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ABSTRACT

This overview of distance education in the present and future begins by defining the concept of home study and briefly tracing its history from the 19th century to the present. Several distance education institutions around the world are mentioned, including Great Britain's Open University. In the United States, the work of the Annenberg/Corporation for Public Broadcasting project and the growth of networks and consortia of institutions for delivering distance education are identified as important recent developments. The impact of new technologies and the growing need for lifelong education are noted, and it is suggested that home study programs at the local, state, and national levels will develop in response to changing needs. Characteristics of the media available for distance education and ways in which they can be used are outlined; however, it is predicted that the printed word--the study guide and correspondence assignment--will remain the most important medium for home study. Elements of good design for course and printed materials are discussed in the contexts of structure, self-sufficiency, "personality" (the ability to give students a sense of excitement), and the provision of space for students to explore more widely outside the course and to use their own experience. The provision of support and counseling services for distance learners is also considered. A review of the current state of research in the field together with educational and research goals for the future concludes the paper. (MES)

I would like to begin by saying in just a few words what I understand by home study. What is home study? Study is a special kind of learning. Not all learning is study. Study is learning which is planned, deliberate structured, and disciplined. Because study is planned and deliberate, it employs resources of several kinds, including usually, though not always, the guidance of a teacher, tutor or instructor. When study is at home, no instructor is physically present. There is a distance between learner and instructor, so that instruction must be delivered by some kind of communication medium. Traditionally, this has been a printed study guide to which the student responds through correspondence assignments. Home study, then is part of the field of education, part of that sub-field known as distance education, in which there is separation between learner and instructor, so that communication is conducted through print, electronic, or telecommunications media.

Our roots go back more than a hundred years. We trace our origins in this country to Anna Ticknor's Society to Encourage Studies at Home, a Boston-based home study venture of the 1870's; to Thomas Foster's courses for home study by Pennsylvania miners about the same time; and to William Rainey Harper's courses for Chautauquans of whom in the 1880's there were as many as 60,000 enrolled for home study at any one time, from as many as 10,000 communities. Harper then brought home study into the University when he became President of the University of Chicago in 1898 -- bringing what William in 1915 called his "long distance teaching system" to the University. Home study and distance education has enjoyed a remarkable renaissance during the past decade. In 1971 the British Open University enrolled its first students and every year now there are more than 100,00 adult learners studying Open University courses at home, with the primary medium of instruction being the study guide and correspondence assignments. Following the establisment of the Open University, similar institutions have been set up in Spain, Israel, West Germany, Canada, Pakistan, Venezuela, Costa Rica, Thailand, Netherlands, Sri Lanka, Hong Kong,

and Japan. Examples of other publicly-funded home study institutions which rely heavily on correspondence education are Deakin University in Australia, British Columbia's Open Learning Institute, and the Radio and Television University in the People's Republic of China which enrolls a million students a year.

The Open University in Great Britain began teaching its first students in 1971. It now has some 70,000 undergraduate adult students, all studying at a distance to earn their degrees on a part-time basis. There are over 50,000 other adult students taking non-credit courses and courses of professional continuing education. A quarter of a million adults have studied with the University through a system of education at a distance which is based on such communications technology as the micro-computer, audio and video tapes, radio, television, and correspondence instruction. All the more advanced technologies are under development and experimentation, especially interactive video discs, video text systems, simulation programs for home computers, and electronic mail systems. In 1985, about 200 television programs were made and more than 27 hours of television were broadcast each week. About three million correspondence course packages are sent out from the University each year, and nearly a million correspondence assignments are submitted and marked. There is no doubt that the key medium in this multi-media distance teaching system reamins the correspondence course package.

