DOCUMENT RESUME

ED 189 309   CE 025 302

AUTHOR   Delker, Paul V.
TITLE   Adult Education--1980 and Beyond: Implications for
                Research and Development. Occasional Paper No. 59.
INSTITUTION   Ohio State Univ., Columbus. National Center for
                Research in Vocational Education.
PUB DATE   May 79
NOTE   19p.: Paper presented at the National Center for
                Research in Vocational Education (Columbus, OH,
                1979).
AVAILABLE FROM National Center Publications, The National Center for
                Research in Vocational Education, The Ohio State
                University, 1960 Kenny Rd., Columbus, OH 43210
                ($1.90)

EDRS PRICE   MF01/PC01 Plus Postage.
DESCRIPTORS   *Adult Education: *Adult Learning: Adult Students:
                *Educational Development: *Educational Research:
                Independent Study: *Learning Motivation: Learning
                Readiness: Learning Theories: *Research Needs:
                Student Educational Objectives: Student Interests:
                Student Needs

ABSTRACT
                During the next twenty years, a significantly
expanding adult population and decreasing youth population will cause
education for adults to be an increasing concern to the educational
system. Out of necessity, an increasing proportion of the resources
in education will be directed towards educating adults. Challenges
which present themselves are how adults learn, what they want to
learn, and where they want to learn. Research needed to launch a
comprehensive system of adult education is unfortunately lacking. A
basis for future implications for research and development for adult
education is to be found in Mezirow's approach to research, which
answers six significant questions: (1) How many adults learn through
learning projects? (2) Who is responsible for planning the learning?
(3) What motivates adults to learn in this way? (4) Where does this
learning take place? (5) Why do adults choose to learn on their own
rather than take a course? and (6) Is this research not confirming
the learning behavior of educated adults? Implications for research
include the need for further data on self-directed learning and the
adult learner. (Questions and answers are appended.) (YLB)

ADULT EDUCATION — 1980 AND BEYOND:
IMPLICATIONS FOR RESEARCH AND DEVELOPMENT

by

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May 1979

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THE NATIONAL CENTER MISSION STATEMENT

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PREFACE

The National Center for Research in Vocational Education at The Ohio State University is pleased to present a paper by Mr. Paul V. Delker entitled "Adult Education—1980 and Beyond: Implications for Research and Development." This paper was presented at a staff development seminar at the National Center. Mr. Delker is director of the Division of Adult Education, Bureau of Occupational and Adult Education, in the U.S. Office of Education.

In his lecture, Mr. Delker emphasized that education for adults will be an increasing concern to the educational system in the future as, out of necessity, an increasing proportion of the resources in education will be directed towards educating adults. The challenges which he presented are (1) how adults learn today, (2) what they are interested in learning, and (3) where this learning takes place. Additionally, Mr. Delker pointed out the research that has been done to date as a basis for charting future programs for research and development in adult education.

Mr. Delker received his A.B. and M.A. degrees from the University of Notre Dame. Prior to his present position, he was chief of the Community Services and Continuing Education Branch, Division of Adult Education, Bureau of Occupational, Vocational, and Adult Education. Before joining the Office of Education, he was deputy associate director for selection and training for VISTA, and deputy director of special projects for the Peace Corps. His experiences involved many national and international assignments.

The National Center takes pride in presenting Mr. Delker's lecture and trusts that it will be useful to the educational community.

Robert E. Taylor
Executive Director
The National Center for Research in
Vocational Education

ADULT EDUCATION–1980 AND BEYOND:
IMPLICATIONS FOR RESEARCH AND DEVELOPMENT

The combined topics of adult education and the future or the next twenty years or so are literally unmanageable. First, adult education is, in this country, a highly diverse and pluralistic non-system. The term "adult education" therefore lacks precisio... As for the future, I regard it as mostly unpredictable; therefore I treat futures forecasting as an interesting but not very useful exercise unless undertaken primarily as a methodology to generate interesting and tentative agendas which one is prepared to revise or discard as soon as they are developed. Let me say, however, that while I place very little confidence in being able to accurately *forecast* the future, I place great confidence in individuals', communities', and organizations' abilities to *influence* the future. And it is for this reason that I accepted the challenge to share with you my views on the future of adult education as they *imply* agendas for research and development. To a very considerable degree, as we individually and collectively decide the questions to be researched and the problems to be addressed in demonstration efforts, we will influence the future of adult education and learning in this country.

