, placing family needs on one axis and diocesan services on another axis. Where a need did not correspond with a service, students were able to identify potential program development opportunities. From this they could determine what kind of program their group could most reasonably design, which was their next task, at least on paper.

The groups had to calculate all the requirements and costs for a new program or an existing program expansion into a new area. They had to work this information into a grant proposal, a values statement, and a mission statement. Internet research was more than abundant in support of these activities. The summative exercise that brought this exercise to a close was a group presentation of the grant proposal as if it were before the board of a grant offering organization.

There were no shortage of transactional moments during the phases of this project, and at very the least, most students transformed their perspective of the working poor. One of the primary learning objectives in any social justice course is to get students to realize that Social Justice is not a matter of an episodic redistribution of wealth under the title "charity." Instead, justice is achieved through changes in the structures that limit people's capacity to survive and thrive in life. By identifying and giving shape to a program that changes structures on behalf of some of our most challenged neighbors, students are able to meet this objective as the result of a series of hands-on, group learning transactions. Beyond this, they engage in careful thought about the nature of a society and its obligations to the most vulnerable members; they practice expressing their ideas through a variety of media; they connect group or organizational values with project outcomes; they use real-life quantitative reasoning; they are introduced to non-profit organizational practices; and they develop professional skills while coming to recognize their responsibilities as leaders in society. To top it all, with a good grading rubric, assessment of student learning outcomes has been one of the most fulfilling assessment experiences of student learning outcomes in which I have ever engaged.

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