In the history of this country there have been 3 major philosophies about who should go to college: (1) the aristocratic philosophy, (2) the meritocratic philosophy, and (3) the philosophy of egalitarianism, which came into vogue in the 60's. This has meant that the greatest rate of increase in college attendance during the last 10 years has been by members of the lower socioeconomic groups and those with lower academic standing. The 60's emphasized gaining access to higher education for these students; the 1970's must concentrate on accommodation, i.e., changing the system to fit the student. The access system, which is a unidimensional model, attempts to move the marginal student closer to the core through remediation of academic or motivational deficiencies; the system is designed for orderly progression through a funnel or sorting system, effectively eliminating those who don't fit the system. Though systematic educational activities are now going on outside the regular system, i.e., on the educational periphery, equality of educational opportunity would be enhanced by the creation of new educational models that will permit easy movement between the core and periphery. This paper discusses new models for education: developing new cores of excellence, and developing lifelong learning models. It also makes recommendations for policies and programs to institute new educational models. (AF)
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There is widespread agreement that a national goal in the decade ahead will be the achievement of equality of educational opportunity for all citizens. The phrase, "equality of educational opportunity", has been used with such glib frequency that it is easy to underestimate the enormity of the task ahead. In fact, there are two major tasks--the assurance of equality of access to all levels of education and the accommodation of education to fit the diverse needs of the populace. These two aspects of educational opportunity are inseparable. Access is a hollow victory if education is not meaningful, and the development of appropriate quality education is unjustified if some citizens are barred access.

Problems of access are usually discussed in terms of postsecondary education whereas the process of accommodation has powerful implications for equality of opportunity at all levels.

CHANGING PHILOSOPHIES OF ACCESS

In the history of this country there have been three major philosophies about who should go to college. When higher education was young and not many people went to college, the aristocratic philosophy prevailed. In this philosophy, the probability of college attendance is predictable from birth. Because he belongs to the
hereditary aristocracy, a white male from the upper socioeconomic strata of society is very likely to attend college, regardless of his ability or interest in higher education. In aristocratic terms, the young people who should go to college are those who can afford it and who need it to carry out their station in life. The poor, ethnic minorities, and women, it is assumed, will not follow life patterns that really make use of a college education. The symbols of the philosophy are private high-tuition colleges and the acknowledgment of "legacies" as appropriate admissions criteria.

Today aristocratic qualifications for college admission are definitely on the wane, widely refuted by national policy as well as public sentiment. The demise of the aristocratic era is clearly evident in the data from the decade of the 1960's. College attendance rates showed the following rates of increase from 1959 to 1966; Lowest income quarter 100 percent; second income quarter 30 percent; third income quarter 25 percent; and highest income quarter 9 percent (Froomkin, 1970). Although the poor are catching up to the rich, it is still true in 1970 that young people from the upper socioeconomic levels are more likely to go to college than those of equal ability from lower socioeconomic levels.

The revolt against aristocratic philosophies of college admissions was led by those who maintained that a college education was an earned right, not a birthright. Advocates of the meritocracy felt that criteria for college admission should be based upon
ability and the willingness to study hard. In practice, meritocratic principles were applied by using rather narrow criteria of grades and test scores to define merit and to select the "most promising" young people to attend college. Philosophically, the meritocracy was at its peak in the 1950's. The Commission on Human Resources and Advanced Training published the well-known study, America's Resources of Specialized Talent in 1954. The prevailing philosophy of that time is typified by their assertion that,

"Some men have greater ability than others and can accomplish things which are beyond the powers of men of lesser endowment. The nation needs to make effective use of its intellectual resources. To do so means to use well its brightest people whether they come from farm or city, from the slum section or the country club area, regardless of color or religious or economic differences but not regardless of ability" (Wolfe, 1954, p. 6, emphases added).

