Boot Camp 2007 —Educating in Fractal Patterns
Exercises in Introspective Reflection

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Module 1 – Development of Introspective Reflection

We recognize ourselves as educators, but what does it mean to become educated? The results of education are not merely what students gain in content and skills, but more importantly what students gain in their ability to think. Bringing students to mastery of content and skills is challenge enough, and mentoring them to higher levels of thinking —the intellectual and ethical development deduced by William Perry—is far more difficult. We can achieve some goals and certain outcomes through our own efforts, but others we cannot achieve through anything less than a curriculum that is well planned and coordinated with our colleagues. Faculty development provides support to succeed in those efforts.

When I first attended faculty development workshops at POD, AAHE and Lilly over twenty years ago, I was fascinated by the variation that existed between institutions in support of faculty to succeed. I was extremely grateful for the exceptional training workshops that were provided at each of these events. The first "Boot Camps" in the early 90s focused on bringing such workshops to faculty in an intense retreat setting. Soon, we began to realize that as good as workshops may be, they are still isolated workshops that provided no central unifying framework for practice. In the mid 90s, we conveyed the importance of an operational framework through the concept of "teaching systems." This meant that an individual constructed her/his own system based upon recognized interconnections between course products, lessons and a sophisticated teaching philosophy. A successful system manifests when a sound philosophy is enacted with consistence through every action of our teaching. Further, a system contains specific self-tests and benchmarks that allow us to monitor the consistence of application. A teaching system is a close parallel to the concept of instructional alignment proposed during the early 80s and now achieving prominent emphasis in higher education. That approach brought forth more successful outcomes than any program of isolated workshops had done. Before one can "think in fractal patterns," one needs to develop at least a crude personal teaching system.

Over time, however, we realized that even an emphasis only on success in one's own classroom was not enough. The research on how the brain changes through learning, and the research on critical thinking confirmed that no individual could produce certain outcomes through any single course. "Critical thinking," which is something of a holy grail for educators, seemed to be occurring in a few schools but not in "critical thinking courses" that we hoped might deliver the grail. The research told us why—simply that a single course designed to elicit high level thinking does not occur over sufficient time or within a context needed to produce the neural network necessary for the highest levels of thinking. For this to occur, it became obvious that any teaching system had to be practiced at unit levels--ideally through a curriculum of several courses that was purposely designed to produce high-level outcomes. It did not take huge change to begin thinking of applying a teaching system at a different scale. At we began thinking more adeptly in scales, that thinking became very analogous to the understanding of complex systems in nature. These complex systems in both shape and time had an order in apparent chaos, and it

was order seen in a branch of mathematics termed "fractals." Thus we began to see that "success" in the educational profession that involved teaching, learning and thinking had some recognizable character of order, just as did other natural complex systems. In the Boot Camps of the late 90's and early 2000's, we began to stress that educational efforts could be made effective at all scales from lesson to curricula if one kept in mind the order within. This perception was certainly aided by being able to think rapidly between varied scales-- to think of education that actually occurs in terms of fractal patterns.

Faculty development, at its best, involves getting each faculty member to consider what it is she/he most wants to do, and then helping that faculty member to fulfill her/his own aspirations. The central reason for doing introspective reflection is that, as teachers, we will never be truly satisfied until we actually do what we most want to do. Good development never involves telling any faculty member how to teach or what to teach, because this will result in the unsatisfactory saddling of the faculty member with the aspirations of others. What development and "Boot Camp" should do is to widen the possibilities of aspirations brought by opening new choices. We should judiciously select those options that best fit what we want and need to accomplish. With rare exceptions, most of us have never taken the time to have the conversation with ourselves that is required to deduce what our values really are, how we obtained these values, and whether what we are doing now is actually what we most want to do. We teach best by making the informed choices that enable us to do exactly what we want and to avoid producing results we don't want. When students learn something new, they construct new understanding by building upon acquired skills and experience—so do we. If we are going to use our week to make the changes that better enable us to do what we want to do, we really need to start by understanding what acquired experiences have already been most influential in the decisions we have made.

Therefore, the first module of reflection provides a guided experience to bring about the required conversation with self. Insights will arise from this reflection, and these insights are both profoundly important and continually negotiable. "Negotiable" means that a day, week, month, or year from now, your reflections back on these insights may indicate new or changed priorities. The single caveat is that it is important in any such negotiation to make such changes based only on what you most want to do, not on what you are merely willing to settle for. The latter choice will simply throw you back into the practice of doing something other than what you want to do.

An interesting way to start is to get a profile of where we are now. A convenient tool to see some priorities that concern the issue of our present aspirations is provided by Tom Angelo and K. Patricia Cross through the University of Iowa's Center for Teaching at http://www.uiowa.edu/~centeach/tgi/. Go to the above web site now, complete the *Teaching Goals Inventory* and print out your results. Keep the results, bring these to Boot Camp, and consider the *Teaching Goals Inventory* as a tool capable of eliciting an expression of some of your important aspirations. The survey is only a good start; we want to reflect on the journey that caused you to make particular choices in the inventory.