For our purposes today, it will be useful to give some precision to the term "adult education" if for no other purpose than to aid in communication. I find the distinctions of informal education, formal education, and nonformal education as defined by the International Council for Educational Development (ICED) a useful starting point. Briefly stated, they are as follows:

> Informal education [is] ... the lifelong process by which every person acquires
> and accumulates knowledge, skills, attitudes, and insights from daily experiences
> and exposure to the environment—at home, at work, at play. ... Generally,
> informal education is ur ·rganized and often unsystematic. Formal education
> [is] ... the highly institutionalized, chronologically graded and hierarchically
> structured "education system," spanning lower primary school and the upper
> reaches of the university. Non-formal education ... is any organized, systematic
> educational activity carried on outside the framework of the formal system to
> provide selected types of learning to particular sub-groups in the population. ...[1]

When viewing the learning and education of adults, it is critical to add to these definitions the domain of independent learning, by which I mean that purposeful and systematic learning carried out by individuals independently of institutions. Drawing upon the ICED definitions and the work of John Lowe in *Learning Opportunities For Adults,* as I use the term here: Adult education refers to any activity or program deliberately designed (by the learner, another, or others) to satisfy any learning need or interest that may be experienced at any stage in the adult's life.[2] For purposes of this discussion, I exclude informal education, principally because it is unorganized and usually unsystematic, and formal education through the baccalaureate level unless such programs are specifically

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[1]P.H. Coombs and M. Ahmed, *Attacking Rural Poverty: How Non-Formal Education Can Help* (Baltimore, 1974), p. 8 as quoted in *Learning Opportunities For Adults,* Vol. I (Paris, 1977), p. 19.

[2]*Learning Opportunities For Adults,* Vol. I, OECD (Paris, 1977), pp. 21-22.

designed for adults. Included in this definition are all nonformal education for adults; all independent, purposeful, and organized learning by adults; and all formal education designed especially for adults. With that definitional issue behind, let us now turn briefly to adult learners themselves.

For the most part, those adults who will be educated during the next twenty years have already been born. We know who they are and can project with reasonable accuracy their ages and educational backgrounds. What is significant for our purposes is that we know that during the next twenty years ours will be a significantly expanding adult population and a significantly decreasing youth population. Clearly, the educational market of the future lies with adults.

An immediate implication of this fact is that, since our educational system will devote increasing attention to the learning and educational needs of adults in our society, an increasing proportion of our resources in education must be directed to understanding adults. Specifically, we should begin by looking carefully at how adults learn today, what they are interested in learning, and where this learning takes place.

During the '70s, adult education has received the greatest support and attention it has ever enjoyed. As the community college movement was the wave of the '60s, adult education is the movement of the '70s. Yet, as Ziegler points out, our attention has been almost entirely focused on making the adult a bona fide participant in our educational institutions.[3] Not enough—in fact, almost no—attention has been given to how adults learn, what they want to learn, and where they want to learn. Our response to adult education's coming of age has been to view the adult as the "new market" rather than to view adult education as an opportunity to meet the learning needs of as many adults as possible and to do it more effectively.

This, I submit, must change. There are a number of reasons why it must. First is the need to optimize learning if our participatory democracy is to remain vital and meet the challenges of the years ahead. Jefferson was right! If I may translate his expression of colonial times into the bicentennial context, a participatory democracy must be a learning society. In a democracy, a number of responses to social and public problems are always possible.[4] Part of the strength of this country is that, more often than not, we have solved problems through learning. Sometimes, of course, we have resorted to violence, but most often even that resorting to violence has in turn triggered a reflexive and, subsequently, a learning response. The complexity and interdependency of our world increasingly require that we must use the learning response as the national posture to problem solving and social development.

A second compelling reason why we can no longer regard the adult as simply the new market which can assure institutional survival is cost effectiveness. Education, especially as we now manage it, is very expensive. With continuing inflation and decreasing tax support for services and education, we must turn our attention to learner needs first and institutional needs second. If we do this, there is every evidence that educational institutions will enjoy increasing public and financial support. If we do not, competition for those who can afford education will increase at the expense of those who cannot afford it; and institutions as well as individuals will suffer. Serving learner needs is far more economical and cost effective than maintaining educational programs. I will develop this point at some length later in my remarks.

