

Lesson In Ecology: You Can't Change The Student
Body Without Changing The System

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The theme of your conference is "The Ecology of the Learning Environment." Although the angle of many conference planners is to latch onto the latest "in" word in order to give the conference a modern look and an appearance of timely relevance, I think this theme has a more profound message.

By far the most significant trend in higher education for the past decade has been the inclusion of new kinds of students in the learning environment. As any good ecologist knows, you cannot change one factor in the environment without expecting impact on almost everything else. Just as we surrounding the San Francisco Bay did not become aware until quite recently that filling in the marshlands around the Bay would change everything from wildlife to weather, so we in education are just learning that including a true cross section of the American public in postsecondary education is having an impact on what we teach, how we teach it, where we teach it, and how we measure it. And each of these elements affects in turn each of the other elements. When we made full educational opportunity a national priority we did it naively, thinking that all we had to do was to open our doors and welcome everyone in to enjoy the same

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opportunities and reap the same rewards that accrued from a college education in a bygone era--bygone in part because of that very decision to include rather than exclude the majority of the American public. I believe that we now stand at a significant crossroad in the history of higher education. We can now look back on a system that took as its major claim to fame a truly remarkable physical growth. We can look forward to a system that will concentrate on improving the quality of learning for everyone.

The final report of the Carnegie Commission (1973) refers to the post-World War II years as the Golden Age of higher education, but I wonder if history won't find those years more akin to the turbulence of adolescence than to the golden years of maturity and wisdom. In many ways, higher education had a difficult adolescence. We experienced rapid physical growth--growth so demanding that we had little time or energy left for raising more profound questions about our future. We faced the encouraging, but still adolescent, problems of integrating parts that grew at different rates. Like most adolescents, we bumped against the problems of authority in the form of taxpayers and legislators and alumni who felt we had grown too big for our britches. We even struggled briefly with the acne of campus eruptions. Those were good years in many ways, full of the exuberance and energy and natural optimism of youth, but they were not the golden years, and I am not sorry to see them pass.

The decade of the 70's will not, I think, be the golden years either. They are more likely to be the seeking years in which we face the problems of our own identity. Who are we and what does the future hold for us?

Higher education derives its identity from three sources: some comes from our heritage; some is a product of the times in which we live; but most of our identity is a function of decisions that we make. If I do say so myself, our inherited identity is good; we come from good stock. There are not many rascals among our ancestors, no incurable heritable strains of disease, and only an occasional eccentric aunt or odd uncle. As to the identity that has been thrust upon us, we can acknowledge that we are the offspring of parents that have been considered pillars of society; people look to us for leadership in solving all manner of problems of the community. They expect us to be knowledgeable--sometimes beyond our capabilities--and they expect us to be generous--sometimes beyond our resources. For the most part, people expect us to be like the older generation of colleges, preserving their standards in the face of social change which has been rapid enough to make some standards unwise and others impossible.

There is much concern today about the preservation of academic standards. But there is considerable truth in the wisdom that reminds us that we can never return home. Standards we surely need, but the problem lies not so much in the preservation of the old as in the creation of standards more in tune with our emerging identity.

Our problem with identity is this: In the meritocratic era of the post-war years we had, or quite universally aspired to, an identity of academic excellence. And as long as the demand exceeded the supply and the egalitarian conscience of the public lay dormant, we could select students that would enhance and strengthen our image. The identity crisis came when we could no longer select the student body that created the image we wished to project. The image of the establishment of higher

education is threatened, not so much by the highly visible issues of affirmative action and civil rights, as by the relatively quiet influx of large numbers of students with poor academic records into open-door colleges--students of any color or age who are ill-prepared for traditional college study. It is this group that has forced reform and change upon the higher education of the Golden Age.

If we blow away the nostalgia that surrounds the pleasant ring of the words "academic excellence" we will discover that unpalatable truth that our identification with academic excellence was more the result of the selection work of the admissions office than the instructional work of the teaching faculty. The lesson we learned during the meritocracy was that if you start with the qualities that you wish to graduate, you will end with those same qualities if you don't do anything to destroy them. When education moved from an emphasis on selection to an emphasis on teaching and learning, it moved to charging the educational process itself with responsibility for the quality of the graduating class. We have entered an era that challenges us as teachers and counselors.

