

FORMING LINKAGES IN THE LEARNING SOCIETY

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"Linking Education, Human Services, Business and Industry." That is an ambitious theme for your conference, and it's even more ambitious as a program for action. But the call for cooperation among the multiple providers of adult education reflects the fact that we are rapidly approaching the time when most of society's people and most of society's organizations will be involved, in one way or another, in teaching and learning. It behooves all of us to think carefully about the new roles that we will be playing in the Learning Society.

There is a good chance that the new enthusiasm for lifelong learning will have an impact on education that extends far beyond the mere numbers that many traditional college educators are hoping for. Indeed, in the vigorous pursuit of adult learners to fill the seats left vacant by diminishing numbers of eighteen year-olds, college educators are discovering that they have no monopoly on education for adults, and worse yet that some of the sacred traditions of higher education are unacceptable to adult learners.

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so simple

Your interest in competency-based education, questions one of higher education's more dubious traditions--the practice of evaluating learning by grading on the normal curve. That particular practice seems to be an anomaly of the traditional school system, and it is significant that educators in other settings have been more concerned with pushing the normal curve out of shape than with preserving it. Where student performance is the goal, it makes sense to aim for a badly skewed curve in which the largest number of students are achieving, not some statistical average score, but maximum competency from their learning.

Adults bring a new dimension to traditional education, and change within higher education as well as between higher education and the rest of the world is inevitable. Those of you working with competency-based adult education are on the cutting edge of a revolution of sorts. You combine a common interest in finding new ways to evaluate learning with the diversity of multiple providers of adult education. Your strength as a group lies in the fact that, from different perspectives, you can work toward common ends.

That suits my ends just fine because my message this afternoon has three themes: 1) the changing role of education in the society, 2) the changing nature of the student clientele, and 3) the changing practice of education. I don't

promise to keep those themes separate and distinct because they are all indicators of our entrance into the Learning Society.

The need for education on the part of both individuals and society is escalating as fast as the world changes--and that is at a heady pace these days. Margaret Mead once remarked that the world in which we were born is not the world in which we live nor is that the world in which we will die. I was born into a world without television, mass air travel, credit cards, frozen foods, or computers. My parents were born into a world without automobiles, radios, or refrigerators. That is a lot of change in a short span of time, but change has a way of escalating so that each new generation is coping with a faster rate of change than the preceeding generation.

The transportation industry serves as a good example. For thousands of years, people transported themselves and their worldly goods by walking from place to place. With the taming of the horse, the distance travelled and the loads transported became a different order of magnitude. With the invention of trains and cars, another quantum leap occurred. Then airplanes increased the speed of travel, not just from twenty to eighty miles per hour, as improvements in the car had done, but from eighty to eight hundred miles per hour. Now Voyager II is moving through space not just ten times

faster than airplanes but at the rate of 54,000 miles per hour.

Once the quantum leap occurs, a whole new industry is on the scene. ~~No amount of careful breeding, attention to diet, or training, can make the greatest horse even approach in efficiency the "transportation work" done by the most mediocre car.~~ Thus anyone in the transportation business must learn an entirely new set of skills and knowledge whenever a leap in technology wipes out one industry and creates another, often within the timespan of a single generation.

Quantum leaps in knowledge occur with considerable regularity across a wide variety of fields. Change is now so rapid in medicine, for example, that obsolescence is measured by the "half-life." The half-life of knowledge in medicine is about five years, meaning that within five years of receiving the medical degree, half of all a doctor's information and training is obsolete. Continuous lifelong learning is so essential now for almost any professional serving the public that states and licensing boards have resorted to legislating or mandating continuing education for certain occupations. Competency, of course, is the goal. But there is many a gap between attending a class, learning the knowledge or skill, applying the learning, and using it in daily practice. Research has not yet answered the question of whether mandated continuing education leads to improved ^{daily} practice, but logic

suggests that a competency-based perspective is more likely to accomplish the desired ends than are more traditional measures such as mere attendance or the ability to score well on a written examination that may or may not be related to competent performance.

Another sign of the times in the Learning Society is seen in changing lifestyles. It looks as though American society is moving away from the "linear lifeplan" in which education is for the young, work for the middle-aged, and enforced leisure for the elderly, toward a "blended lifeplan" in which education, work, and leisure go on concurrently throughout life. All age groups are opting for a better balance in life's activities. The elderly, resentful of spending full time in enforced leisure have insisted upon the right to work if they want to, and Congress has recognized that right through a rollback of mandatory retirement. Elderhostel, the phenomenally successful educational program for those 60 and older attests to a growing interest on the part of older people in devoting some leisure time to education. The middle-aged, no longer content to spend all their waking hours on the job, are seeking greater fulfillment through education and recreation. Some, especially women, are greatly interested in job-sharing. As a result, part-time workers are increasing in industry as fast as part-time students are increasing in colleges.

