

FRESH OUT OF TRENDS

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Predictions for the future of higher education have usually been based on extrapolations from the past. Except for occasional surprises, this linear prediction model has served us well. For the past one hundred years it has been fairly safe to predict the continued growth of almost everything in higher education -- more students, more colleges, larger campuses, expanded curricula, larger budgets, more faculty. But strange things are happening in the formerly predictable world of education. Recently, the forecasters of college enrollment had to return to their charts when the percentage of male high school graduates entering college dropped off sharply instead of continuing its steady climb. That new "trend," combined with the appearance of a declining birth rate, led to what almost everyone regarded as a somber warning of a no-growth future for higher education. But no sooner had the phrase "steady state" worked its way into the language than enrollment forecasters began snatching back their gloomy statistics to incorporate the "unpredictable" rise of adult college enrollments into their forecasts. Seemingly the world of higher education has become less predictable; either people are behaving in whimsical ways, or we need a new model for thinking about the future.

Perhaps education has outgrown the two dimensional charts. Extrapolations that assume the extension of the past have reached the asymptote in some cases and the point of practical absurdity in others. It is hard, for example, to think of any segment of

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the population that has not now been considered in the trend toward the democratization of higher education. It is hardly prophetic to suggest that by the year 2000, colleges will be serving ethnic minorities, poor people, women, senior citizens, part-time learners, prisoners, low achievers, and anyone else who wants to go to college. We will simply run out of groups to include in the egalitarian thrust that has been the major force for change throughout the history of higher education in this country. Not only are we running out of enrollment trends, but it looks as though we shall do so without solving some of the problems that we thought we were addressing. Although universal education has certainly raised the floor of learning in this country, it is difficult to demonstrate that we are making substantial progress in bringing about equality through education. Indeed, there is some evidence that the disparity between the "haves" and "have nots" has not grown appreciably less with our increased efforts to provide universal access to college.

The social inequities that propel the egalitarian thrust are far from resolved, and the drive for equality through education will no doubt continue to be a compelling force for change in higher education. But by the year 2000, these problems can no longer be addressed through quantitative changes -- more degrees for more people; they will have to be approached through changes in the kind of education offered. We shall need new models to deal with new kinds of change. I shall return later to the shape of these things-to-come, but first let us parallel this example

of the exhaustion of a trend with an example of an extension of a trend that is theoretically infinite but that has reached the point of practical absurdity.

The expansion of the curriculum has followed essentially the same pattern as the growth of enrollments. Just as enrollments grew by including new segments of the population, so curricula expanded by adding new fields of study. The land-grant movement expanded the classical curriculum to include applied subjects, and the community colleges expanded the interpretation of "applied" to include vocational subjects. Now people are talking about expanding the curriculum to include avocational subjects that are of interest to people with increasing amounts of leisure time.

The problems of the bloated college curriculum have been exacerbated by the explosion of knowledge within each course of study. Instead of academic disciplines fragmented only to the point where experimental psychologists share no common vocabulary with which to converse with clinical psychologists, we are rapidly approaching the point where the sub-branches of clinical psychology have almost nothing in common. Libraries are moving from shelving bulky books to storing microfilm, to pondering a new technological version of the old philosophical question, How many books can be stored on the head of a pin?

The ultimate extrapolation of an educational model that aims to pass along the "heritage of human knowledge" in the form of subject matter content is rapidly reaching the point of

practical absurdity. It is ridiculous to attempt to identify the common core of subject matter that should be known by the college graduate, and it is increasingly difficult even to agree upon a common core within disciplines. In much the same way that we seem to have reached the end of groups of people that can be included in higher education, so we seem to have reached the practical end of the content that can be added to the curriculum. Furthermore, the trend toward curricular expansion, like the egalitarian trend, has left unsolved educational problems in its wake. There is no indication that the easy availability of knowledge has resulted in generations of young people who "know" more than those of the past. In fact, if nationally standardized tests are a measure of knowledge, then all indications are that recent high school graduates know less than those of a decade ago.

These examples of trends for the two major components of higher education -- students and subject matter -- illustrate the need for new models that are less dependent on extrapolation to provide a glimpse of the future. Reliance on trends and prediction formulae cranked out by computers and technicians will be of limited usefulness in 21st century education. We will need models that can handle qualitative, as well as quantitative, change.

Bolder Models

I believe that the planning models for the future will be bolder, involving relatively more emphasis on direction by educational statesmen and somewhat less reliance on prediction by technicians. Instead of permitting what has happened or is

happening to predict the future, 21st century educators will give more attention to problem-solving models that ask what should happen. What should happen in the 21st century to implement the ideal of quality education for all people? And what should we teach in our colleges?