As I study various programs designed for new learners, I think I see three quite different assumptions about the purpose of egalitarian education. The earliest and still quite prevalent assumption is that equality of opportunity should lead to equality of outcome--that

if we can somehow provide the opportunity, the new learners will end up with the achievements and rewards that traditional college graduates have enjoyed in the past.

The means to this end is to provide remediation until the new learners can profit from the same type of education that has been offered in the past to selected student bodies. This mode of thought arises quite naturally from the old meritocratic concept that faculty in the academic disciplines have a right to expect that the students they teach will be selected--or corrected--until they are ready to learn what the faculty member is prepared to teach. Remedial programs today are often segregated educational ghettos with a faculty and a mission quite different from that of the parent institution.

Unfortunately, the ecologically-blind remedial philosophy which held that we could add new students without changing the learning environment was a responsibility that fell into the laps of student personnel workers. Historically it had been the responsibility of counselors and personnel deans to help students adjust to colleges. Any mismatch was assumed to be more amenable to solution through changing the student than through changing the college. Furthermore, student personnel professionals usually worked on the procedural fringes of the educational enterprise rather than in the instructional core. The Remedial Model was initially seen to be a fringe operation, permitting dramatic changes in recruitment, admissions, financial aid, and counseling, in order to protect the traditions of the instructional core. But then educational change is usually made on the fringes, only gradually does it make its way to the core of the enterprise. Thus it is no accident that student personnel workers frequently perceive

themselves as change agents. Indeed, you are. Not always, I'm afraid, because of your vision and flexibility, but because your fringe position gives you less to protect than those who operate in what a cynic might call the dead center of the educational enterprise.

The Remediation Model did and still does approach egalitarian higher education a little embarrassed by individual differences. It attempts to "correct" individual differences at the point of entry into college. This approach to academic egalitarianism is not unlike our earlier approaches to social egalitarianism in which we tried to blend ethnic differences into the melting pot. The best tactic for the ethnic caught in the melting pot approach to equality was to attempt to "pass" into the majority culture--a task considerably easier for the white or light ethnic than for those of more distinctive color.

Despite its obvious limitations, the melting pot approach was not the total failure that is sometimes assumed from today's perspective. Thousands of immigrants did pass into the majority culture, and many of us are testimony to the fact that equality can be achieved through eradicating cultural differences. But it works only for those who are close to the borderline. The Irish passed more completely than the Jews, who were assimilated more easily than the Chinese, who in turn, faced fewer problems than the blacks.

The analogy for education is obvious. Remedial education will help those on the borderline of acceptable academic achievement to pass into the standard curriculum. But there are some students--from rich homes and poor, from white homes and black, from suburbs and reservations--who cannot or will not be assimilated into the academic mainstream. For these students remediation is not the answer to educational equality. We have enough experience and enough research now to know that it is not a question of

whether remediation works or does not work. Rather, we can conclude that it works for some--to date, a disappointingly small minority--and not for others.

It is to be expected, I suppose, that counselors and faculty working most closely with remediation saw the difficulties much sooner than disciplinary faculty who were often isolated from the problems of open admissions. It was remedial counselors and teachers that began to turn remedial programs into developmental programs, sometimes in name only, but frequently in the implementation of a totally new philosophy. Developmental programs not only recognize individual differences, they value them and attempt to help students exploit their unique strengths while shoring up their weaknesses.

It is almost predictable that when educators run into difficult problems their first reaction is that the problem exists because someone lower in the pecking order failed to do their job. Typically, they sigh with resignation and decide that the problem really needs their superior talents. Thus the colleges embarked upon remedial education with confidence that they could do the job that high schools had failed to do. The most traditional faculty have now started to take over the task remedial faculty and counselors failed to do. Four-year colleges are wondering if they are going to have to do the work that the community colleges should have done and so it goes. But progress is made, and the ecological impact of the New Students has finally reached the classroom door. While the new individualized approaches that are sweeping across academic disciplines might have been introduced sooner or later anyway, I submit that it is

the embarrassing presence of so-called non-learners in college that highlighted the ineffectiveness of most classroom instruction.

