

COMMUNITY COLLEGE STUDENTS TODAY AND TOMORROW

K. Patricia Cross

Distinguished Research Scientist
Educational Testing Service

There is a lot of talk these days about a new student clientele for community colleges, commonly referred to as "new" and "nontraditional" students. While these terms are bandied about without much precision, there does seem to be a general understanding that new and nontraditional students are all those who were underrepresented in college student bodies around the year 1950. They consist of rising proportions of ethnic minorities, low income students, women, low academic achievers, adult part-time students, and the handicapped.

In the interest of clarity, I separate the new student clientele into two major groups, defining them not by Census Bureau descriptors such as age, sex, and race, but in terms of educational needs. I have used the term "New Students" to describe those who are educationally disadvantaged; for research purposes I define them as those scoring in the lowest third of the high school graduating classes on standard tests of academic achievement (Cross, 1971). New Students may be white or black, rich or poor, but they share the common experience of poor past performance in school. Without open admissions and "special" admissions, they would not be in college today.

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The term "nontraditional students" is generally used to describe adult part-time learners for whom education is a secondary rather than primary activity. In general, adult learners returning to school or participating in a variety of other adult learning activities are not New Students. Quite the contrary, they tend to be above-average students who are achievement oriented and more academically independent than New Students.

Actually, there are three trends going on right now that are contributing to the changing characteristics of college students. One is the well-publicized decline of 18 year olds in the population, the result of the low birthrate following the baby boom of the postwar years. The second is the rising proportion of New Students in the college population, which is the combined result of the press for equal educational opportunity and the rapid expansion

of open admissions colleges. The third is the increase in adult part-time learners, a worldwide phenomenon known as "lifelong learning" in the United States and "recurrent education" abroad. These three trends will affect colleges differently, depending on whether they serve national or local clientele, whether they are located in areas of declining or growing population, and what kinds of students they attract or are prepared to attract.

A great deal of study and attention has been given to the probable impact of demographics on college enrollments. By 1985, the number of 18 year olds in the population will shrink by 15 percent; by 1992 there will be 25 percent fewer 18 year olds in the United States than there were in 1975 (Henderson and Plummer, 1978). While that is a very **scarey** statistic to colleges that expanded physical plant and personnel to serve the baby boom generation of the 1960s, it does not mean that every college should plan for a 25 percent reduction in student enrollments by the mid-1990s. Approximately a dozen states should probably plan for a modest increase in entering freshmen. According to projections by the American Council on Education (Henderson, 1977), Arizona is one of only three states in the Union that can expect more than a 20 percent increase in 18 year old freshmen in 1985. This is the combined result of more people moving into the state than out of it and Arizona colleges attracting sizeable numbers of out-of-state students. The new mix of students in Arizona community colleges will almost certainly contain higher proportions of both New and nontraditional students than exist today.

Adults now constitute the fastest-growing sector of American higher education. The spectacular growth is the result of changing demographics as

well as changing lifestyles. During the present decade, the number of 18-24 year olds in the population will grow a modest 8 percent, while 25-34 year olds will increase a whopping 44 percent. By the year 2000, says the National Center for Education Statistics, "The United States population will be dominated by persons in their middle years" (Golladay, 1976, page 12).

As spectacular as the aging of America is, the emergence of a Learning Society is even more dramatic. The number of adult learners is increasing nearly two and a half times as fast as their numbers in the population. Depending on which national survey one chooses to quote, there are somewhere between 17 million and 32 million adults participating in organized learning activities of one sort or another (Boaz, 1978; Carp, Peterson, and Roelfs, 1974). My best estimate is that one in four American adults will join with others this year in some sort of organized learning activity offered by industry, museums, and community agencies, as well as by schools and colleges. That is a very substantial learning force, two to three times as great as the number of all students enrolled in colleges and universities.

As you might suspect, the increase of adult part-time learners has been especially rampant in the community colleges. Noncredit learning participants have increased 57 percent in colleges and universities overall during the past decade, but the community colleges have shown an astounding 464 percent increase in noncredit registrations (Kemp, 1978). And, of course, part-time degree credit enrollments are growing much more rapidly than full-time enrollments across the entire spectrum of higher education.

As a group, today's adult learners represent the advantaged classes of society. They are disproportionately young, white, well-educated, and making good salaries. Those who still think of night school as a poor man's college for lower class immigrants are clearly out of date. Adult education today is moving toward elitism, with the following populations significantly under-represented: Blacks, people with less than a high school education, those with annual family incomes under \$8,000, people aged 45 and older, and those living in the central cities or on the farm (Boaz, 1978).

