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Computer Education for Adults: Policies and Practices

by Dr. Charles R. Oaklief

State departments of education, colleges, universities, and professional associations are now being confronted with the need to discuss policy issues related to the increased presence of adult learners and the application of computer technology to serve this audience. The general field of adult education is the most rapidly growing segment in all areas of American education, an increase of 17 percent between 1978 and 1981. The National Center for Educational Statistics (NCES, 1981) estimates that 21 million adults participated in some form of organized educational programming in 1981. There are many reasons for the rapid acceleration of adult education in our society including the following:

1. The demographic shift is placing the baby boom in the age of greatest adult learning.
2. The explosion of knowledge is creating new information so rapidly that job skills and knowledge are becoming obsolete in even shorter periods of time.
3. Training and education programs are growing rapidly.
4. Social movements for equal opportunities in work and education are increasing the need, motivation, and opportunity for education. In this respect, women are the most active adult learners (NCES, 1983).
5. The level of educational attainment of the populace is rising and with it the demand for lifelong learning. A college graduate is five times as likely to participate in adult education as a high school dropout (NCES, 1983).
6. Adult education is also growing more rapidly among the elderly. A 29 percent increase in the three year period from 1978 to 1981 (NCES, 1983).

The reality of the growing demand for adult education is perceived by adult educators and those who benefit from adult learning such as employers, community leaders, marketing organizations, and society at large. According to

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Cross and McCartan (1984), many state policy makers are realizing the growing interest in adult education which promises to have dramatic effect on equal opportunity, the quality and condition of education, and the economic future of our country.

One approach to enhancing access to further education for the increasing numbers in adult education is the use of computer technologies, including computer-based instruction and computer-based instructional management (Lewis, 1983). This new emerging application of technology to adult education enhances knowledge and skills through self-directed learning in addition to the various adult teaching methods and techniques including participation training and human resource development. The increasing evidence of computer applications to education suggests a positive future for educational technologists, computer specialists, and a broad array of information processors (Gorny, 1982).

Knowles' (1983) prediction that by the end of this century most educational services will be delivered electronically may well go the way of other futuristic predictions. Futurists have predicted the demise of the book, the evolution of the nation's work force into information processors, the development of millions of high technology jobs, and that three million telecomputers will be operating by 1990 (Hodgeskinson, 1985). These propositions, like the idea that providers of adult and continuing education are offering learning opportunities in the necessary attitudes, knowledge, and skills of computer applications are highly speculative. If it is to be true, the mission statements and policy declarations of educational institutions would surely provide evidence of such program direction.

A review of data generated from a broad based computer search of adult and continuing education literature reveals quite the contrary. In fact, there is little information relative to policy statements in support of computer education and computer literacy to be found among the various organizations which provide adult education. The finding that few institutional providers of adult education have established policy guidelines for computer education may not be surprising but the reality of the situation raises some interesting questions:

1. Is there a lack of commitment by adult education organizations to the application of computer technology in the education of adults?
2. Is adult computer literacy the responsibility of others? Should organizations that employ the nation's work force be the primary source of computer competency training?
3. Is the application of computer technology a fad? Will it go away, or be replaced by something more advanced and worthy of educational endeavor?
4. Do these individuals responsible for adult education policy development believe that computer technology is still new to educational settings and that we should wait for more proven applications before committing instructional resources?
5. Is an organizational commitment still too early? Should we let the small number of innovators, risk takers, and others who may be somewhere on the periphery of an organization's main stream do the development work?
6. Could it be that problems associated with the transition from policy to practice prevent the implementation of "cutting edge" programs in most adult education organizations?

Although these possibilities are not exhaustive, it is reasonable to assume that the lack of policy development in computer education for adults is the result of a combination of obstacles. The basic problem is largely set in adult educators wishing to avoid preliminary policy development and long range planning in favor of addressing their perceptions of the immediate needs of learners; a scenario which leads to the marginality of adult education (Clark, 1956). An analysis relative to policy development in established adult educational organizations is that policies are (1) written in broad general statements which reflect the "larger" missions of the institution and not specific educational programming such as might relate to education for computer competencies, (2) that policy reflects the established and traditional educational service areas where computer education is considered as a new era, and (3) the process of policy development and up-dating tends to be neglected in favor of more immediate educational programming intended to meet the felt needs of adult learner audiences.