As a result of the success of the British Open University, we have experienced in the last ten years an amazing renaissance of interest in distance education, and a new interest in its particular methods and techniques, and a new awareness of its potential for meeting the needs not only of individual learners, but also as a means of social and even national development. Within a decade of the opening of the Open University, we saw similar institutions established in Spain, Israel, West Germany, Canada, Pakistan, Venezuela, Costa Rica, and Thailand. More recently, Open Universities have been started in the Netherlands, Sri Lanka, Hong Kong, and Japan. Other important distance teaching institutions which are not fully autonomous universities but which use distance teaching in many ways similar to the

Open University include Deakin University in Australia, the Radio Television University in The People's Republic of China, British Columbia's Open Learning Institute, and the Correspondence and Open Studies Institute at the University of Lagos.

In the United States, distance education at the university level has been provided, as we have seen, by the independent study divisions of conventional universities. Today there are over 60 such providers. For most, correspondence is still the major medium of instruction, but most now use such media as audio and video tapes and microcomputers. In recent years, numerous other agencies, both public and for profit, have moved into the field of distance education. While the contribution of particular institutions are noteworthy -- good illustrations would be Empire State College in New York or New York Institute of Technology's Open University -- there have been two developments in this area in recent years which are of special importance, and more significant than the achievements of any single institution. First has been the stimulus given to the development of distance education programs and the improvement of distance education methods as a result of the work of the Annenberg/CPB project. In 1981 the Annenberg School of Communications committed $150 million to the Corporation for Public Broadcasting to support projects using telecommunication and information technologies to enhance the quality and availability of higher education. The project provides funds to develop innovative course materials and to explore new applications of the technologies to higher education. Among the major audiences for these resources are students who seek a baccalaureate degree but are unable to attend conventional campus classes and adult learners who do not desire college credit but wish to continue their general education. Thus, the Annenberg/CPB project has encouraged innovative efforts to use distance teaching technologies and

has focused attention of academics on new ways of thinking about content and about ways in which it can be taught. The project has also initiated and stimulated a program of research, both evaluative as well as basic research. It is important to note that while British Open University courses are prepared and produced and taught by the British Open University, Annenberg/CPB project courses are only funded by the project and are produced by successful applicants for Annenberg/CPB funds. Once produced, they may be used by institutions nation-wide. Accreditation lies with the institutions that use them. One final comment regarding Annenberg/CPB project courses is to note that while they feature television programs and, on occasion, radio programs, they also contain one or more textbooks, a student study guide, and through the using institution a faculty guide, contact with a faculty member through the mail or telephone, and usually optional or required class meetings. They are, therefore, in the full sense of the term multi-media distance education programs.

The second major development in recent years in the United States has been the growth of networks and consortia of institutions for delivering distance education. This is seen in particular in the International University Consortium for Telecommunication in Learning, and in the National Technological University. The former is a network of 21 colleges and universities in partnership with local television or cable stations, which aims to deliver a nation-wide distance education program on a scale which would be quite beyond the resources of any of the partners acting alone. The Carnegie Corporation has awarded grants totaling over $2 million for the development of the Consortium. By 1990, some 20,000 students are expected to be enrolled through 100 colleges and universities. IUC courses consist of a study guide, set books, a suggested syllabus, student assessments, video programs, and

interaction between the student and members of the faculty of the member institutions. Consortium courses come primarily from two sources; they are either adapted from British Open University courses or developed by the Consortium itself. The National Technological University operates via satellite to reach engineers in corporate classrooms for advanced continuing professional education. NTU is a consortium of 15 universities from the Association for Media-Based Continuing Education for Engineers. In corporate classrooms, Eurich and Boyer comment, "A bold and potentially very large venture, NTU's delivery system takes high quality instruction from major universities to the workplace." (p. 17) In a foreword, Ernest Boyer writes, "National Technological University represents a merger of corporate and university concerns. Corporations needing high level training for technical personnel have contributed time and resources to launch the institution. IBM, Westinghouse, Hewlitt-Packard, Digital Equipment, NCR, RCA, and Control Data Corporation were among the first contributing companies. Distinguished universities have prepared courses for NTU."