When we saw that defect revealed in stark reality, we moved from the Remedial Model to the Educators Model. The Educators Model, or Model II in my saga, comes to grips with the teaching/learning process while striving to maintain traditional academic standards. It accepts individual differences as an educational challenge, permitting difference upon entry to college but attempting to devise multiple processes and treatments that will reduce or eliminate differences upon exit from college. The point is to maintain standards by assuring that all will graduate from college with similar competencies.

There are at present two major approaches to our latest frank acceptance of individual differences in learning. One acknowledges differences in the amount of time required by individual learners; the other recognizes differences in learning styles. It is the acceptance of individual differences in learning rates that is promoting innovations such as flexible scheduling, self-paced modules, and mastery learning. Differences in learning styles or preferences are recognized through the introduction of alternatives such as computer assisted instruction (CAI), the use of peer tutors and faculty mentors, and experimentation with a wide variety of learning media and teaching strategies.

These new concerns for individualizing instruction are a direct outgrowth of the search for ways to deal with the increasing diversity of mass postsecondary education. They are understandably popular answers to academic egalitarianism because they concentrate on the elimination of invidious comparisons by varying the treatment and proclaiming eventual equality for all who attain the desired level of mastery.

Model II is an important and emerging approach to egalitarian education. I doubt that it is the final answer to equality of educational opportunity, but as far as I can see, its major problem is that it does not go far enough. Like remedial education it is unlikely to bring about the equality that it promises, but no doubt it will help another group of people to pass into the academic mainstream.

The concept of mastery learning is the basic ingredient of Model II. Ben Bloom, hailed as the father of mastery learning, claims that "95 percent of the students . . . can learn a subject to a high level of mastery (for example, an A grade) if given sufficient learning time and appropriate types of help (Bloom, 1971, p 51)." The optimistic ring of this kind of statement has tremendous appeal to academic egalitarians, and there is more to mastery learning than idealistic promise. It works--for some students in some subjects.

At the level of higher education, the concept of mastery learning has been incorporated into a more sophisticated learning model known as PSI (Personalized System of Instruction) or the Keller Plan (Keller, 1968). The Keller Plan has been sweeping across the country and across academic disciplines at a phenomenal rate, especially in four-year colleges and universities. To the delight of some of us who occasionally grow cynical about the relevance of much of the content of higher education to the practical problems of today, the Keller Plan was devised by a psychologist who simply applied his academic knowledge about human learning to his teaching. An overly brief synopsis of the Keller Plan would look like this:

It breaks the material into small, clearly-defined objectives, permits each student to proceed at his own pace, requires mastery of one unit before proceeding to the next, furnishes immediate positive reinforcement, and provides for the personal-social interactions that we know are important to motivation. Research evaluations are generally positive. Students are enthusiastic, and learning and retention of content is as good or better than that occurring in conventional classrooms. Thus, there are scientific as well as humanistic reasons for promoting PSI and other derivations of modular mastery learning.

Equality through mastery learning is predicated on the assumption that while the time required for learning may vary, the final result will not. Through the simple expedient of diversifying the treatment we can proclaim equality in the outcome. But the time required for learning does categorize people into fast and slow learners, and pragmatic employers if given a choice between two equally competent people, are quite likely to give the good jobs to the fast learners and the lesser jobs to the slow learners. Furthermore, the dimension of time is as biased as any measure yet devised to categorize learners. What is perceived as equality today because it permits people to reach equal academic attainments may be seen as inequality tomorrow because some must spend five years in college whereas others may graduate in three years.

More recent than the attempts to vary the time for learning are the attempts to deal with the different learning styles of students. Although research on cognitive styles in the psychology laboratory is at least 25 years old, its application to education is quite new and frankly experimental. Researchers concerned with cognitive styles are studying individualistic ways of perceiving,

remembering, thinking, and solving problems. We know, for example, that some learners perceive the elements in a situation, processing information methodically and analytically, while others perceive the whole and take an intuitive approach to problem solving. Such learning preferences are relatively stable throughout life, and their importance to education is obvious. Herman Witkin, an ETS colleague and a pioneer in research on cognitive styles, maintains that

While relatively little research has been done compared to what is possible and needed, it is already clear that cognitive style is a potent variable in students' academic choices and vocational preferences; in students' academic development through their school career; in how students learn and teachers teach, and in how students and teachers interact in the classroom (Witkin, 1973, p 1).