Since the practices of the nation usually lag behind the acceptance of principles, the effective meritocracy did not reach its peak until the present time. Recent data show that most high school seniors in the top ability quartiles are now going to college, regardless of family socioeconomic status, race, or sex. For the dominant culture of white males, the meritocratic philosophy is in full flower. Even boys who rank in the lowest quarter of the high school graduates on socioeconomic measures are very likely to continue their education if they are above-average students academically. Three out of four do enter some form of postsecondary education. Girls, however, are not as likely to have "earned" the right to a college edu-

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cation by making high grades. They must also come from families in the upper socioeconomic levels. Aristocratic criteria linger for women, discriminating against women of lower-half socioeconomic status in the meritocratic race for college access.

With meritocratic emphases upon quantitative indices of academic ability, such as school grades and academic aptitude test scores, there has been little recognition accorded the fact that the test scores and grades of a 17 year old youth are determined in part by his early childhood environment. Since our educational system is fundamentally unidimensional, valuing academic skills above all others, meritocratic practices have not served those who did not get a good start in the system, or those whose talents lay outside the narrow academic curriculum.

The most recent philosophy of college access is egalitarianism, which is defined as, "a social philosophy advocating the removal of inequalities among men." Applied to college entrance it means that everyone should have equality of access to educational opportunities, regardless of socioeconomic background, race, sex, or ability. Open admissions is the symbol of the philosophy. To most egalitarians, equality of educational opportunity does not mean identical forms of education for everyone. Uniformity of educational offerings for young people with diverse talents and interests would most likely result in inequality of opportunity.

Both aristocratic and meritocratic practices of college admission have passed their peak of influence in determining who shall
go to college. Most young people of high socioeconomic level are in college; most young people with good grades or high academic aptitude test scores are in college. The group new to higher education in the decade of the 70's will be those of low socioeconomic status and those with low measured ability. The movement is already underway. The majority of students entering open-door community colleges come from the lower half of the high school classes, academically and socioeconomically.


The decade of the 1960's was devoted largely to removing barriers to admission to college, and thus it was oriented toward gaining access for groups that had never before considered attending college. Emphasis upon access assumes that the task is to change students to fit the system; emphasis upon accommodation implies that the system can be changed to fit the students. Both access and accommodation are designed to narrow the gap between educational opportunities and students, and both are important, but access predominated in the 60's; accommodation must receive the major attention of the 70's.

"New students" to higher education are characterized by their lack of success in traditional academic subject-matter oriented education. Traditional education was designed in a different era to serve an elite segment of the population, and in many ways traditional education has served traditional students well. But times have changed dramatically, and there is no evidence to suggest that the old model of education
with its emphasis upon classrooms, lectures, subject-matter units of credit, and competitive grading practices, promotes equal learning opportunities for all individuals or serves the needs of a modern society better than other models which might be devised. The present system is built around an academic core with the result that at every level of education, institutions are oriented to serve the needs of those who are continuing in the system. Collegebound students are better satisfied with their secondary school preparation than those who go to work; transfer students are better satisfied than "terminal" students with 2-year colleges. Students not planning to continue their education feel that teachers and counselors would prefer to work with those who are preparing for the next level. From first grade to graduate school, the educational system operates as a giant sorter or funnel, selecting the most academically able at each transition point and channeling them into the next educational level, while dropping the others from the system.

THE OLD AND THE NEW: EDUCATIONAL MODELS

The Access Model

There is a search on now for a euphemism for "marginal students." But a pleasing euphemism will only obscure the fact that there are many students on the margins or fringes of our present "academic core" education. Figure 1 illustrates our present model. The task in this model is to decrease marginality by moving students closer to the core
through remediation of academic or economic or motivational "deficiencies."

Figure 1. Moving marginal students toward the core of traditional education.

