Approaches to Learning and Teaching: Some Observations.

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> "Teachers don't teach,
>
> but students learn."
>
> *Jacob Neuhauser*

Introduction

College professors often say that their goal as teachers is to assist students to think for themselves. One way to do that is by taking note of the growing body of research into teaching and learning in higher education. After all, approaching teaching in a scholarly way, mindful of recent research, making decisions based on evidence, seeking feedback systematically, and the like, parallels the approach we take as researchers. Thanks to Ernest Boyer's *Scholarship reconsidered: priorities of the professoriate* (1990), this approach is widely known as the scholarship of teaching and learning.

These pages offer a survey of theoretical and empirical findings in the scholarship of teaching and learning, outside the United States. The focus is on elements that have immediate practical implications for the classroom in humanities and social science. Some findings confirm common practice while other findings spotlight alternatives.

What do students and teachers say about teaching and learning? Both usually describe a good class in pretty much the same terms. More often than not, students and teachers say they want active experiences on a high level. Neither wants passive and boring sessions where the inert hands of the clock droop like a Salvador Dali painting. Teachers say they want students to be responsive, and students say they want classes to be lively (Jackson and Prosser 1985; Jackson and Prosser 1989; Jackson 1990; Booth 1997; and Jackson 2006a). Despite this common ambition, students and teachers do not always find that classes work that way.

Students in political theory, as in many other fields, require conceptual change and growth. In practice, with a teaching load to manage and other commitments, it can be tempting to approach teaching as information presentation and transmission, an administrative conception of teaching (Svensson and Högfors 1988). Sometimes this kind of administrative teaching just does not result in student learning.

Student learning goes well beyond completed assignments and grades to conceptual growth and change in the way students think. Student learning happens when the concepts students use to analyze arguments and phenomena enlarge and change. At the start of a course on utopia, my students make maps of the concepts they associate with utopia (Novak 1998). Their responses are largely predictable at the beginning, and they are relatively sparse, but by the end of the semester they have developed a much larger, more complicated, set of

conceptual relations. Of course, there is variation among them on the degree of change and the success with which they master this change.   There is also individuality along with much common ground that is now better understood.

Why spend precious time reflecting on teaching or seeking evidence at all? Why not just get on with the job? Commendable as that focus is, first, we do have evidence that there is teaching-without-learning, that not all students grasp the fundamentals we teach even in the most well organized lectures. Teachers often speak of their frustrations with students (as students do of teachers). Even academically successful students, who can spot a faulty argument in a classroom, do not think as critically outside a classroom. For example, many economics graduates believe that production costs determine price, while economists refer to the higher law of supply and demand (Saunders 1980; Dahlgren 1984). Howard Becker (1968) says sociology students likewise retain naïve misconceptions. In another example, the short film *A Private Universe* (Schneps 1988) shows Harvard University science graduates explaining the change of the season by the Earth's proximity to the sun rather than to the tilt of its axis in stellar orbit. I know that my own students understand Thomas Hobbes's compelling arguments against the destructive power of opinion, but when they discuss contemporary politics, it is all a matter of opinion.

The Administrative Approach to Teaching

The administrative approach to teaching emphasizes order, validity, and coverage of the material presented to students. If students take accurate notes and study the PowerPoint slides posted on the web site, the information has been transmitted (Handal, Lauvå et al. 1990). The material moves students from like to like in small steps. This is the way Jean Piaget described psycho-motor learning (Piaget 1956). However, conceptual frameworks are not increments of each other on the same plane. Some are antithetical to others; they assume what others contest. A post-modernist says all is opinion while an empiricist cites hard reality. These two frameworks are antithetical rather than continuous. Learning to appreciate what contesting conceptual frameworks have to offer takes more than small steps. It may take a leap of faith to put aside one's own point of view to try another, and another. Information presentation cannot fill this bill, no matter how well done. Perhaps an analogy from sports helps. Learning to play different positions on a team is best done by playing those positions in practice, not seeing information presented about the needs of different positions no matter how well done.