The introduction of serious work with cognitive styles into higher education will unite teachers and counselors in the common goal to match student characteristics with the appropriate learning resources. Its importance to the marriage of student personnel work with instruction for student development can hardly be overemphasized. This brings me to Model III.

Model III may be labeled the Pluralistic Model for egalitarian education. Whereas Model I recognizes individual differences upon entrance to college and tries through remediation to erase such differences before the end of the first year, Model II permits individual differences throughout the college years, but hopes to certify that there are no differences upon exit from college. Model III, however, proclaims that equality and individual differences can co-exist compatibly--that learners can enter college with differences, can proceed through college in varied ways, and can exit from college with different competencies. To use the melting pot analogy, Model I doesn't care for lumps in the melting pot; if they can't be dissolved within

a year, they must be cast aside. Model II doesn't like lumps either, but it recognizes that some lumps can be melted by higher temperatures and some by longer cooking. But Model III likes lumps. It aims, not for the melting pot, but for the salad bowl as an end product; differences in texture and flavor are clear, but they work together to enhance and complement one another in the total product.

We are just starting our experiment with truly pluralistic educational outcomes. The bridge between Model II and Model III is under construction now. In its more conservative forms, it is known as the kind of nontraditional education that recognizes individualistic learning needs by proclaiming that if the lifestyles of learners cannot be adapted to the lifestyles of colleges, no harm will be done by putting some of the burden for adjustment on the colleges. To date, the majority of the nontraditionalists have concentrated on new ways of making available a rather traditional curriculum to a previously excluded clientele--mostly adults needing special consideration with respect to the time and place of educational offerings. This more moderate wing of the nontraditional party is perhaps more compatible with Model II than Model III education, for it stresses maximum flexibility in the processes and procedures of education while insisting on traditional standards of output.

But once the educational focus is on the learner, as it is in Model II, it is hard not to proceed to Model III. And there is a rapidly growing group of educators who maintain that we need to look now not only at traditional structures and procedures of education but at curriculum and goals as well. They point out that the accumulation of knowledge in the academic disciplines by itself is a sterile and lifeless focus on the past rather

than the dynamic education for self-development and lifelong learning that is the need of the future.

Education that maximizes the opportunity for personal lifelong development is necessarily individualistic--in outcomes as well as in process. I spoke at some length about programs for student development at ACPA less than a month ago (Cross, 1975a), and I spoke about the need for learner-centered reform of the curriculum at AAHE just weeks ago (Cross, 1975b). I will not repeat those messages here except to emphasize that the college curriculum of the 1980's must be broader than traditional academics. Individuals as well as the broader society will be best served by education that meets human diversity with pluralistic alternatives.

I have spent my time this morning talking about the impact of the new learners because I think it is responsible for most of the change taking place in higher education today. Higher education has finally awakened to the inevitability of dynamic change in what we teach and where and how we teach it, and there is today more creative ferment in the core of education than any of us have ever seen in our professional lifetimes.

To summarize quickly, the initial burden for finding solutions to the new diversity of students in higher education fell to the procedural fringes. We tried to devise programs that would take the new learners into the old education without the necessity of upsetting the system. But the ecology of social systems is as interconnected as the ecology of physical systems. It is apparent now that we are all in this together--counselors, professors, and administrators. It is no longer counselors, financial aid officers, and community colleges that are charged with the responsibility of meeting new students at the fringes of the educational enterprise and helping them

to move into a static and unchanging core. Nor is it enough to admit diversity to our classrooms while devising a filtering system that will graduate uniformity.

The egalitarian thrust of the past 20 years has brought such a range of diversity into our colleges that it has literally broken the back of an old educational system that gave its graduates prestige by the mere exclusiveness of the college degree. The challenge now is to make education more meaningful and responsive to the individualistic needs of all learners. Now that we have achieved education for all, let us seek it for each.

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