THE TEACHER AS STUDENT — AND ENGINEER

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In 1979, while teaching in a public school in Ohio, I served on a departmental self-study committee that helped to initiate the state's periodic accreditation procedure. Our staff of around ten English teachers met regularly over three months to review instructional goals and procedures.

I remember feeling that this process would provide us with an opportunity to focus critically on weaker areas in our program. Here was a chance to discuss change, a topic that

would rarely arise on its own.

My story unfolds, however, in a typical fashion. Many times those who saw the need to change didn't attend the meetings. Often any attempts to pinpoint problem areas were met with a phalanx of disapproval, or even denial. Most interesting was some teachers' refusal to even acknowledge the existence of published evidence supporting viewpoints opposing theirs. Over those three months, I became increasingly amazed at the casual, negative reactions of professional teachers toward change and improvement.

During the summer of 1982, I had the chance to work with a Texas affiliate of the National Writing Project. One goal of the NWP is to nurture in participants a respect for their own abilities as students and teachers of the writing process. On the whole, participants left our local project intellectually and psychologically changed even beyond their own expectations. They matured in their ability to teach writing, to defend their teaching, and to prompt others to do likewise. Many times I marveled at their serious, positive concern for composition instruction.

Still, even within this latter group of talented individuals, two familiar attitudes once again emerged, ones certainly not unique to teachers of writing, or maybe even to teachers in general. For educators, however, these attitudes

are especially dangerous and self-destructive.

The first is actually a symptom of the more disturbing second. Yet, like the fever common to a serious infection, the immediate symptom quickly overshadows the disease itself. When teachers gather to discuss professional concerns, their most serious disagreements with "experts" often reflect a negative attitude toward anything "theoretical." For too many teachers, theory is associated with irrelevance, boredom, impracticality, and academics. In some ways, these associations are not undeserved. Theorists often acknowledge classroom teachers only in light of how and where they fail. And failure, unfortunately, is much easier to measure than success. On the other hand, teachers rarely use their expertise to forge new syntheses between the abstract and the concrete.

To classroom teachers, theory's necessary opposite is practice. In fact, they often describe, attend, and evaluate speakers and programs solely on their "theoretical" or "practical" nature. In reality, however, the only crucial difference should be whether an idea or technique works, not whether it is classified as theory or practice. Such pragmatism has always characterized the day-to-day decision-making processes in schools. Any historical view of education reveals a discipline littered with the corpses of both bad "theory" and "practice."

Of all aspects of education, curriculum design best illustrates both poor theory and practice. In addition, it often draws out teachers' dislike for theoretical issues. One objective of the 1983 summer Writing Project was to develop a K-12 curriculum plan emphasizing persuasive writing. As a foundation, our teachers were referred to the language theories of James Kinneavy. Kinneavy's ideas serve as the basis for Texas' English Language Arts Curriculum Framework K-12 and for TABS (Texas Assessment of Basic Skills), the state competency exams. Certainly this theory was pedagogically relevant to each teacher.

To complete the curriculum guide, participants had to study Kinneavy's ideas as thoroughly as they expect students to master the content for any writing assignment. Then, to draw ideas together and to support their choice of procedures, participants had to write a short justification of each lesson.

Many quickly assumed that only certain people were able, or cared enough for the theoretical issues, to read and synthesize the material. Each group passed off this assign-

ment to a member who was "bright" enough to write it or too timid to turn it down. Yet all teachers of writing in some ways adapt assignments to serve their own special needs. An honest adaptation is like a good précis — modified, but with the *key points* left intact. Only a grasp of the basic ideas that support an assignment keeps its adaptations from seeming haphazard and inconsistent.

Teachers who grasp the foundations beneath any teaching unit are able to enrich, adjust, remediate, and evaluate what already has been done. In other words, teachers who realize how their programs have evolved possess the ability to generate relevant, consistent activities having the same instructional purpose. They often see the future so clearly because they've understood the past so well. In this sense, most teachers who wonder what "to do on Monday" probably didn't do much of anything on Friday.

Yet many teachers *choose* to remain ignorant of their own pedagogical roots. Why they do so seems to involve a deeper, second set of feelings and apprehensions, ones that members of our Writing Project expressed unconsciously to

me over and over again.

During our five-week project, many participants found themselves battling with their sudden change in status from teacher to student. Even though they experienced the main strength of the Writing Project, the camaraderie and friendship generated among all involved, they were too familiar with the environment of schools to escape the student-teacher dichotomy. One participant described her loss of authority almost as if she were a victim of assault and battery.

The important point is not that many foresaw benefits from such a modification of their normal experience. What is important is that some did not, that others will never even recognize the problem, and that educators allow the implied

atmosphere and attitudes to exist at all.

As teachers, we, better than anyone else, should be able to see the life-long nature of learning. In the past, our professional organizations have publicly affirmed the need to be exposed continually to new, more complex ideas. Yet individual teachers often use graduate courses and inservice meetings as mere instruments for higher pay and extra days off work. Most students are quick to realize which teachers see education as a profession and which see it as a job. If teachers cannot slide easily between the roles of instructor

and student, then they cannot expect their students to become both successful students and independent learners. In short, to teach well, teachers must learn well.