What we are witnessing in the U.S., in the absence of a decision as has been taken in other countries by a central policy-making organ, to establish one or more national distance education systems, is the growth of various cells of such a system, and the gradual organic growth of a system through the networking process. The system which is evolving has most, if not all, of the features of the more formally established distance education systems.

The number of adults who learn through distance education is difficult to estimate, but one study suggests some 250,000 people taking university and college correspondence courses, some 600,000 in private correspondence schools, and another 600,000 students in the armed forces.

In this country and overseas, the private sector in home study has quietly thrived, with schools targeting on highly specialized markets, developing their professional expertise and, I hope, generally benefitting from the new interest in and acceptance of distance education in particular and lifelong education in general. Lip service is paid to lifelong education; it is a concept more widely accepted than we could have imagined some twenty years ago. Yet for most of America's people, lifelong education is at the best an unsystematic, unorganized, rather chaotic, individually pursued ideal. Programs are snatched off an institutional peg, more often ill-fitting than not, or are personally worked out self-learning projects, as good as be expected but by no means as good as possible in the properly organized, universal lifelong education system we can envision in the future. As we enter the 1990's, the adult years of lifelong education will continue to take second priority to the education of children. However, the pressure from both educators and public for a more systematic provision of adult continuing education, including distance education and home study is going to increase. There are a number of reasons for this, including the self-interest of educational institutions faced with a decline in the college-age population and a growth in the adult population. More important, though, are the twin effects of new technology on employment, on the one hand, bringing increased compulsory leisure, and on the other, enforced job-mobility and continuous retraining for those who remain in employment. Arthur Cordell, science advisor to the Canadian government, writes "~~Structural unemployment is definitely~~ a feature of the ~~1980's.~~" ~~As for net unemployment,~~ "the new technology is like no other ever seen: it is labour saving, capital saving, and energy saving"; "the short term will bring disorder, disruption, and uncertainty to the labour markets". He expects as many as 45 million jobs in the U.S. to be changed by information technologies. One survey expects that before the year 2000 there will be "a radical restruc-

turing of work, including a devaluation of current work skills and the creation of new areas at an ever-increasing rate. This will result in a fundamental change in most workplaces and an often painful adjustment for the workers involved." Citing a Carnegie-Mellon University study of robots, the survey notes that current robots could take over seven million factory jobs. Reports from business indicate that even economic boom will not seriously affect employment trends. A survey of 1000 manufacturing companies in Europe found that even with normal growth rates, about 33% of respondents would not hire new employees and an additional 30% said they would continue cutting employment wherever possible. The weight of informed opinion seems to suggest an accelerating need for adult education, including distance education and home study both for those who have to change their knowledge and skills to keep up with change in the labour market, and also to give meaning to life without work. As well as education for work and for leisure, a third area of adult education which will receive increasing attention is that of learning for family and social roles and for personal growth. These are the learning needs which arise as a consequence of each individual's personal development through the various life stages, which have been identified by developmental psychologists. Just as we all experience birth, adolescence and death, we also experience other, though less traumatic transitions, throughout adulthood and there is considerable agreement about the general nature of these main stages of adult development. For example, we are becoming aware of the learning needs which accompany the developmental task of becoming a parent, or that of facing the difficulties and opportunities of mid-life change. "Readiness," says Cross in her book The Adult Learner, "appears to be largely a function of the socio-cultural continuum of life phases. The implication is that educators should capitalize on the "teachable moments" presented by the developmental tasks of the life cycle." While it will be essential of course to keep our attention on the needs of the adult for continuing vocational, professional and academic education, it does seem likely that this is a new

area of adult learning needs that will form the basis of an extensive range of new teaching programs. There is an important implication of this research in developmental psychology. It is apparent that though we all experience the same life transitions, they are experienced differently by each individual. Learning to cope with, and grow through each life stage is different for each individual, and educational programs to aid such learning should be designed to allow each individual to meet his or her particular needs. In practice this is best done by a combination of individual learning and a wide range of teaching programs, a range so wide it will only be accessed through distance teaching and home study.