If the predictions of the National Center for Education Statistics are correct, by 1985 half of all students studying for college credit will be part-time students. That represents a huge increase in a very short period of time. As recently as 1970, fewer than a third of all college students were studying part-time.

The new part-time student body is made up of young, formerly full-time students, middle-aged formerly full-time workers, and elderly formerly full-time retirees. The Learning Society encourages a blended lifeplan through recognizing the value of education through every phase of life.

At the same time that there is a blending of activities in the lives of individuals, there is a blending of functions among the organizations of society. Schools no longer have any monopoly on education, nor does business tend strictly to business. Employers are increasingly concerned about developing human resources, ~~through on-the-job training, for employees, workshops, for professionals, and think tanks, for executives.~~ Professional associations are moving beyond their traditional functions of publishing journals and holding annual meetings to developing courses, conducting workshops, distributing audio and video cassettes, and in general, contributing to the life-long professional education of their members. Smaller scale activities also illustrate the blurring of functions among the

organizations of society. Travel agencies are adding educational components to packaged tours at the same time that alumni offices and extension services are adding packaged tours to credit-bearing courses. Increasingly, the Learning Society consists of a rich mixture of community learning resources, and no provider has any monopoly on the learning market.

Industry spends not mere millions but billions of dollars annually on the education and training of employees--more than the total appropriations for higher education in all fifty states. Last year, AT&T spent $4\frac{1}{2}$ times as much on the education ^{and trng.} of its employees as MIT spent on the education of its students (Luxenberg, 1978-79). The modern IBM campus north of New York City and the George Meany Center for Labor Studies, ^{est by} outside of Washington D.C. have classrooms and residence halls that surpass anything offered in our most exclusive and expensive colleges. Professional associations are the builders of vast educational networks. The American Management Association, with an annual education budget of 50 million dollars, uses 7,500 lecturers and discussion leaders to conduct 2,000 formal education programs each year. The American Institute of Certified Public Accountants offers extensive professional education programs, consisting of individual study and regional workshops that rival the degree-granting monopoly

of higher education because licensing boards that determine who is licensed to practice accounting recognize AICPA education as appropriate to professional practice.

Educational purists like to make a distinction between the education offered by colleges and the training offered by industry, but such distinctions are difficult to maintain. Non-collegiate organizations have moved into education almost as fast as colleges, especially community colleges, have moved into training, and the distinction is now blurred beyond usefulness--at least when applied to providers. Colleges are heavily involved in training as well as in education, and the programs of many corporations contain as much emphasis on theory, research, and personal development as those of any business school.

A related blurring of educational functions occurs in the distinction between credit and non-credit learning. Colleges are not the only educators to offer degrees. Within commuting distance of us here in Boston are four new degree-granting programs founded by non-colleges--a hospital, a banking institute, a consulting firm, and a computer manufacturer. While the image of degrees offered by non-colleges is still mildly sensational, the movement of collegiate institutions into the realm of non-credit instruction is now commonplace. Over the past decade, the number of colleges offering non-credit instruction more than doubled, rising from 1100 colleges in 1968

to more than 2400 in 1978. Today it is the norm rather than the exception for degree-granting institutions to be involved in non-degree instruction.

But whether a course was originally taken for credit is not especially important today. It is increasingly easy to convert non-credit learning into college degrees. Just a decade ago, only about a third of American colleges granted credit if students could demonstrate on standardized examinations that they knew the material; today 84 percent of all colleges grant credit for CLEP examinations. Ten years ago, only 14 percent of the colleges would consider granting credit for experiential learning; today 41 percent do (Stadtman, 1980).

Historically, colleges have been reasonably generous in accepting credit from other colleges; today they are increasingly likely to endorse learning regardless of its source. The American Council on Education's Office of Education Credit lists over ^{two} a thousand courses offered by more than a hundred corporations that appear worthy of college credit.

All of these practices, of course, are premised on the assumption that learning outcomes can be evaluated and that what students have learned is more important than where they learned it or how long it took them. In practice, traditional education is increasingly accepting the fundamental premise of competency-based education, and in so doing is moving closer

to laying the groundwork for the linkages that are called for in your conference theme.