There is negligible evidence of the existence of policies outlining the provision for computer applications in areas relating to computer literacy for adults, yet, the practice of providing education and training in the application of computers in adult education is increasing at a rapid pace (Kasworm and Anderson, 1982). The growth in the application of computers in adult education is supported by various groups including the Institute For The Future (Amara, 1974). As their report on the social impact of computer technology states:

... there is a need for the public to acquire a deeper understanding how computers affect the decisions individuals and organizations make, the goods and services they produce, and the world that individuals perceive. It is concluded that such improved understanding must be acquired in the near future. (Abstract, p. 1)

Such a call-to-action does not address the reasons for this lack of policy. Rather, it asks what can be done to resolve the problem. If one makes the assumption that educational institutions maintain their vitality by fulfilling the goals and objectives outlined in educational policy, the following considerations for developing computer policy are indicated:

1. There is a practical expectation for the integration of computer education within existing adult education curricula and program areas.
2. There is a need for the development of new educational programming to enhance the attitudes, knowledge, and skills of adults in the utilization of computer technologies in the world of work, community development, and the solution of lifes' larger problems.
3. There is a need to involve adults as learners in the lifelong process of self-development through adult education opportunities. The application of computer technologies can enhance the adult's lifelong learning and self-development process.

The development and implementation of new educational policy is often only as difficult as overcoming established institutional traditions and the extensiveness of existing staff values and competencies. The more difficult aspect of the policy to practice scenario may be found in the process of making the appropriate decisions relative to program and curriculum development, teaching methods and techniques, and design of the adult learning environment. Basic policy questions which need consideration include

the following:

1. Separate Curriculum Area or Knowledge Base Approach

Many approaches which integrate computer training in the educational dimension have failed or have lost emphasis due to a lack of resources, competition from other curricula, and different demands brought by changing economic and social milieu (Apps, 1979). Computer skills and technologies, with the potential of their supportive and enhancing role in adult learning, are too important to be left to a singular instructional thrust or curriculum. In support of this idea Ennals and Cotterell (1985) believe that programs of study in computer applications should increasingly underlay teaching and learning in each subject area. This approach would offer a diffused knowledge-based approach to computer literacy.

There are numerous considerations for the application of computer technologies in adult education (Hoyt, 1985). The education of adults is delivered by most educational institutions and organizations through programs designed around the immediate problem areas of the learners (Cross, 1981) rather than through established curricula (Knowles, 1980). To fit this model, computer-based educational programs must be adaptable and dynamic in order to meet the proactive approaches to life, and the intentional approach to learning (Knox, 1977) as experienced by adults. Adult satisfaction and perceived benefits of learning are related to the learners' propensity for involvement in the process of education and learning (Oakleaf and Oakleaf, 1983).

Effective education of adults will interface with the learner in the solution of real life problems and will not be limited to a specific curriculum or a knowledge based approach. The educator of adults must be prepared to utilize a variety of approaches which will offer choices deemed most desirable for the application of computer education with adults.

2. Liberating Adult Education or Problem Solving Adult Education

Traditional perspectives on adult education in the United States describe the benefits of learning as most often related to the solution of immediate problems in either economic or non-economic benefit areas (Peterson, 1979; Oakleaf, 1982). This would include the acquisition of new attitudes, knowledge, and skills. In this learning process the learners adapt to the demands of occupations and responsibilities of citizenship. There is another important consideration for the application of computer technology in the field of adult education. Education, according to Jones (1984) and Apple (1979) seldom empowers the learner to change the given order of things; to take charge of their environment. In this respect, the interactivity of adult learner and computer technology may help to facilitate the integration of the adult learner into dominant social and economic patterns. According to Heaney (1982, p. 157), "Liberatory adult education . . . enables adult learners to deepen their involvement in the struggle to change their world through reflection and understanding." The impact of computer literacy upon the delivery of adult education and lifelong learning is to enhance the adult learner's potential for taking charge of their own learning thus making the transition from reactive to proactive learning behaviors (Knowles, 1975).