Home study is almost ideally suited to meet the needs of the adult population for learning for work, for leisure, and for personal development. The educational needs of the adult population, being so diverse, are almost infinite. They don't fall nearly into categories, and people are not or will be ready to form classes, except for the most common, the most gross of needs -- for example, the needs of groups of immigrants to learn the English language. Apart from such general needs, it will be impossible to meet the specialized needs of the adult by face-to-face methods. As the pressure for such education increases, so will the demand and opportunity for individualized home study through distance education. What we are seeing already is a new interest in distance education and home study on the part of the traditional, conventional institutions of education. University extension departments and departments of continuing education, vocational-technical schools, and community colleges are all showing an increased interest in designing and delivering programs to the adult learner at home. More often than not they are dabbling with one of the new media -- such as ITFS, Instructional Fixed Television Service, or cable TV, perhaps audio tape or electronic mail. It is most unusual to find well-designed and well-used print materials, and rare indeed to find properly integrated media packages that have been well designed to meet

carefully thought out learning objectives. There is at present anarchy and confusion, and I'm sure a great deal of frustration on the part of the growing numbers of people who are experimenting with distance teaching. Nevertheless, in time, it seems certain that distance education and home study will be incorporated more widely by educational institutions than has been the case in the past. As a result, the relationship between specialist home study institutions and others could well become a closer one. For example, as the recognition grows of the value for distance teaching of local counseling and support, it is possible that traditional institutions will provide advisory and counseling services for the growing numbers of adult independent learners for both the public and private sectors. We can hope to see in the future a more cooperative and creative relationship between traditonal education and the new, and the two kinds of institutions working in closer partnership than before. We are likely to see programs of home study developed at three different levels.

At the most local level, the school board, the vocational-technical college, hospital, library and others --including the private schools -- will have their own home study programs, developed by their own personnel and delivered within a limited geographical area. Other agencies, perhaps private, but including the university and the vocational-technical systems, will deliver a state-wide program in a wider array of learning areas, with programs developed by their content specialists and their distance education specialists, in collaboration with specialists from state agencies, business organizations and voluntary associations. Finally, some institutions will act as the state agent for the organization of home study programs delivered from national distance resource centers located anywhere within the country. It is inevitable that there will be by the end of the century, and perhaps before, one primary national center for the distance teaching of, let us say, biology, one for courses in aging and the care of the elderly, one in one

aspect of the continuing education of pharmacists, and another in another aspect, and so on It used to be boasted that the boundaries of the university were the boundaries of the state. This was the extension idea. With distance education, the boundaries of each school will, in fact, be the world. With distance education there need be no boundaries and there are no more severe technical barriers to our institution acting as a world resource than there were in the 19th ıtury to serving the farthest reaches of the state. Distance education is most effective when organized on a large scale; large scale organization permits specialization. Specialization allows on the one hand a wider range of programs than can be provided by any one institution alone, and equally important, it permits higher quality programs; incidentally it also provides programs which are cheaper per head. The trend to national provision of at least some part of home study programs, especially in professional continuing education, is an inevitable consequence of both the increasing need for specialized content and the capacity of distance education to provide highly-specialized content over a wide area. It remains to be seen whether the new needs and opportunities for teaching on a national scale are developed by the schools of the private sector, who have been thebest national providers, especially in vocational areas, since the beginning of correspondence education, or by business corporations themselves, or by the universities. Most likely it will be some combination of all three, though as a university man myself, I suspect our slow and convoluted decision-making procedures might well cause us to run a week third position in this particular race. The provision by such extra-educational institutions as business and industry is likely to continue with national corporations providing instruction directly to their own personnel. How far that proliferates will depend on the readiness of educational institutions to adjust to the need that I have discussed for large scale national programming in this area. It is quite conceivable that universities or private schools

will take on a distance education role for the national corporations for a particular business or industry delivering instructional programs to offices and workplaces with local supervisors providing the learner support role. This trend is already well-established and it might even now be hard to reverse.