Linkages, however formed, will be concentrating on serving the needs and interests of an increasingly motivated and articulate adult education market. Thus ^{we need} ~~it behooves us~~ to know something about that market. Who are the adult learners who are signing up for classes, workshops, short courses, tennis lessons, and other forms of organized instruction? With all of the research surveys of the past decade, we do not lack descriptive data. In the 1970s, most states conducted needs assessments to aid in planning and coordinating education programs in the state. In synthesizing data across those studies (Cross and Zusman, 1978; Cross, 1981), I found that patterns of participation and interest were remarkably similar from state to state. That similarity makes it possible to present a national profile of the characteristics and educational interests of adult learners.

A profile, of course, is a statistical average which ignores the tremendous diversity of the adult population, and ^{diversity perhaps is the most distinctive characteristic of adults as learners.} ~~it doesn't purport to describe any real person who ventures into a workshop or classroom.~~ Nevertheless, statistical summaries do serve to put together, as our individual experiences cannot, a generalized picture of a typical adult learner. The typical learner I am about to describe is the person who

engages in "organized instruction" offered by schools and colleges, employers, ^{military,} professional associations, community groups, or any other provider of adult education.

Using this definition, a national survey (Carp, Peterson, and Roelfs, 1974) found that approximately 30 percent of the adult population can be classified as active learners ^{in any given year,} and another 46 percent can be called would-be learners, i.e., those who are not currently participating in instructional activity but who express an interest in doing so. For all of our idealism about education for personal satisfaction and fulfillment, adult learners are primarily interested in increasing their competency to perform their daily tasks. Fifteen years ago, the classic study of adult learners concluded, "the major emphasis in adult learning is on the practical rather than on the academic; on the applied rather than the theoretical; and on skills rather than on knowledge or information" (Johnstone and Rivera, 1965, p. 3). Nothing in the myriad of surveys since has changed that general conclusion. Adults are, by and large, pragmatic learners, more interested in learning how to do things than in how to think about them. Learning that is relevant to jobs is far and away the most popular type of learning, with almost half of all adult learners engaged in it. Learning skills for family living and recreation, however, are the most rapidly growing subjects.

What people want to learn influences how they want it taught. Most people would prefer to learn how to fix a car by actually working on one. If the learning is in history, however, then classes and reading may seem more appropriate. Thus the diversity in preferred instructional methods equals the diversity of subject matter interests. Generally speaking, however, most people seem to like teaching methods that are familiar to them. Traditional lectures and classes, for example, lead any other single method in the preference polls, but actually three fourths of the potential learners would prefer something other than the traditional class lecture. On-the-job training and internships are popular, as are institutes and workshops, and the demand for these more active forms of learning appears to be greater than the present supply.

While media instruction such as radio, television, and audio or video cassettes are not rated very attractive by most survey respondents, I would not underestimate the potential impact of these new delivery systems on the Learning Society. Their chief handicaps at present are lack of familiarity as learning tools and lack of opportunity for personal interaction. But these handicaps must be weighed against the advantages of tremendous convenience and the potential for exceptionally high quality instruction. Furthermore, as technology becomes more familiar, its popularity is rising. There is some evidence that the most likely future users of the various technologies are past users. While I think it

highly unlikely that computers and television will ever replace human teachers and counselors, it seems apparent that the new technology has an important role to play in the Learning Society.

As a matter of fact, all indications are that the new technology including educational television, will stimulate rather than satiate adult learning. One of the clearest and most consistently reported findings of the research on adult learning is that the desire for learning is addictive and apparently insatiable. Being introduced to something or knowing a little about it usually stimulates the desire to know more. In that simple fact of life lies one of the greatest problems for the Learning Society. It is quite clear now that the people taking the greatest advantage of the new educational opportunities are those who are already among the best-educated adults in the nation. A college graduate is seven times as likely to be participating in some form of organized learning as a high school dropout, and the gap between the well-educated and the poorly educated is widening rather than narrowing as the Learning Society picks up speed. The almost certain result is that as opportunities grow, so will the gap between the educational "haves" and "have-nots."

The situation is far easier to understand than to remedy. Almost everything the college graduate does adds to

the probability of further education, while almost everything the high school dropout does militates against it. The college graduate frequently enters an employee training program, works for a company or in an occupation that is likely, not only to support, but to require further education. College graduates typically belong to social and professional groups that discuss educational opportunities; spouses and friends are supportive and admiring of educational accomplishment. And finally, those who continue with school long enough to graduate from college were usually happy and successful in school and are familiar with the procedures and people that inhabit educational institutions.