There is no bright line between the quality of information presented and conceptual growth and change in students (Marton and Ramsden 1988). Listening to even more lectures on logic may not make the listener more logical. Rather than place all our efforts on improving teaching, we could take some time to consider how students approach learning and try to manage that.

Surface and Deep Approaches to Learning

What is the distinction between surface and deep approaches to learning? A student taking a surface approach to learning is one who strives to reproduce what the teacher does without trying to understand why the teacher does it that way (Ramsden 1988a). If I put a passage from Jean-Jacques Rousseau's vibrant prose on the screen this student will copy it down. While copying it this student may not hear the interpretation of that passage. This student assumes that if a passage is selected and screened then it must be important in itself (Ramsden 1992). Yes, sometimes that may be true, but not always. Sometimes a lecturer singles out a passage to bring the class back to the text, or to make a transition to another point, or a comparison with a different perspective, or to illustrate a common error, and so on. The passage can be a means to, not an end of, understanding the nature and limits of Rousseau's arguments and not simply to transfer received knowledge to the students' notes.

If a student adopts a surface approach, that student will focus on the signs (the passage) as discrete elements, memorize the information for examinations, and associate concepts and facts without the significance of context.   Unaware of the topography of a field of study, such a student treats everything as though it exists on the same flat surface, and does not discriminate between different kinds of meaning (assumptions, concepts, theories, evidence, and argument) but treats each as equally arbitrary. Students who approach learning as an endless series of isolated lumps of material to be remembered will also be the most likely to perceive a large workload in their study. They lack principles, concepts, or theories in which to locate these lumps.

Assignments and grades do not alone compel deep approaches to learning. Smart students using the surface approach to learning may well absorb enough information and command enough material to pass an examination. Some will boast of it. Many teachers see some of the longer-term evidence of this surface approach to learning in graduates who a few short years later can barely remember what they did in university. Please note that a surface approach to learning is not rote learning, which has a place in learning multiplication tables, verb conjugations, the Latin names of bones, and the like. Nor is the surface approach an irremediable psychological attribute. It is a tactical choice, and as such may be influenced by teachers.

In deep approaches to learning a student concentrates on what is signified (arguments and conclusion) not on the signs, and tries to apply the concepts being studied to experience, to distinguish argument from evidence, to relate and integrate knowledge from a variety of sources, and to organize material into structures with several dimensions. Of course, a student taking this deep approach may err, but this approach is the one that promises conceptual growth. If errors are never surfaced, they cannot be amended in teaching.

It is easy to blame the lack of deep approaches to learning on externalities. The usual suspects today are time-poverty identified by students and attention span deficit identified by teachers. Conversely, the argument here is that a student committed to a surface approach to learning will not go deep, no matter how much time there is, no matter how much concentration there is during that time. That is, the intention with which the student approaches a task is itself decisive, not time nor attention-span. There is ample empirical evidence to support this argument (Marton 1992; Prosser 1993). Students matched on indicators of achievement like admissions scores performed differently on interpretative tasks and those differences traced back to the stated intentions that the students applied to the tasks. In one study, students read and re-read a Franz Kafka story. They were given as much time as they needed, and they were each asked to re-read the story at least once. Students who read the story in a surface approach, trying to capture and retain detail, read the story time after time to point being able to recite it word-for-word without yet grasping its meaning. Whereas other students instructed to look for the meaning, did so (Svensson and Högfors 1988). They tried to relate the events in the story to their own experience and to see the meaning of the story beyond the detail. Instead of memorizing detail, they asked themselves why the author had written the story. It can be that simple; instruct students to test what they study against their own experience, other concepts, or general knowledge.

The tragedy occurs when bright students alive with the excitement of learning and teachers possessed by a love of knowledge meet in mutual incomprehension with one side floundering in a surface approach to learning, trying to capture and reproduce everything, and the other bunkered in an administrative approach to teaching that covers every detail. The result is a mutual incomprehension as profound as that C. P. Snow saw in the two cultures of science and the arts.