Figure 1 is fundamentally an access model in which education remains static, and students are moved into the traditional system. Financial aid enables low-income students to attend traditional
colleges. Open admissions practices at traditional colleges offer those with low grades and low test scores the opportunity to pursue traditional curricula. Special programs such as Upward Bound focus attention on making new students over into the image of traditional students. Remedial courses remove academic "deficiencies", counseling removes motivational "deficiencies"; financial aid removes economic "deficiencies."

The educational approaches used in special programs for the disadvantaged may be said to start with the needs of students, and in that sense, they might be considered accommodation models. The goal, nevertheless, is to change the student so that he is acceptable to traditional education, and in accepting that goal, all such programs are access-oriented.

The fundamental problem with access models is that they leave unchallenged the notion that there is a single ultimate goal for excellence in students and in institutions. As long as the uni-dimensional model remains supreme, there will always be marginal students and there will always be a "lower half" who are below average in their performance of the tasks of education. At the institutional level, the singular model of excellence in education has been the university. "Second-rate" colleges frequently believe that to be "first-rate" they need research grants, a faculty of Ph.D's, highly discipline-oriented curricula, and all of the other symbols of "quality" education.
The Funnel Model

A second limitation of present educational models is that they are designed for orderly progression through a funnel or sorting system. It is assumed, especially in the present meritocratic era, that students will go as far as they can in school, at which time they will have completed their education. The funnel model of traditional education is illustrated in Figure 2. The task is to funnel the academically superior to the top.

![Figure 2. Funnel model of traditional education.](image-url)
The following conditions characterize the funnel model illustrated in Figure 2:

a. Students must complete one unit before moving to the next.

b. Students who are marginal at one level will probably be considered "terminal" students at the next level. In Figure 2, for example, student A began elementary school in a marginal position relative to student B. Statistically, it is probable that student A will terminate his education with a high school diploma whereas student B will complete a Ph.D.

c. The system is akin to the Peter Principle* in which each student advances to his highest level of incompetence. When either he or an educational institution conclude that he cannot profit from moving further in the system, he drops out. But his future income and his status in society and in the labor market are very closely related to how far he went in school.

d. The "normal" age levels for the completion of each unit are indicated in Figure 2. Even the student remaining in the system for the longest period of time is expected to finish his education before reaching the age of thirty. In other words, present educational models are designed

*The Peter principle states that "In a hierarchy every employee tends to rise to his level of incompetence" (Peter and Hull, 1969).
for young people prior to their entry into the labor market.

The selection process is increasingly severe as students advance in the system. For every 100 students entering the fifth grade, approximately 72 graduate from high school, 40 enter college, 20 graduate from college, 5 obtain master's degrees, and finally roughly one in a hundred citizens who were fifth graders in 1960 may expect to receive the doctor's degree.

The Educational Periphery

The most rapidly growing segment of American education is the "Educational Periphery", a term which has been used by Moses (1970) to describe systematic educational activities which go on outside the educational core of elementary, secondary, and higher education. Included in the periphery are 1) programs sponsored by employers--business, government, and industry--to upgrade the capability of employees. Such "courses" may run from a few days to lengthy programs involving highly advanced concepts in the employees' field. 2) proprietary schools, usually run for profit and including beauty schools, computer training, refrigeration schools, etc. 3) antipoverty programs such as the Job Corps and Manpower Training and Development Centers 4) correspondance courses 5) educational television which is beginning to perform educational functions for all ages--from Sesame Street to Sunrise Semester. 6) adult education programs ranging from academically-oriented evening courses to neighborhood, church, and
social action groups concerned with "affective" learning. In 1970, the numbers of people pursuing structured educational activities in the educational core stood at about 64 million, whereas the number in the periphery was estimated at 60 million. By 1976, the number in the core will be approximately 67 million, compared to 32 million in the rapidly-growing periphery (Moses, 1970). Education in America has moved out of the confines of the "regular school system". With little or no attention from the educational establishment, millions of citizens are creating their own lifelong learning models of education. But a goal of equality of educational opportunity would be enhanced by the creation of new educational models which are flexible and fluid enough to permit easy movement between the "core" and the "periphery".