Computer applications in the practice of adult education can contribute to the decentralization of traditional information power structures through awareness and shared access in the public domain. The ideals of liberation and re-

construction through adult education are echoed in the following statement from UNESCO (1977) on reconceptualization of the education process:

Lifelong learning denotes an overall scheme aimed at restructuring the existing education system and at developing the entire educational potential outside the education system. In such a scheme men and women are agents of their own education through continual interaction between their thought and actions. Education and learning . . . should extend through life, include all skills and branches of knowledge, use all possible means, and give the opportunity to all people for full development of personality. (p. 2)

Educational policy for the enhancement of computer literacy and its application in adult education must deal with the basic question of what to do at every institutional level to insure that the administrative and program directions are supportive, that adequate resources are committed, and that instructional methods and techniques further computer literacy and the application of this technology through the principles and practices of adult education. The following policy areas represent larger individual and societal concerns:

Policy Area #1: The Potential of Adult Learning and Development—Educational policy should address the potential of adult learning and development through computer literacy training, the application of computer technologies to problem solving, and enhancement of proactive learning involvement for adults. Such policy should insure the availability of computer competency education for adults regardless of age, sex, social status, racial and ethnic background, economic and social status, intellectual ability, and learning style.

Policy Area #2: The Locality of Adult Learning—The adult learner audience includes a vast array of ages, socioeconomic groups, occupational areas, and individual interests. Adult learning opportunities take place in many different locations including the home, the work place, libraries, shopping centers, museums, and churches to name a few. Educational policy should provide for computer literacy and application training at the point where it will be used; the real life setting.

The sharing of learning environments with other educational and community organizations is an important policy consideration. Industry, business, health organizations, and community service groups can help resolve delivery problems, increase acceptance and direct computer education toward solving community problems and individual needs.

Policy Area #3: The Integration of Computer Education for Adults—Adult education is manifest in an on-going, dynamic, and lifelong process. Adults continue their learning over many life stages and integrate it with their life activities. Educational policy should provide for computer skills and applications of learning at times and locations convenient to the learner.

Policy Area #4: Consumer Protection in Commuter Education—Protection of the best interests of adult learners is one function of the competitive marketing system in adult and continuing education. Public institutions are accountable for the expenditures of their funds. The process of developing public educational programs for adults is sometimes slow and deliberate as compared to the rapid

innovation and adaptiveness of proprietary organizations in servicing adult audiences. Policy should call for collaboration between educational providers to insure the quality and integration of computer education and serviceability. Programming should transcend social and economic barriers to develop the potentials for benefitting privately sponsored adult learning programs. Policy should provide for the employment of personnel skilled in the process of helping adults to learn and in the application of learning to the solution of problems and the improvement of the quality of life.

Policy Area #5: Information and Learner Services—The interface between adult learners and the educational organization should be efficient, accurate, complete, helpful, and positive. Policy should create an awareness of computer learning opportunities for adults throughout the service area and provide a supportive environment. Policy should insure that educational services provide a supportive environment and facilitate the adults' potential for utilizing computer technologies in the process of lifelong learning. Adult guidance and supportive services should perform an advisory role and encourage adults to initiate personal choices about their learning needs and the most appropriate format for achievement.

This article has emphasized the nonexistence of computer educational policy among the institutional providers of adult education and the professional development programs in higher adult education. The primary concerns for computer literacy and application training, as reported in the literature, are related to the following:

1. Negligence on the part of administrators, program specialists, and adult education leaders to initiate realistic and practical policy which will drive computer educational programs for adults.
2. The need for developing policy which will bring cooperation among all providers of computer competency education with business, industry, and community organizations to reach all adult learner audiences with developmental training and application skills.
3. The facilitation of adult learning relative to those approaches which create learner centeredness and proactivity for adults as they develop as independent learners and controllers of their own destinies.
4. Development of learning environments which involve the adult in planning, sharing live experiences, evaluating progress and taking ownership in the computer education process.
5. Facilitating computer education and literacy training so that instructional programming is applicable to the real life problems of the learners.
6. Documentation, dissemination, and discussion of policy and procedures with program and instructional staff prior to beginning computer education and literacy programs.