Furthermore, the situation with respect to equal opportunity is becoming worse not better for all groups except women. The greatest increases in educational participation between 1969 and 1975 were made by white women with college degrees and family incomes of \$25,000 a year and over. The rate of growth for women was more than double that for men; adult learning activities for the college educated increased almost twice as fast as for high school graduates; and the participation rate for whites increased eight times as fast as for blacks (Boaz, 1978). Thus not only are white, well-educated people with good jobs already overrepresented on the adult education scene, but they are making much faster progress than their less well-educated peers, and the educational gap between the "haves" and "have nots" is increasing.

With the escalating rate of change in job knowledge and skills, continuing education, for credit or not, could become the new sorter of American society. In full recognition of the obvious fact that degrees do not last a lifetime, employers may begin to ask, not about degrees, but about the recency of knowledge and the motivation that makes the upwardly mobile

into lifelong learners. There are predictions now of an imminent "promotion squeeze" in the labor market as the large, well-educated baby boom generation attempts to move past the lower rungs of the occupational ladder (Morrison, 1976). Following the retirements of leaders from a relatively small older generation, the competition generated within the large upcoming generation will become intense, and it appears that at least some career ladders will become severely congested. The escalating opportunities for women and ethnic minorities on career ladders will further exacerbate the situation. The result will probably be increases in the rate of midlife career switching and a desire to improve competitive advantage through career-oriented adult education. Education for career change as well as for job advancement is a staple of adult education now, and it is bound to grow in importance.

Another factor in the predicted rise in adult education lies in the research findings that the more education people have, the more they want. The average person 25 years of age or older now has more than a high school education, a very significant increase over the elementary school education that characterized the typical adult as recently as 1940. Survey research is virtually unanimous in concluding that past level of educational attainment is the single best predictor of interest and participation in future adult learning activities (Cross, 1979). Thus as the educational level of the populace rises, so too will the demand for education.

Other factors have also been considered in the predictions. Changing lifestyles are calling for less emphasis on material possessions and more on self-realization and the improvement of the quality of life. Although job-related education is the most popular form of continuing education, enrollments

in courses for personal growth and social and recreational activities are growing more rapidly now than enrollments in occupational education. In the final analysis, whether people learn for fun or for job advancement, the likelihood is that with the explosion of knowledge and the constant change in most occupations, lifelong learning will become a necessity.

And so it looks as though adults are here to stay in higher education, and it seems equally apparent that colleges cannot continue to teach adults as though they were children. For community college students today and tomorrow, the college years will parallel life rather than constitute a cross section of it. Most students will carry the usual adult responsibilities of job, marriage, and family, and they will be unable to immerse themselves in the separated-from-life college activities that have provided the model for higher education in the past.

Because there is much greater diversity among a group of 35 year olds than among a group of 18 year olds, increasing diversity in the student population will pose a major problem for postsecondary education--especially for community colleges which will continue for the foreseeable future to absorb and deal with the impact of increasing diversity in American higher education.

If community colleges are to adequately address the needs of their major constituencies of nontraditional students and New Students, they will have to find more effective methods for teaching and learning. At the moment, I am somewhat more optimistic that the solutions exist than I am that they will be implemented. I will talk in just a minute about an educational model that would serve the needs of both nontraditional and New Students better than current practices, but first let me say a few words about New Students.

New Students are not very new to higher education anymore. They have been with us in substantial numbers for more than two decades, and they have been a significant part of the distinctive mission of community colleges. It has been interesting for me to observe, however, that just within the past two or three years, I have been getting an increasing number of requests from four-year colleges for help in working with New Students. The reasons for the interest of four-year colleges in the New Student are mixed. One motivation is not altogether altruistic. Colleges threatened by the drop in 18 year old enrollments must now think seriously about how to retain students

who are not destined to walk in the footsteps of academically-oriented professors. Another reason for the rising interest of four-year institutions in the New Student is that more of these New Students are making their way through the community colleges into the four-year institutions. Thus New Students are more numerous than they used to be in all kinds of colleges.

With a few notable exceptions, higher education has nothing to brag about in its ability to provide a useful college education for the majority of educationally disadvantaged students. The reason for our failure lies largely, I think, in the organization of colleges, which were designed in different times to serve a more homogeneous population of learners.

As recently as the 1940s and 1950s, the national purpose of higher education was to select and educate young people who had already demonstrated their ability to learn what colleges were prepared to teach. Today society has charged higher education with the responsibility of educating anyone who wishes to walk through the opening doors.

I doubt that the challenge facing education in the 1980s can be met with the educational machinery set in place in different times for different purposes. Significant improvement in the education of New Students and nontraditional students will take major reform, and that reform will have to be directed toward making the daily practices of education more compatible with our new clientele and our new purposes.