The deepest problems of egalitarian ideals are not addressed by simple growth formulae. Equality is a relative concept, and the "haves" always seem to have a running head start on the "have nots." I doubt that we will narrow the opportunity gap by continuing to provide the "have nots" with what the "haves" had two generations ago. They will just never catch up because the "haves" will move at the same, or more likely, a faster rate. To cite but one example, when the "have nots" from poor rural areas got to the "good life" of the cities, the "haves" had fled to the "good life" of the suburbs. Likewise, now that the "have nots" are finally getting college degrees, the commercial value of the certificate is becoming deflated, and people are questioning the ability of the nation to support large numbers of college graduates in the style to which they have become accustomed. In short, the old growth model has outlived its usefulness. Equality will not be attained through simple numerical approaches, nor will educated people be produced by stuffing minds with subject-matter content.

Education for Each

The model that will gradually replace the growth model during the remaining years of this century is a pedagogical model that concerns itself with how education can maximize the potential of

the individual. Education for all was a 20th century goal; education for each will be the major goal for the 21st century. The components of the new model are already in place -- individualized instruction through self-pacing, individually designed learning contracts, personalized systems of instruction, personal growth groups, developmental programs. Such programs are concerned with pedagogy and individual development through learning, and they are different in kind from the issues of access to college that dominate today's equal opportunity programs. Ironically, we are discovering that mass education is not the inevitable route to education for the masses. The very diversity of the masses calls for the abandonment of mass approaches that assume that students can be batched in groups and processed through a standard pipeline designed for some mythical "average" student.

But isn't individualization too costly in these days of educational austerity? Probably not. It would be hard to devise a more inefficient and costly approach to instruction than the traditional content-saturated lecture delivered to a group of 30 students who are attempting, with varying degrees of success, to take amateurish notes on information that was better presented in the textbook. Students might better assimilate information independently at their own pace; they might better use the group for the discussion of issues and a computer for the recitation of facts, and the professor might better use the lecture to inspire through a carefully prepared demonstration of a scholarly mind at work. The pedagogical models of the 21st century will use a rich variety of teaching strategies for what each can accomplish.

Learning for the individual will be the measure of education, and it will not be long before we can demonstrate that individualization is more cost-effective than the mass approaches that aim for the center but miss most of the target.

The Cultivation of Intellectual Skills

In much the same way that the simple addition of more class sections to accommodate more students has failed to address the problems of educational opportunity, so the addition of more courses to accommodate more knowledge will fail to address the problems of the knowledge explosion. The old aims of providing an education that can last a lifetime are gone forever. Any type of vocational or professional knowledge is quickly outdated, and even education that is pursued for personal satisfaction and the enrichment of life changes with the times and with the developing individual. A well-known architect wrote recently that "...almost nothing that we were taught by our betters in or out of the architecture schools of the mid-century has stood the test of time. Nothing -- or almost nothing -- turns out to have been entirely true."¹ If knowledge is tentative in such an empirically demanding field as architecture, ponder the problems of the social sciences. The president of the prestigious American Psychological Association, who has looked at the past and probable future of some realms of psychology, recently urged his colleagues to teach so as to remove

¹Blake, P. The Folly of Modern Architecture, Atlantic Monthly, September, 1974, p. 60.

"any arrogant scientific certainty that psychology's current beliefs are the final truth...."² The new humility that is making its appearance in some academic disciplines is giving impetus to the search for models of teaching that move away from the teacher as purveyor of subject matter.

It has been said that education is what remains after content has been forgotten. Most learned people who use their minds as active tools rather than storage tanks would agree. To be sure, students cannot learn to think in the absence of content to think about, but the content-heavy undergraduate curriculum is already in danger of sacrificing education to the mere accumulation of information that is quickly outdated. The teacher of the 21st century will be concerned with the development of the intellectual resources of students. The move will be away from teaching content as an end, toward using it as a means to the cultivation of intellectual skills such as the capacity to express ideas, the creative use of knowledge, the ability to analyze and to synthesize -- in short, the desire and the capacity to use the mind in working with ever-changing information about the world and its people.

The Pedagogical Model

The end of the eras of both student and curricular expansion will be met by the adoption of the pedagogical model. The simplistic "catch-up" approach to equal opportunity will be replaced

² Donald Campbell quoted in TIME, September 15, 1975, p. 94.

by individualized education that leaves an imprint on each student, and the unrealistic content-laden curriculum will be recast to concentrate on the development of skills that are useful in the pursuit of lifelong learning.

If the pedagogical model is lurking just around the corner of this century, then both administrative and academic power brokers have something to worry about. Passing from the scene is the all-consuming concern about growth that built the administrative machines of education; going, too, is the arrogance of disciplinary specialists who enter college classrooms proud of their disdain for pedagogy. Higher education in the year 2000 will be primarily concerned with developing the capacity of each human mind to cope with a wide array of problems -- personal and societal, as well as academic.

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