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[3] Warren L. Ziegler, *The Future of Adult Education and Learning in the United States,* final report under Grant No. OEG-0-73-5232, prepared for U.S. Office of Education, Division of Adult Education (Syracuse: Education Policy Research Center, Syracuse Research Corporation, 1977), p. 12.

[4] Warren L. Ziegler, *Perspectives of Adult Education in the United States and A Projection for the Future* (Washington, D.C.: U.S. Government Printing Office), p. 47.

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As we embark upon an unprecedented period in which the education and learning of all adults in our society will receive increasing attention, we do so with impoverished resources, especially from the viewpoint of research and development. First of all, there is no theory of adult learning. What clues exist—and there are, at best, only clues—come more from developmental psychology than from educational research. But clearly, there is no Piaget of adult learning, and consequently, no body of literature to which one can turn for even a respectable theory of how adults learn. This demonstrates that the education and learning of adults has not had an academic basis for attracting research. More specifically, adult education lacks a constituency of researchers who are concerned about the education and learning of adults and who are willing to devote their time and attention to it. In effect, adult education research is at "square one"; and it is inevitable that, at this time in history, we will undertake an extensive effort to assist more and more adults to learn without the guidance of either research or a codified body of experience.

But "square one" has its advantages. For one thing, adult education is not the captive of false assumptions. Nor does it have to try to extricate itself from institutional inertia; and in education, that may be a special advantage since inertia is directly related to mass. Although we clearly lack the research needed to launch a comprehensive system of adult education in this country, there are two landmarks which I think point the way to proceed.

The first landmark to which I refer is the work of Professor Jack Mezirow of Columbia Teachers College. In some early examinations of adult basic education programs, he borrowed research techniques from anthropology which, in his terms, "build theory from practice" rather than the other way around. Cogently stated, these techniques seek to identify objectively that which occurs in practice, analyze that which is observed and identified, and systematically distill those conclusions which merit generalization.[5] Given that the education and learning of adults has existed as long as adults have and that its practice is much better documented historically than that of the education and learning of children—allow me to cite Plato in passing—this approach promises to be much more fruitful and time-relevant than the traditional approach of empirical research, although I do not denigrate that approach. We have a vast laboratory called history and a mind blowing "N" called adults that make building theory from practice eminently more practical and feasible than more traditional approaches to scientific truth.

Consistent with Mezirow's approach, but entirely independent of his work, a body of reliable research has emerged over the past twelve or thirteen years which identifies and describes how adults in the United States and Canada actually go about learning. This body of research has been extended to other countries such as Ghana, Jamaica, and New Zealand where some of the basic conclusions of the learning behaviors of adults in this hemisphere have been found to be common to adults in significantly different cultures. As many of you have no doubt already anticipated, I refer to the work of Allen Tough and a number of others. About a year ago, Tough summarized and synthesized the results of some twelve years of research. I know that some of you are familiar with this research and his summary, so I ask your indulgence for repeating it here in considerable detail. But from my point of view, it is seminal research on the education of adults. It has not been widely publicized and, where it has been publicized, I do not see evidence that its implications have been adequately understood. Since my view of future implications for research and development for adult education is based considerably on these data, it is essential that I cite his summary in some detail.

[5] Jack Mezirow, "Toward A Theory of Practice," *Adult Education*, XXI (Spring 1977): pp. 135-147.

The research centers around the identification of "learning projects" by which is connoted a conscious learning endeavor carried out by an adult in a sequential and systematic manner. Extensive interviews by trained researchers were necessary to identify and describe the learning projects of adults. This accounts, in part, for the period of time required for this body of research to reach generalizable conclusions.

To highlight the significance of this body of research, I will draw upon Tough's summary to answer six questions. The first is

How many adults learn through learning projects?

The answer is probably 90 percent, though the range from one study to another is from 70 percent to 100 percent.

The typical learner conducts five quite distinct learning projects in one year. He or she learns five distinct areas of knowledge and skill. The person spends an average of 100 hours per learning effort--a total of 500 hours per year, almost 10 hours per week![6]

Next, we ask,

Who is responsible for planning the learning?