The situation is exactly the reverse for the poorly educated. They enter low-paying jobs with few educational requirements and usually no educational benefits. They consort with friends and family who know little about education and may even be hostile to it; they lack the information networks to know about opportunities and the skills to take advantage of them. They are on the downward spiral with respect to education, and they become the hard core undereducated, taking up lifestyles and values that spawn new generations of undereducated. This is a tough problem and one that no provider of educational opportunities can solve alone. -- *although the military services have done a great deal with* -- ~~it~~ requires *+ for the undereduc* linkages that work, and working linkages come in three basic models. First there are linkages that work for organizations.

But narrowing the ed'd gap

Colleges and businesses, for example, are finding mutual benefits in sharing resources. Colleges have expertise in course development and instructional methods that are expensive for business to develop and maintain. Business has practical experience and relevant and current equipment that is impossible for colleges to duplicate. Linkages make sense, and a recent survey (Young, 1981) reported that 40 percent of all community colleges have working agreements with industry that are mutually beneficial. *to students, colleges, industry & society.*

A second linkage model that works is of growing importance to individuals. In a mobile society where adults learn from a wide variety of providers and experiences, it is important to be able to develop a coherent lifelong plan for education, one that is transportable and cumulative. The increasing willingness of educators throughout the Learning Society to look at the outcomes of learning and to measure competencies rather than semester-hours is the backbone of a linkage system that permits individuals to accumulate educational experiences toward credentials as well as personal growth and development.

Finally, there is a linkage, that has not been much discussed but that I believe works, for society. One of society's major problems now is the delivery of education to those who most need it, i.e., the undereducated. There is good reason to think that there is a hierarchy of threat in educational

opportunity and that adults will enter the Learning Society at the threat level that is tolerable for them (See Cross, 1981, Chapter 6). We know from research, for example, that adults who build self-confidence as learners by taking a television course at home are likely to venture out to try other forms of education as their interest and confidence grow. Similarly, adults who participate in various forms of job training may discover interests and abilities that carry them over into other learning opportunities. If the Learning Society is to serve all adults, we need to nurture a varied system of entrances into educational opportunities. The adequacy of the variety of the opportunities available will depend to a great extent on the cooperation and linkages developed by educators across the broad spectrum of providers.

Unfortunately, for many poorly educated people, adult education has the task of undoing some of the attitudes built up by the competitiveness of the formal school system. Learning, when it is graded on the bell-shaped curve, always leaves 50 percent of the class designated as "below average" learners. It is those below average learners who drop out of school early, thereby compounding their problem of low skills and poor attitudes about themselves as learners. To reexpose these students when they become adults to non-threatening, satisfying forms of education is a high priority task to which all educators should give serious attention. But the problem

seems most amenable to solution through competency-based approaches to education because its goal is the production of competence rather than the sorting of people. Let me illustrate the difference through an analogy.

My story is about a furniture company that is organized like a traditional 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 admittedly a 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 the next station when they are completed rather than in various states of completion at the end of each work day.

Well, when the new plans were announced, there were massive complaints throughout the furniture company. The first to complain were the graders, and their complaints were numerous. In the first place, when each chair had to be completed before being released, chairs might be coming along every 15 minutes instead of 30 in various states of completion at the end of each work day. Even though it was perfectly possible for the registry of chairs to register each quality chair as it came along, graders had been batching for so long that they really believed that it was less efficient to maintain a steady place 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, they said, 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 that was presented to the Carpenter's Senate for resolution. 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 market place? While the independent consultant 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 scrap-heap, the simple fact is that most carpenters don't like to work with difficult chairs because they usually require more ingenuity and longer hours.

And so the fable of the furniture company ends. Change is usually difficult and exhausting. It is probably more

difficult to change the educational system than it is to change the furniture factory, but meetings such as this one should serve to clarify the issues and to aid in the search for solutions. Competency-based education is a solution to many of the problems that plague us as we move from traditional school-based education for a few years of life to the Learning Society, in which learning is cumulative, lifelong, and pervasive throughout society. Competency-based education speaks to the pragmatic interests of adults in performing their daily tasks with competence. It is transportable, meeting the needs of the mobile society, but more importantly, capitalizing on the versatility of the multiple providers of education. Competency-based education is more palatable than competitive education for most adults, but especially for those whom we most need to serve--undereducated adults, trying to make a living in a society in which the capacity and motivation for lifelong learning have become survival skills.

May the remainder of your meeting strengthen your resolve to improve competency-based approaches to education and may you find linkages that work for learners, providers, and society at large.

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