Students' perceptions of learning are shaped by previous experience, contemporary events, peers, family, the school, the degree, the discipline studied, the physical character of the classroom, the timetable, and the idiosyncrasies of teachers. Causation here is, as always, multiple. There is a great deal on that list, but its focus is the classroom, and it is there that lecturers can influence students' perceptions. Again there is encouraging evidence. Students, many of whom with no idea of academic governance, can perceive a learning environment

in a department where instructors are broadly consistent in their approach to teaching (Bain and Thomas 1984; Lizzio, Wilson et al. 2002; David 2004). And education practice and research continues to identify a myriad of techniques to use in gaining and directing students approaches to learning, like problem-based learning, internships, case studies, discovery learning and the like (Cryer and Elton 1992). There is no shortage of techniques, but the suggestion in these pages is that the application of these techniques will have greater effect if it is informed by recognition of students' approaches to learning, and if these approaches are made explicit and legitimated, so that a bright students seek meaning rather than retaining every detail.

An anecdote may assist. A colleague lecturing to a group of two hundred students carefully broke up the fifty-minute sessions into two or three parts each time. At the end of each part of the exposition, the colleague invited students to discuss the material just presented among themselves. This practice arose from a humane consideration of the length of attention space being about twenty minutes. Yet never did this colleague find out by any means what it was that students discussed among themselves in those pauses. From where the students sat, in tiers, the peer discussion was simply filler, not a part of the learning experience. Why might one seek feedback from students in such pauses? It would be one way immediately to confirm conceptions and to identify and address misconceptions. How can one get feedback from 250 students in a tiered lecture theatre? A simple show of hands in response to propositions on slides is one of many classroom techniques available. The point of this aside is that in this case the technique is sound, but it is at least partly wasted because the intention was merely to provide a pause not to capture and work with students' responses.

The one thing we have most control over is our own intentions as teachers. If our strategy is to promote conceptual change in students, then we are well advised to select teaching techniques that encourage and support approaches to learning that are associated with conceptual change.

Among the critical factors that shape students' perceptions, four stand out. They are the (1) course objectives, (2) assignments, (3) teaching methods, and the (4) workload. There is research literature on these four, which I will briefly sketch.

Course objectives are critical. If an instructor spends half an academic hour saying why this course is important, that will give students a guide for the remainder of the semester, the more so if those objectives are occasionally reiterated. These objectives may be described within the context of the course alone. Why should a student take History of Political Theory 201 very seriously if that student is not a major or a minor in political science? Why indeed? Some very good answers can be given to that question, and given they should be. The objectives can be intellectual, social, or moral; they can be the intrinsic satisfaction of understanding or the extrinsic use of clear thinking. With a set of objectives students can fix priorities, making it easier for them to navigate deep approaches.

That grades motivate students is a truism, but what may be less obvious is that one empirical study found that "the majority of students reported greater use of transformational [deep] activities for the open-ended assessment [assignments] than for the closed examinations; and conversely less use of reproductive [surface] activities with the open-ended assignments than with the short answer and closed examinations" (Bain and Thomas 1984). Grades can encourage students to take deep approaches only if the assignments are conducive to deep approaches to learning. A true-false test is not conducive, but a term paper can be. If there are pressures to teach more students and to cut costs by using more examinations, then we need a rational argument with empirical evidence that open-ended assignments lead to better results for students, not simply assert that the term paper is preferable, because it is the tradition.

Teaching methods are the heart of the matter. Autonomy and responsibility fuel those students ready to take deep approaches, and give others the incentive to try. If there is no free discussion, if there is no freedom

for students to make choices, say about what to write the term paper about or what kind of argument to make, students are less likely to adopt deep approaches to learning.