A true student of education recognizes the dedication, intelligence, professionalism, maybe even humility, demanded of competent teachers. A good composition teacher needs a minimum working knowledge in the fields of literature, linguistics, semantics, art, drama, history, the classics, sociology, psychology, psycholinguistics, curriculum theory, instructional theory, computer technology, English education, speech, communications, debate, journalism, and philosophy. And therein lies a contradiction.

Any competent, professional teacher demands recognition on the basis of her knowledge and performance. Also she expects to be respected in her own areas of competency. This respect is essential to a job low on pay but high on responsibility. Yet, in turn, each teacher needs to develop a humble respect for her own inadequacies, and she must resolve to reduce her ignorance a step at a time. One of our most delightful participants during this particular summer workshop was a veteran of 28 years in the classroom. Her professional status was evident at a glance, yet she attacked new ideas with a curiosity usually accorded to young children. Truly she is a teacher and a student of her art.

We could label such a teacher an ideal or an exception if her characteristics were not so crucial to the preservation of every teacher faced with 150 students, 150 parents, and a host of over-the-shoulder administrators. The importance of being teacher and student is a factor of both professional

and personal survival.

For five weeks, though, I watched many of our project's participants contend with feelings that their training, schedules, and social situations had planted and nurtured. They fought to escape the task of learning those very ideas on which they and their students were being evaluated. They lurched, lunged, sputtered, and gasped through their curriculum project. Yet no aspect of education can be or should be more the sole responsibility of teachers than curriculum design.

Curriculum design should not be confused with curriculum development. In curriculum development, teachers, administrators, subject experts, parents, students, and community leaders combine to map out goals and directions for

schools. In curriculum design, classroom teachers decide the best instructional methods and sequences for teaching each goal and directive. Thus design is the professional responsibility of teachers; we alone are entrusted with actual classroom instruction. Other professionals, especially subject experts, can provide helpful advice. However, we, as classroom teachers, should claim curriculum design as our lair, our turf, our special area of expertise. If we, as professionals, abrogate our responsibility and influence here, we deserve to be given a curriculum guide and be ordered to teach it.

Maybe the nature of teaching has never been defined well enough to give critics — or teachers — a sense of the profession's unique role in society. Many factors combine to define "teaching," but three key ones stand out. First, educators, like no other group, are answerable to a critical, ofttimes vengeful, taxpaying public. Second, teachers in general are not university thinkers who construct abstract models devoid of real faces and daily situations. However, they are responsible for the use, nonuse, or misuse of those same abstract systems. Third, competent teachers continually exhibit that strange blend of humility, creativity, and curiosity needed to amass a large amount of information, analyze and synthesize it, and spot that one vital piece or connection that will prove useful in the classroom. Such a balancing act seems more appropriate to a street-corner juggler than to the quintessential professional who operates by set standards, theories, and billing practices.

Maybe education can never be a science, nor a teacher a scientist. Teachers are too strongly tied to the classroom, a place whose complexity dwarfs even the cosmic concerns of pure science. (Who has not taught the student or experienced the situation that could rewrite the educational psychology textbook or defy the best laid plans of any tamperproof, pre-packaged instructional unit?) However, teachers do have a role model to be found in, of all places, industry.

In 1958, Jack St. Clair Kilby drew the design for the first integrated circuit. That design would lead to the silicon chip, the semiconductor that gave birth to the multi-billion dollar microcircuitry industry. It would also put Texas Instruments in the Fortune 500.

Yet Jack Kilby is firm in denying that he is a scientist (Texas Monthly, July 1982, pp. 103-109, 176-182). He'd rather be called an engineer. While a scientist is motivated

by knowledge, by a desire to "explain something," an engineer, says Kilby, wants to "solve problems, to make something work" (p. 106). For Kilby, engineering is a crea-

tive process. But then so is teaching.

Teachers can learn from Kilby's method of attacking a problem. First, even though only one piece in a million will be useful, Kilby amasses information in any area that could possibly relate to the problem. Then his thinking turns narrow, tuning out all of the obvious solutions from the start because they probably have already been tried. Any solution then rests on his wide preparation, careful definition of the problem, selected focus on the key question, and on a dash of creativity and a little luck. Yet a solution at this point has to fit one more criterion: it needs to be cost-effective.

Maybe a teacher can never be exactly like Kilby the engineer, who works in the private world of his mind and his notebooks. On the other hand, we shouldn't be so proud as to deny that we can utilize his problem-solving technique, respect his demand for large amounts of information, and acknowledge the need to be constantly aware of, if not

obsessed by, cost.

All of us share Kilby's desire "to make something work." Yet we rarely acknowledge the prerequisites, the necessary elements, the iceberg below the surface, which are crucial to actual success in the classroom. Like students in the back of the lecture hall, we often are willing to be lectured, questioned, and evaluated without insisting on our rightful place in the educational process. Ironically though, that position, that place of professional respect, can be revived by a willingness to return again and again to the front of the hall, to the role of the student who not only asks the questions, but who also independently searches for the answers, wherever they may be.

I've always been alternately enraged and challenged by the adage, "Those who can, do; those who cannot, teach." If education's prime goal is to teach students to become independent lifetime learners, then we as teachers should at least exemplify this standard in our own lives. We should be able to point to this ideal and say that we not only lead students to a love of learning, but that we also exemplify and practice that ideal ourselves. If not, our "profession" really

deserves the abuse it so often receives.

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