The responses to the queries below are important because ultimately they form the foundation that will help you to actually do what you most want to do. These are "big picture" items. You might want to refer to your answers in the *Teaching Goals Inventory* periodically as you

formulate your responses. You can choose to change your goals or remain guided by them at any time.

Give the next two items some thought. You may want to spend a couple of days reflecting here. Once you have given these issues sufficient thought to provide a clear response, produce responses, preferably in a word processor, save the files and print the results.

1. Reflect on your choice of career, and express why you gravitated originally, toward becoming a university professor. Consider what generated the greatest enthusiasm for you, and what provided the core attraction(s).

2. Consider your present status and situation, and note any contrasts with your reflections in "1" above. What changes, if any, have occurred? Don't look for causes -just note "how things are;" consider what gives you satisfaction at this time and how that compares with when you began.

Module 2 Introspective Reflections – Origins

Most of us don't get pedagogical training; we get our initial ideas about good teaching based upon our perception of experiences that worked for us when we were students. This leads to a common default: "to teach as we were taught." Hopefully, each of us had inspirational role models in teachers, and they probably influenced both our initial aspirations to teach and how we initially taught. Their influence may still be very great, even after we have taught for decades. You will now investigate origins of your perceptions of "good teaching" based upon a particularly influential teacher.

Recall an influential teacher who had a positive impact on you. As you form this memory, recall the setting in which the most vivid memory took place. Below are some key words that others have used to describe their influential teacher. Pick only three that most apply to the memory of your former teacher. If you know better terms that apply, write these in under "other" in the final three entries. You may want to take some time in your consideration.

SOME KEY WORDS

- ❍ accessible
- ❍ adventuresome
- ❍ approachable
- ❍ authoritative
- ❍ available
- ❍ balanced
- ❍ caring
- ❍ challenging
- ❍ clear
- ❍ committed
- ❍ communicative
- ❍ competent
- ❍ concerned
- ❍ creative
- ❍ dedicated
- ❍ demanding
- ❍ dignified
- ❍ disciplined
- ❍ eccentric
- ❍ effective
- ❍ encouraging
- ❍ energetic
- ❍ enthusiastic
- ❍ exciting
- ❍ expressive
- ❍ fair (just)
- ❍ focused

- ❍ friendly
- ❍ fun
- ❍ helpful
- ❍ humorous
- ❍ inspiring
- ❍ interesting
- ❍ knowledgeable
- ❍ motivating
- ❍ neat
- ❍ nurturing
- ❍ organized
- ❍ patient
- ❍ personable
- ❍ prepared
- ❍ professional
- ❍ research - oriented
- ❍ respected
- ❍ respectful
- ❍ rigorous
- ❍ stimulating
- ❍ student - oriented
- ❍ understanding
- ❍ warm
- ❍ _____ (other 1)
- ❍ _____ (other 2)
- ❍ _____ (other 3)

In what setting did your most memorable experience occur? Select the option below that best describes the setting.

❍ In a K-12 environment
❍ With a parent, relative or friend
❍ In a small (less than 30) class environment in college
❍ In a large class environment in college
❍ In college at some site outside the classroom
❍ Other not covered above

In the space below, describe the setting, your teacher, and the feelings you had at that time.

In the space below, describe why you think this particular moment was the one that you recalled.

Do you believe that your teacher present at the event you have just described realized that this moment was of such importance that you might recall it years later? Why or why not might that have been the case? Give your best analysis to these questions in the space below.

Finally, consider the effects of this memory and how it might have influenced the way you teach or work with students today. Please provide your best analysis of this influence in the space below.

An optional assignment: If the teacher you recalled is still alive, go to http://home.netscape.com/netcenter/whitepages.html?cp=hop11hs8 and find the address or email of this mentor. Send her/him a thank-you note or card. After completing the above exercise, you won't be at any loss for words. This is one of those rare chances to repay your very memorable good moment. You can bet that person will remember this as one of their richest moments!

Module 3 – Introspective Reflection -Who we are and what we want

In the past module, we explored the influence of our influential mentor. Now we are going to go through a parallel exercise for ourselves.

In the future one of your students may recall you, in an exercise similar to Module 2, as an outstanding mentor. What 3 key words would you <u>most</u> like them to use for their memory of you? Repeated again are the same list of key words. Pick only three by shading the bubbles that you deduce correspond to the terms that capture your most dearly held traits. If other terms apply better, write these in under "other" in the final three entries.