... about 20 percent of all learning projects are planned by a *professional* (someone trained, paid, or institutionally designated to facilitate the learning). The professional operates in a group (10 percent), in a one-to-one situation (7 percent), or indirectly through completely pre-programmed nonhuman resources such as programmed instruction or a television series (3 percent). In the other 80 percent of all learning projects, the detailed day-to-day planning is handled by an "amateur." This is usually the learner himself or herself (73 percent), but occasionally is a friend (3 percent) or a democratic group of peers (4 percent).[7]

If probably 90 percent of adults engage in at least one learning project a year and 80 percent of them are planned by amateurs (usually the learner),

What motivates adults to learn in this way?

The most common motivation for a learning project is some anticipated use or application of the knowledge and skill. The person has a task—raising a child, writing a report for the boss, handling a case, teaching a class, fixing or improving something around the home, sewing a dress—and learns certain knowledge and skill in order to perform the task successfully. Less common is curiosity or puzzlement or wanting to possess the knowledge for its own sake. Also rare is learning for credit toward a degree, certificate, driver's license, or other certificate: it is about 5 percent of all learning projects, with the precise figure ranging from less than 1 percent to 15 percent.[8]

If this is how and why adults learn,

Where does this learning take place?

When asked where they preferred to learn, most respondents chose their home, followed by on-the-job training, outdoors, discussion group, classroom, library, and public events, in that order.[9]

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[6] Allen Tough, *Major Learning Efforts: Recent Research and Future Directions* (Toronto: Ontario Institute for Studies in Education, 1977), p. 5.

[7] Ibid., pp. 6-7.

[8] Ibid., pp. 7-8.

[9] Ibid., pp. 9-10.

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Why do adults choose to learn on their own rather than take a course?

The responses are quite different from the guess that many adult educators would make, and the traditionally cited factors of money and transportation were ranked last. Here is the rank order, beginning with the reasons most often selected as particularly important (23:32): "desire to set my own learning pace; desire to put my own structure on the learning project; desire to use my own style of learning; I wanted to keep the learning strategy flexible and easy to change; I wanted to learn this right away and couldn't wait until a class might start; I didn't know of any class that taught what I wanted to know; lack of time to engage in a group learning program; I don't like a formal classroom situation with a teacher; I don't have enough money for a course or a class; transportation to a class is too hard or expensive." [10]

A sixth and final question arises:

Is not this research simply confirming the learning behavior of educated adults?

In the number of projects or the number of hours, Hiemstra found no differences according to age, urban-rural, male-female, or Mexican American and white American. Differences according to social class, education, and occupational level occurred only in the number of projects, not in total number of hours.

... Armstrong found a remarkable amount of learning among unemployed adults of low educational attainment. [11]

This latter finding, while it needs further research, may be one of the most significant of all. Unlike those data that tell us participation in formal and nonformal adult education offerings is directly related to income and previous education (the more you have of both, the more you participate), these data say that learning by the lesser educated and those who can least expend income for learning is as great (and possibly greater!) as for others. I can add here that anecdotal data from our experience in the adult basic education program corroborates this conclusion. Illiterates appear to be limited, not in their learning behaviors, but in the means available to them to carry out that learning. The lack of literacy skills bars them from using printed sources, but it does not bar them from conducting their own independent learning projects.

Returning to Tough, he presents the following overview:

An iceberg is an apt analogy. Let's imagine that the entire range of the adult's learning efforts is represented by an iceberg. For many years we paid attention only to the highly visible portion of the iceberg showing above the surface of the water. We focused our attention on professionally guided learning. We provided courses, classes, workshops, and other learning groups, plus apprenticeship, tutorials, correspondence study, educational television, programmed instruction, and so on. Virtually everyone still agrees that all of this profesionally guided learning is an incredibly important phenomenon in the world today. At the same time, though, it turns out to be only 20 percent of the total picture, only the highly visible tip of the iceberg. The massive bulk of the iceberg that is less visible, hidden below the surface, turns out to be 80 percent of the adult's learning efforts. [12]

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[10] Ibid., pp. 9-10.

[11] Ibid., pp. 11, 13-14.

[12] Ibid., p. 7.