NEW MODELS OF EDUCATION

Developing New Cores of Excellence

Accommodation models of education assume that the gap between student abilities and educational offerings will be narrowed by moving education toward student learning needs. This can be accomplished in two ways as illustrated in Figure 3.
Figure 3. Alternative models for moving educational offerings toward student learning needs.
Historically, the nation has used method A to adapt education to the steady trend toward serving larger segments of the populace. The great reform movement of the American high schools added vocational subjects such as home economics, shop, agriculture, business, etc. which grew into a large "fringe" area of courses available to those who were not continuing their education. The courses, the instructors, and the students in vocational education have been considered marginal to the academic enterprise, and the wall between the academic core and the vocational fringe has proved formidable. Movement between academic and vocational courses of study is very difficult. Thus while the expansion of the curriculum does move education toward the accommodation of more students, they remain marginal to the chief enterprise of education which seems to be to prepare students for the next academic level.

Model B seeks to identify human abilities that are central to individuals and to the needs of society. There are several "cores of excellence," and students who may be marginal students in working with the abstract ideas of academy may be excellent in working with human sensitivities in the area of interpersonal relations. To be sure, some of the skills of traditional education are needed in any educational endeavor, and there are areas of overlap among the various abilities. Students will need to be helped in identifying and moving toward some core of excellence, but the options are much greater and the realistic opportunities for achieving excellence are
available to a greater variety of people.

Developing Lifelong Learning Models

The task of education is assumed to be the preparation of young people for their vocational and personal futures. But the world is changing so rapidly that it is almost impossible to prepare for the future by learning about the present. Learning should be lifelong, and easy exit and re-entry into a flexible and fluid educational system must be assumed in developing new educational models. Figure 4 presents a lifelong learning model, making use of multiple cores of excellence and easy movement in and out of a great variety of educational opportunities.

Figure 4. A model for lifelong learning with multiple cores of excellence.
The characteristics of the model illustrated in Figure 4 are as follows:

a. Learning opportunities remain constant throughout life, but peripheral learning structures play a small role in early childhood learning and an increasingly greater role in developing specialized adult proficiencies. The constancy of lifelong learning space is illustrated by the total rectangle \[
\text{total rectangle}
\]; school structures by internal figures \[
\text{internal figures}
\], and peripheral structures by other space in the learning rectangle.

b. Learners become increasingly proficient at developing their special talents. Proficiency is indicated by narrowing the focus \[
\text{narrowing the focus}
\]; special abilities are indicated by several "cores of excellence" \[
\text{cores of excellence}
\].

c. There is easy exit and re-entry into the formal school curricula, and things learned outside of school are easily applied in school and vice versa. To cite an example, individual A began with talents that could be developed in either the dotted or solid-line mold illustrated in Figure 4. Upon reaching working age, A found that a course offered by his employer created considerable interest in the area indicated by the dotted lines. He decided to return to school to add to his background in this field of study. Notice that his working experience added to his development, and he re-entered school at a
new level, 2, not at the level of exit, 1. Additional schooling added to his expertise, and he re-entered the labor market at a higher level than his previous job. A three-month summer workshop and several extension courses offered by the university added to the development of his talents and he re-entered formal schooling at a still higher level, etc. Other people may have followed totally different pathways to the fullest possible development of their talents.

In summary, the development of lifelong learning models with multiple cores of excellence would offer students many more options than are presently available. Some students could continue in the traditional pattern of developing academic excellence, but others may wish to develop other talents. Some students may move directly and rapidly through the academic system; other may wish to defer college attendance, or to "stop-out" from college or to change directions in the core or through periphery educational experiences. Despite our heavy emphasis on concentrated academic learning, some young people are expressing a greater willingness to "follow their own instincts and interests rather than bow to the strong bias of many teachers, parents, and guidance counselors in favor of (traditional) college education." (New York Times, November 22, 1970) It takes courage and independence to defy the system that defines
"success" as moving straight though school programs to the attainment of academic degrees. There is a desperate need to break out of the lockstep unidimensional mold and to help people of all ages to grow in interests and capabilities.