SOME KEY WORDS

❍ accessible
❍ adventuresome
❍ approachable
❍ authoritative
❍ available
❍ balanced
❍ caring
❍ challenging
❍ clear
❍ committed
❍ communicative
❍ competent
❍ concerned
❍ creative
❍ dedicated
❍ demanding
❍ dignified
❍ disciplined
❍ eccentric
❍ effective
❍ encouraging
❍ energetic
❍ enthusiastic
❍ exciting
❍ expressive
❍ fair (just)
❍ focused

❍ friendly
❍ fun
❍ helpful
❍ humorous
❍ inspiring
❍ interesting
❍ knowledgeable
❍ motivating
❍ neat
❍ nurturing
❍ organized
❍ patient
❍ personable
❍ prepared
❍ professional
❍ research - oriented
❍ respected
❍ respectful
❍ rigorous
❍ stimulating
❍ student - oriented
❍ understanding
❍ warm
❍ _____ (other 1)
❍ _____ (other 2)
❍ _____ (other 3)

You may want to take some time in your consideration. This is no trivial exercise, because through these thoughts you are actually beginning to express the kind of teacher you want to be; they will influence what you want to do. When you have a true teaching system, you will use your core aspirations to deliberately influence every action you take and every course product you construct. It is important that you minimize doing and/or creating anything that will lead you to a result you don't aspire to achieve.

You have selected the words that best describe the traits you want to exemplify. (Did any of these duplicate any key word you assigned to your mentor? If so, it confirms how much that mentor's influence lives on in you.) Next, you are going to look at your primary aspirations for the learning outcomes that you want, once again from the broad perspective of the "big picture."

Select a single course—the one represented by the syllabus you'll bring with you in June to the Camp.

Consider <u>only</u> that single course. Write the name of the course in the space below, and follow that with a listing of three phrases that capture the three most important learning outcomes that you wish for your students from that course.
COURSE NAME--

1.

2.

3.

If you had trouble in discerning three primary outcomes from a list that you feel included other <u>indispensable</u> objectives, type the name of the course in the space below, and follow that with a listing of the objectives in the text space below.
COURSE NAME--

We have academic freedom, but we also have responsibilities to our departmental, college and/or university units. There may be particular learning outcomes for this course expected by these units, especially if the course is required as part of a general university requirement or required for a major or minor in a discipline. The situation should never exist in which any course is required, but its educational justification cannot be stated in terms of both learning goals and intended learning outcomes. If any learning outcomes exist under the category of unit level responsibilities that you have not addressed already in the responses to 2a and 2b above, add again the course name in the space below, and follow with a listing of these additional unit-mandated responsibilities.

If your course is required by a unit, but you can find no written educational justification specified in terms of learning outcomes, a conversation at the unit level is clearly needed to identify the outcomes and specify these in a written document.

When professors teach any course, most certainly have outcomes in mind that they want for their students. However, instructors seldom specify the learning outcomes they *want for themselves* as result of teaching the course. Specifying some outcomes you want for yourself is far from a selfish act. Instead, clarifying these in writing will insure your growth and thus your enthusiastic participation in a class. These outcomes can take a variety of forms. They could include greater content mastery in a particular area in which one feels less adequate, but great benefits may also result from addressing an area other than content knowledge. One may resolve to learn how to teach a particular unit through an unfamiliar non-lecture approach; one might resolve to become more patient with students or to know each student well enough to appreciate each as an individual learner. In whatever goal we choose, by identifying our own desired area of growth and making sure that we pursue it, we insure that we improve in some way each time we teach the course. While course material may become so familiar to us that it becomes stale, insuring growth by varying what we do with the material and with our students can insure that a course will always be fresh and inspirational for us. Having our own desired learning outcomes is a way to keep us sharp.

So finally, for the same course you have been dealing with, draft two phrases that capture two major outcomes you desire for <u>yourself</u> as result of your teaching.

COURSE NAME--

1.

2.

In these three modules, we have formulated the most critical foundations for our own teaching philosophy—why we entered our profession, how we obtained our present ideas about good teaching, what our core values are, what learning outcomes we want for our students, and how we next plan to grow ourselves. A <u>sound</u> philosophy contains the personal core tenets we hold dear, and material based on an awareness of the literature on the pedagogy and assessment of teaching in higher education.

A sophisticated philosophy is the essential blueprint that enables one to build a teaching system. No two systems are alike, nor should they be. Writing a philosophy is a relatively easy exercise in comparison to enacting that philosophy in practice. At the individual level this introspection should help you to articulate: "What outcomes do I want, and why?" Once this is formed, the rest of the camp should help to supply answers to "What are my best ways to achieve these?" and "How can I know the degree to which the students have reached these?" The week of our Boot Camp involves development of actual products that will produce answers to such questions. This awareness enables us to select from a variety of sound choices that ultimately best fit our aspirations. A teaching system conveys a sound, sophisticated teaching philosophy to both students and peer reviewers.