For some time Ivan Illich has called for the de-schooling of society. As far as adults are concerned, one can say that, in terms of the totality of adult learning, it is already 80 percent de-schooled. But more than 80 percent of our research effort and far more than 80 percent of our program development effort is directed toward further institutionalization of adult learning. This is neither desirable nor sensible. Instead of concentrating our effort on making the adult a bona fide participant in our educational institutions, we must concentrate on making our institutions the facilitators and supporters of the entire range of learning, whether it takes the form of a self-planned project, through a group taught by peers, or by an instructor.

These phenomena call for a radical realignment of institutions as they pay increasing attention to the education of adults. Program development efforts should be built around the phenomenon of self-directed learning as the core component. The research confirms that adults want additional help and competence with planning and guiding their learning. If educational institutions provide that help, if they approach the adult as the learner and help adults to better plan, conduct, and evaluate their own learning, the learning society will flourish, and so will educational institutions. If, however, program development and research continue to assume that adult education is that which occurs under institutional sponsorship within an environment designed and controlled by educators, costs will continue to climb, institutional crises will continue to escalate, and adults will continue to do most of their deliberate and planned learning independently of educators and their cherished institutions.

The central issue in adult education program development of the future is whether the program is learner-centered or institutionally centered. Does it recognize and enhance the person's ability to learn independently and to continue learning with or without institutional support, or does it assume the adult will continue to depend upon institutionalized learning as the major mode? Services such as the National Center for Educational Brokering and programs such as the New York State External High School Diploma Program are significant responses to independent learning. They seek to enhance and extend that learning. Finally, I would like to address some further implications for research.

As significant as the data are on self-directed learning, they urgently need to be clarified and extended. A national survey is needed which collects accurate basic data on men and women in all socioeconomic levels of our society. The entire phenomenon needs to be more accurately described and assessed in order for us to better support and enhance it. Tough suggests some specifics in his Major Learning Efforts: Recent Research and Future Directions which I need not repeat here. From my vantage point, fundamental research is needed on the essential qualities of the independent adult learner. Since the independent adult learner is a near-universal phenomenon, what qualities are essential to the self-directed learner? For example, is a certain kind or degree of self-awareness required for independent learning? What attitudes, skills, and behaviors are required for effective independent learning? How are these best acquired and when?

Aristotle told us that one must have a certain amount of life experience before studying ethics. I am told some recent research is proving him right. What other traditional Western wisdom can guide us in this regard? Although these questions are cogently posed in relation to adult learning, their implications for the education and development of children and youth may very well be even greater.

The behavior and experience of the undereducated independent adult learner must be given special attention. How can it be enhanced and extended? What supports are essential to it and how can they best be provided? What choosing, planning, and guiding steps do less educated adults, especially illiterates, undertake at the early stages and throughout their learning? How are resources identified and accessed? How can technology and mass media support the independent learner?

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Answers to these questions and many others are essential to developing effective public policy and identifying new services which would provide the additional help and competence from which learners would most benefit.

Specifically, what are the implications of self-directed learning to the area of education and work? On-the-job learning was cited as the number two preferred place of learning, second only to the home. To what extent does on-the-job learning recognize and build on the reality of independent learning? Can work be more effectively structured and learners be given greater options for planning and conducting their own learning within the work situation? Could these increased choices develop a synergy with those learning projects adults elect to conduct in their homes?

Seventy-nine percent of independent vocational learning projects were self-planned. This means only 21 percent utilized groups or others to help plan their learning. Does this suggest that vocational educators should give special attention to providing planning services? Should "How to Plan, Conduct, and Evaluate Your Own Vocational Learning Program" be in our core curriculum?

These questions and many more need to be addressed immediately. Their answers have both immediate and long-range implications. They recognize how adults go about the bulk of their learning in our society. To seek answers to them is to support the phenomenon. Quality research on the adult self-initiated, self-directed learning phenomenon will inevitably raise new, important questions for research and development.

Whether we look toward the future of adult education from the viewpoint of our national interest, institutional interest, or self interest, the answer is the same. The dominant learning pattern of adults must be better understood. Public policy and institutional programming must seek out, support, and enhance that learning.

QUESTIONS AND ANSWERS

Question: What facts are there which would assure educators that we ought to tamper with the system? We might do it more harm than good, because it seems to be working presently.