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Our/educational system is based on three fundamental practices. Most instruction is delivered to groups of students for a fixed time period such as a quarter or a semester, and students are evaluated by comparing their performance with that of their classmates. Those three practices--classes, semesters, and grades--are sacred traditions in education. Our system is built upon them and organized around them, and I suggest that all three are counterproductive to the goal of maximizing student learning.

Any one of these sacred traditions could be singled out and analyzed for its contribution to learning. They are, of course, interdependent. Grading practices reflect better than anything else our philosophy of education. If you doubt the truth of that statement try engaging anyone in a discussion of grading practices without learning a great deal about what that person thinks the purpose of education is. Do grades serve as motivators for student learning? As threats to coerce student responsibility? As protectors of academic standards? As indices of promise to graduate schools and future employers? All of the above? If the common practice of grading on the curve has contributions to make to student learning, how well does it do the job?

The universal practice of grouping students into classes seems to have a simpler rationale than that for grading. It reflects largely economic considerations or what many people think of as fiscal realities. It is assumed that teaching 30 students as a group is cheaper than teaching 30 individuals. Whether it is more cost-effective raises new questions. What are the real efficiencies and inefficiencies of group instruction? And what is the potential impact of new technologies on the cost-effectiveness of group instruction?

Finally, the rationale for the practice of fixed time boundaries or the semester is tied to what might be called administrative realities-- record keeping, counting credits, computing faculty load, and the like.

Ironically, the three educational practices that form the backbone of our system of education must be defended largely on grounds other than those related to student learning. To put it bluntly, they exist to meet administrative and fiscal requirements, not to enhance student learning. Indeed, I doubt that anyone would undertake to defend grades or semesters or group instruction as practices designed to maximize student learning. It would be hard, for example, to argue that even the most dedicated and skillful teacher could maximize learning for individuals reading at the 6th, 8th, and 15th grade levels through treating them as a class of learners who read at the 12th grade level. Similarly, it would be hard to defend grades as motivating devices for learning when it is the students who least need motivating who receive the greatest rewards of As and Bs, while those who most need encouragement and motivation receive negative rewards of Ds and Fs. Finally it is hard to defend the notion that blowing the whistle on learning at the end of the semester maximizes learning for either faster-than-average or slower-than-average learners. In other words, if improving student learning were to become the major mission of colleges, dramatic--yea truly revolutionary--change would have to occur in the traditional practices of education.

I believe that our present organization of education is, in large measure, responsible for the problems we are having with student mastery

of the basic academic skills. Mastery learning or competence-based education is challenging us now with some solid arguments for rethinking the way we organize and administer education--especially education that has as its goal the mastery of subject matter content and skills.

Mastery learning, accompanied by variable credit, is a simple concept in which the number of credits accumulated is a direct reflection of the amount learned. At present everyone who completes a course satisfactorily receives the same amount of academic credit--despite the fact that some students learned a lot and received As while others learned little and received Ds. In other words, we permit achievement to vary from A through D while holding credit constant, at say three hours per semester course. Mastery learning with variable credit would reverse that. Achievement would become constant, and all would study the subject matter until they learned it. Credit, however, would become variable; some people would accumulate more credit in a year of study than others.

Mastery learning requires every student to demonstrate mastery of the learning task in order to receive credit. Thus if a student earns three credits, we can assume that he or she knows the material well; what we do not know from the transcript is how long it took him or her to learn it. The tradeoff is whether we would rather have students who know what they know well or whether the time it took them to learn it is somehow more important. Actually, the contest between learning something well and learning whatever is possible in the time allotted reflects our value judgment of the importance of the learning. We would not dream of having a

student learn airplane landings as well as possible in a semester; practice would continue until the student knew how to land safely every time. But if the learning task is English or mathematics then we seem to say that whatever can be learned in a semester is good enough.

The advantages of mastery learning are both cognitive and affective. Moving a D student, who has failed to master the fundamentals, along at an administratively convenient time such as the end of a semester practically guarantees failure in sequential learning. It is highly unlikely, for example, that a student will ever become proficient in algebra if he or she has not mastered arithmetic. Ironically, however, the student who earned an A in arithmetic has more time to devote to learning algebra than the D student who must continue to struggle with arithmetic while trying also to learn the new subject of algebra.

Even worse than the cognitive handicaps wrought by traditional education's notion that everyone should move along at administratively convenient times is the affective damage done to young people who are offered no alternative to doing poor work. A school lifetime of doing a job half-way because the student never has the time to master the task must surely take its toll in feelings of frustration and, by the time they get to college, in feelings of indifference and loss of self-confidence.

Many of the students entering open-door colleges these days, and many entering selective institutions as well, exhibit little pride in academic accomplishments because, I suspect, they have had little opportunity to experience the satisfaction of doing school work as well as they could do it.