The development and implementation of computer education policy in our adult education institutions is a major assumption. Even if it were true, the actual impact of such policies would be dependent on the integration, understanding, acceptance, and actual practice relative to such policies by teachers and facilitators of adult learning. All things considered, the development and evidence of educational policy to guide computer education for adults is the first place to start. Only a firm foundation of institutional policy for computer education will enable full development of the adult's potential and contribution to society.

Bibliography

- Amara, R. (1974). **Toward understanding the social impact of computers** (IFF Report R-29). Menlo Park, California: Institute for the Future.
- Apple, M.W. (1979). **Idiology and curriculum**. London: Routledge and Kegan Paul.
- Apps, J. W. (1979). **Problems in continuing education**. New York: McGraw-Hill Book Company.
- Clark, B. (1956). **The marginality of adult education** (Notes and Essays No 20). Chicago: Center for the Study of Liberal Education for Adults.
- Cotterell, A. and Ennals, R. (1985). **Fifth generation computers: Their implications for further education: An occasional paper**. (Report No. ISBN-0-948621-08-7). London, England: Further Education Unit. (ERIC Document Reproduction Service, No. RIEJUN86)
- Cross, K. P. (1981). **Adults as learners**. San Francisco: Jossey-Bass.
- Cross, K. P. and McCartan, A. (1984). **Adult learning: State policies and institutional practices**. (ASHE-ERIC Higher Education Research Report No. 1). Washington, D.C.: The George Washington University, Clearinghouse on Higher Education.
- Gorny, P. (1982). New information technologies in education in the Federal Republic of Germany. **European Journal of Education**. 17(1-4), pp. 339-353.
- Heaney, T. W. (1982). Power, Learning, and "Communication." In D. G. Gueulette (Ed.), **Microcomputers for adult learning** (pp. 156-171). Chicago: Follett.
- Hodgkinson, H. (Speaker). (1985). **Second Annual Chester Peters Lecture** [Video Cassette]. College of Education. Manhattan: Kansas State University.
- Hoyt, K. (1985). Redesigning education curricula for tomorrow's career demands. **Media and Adult Learning**. 2, 1-17.
- Jones, R. K. (1984). **Sociology of adult education**. Chippenham, Wilts: Antony Rowe.
- Kasworm, C. and Anderson, C. (1982). Perceptions of decision makers concerning microcomputers for adult learning In D.G. Gueulette (Ed.), **Microcomputers for adult learning** (pp. 86-105). Chicago: Follett.
- Knowles, M. (1975). **Self-directed learning: A guide for learners and teachers**. Chicago: Association Press/Follett.
- Knowles, M. (1983). How the media can make it or bust it in education. **Media and Adult Learning**, 5(2), p. 3-4.
- Know, A. B. (1977). **Adult development and learning**. San Francisco: Jossey-Bass.
- Lewis, R. (1983). **Meeting learners' needs through telecommunication: A directory and guide to programs**. (ED227783). Washington D.C.: American Association for Higher Education.
- National Center for Educational Statistics. (1981). **Participation in adult education** (NCES Publication No. ED221751). Washington, DC: U.S. Government Printing Office.
- Oaklief, C. R. (1982). **The benefits and characteristics of adult learning in Kansas: A survey of participants in non-credit learning experiences**. Manhattan: Kansas State University.
- Oaklief, C. R. and Oaklief, M. M. (1983). **Participation in Kansas non-credit adult education: A survey of seven participant groups**. Manhattan: Kansas State University.
- Peterson, R. E. (1979). **Lifelong learning in America**. San Francisco: Jossey-Bass.
- UNESCO. (1977). **The general conference adopts a recommendation on adult education** (Adult Education Notes, No. 1). p. 2.