If we write off 80 percent of the learning that goes on in our society as not needing professional assistance, we have to make an all-out attack on the profession, and that's not where I'm coming from. But your is a very real question. Should we leave this phenomenon alone, or are we going to muck around and mess it up? It seems to me that we don't have to mess it up. From a public policy standpoint, the thing which I think is so significant and encouraging about these data, is that they suggest it is possible to support learning without getting involved in prescribing what is legitimate and what is not legitimate learning. Particularly on the federal scene, we could support the learning of adults without saying that adult basic education is legitimate and macrame is not; vocational education is legitimate, and other kinds of learning are not; because we support this, and we don't support that. But if we support the learning of adults, we seek only to enhance and make it more effective, respecting what is being learned. If you examine some of the details of this research and balance this against your own experience, there are areas of crying need. In general it appears that the materials adults use in self-directed learning are notoriously poor—magazines, periodicals, and books. I'm sure that we as professionals, if we approach it respectfully, can enhance the process without messing it up. I think that's a central issue we have to keep before us if we move in the direction that I'm encouraging us to move.

Question: Would you care to elaborate on the nature of the institutions or specific organizations which might be most effective in supporting adult education activities? What do you see as the role of the public library in this area?

I really don't know in terms of activities which institutions could undertake to support learning in the home. The only one I have any experience with is home-based instruction in the adult basic education program, and maybe that's worth sharing in this context.

Work was done in Appalachia where it was not possible to use television to get into the "hollers." Educators there found that by sending tutors into the home on a one-to-one basis, the learning rate was two and one-half times greater than in a traditional classroom situation, so it was very cost effective. I cite that because I think making available consultant services by educators or specialists in the home may be a feasible way to experiment if one is looking for return of learning rate. But I am sure that there are many other methods. Obviously television and the current technology are things to look at very seriously in terms of supporting home learning.

I was counting on someone to ask me about libraries because I was conscious that I hadn't mentioned them. That's because I'm not sure what to do with libraries. Historically, they have performed and continue to perform a very important role. My observation is that--at perhaps a slower rate than we would like, but at a perceptible rate--they're becoming more and more responsive to people. I'm not one of those who thinks we should transform them into educational resource centers for everybody in the population. Trying to convert that system may be more trouble than

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it's worth. We know that lesser educated adults usually do not make use of libraries and other educational resources with much effectiveness. I certainly think that the trend evident in library services in the last ten years—that of increasing responsiveness and of viewing themselves as more than just a passive storage for the printed word—should be encouraged. I am not one who thinks that libraries are *the* community mechanism that can meet all learning needs or resources.

Question: What individual can be called an "adult learner"?

At the beginning of the paper, I tried to define the adult learner in terms of learning behaviors in situations rather than in terms of ages. But generally, if you pressed me, I would say the definition in the Adult Education Act is pretty good for our purposes—that of the person sixteen and older out of school.

Question: If we made adult or continuing education a formal "discipline," how could this contribute to further understanding or advancement of education for adults?

I've never asked myself that question. I guess my reaction is that making adult education a "discipline" would not affect it very much. I approach adult education as a "discipline" with mixed feelings. First of all I'm not sure what the term means because it probably means what an individual wants it to mean depending on whether the term is used positively or negatively. But one of the real strengths of both the profession of adult education in this country (but more especially the learning of adults) is that it has not been encased in a "discipline." It has benefited from having people from other fields coming into the area of adult education, of their being "adult educators" without ever using the term. Early this morning one of my colleagues was sharing with me an experience she had had some years ago with business administration people in a university. They had six people who traveled over the state all the time. They never used the word "adult education," but they definitely were adult educators. As I said, the learning of adults has been around as long as adults have. To the extent that we can learn from that, enhance it, understand it better, I'm for it—if that's what we mean by "discipline." But I don't think that the learning and education of adults should ever be entrusted only to adult educators who are so trained.

Question: There seems to be a discrepancy between theory and practice. The institutional approach short-changes those people who are not able to function in the institutional setting, and they cannot teach themselves. Over 55 million adults in the United States do not have high school diplomas. This seems to me a sufficient challenge for adult educators.