That state of affairs is as true for the top third of the class as for the bottom third. Under the prevailing constant-credit, variable-quality methods of traditional education, the bottom third of the class never reach their potential, while the top third stop short of their full capacity for learning. Neither group achieves the satisfaction of maximum accomplishment.

Gearing credit to amount learned rather than the time served is especially important as we move into lifelong learning. Poor or mediocre academic performance, measured in traditional ways, remains on the transcript forever. A "C" transcript earned at age 17 cannot be turned into an "A" record when the student reaches greater maturity. But measures geared to units mastered can be accumulated over a lifetime of learning. A young person may have 100 credits to an active older learner's 200. The difference, however, lies not in the quality of the learning but in the amount.

In addition to its merit for individual learners, mastery learning has some advantages for the educational system. It raises rather than compromises academic standards by insisting that students know what they are certified as knowing. It offers positive rather than negative rewards through permitting all students to reach their maximum achievement. And it provides strong motivation through demonstrating to all students that they are capable of doing good work.

All rational arguments support the contention that we would have better education for more people if we restructured education so that our measures of learning were geared, not to what was taught in the classroom in a

semester, but rather to what was learned by the student. Why then aren't we moving toward a closer correspondance between the practices and the purposes of education?

Ultimately I think we will face up to the idea of revolutionary change in education because we are simply unable to solve some of today's most pressing problems in the framework of an organizational structure that works against learning. But change is complicated, especially conceptual change. Shifting the purpose of education from teaching semester courses to producing student learning is a conceptual change of major proportions. Let me illustrate the complexity of such change through the use of an analogy.

My story is about a furniture company that is organized like a college. Just as education is geared to completing semesters rather than learning tasks, so this company is geared to completing days rather than chairs. It is the day that determines the work cycle of packers, shippers, billers, and all of the administrative officers of the furniture company. Chairs are sent along at the end of each day in states of completion that approximate the normal curve. A few chairs are nicely finished; most chairs have a weak rung or a missing screw here and there; some chairs are missing critical elements such as a leg or a backrest; and a few chairs are nonfunctional because the seat is missing. But the company is organized to produce a large number of average chairs, and its obligation to customers is to label the quality of their chairs-- which is an admittedly different goal from producing quality chairs.

Now one fine day a new president comes to the furniture company. It is her notion that the goal of the company is to turn out quality chairs. To do

this she realizes that the whole organization will have to be redesigned. Completed chairs will henceforth be the goal, and chairs will be sent to inspectors, packers, and billers when they are completed rather than at the end of each work day.

Well, when the new plans were announced, there were massive complaints throughout the furniture company. In the first place the customary work cycle was upset. Chairs would be coming along every 15 minutes instead of 30 at the end of each work day. Even though it was perfectly possible for the billers to post bills as they came along, they had been batching for so long that they really believed that it was less efficient to maintain a steady pace throughout the day than to cope with their present peaks and valleys of workload. The inspectors were the next to complain. Having 30 chairs all at once permitted them to make comparisons so that they could tell a good chair from a bad one and thus fulfill their responsibility to the customers to clearly label the relative quality of their chairs. Then too there was the problem that inspectors could not be expected to make a new test for each chair as it came along, but if they used the same test continually, the word would be passed along and soon everyone would discover the criteria for grading chairs. Eventually everyone would be able to produce quality chairs, and that wouldn't be fair. It is a little hard to understand why it would be unfair to make known the test used by inspectors to grade the chairs, but I think it had something to do with straining public credibility by producing too many good chairs. As everyone knows, most chairs produced by any given company must be average--otherwise you have inflationary standards.

The next problem in the reorganization of the furniture company was a policy issue for management. Since some chairs required more work than others, either because missing parts had to be individually tailored or because some woods were harder to work with than others, some chairs would cost more to complete. The question was, how could they justify spending different amounts on different chairs, especially when there was no assurance that the most costly chairs would bring the highest prices in the marketplace? While the independent consultant's report pointed out that in the current market, incomplete chairs were not selling at all well and that in the long run the extra money required to complete chairs would be more than justified because chairs could be used rather than assigned to the scrapheap, the simple fact was that the public was still so enamored with the efficiency of Henry Ford's assembly line that they had a lot of trouble understanding new concepts of cost-effectiveness. While it was clear that a finished chair was more useful than an unfinished one, there lurked the sneaking suspicion that a chair that went together quickly and easily was somehow basically superior to one that took more skill and time.

The moral of the story is that changing the institutions of society affects just about everyone. It requires dedicated leadership on the part of the committed, flexibility on the part of those who must change their habits, and the desire of just about everyone to continue the search for better ways of doing things. If we would serve the community college students of tomorrow, then we must begin the difficult task of remodeling the increasingly obsolete practices of education to fit our new purposes.

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