RECOMMENDATIONS FOR POLICIES AND PROGRAMS TO INSTITUTE NEW EDUCATIONAL MODELS

Support of Research

If education is to devise learning models that will maximize individual potential and aid in matching human abilities to the work required by society, then two major research thrusts are required: (1) we must be able to identify and measure diverse human talents, and (2) we must be able to describe the skills and abilities that are needed to improve the world that man inhabits. Neither is a simple task. There are, however, some promising research findings that make obsolete the old requirements that read, "must have a college degree" or "English 101 required."

In the realm of human talent, for example, researchers have been able to identify several distinct dimensions of memory ability. Individuals excelling in one type of memory do not necessarily excel in other types. Likewise, the ability to understand and follow complex directions is not necessarily related to measures of verbal aptitude. It is obvious that modern society demands a much greater array of talents than did the agrarian society that existed when our
present system of education was devised. One of the problems in studying the variability of human talent has been that the emphasis of the schools on the development of certain abilities, such as verbal aptitude, for example, has permitted other potential abilities to atrophy or lie dormant, thus hiding their existence from researchers, educators and employers. It is recommended that research into the breadth and diversity of human talents be encouraged and given strong financial support.

Closely related to the identification of talent is the cultivation of talents. There is research evidence for the existence of differences in learning "styles". Once again we need more options, and it is recommended that research on how people learn continue to probe the use of new media, the effectiveness of work-study programs, the role of affective learning, etc.

Educational institutions have been used by employers as blanket certification agencies to attest to the young person's meritocratic virtues of diligence and academic aptitude. This practice has diverted educational goals into certification functions. It is recommended that research be directed toward behavioral descriptions of the abilities necessary to perform the work of society and that tests be developed that will aid in matching human talent to work requirements.

Research is a necessary but not a sufficient condition to develop new educational options. New knowledge must be put to work. It is
recommended that government jobs serve as experimental models and that industry be encouraged to experiment further in defining job requirements in terms of behaviors instead of credentials. Government and industry have already moved into the area of peripheral education, and further experimentation with periphery-core interactions are to be commended.

PROJECTIONS OF THE EFFECTS UPON YOUTH AND SOCIETY IF NEW MODELS ARE NOT DEVELOPED

The outline provided by the Education Task Force of the White House Conference on Children and Youth calls for some discussion of what will happen if new models of education are not developed. Perhaps the question is best answered by a Chinese proverb that says, "If we don't change our direction, we are likely to end up where we are headed."

If our educational models remain unidimensional and designed for young people prior to their entrance to the labor market, then equality of educational opportunity will be only an empty phrase. There will always be a "lower half" who will fail to develop academic talents as well as the "upper half." Individuals will suffer frustration over concentration on their weaknesses, while strengths atrophy because of the expectation that all young people must meet common educational requirements. It is readily predictable that people will need to learn throughout their lives in order to live in a rapidly changing world. Those who are "turned off" by early school learning experiences may
react with fear and rigidity to future learning demands made upon them.

If we fail to provide models for life-long learning then the young will be "better-educated" to the modern world than the old who "completed" their education in a different era. The generation gap may be expected to increase and both young and old will grow increasingly frustrated and alienated. Older people who lose touch with modern developments will face the prospects of unemployment, lack of self-respect, and a premature and useless old age. Young people will grow frustrated with the rigidities of a society that lacks new perspectives to change itself. They may react with alienation and violence or else with withdrawal and escape. For individuals and for society, adaptation and flexibility are almost certain to be essential qualities of the future, and continuous learning and lifelong access to it appear to be vital necessities.
REFERENCES