Some argue that when course objectives, assignments, and teaching methods align, they have the greatest influence (Kember, Ng et al. 1996). This is not always the case. In one department where I taught, the rhetoric emphasized critical thinking and the like, but the reality was a curriculum with set essay topics and prescribed reading lists for each topic in every course. Students wrote essays by piecing together passages from the restricted list of reading.

Entwistle and Tait (1990) interviewed undergraduate students from more than sixty departments, and found that departments with assignments that placed a premium on factual information and gave students less freedom (and thus less responsibility) led students to the surface approach to these assignments; as did another modest study (Jackson 2006b). This study compared faculty reports of approaches to teaching with data from students' perceptions of fields of study. When faculty respondents stressed the administrative approach to teaching, students described work in that field in terms of the surface approach to learning. In addition, feedback on assignments is another crucial element associated with the approach to learning taken by students in these departments. If the feedback focused on compliance to rules about spacing and the like and details of the subject, the surface approach remained, as it did if there was no feedback apart from the grade.

One implication of the discussion to this point is that it might be more effective to manage students' perceptions of the learning environment than to concentrate on special study skills sessions, essay writing workshops, yet more PowerPoint slides, more self-paced web material, and the like. There are few technical solutions to human problems. Students' "perceptions of teaching and assessment methods [assignments] in academic departments are significantly associated with ... students approaches to studying" (Entwistle and Ramsden 1983; this finding was also corroborated recently by Diseth and Martinsen 2003).

Workload includes not only assignments, though they are crucial, but also the number of contact hours, duration of the classes, length of assigned reading, and the syllabus itself. If students perceive a heavy workload, and I stress 'perceive,' they are more likely to take a surface approach to learning to manage the volume of work. We all do the same when there is just too much to do. We know this and yet there are professors who set fifteen written assignments in a ten-week quarter. Such an instructor grows exhausted reading and grading these assignments, the more so because most of them are superficial. Equally, the nature of the assignments influences students' approaches to learning. Students will study for technical examinations by concentrating on the form of the material rather than its meaning (Ramsden 1988b). They can reproduce Platonic arguments in political theory but they cannot explain or evaluate them.

Students' perceptions of the volume of work are stimulated in the first instance by the syllabus itself. If it is long and detailed, it is easy for students to conclude that the workload is heavy. Before the end of the first class, these students start the course on the assumption of a high workload and govern themselves accordingly by looking for short cuts. Teachers, who dedicate themselves to thinking of everything and setting it all out in the syllabus or on a web site, may be discouraging deep approaches in students.

The different ways – surface and deep – students approach learning emerges readily in conversation, in research interviews, questionnaire studies of student descriptions of learning activities, and in one's own observations in and out of class (Gow and Kember 1993; Prosser, Trigwell et al. 2003). Fortunately, research has identified deep and surface approaches that classroom teachers can use to good effect. Finding ways to manage that difference constructively is an opportunity to enhance learning.

Conclusion

Deep approaches to learning can be cultivated with reflective assignments so that students can think back about their own work (by revising an essay), or by comparing their work with that of peers by posting work on a web site. Deep approaches to learning can be legitimated by encouraging students to relate what they are learning in one course with work in previous or contemporary courses, rather than narrowing the focus to this course alone. Deep approaches to learning grow from encouraging students to apply what they are learning to their own lives and to consider messy reality rather than sterile thought-experiments. In sum, many classroom techniques are available and they need to be used purposefully to stimulate, encourage, reward, and enhance students taking deep approaches to learning.

Success is never guaranteed. Students who take deep approaches will make mistakes. Students who read for meaning may miss details. Students who try to interpret and evaluate material will err. But their mistakes, oversights, and errors give the teacher openings to influence the thinking of these students. Students who are content to memorize detail and repeat it, will never quite see the point of the assignments they have done, and will, more likely, quickly forget them.

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Jacob Neuhauser (1992, p. 1030) put it best: "Teachers don't teach, but students learn. Students should ask their teachers: (1) Let me discover. Don't tell me things. (2) Give advice in my terms. (3) When my work is poor, tell me how to improve it."

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