Well, I both agree and disagree with you. I agree that all those who wish to get a high school diploma should have the opportunity to do so; but I disagree that that is all adult educators should be concerned with. We have seen a sufficient number of people who are classified as illiterate—both completely illiterate and functionally illiterate—who have undertaken independent learning projects and who have learning skills. There is an excellent film made by the Vermont Department of Education under a grant by the Arts and Humanities Foundation which, in effect, is a documentary of an individual in Vermont who came to the program. Let me take just a minute to describe this film because it illustrates the point very well. The film was about a man in his mid-forties, married, with two children. Although he had a high school diploma, he was a total illiterate. He had faked his way through the whole system. He grew tired of the loneliness of Vermont farming and taught himself how to trap and to cure, grade, and market furs, and he went into the fur trading business for himself. This was a very explicit self-directed learning project using the resources available to

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him in Vermont. After he had launched his new business, he spoke about his discomfort with the problems of not being able to read road signs, not being able to be sure about money and records, and having to fake it in one-to-one and group situations. In terms of delivery system, 50 percent of the basic education programs in Vermont are in the homes on a one-to-one basis. That system appealed to this man because, he said, "only the teacher had to know." He became completely functional in our sense of the word in computational reading and problem-solving skills of an educational type. Obviously, he was a bright man, and he may have learned how to learn by adapting to the socialization process we call high school education. Somewhere he learned it, and yet he was a total illiterate. Now, I'm sure there are total illiterates who do not have learning skills, and I would not be surprised if there are literates who don't have learning skills. I don't think that we can categorize people on a one-to-one basis—learning skills equal literacy. I share that with you because I think that it is an exciting example of why we ought to be out researching these phenomena, and we can do so by improving the education and learning of the illiterates as well as those of us who are, hopefully, literate.

Question: In my experience with adult community learning programs, I've found that there is no one agency or institution responsible for coordinating various courses and organized learning experiences. How would you suggest existing activities be identified, monitored, and coordinated?

I would agree with you, and what your comment points to is an area of experimentation and research which I did not even refer to and which I probably should have—that is, the whole area of administrative mechanisms to enhance the learning and education of adults (both formal and non-formal) and self-directed learning. I would certainly add this as an important area. It may or may not work to put it in the mayor's office. We've had some experience with that, I think, at the local level. Obviously the reality which you point out is there, and it is an area we need to work on.

Question: How do you define a typical adult learning project—in terms of time required, complexity, or some other criterion? Where do we establish the point at which a typical adult learning task requires professional intervention?

If you'll recall in the summary I read, Tough cites the average project length as 100 hours, which represents a somewhat complex kind of learning project—something more than simply responding to a situation. According to this research, a minimum criterion would be five hours. The definition of a learning project involves a conscious decision to learn something of significance which requires sequencing a system in order to achieve that objective. One of the real problems with this research is that most adults don't recall their learning projects. It often takes a long time in interactive interviewing for adults to say, "Oh yes, I did decide that eight months ago I wanted to do some beekeeping." Then they tell about everything they went through in terms of learning beekeeping.

Question: In the research you just cited, how was that figure of five hours arrived at?

Isn't that an individual decision by the researcher or teams of researchers? It seems to me that length is not the proper basis on which to differ regarding this research. I mean that we *do* need a parameter, and we *do* need to define a "go" and "no-go" length. But if you're concerned about self-directed vocational learning by adults, then extend your five hours to twenty if you like. The point is that you can adjust your data after you have collected it. I think that in the interview you've

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got to state your criteria. But if you find that there is a significant number of learning projects of twenty hours or more, and you want to differentiate the data, it's a legitimate research decision. It seems to me that it's important, but not critical.

Question: How do you judge the success of self-directed efforts?

That's very important. I think that in dealing with the learning and education of adults, whether it's nonformal or self-directed, one has to put a great deal of stock in what the adult says about his/her own experience. "Did you learn what you wanted to learn?" I think that's an important form of evaluation in adult learning.

Question: Are there any statistics on that?

I'm sure we need much more research. I can't recall whether in the research adults were asked to indicate their rate of success. But in terms of success rate, the researchers have looked mostly at barriers encountered. The adults would say, "Well, I was able to take it so far, and then I ran into this problem," or "I couldn't take it any farther."

Question: It seems to me that the number of GED certificates given each year would give us some indication of adult learning attempts. This has been on the increase in recent years.

But we don't know, except at the state level, how many of those people brushed up on their own and how many of them came through a basic adult education refresher course. The number of people receiving certificates, even though that may be several hundred thousand a year, is a very minor part of the total adult learning that's going on in this country.

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