What media will be used? The bigger the scale of provision, and the bigger the organization, the more likely it is that we will develop truly multi-media teaching systems. In the smaller schools we are likely to see the continuing of single media teaching or at best a limited media mix, which might sometimes be unfortunate. With widening training in distance teaching methods, however, even at local levels there is reason to hope for greatly increased quality in the use of each medium. The Federal Communications Commission recently approved expanded use by non-commercial broadcasters of telecommunications equipment. Examples of new systems include: Subcarrier Communications Authorization; Instructional Television Fixed Service; Vertical Blanking Interval; Multichannel Television Sound, as well as satellite and fiber optic communication systems. I will go into no details, but only say that many of these are not broadcast, but narrow-cast; meaning they offer the possibility of presenting programs to a particular community or even to particular individuals and this holds great promise for the delivery of home study programs. A second technical development of importance is the new possibility of merging telecommunication technologies so that electronic data, voice and video services can be accommodated on the same transmission systems. This suggests all kinds of new, exciting multi-media configurations, including the possibility that such technologies as cable, satellite and fiber optics, when integrated in a media system, will facilitate more rapid student-instructor interaction than is possible through the print medium. In spite of this, I believe the basic medium of study and teaching is likely to remain the printed word. The ideal, which I am sure will become more common than now,

is a carefully-designed mixture of all or many media, including print. The media mix will become more common as a result of falling costs of hardware and software and also rising familiarity and competence in teaching by media on the part of educators. The media-mix of the near future is going to provide educators with the power to achieve two great, hitherto incompatible and unachievable educational ambitions -- at the same time to provide highly individualized, indeed largely learner-controlled and learner-directed programs on the one hand, and on the other to do it for the large mass of the population. The aspirations which technology makes possible is individually supported, lifelong education for all who want it. One of the keys to this is the personal computer. Either independently, or when wired to the computer of any home study institution, it is possible to build up an infinitely complex profile of each learner. This profile will contain not only a record of every learning project, formal and informal undertaken in the life time, but data on learning style, cognitive style and abilities, attitudes, aspirations, and motivations. The computer can know each learner in a way that only the private, personal tutor of the most priveleged could know hitherto. The learner will be able to obtain impersonal, disinterested advice and counsel from the computer before deciding on particular programs of study, or if he/she so wishes, the computer-generated data could form the basis for consultation between learner and human counselor. Since the computer knows the learner's predilection for study by print, by audio and visual media and so on, an optimum mix of study materials can be prescribed for every learner, and since materials can be dispatched by the computer and feedback can be received and processed by the computer, each learner will be free to determine when to begin a program and at what pace to proceed. Consider the potential of the computer as a source of information about learning resources. Human advisors know only a part of the literature in a small area of human knowledge. The lifelong learner can access, in the future, a file

of virtually all the world's literature. She can ask for a book, a journal article, a film, an audio tape from almost any source on any subject and have it delivered by cable or satellite or in print almost instantaneously. In case this all sounds too impersonal and mechanistic, let me add again that for the learner who chooses human interaction, or for educational goals in which human interaction is desired, the human instructor and the peer learner is a significant component of the total mix of instructional resources available. Like all other resources, the tutor and fellow learner is brought into play whenever, and when, they are most appropriate for the educational task. The future therefore, places learning under the control of the learner, with the computer acting as the major source of data for guidance and acting also as accessor to the instructional resources. These resources include human helper, study guidance in print, audio and video tapes, and disks. There is a diminishing role for broadcast television and radio in the future of highly individualized mass learning. There is, however, a place for audio and video materials transmitted to the learner's home by cable or other direct-method transmission. I see the audio and video teleconference among participants in a particular program, and in the immediate future, I see a period of special interest in the potential of the home computer as a means of data transmission via telephone and also as a means of interaction by keyboard between learner, teacher and fellow learners.

This talk about new media should not blind us to the importance of what is, and what is likely to remain, the most important medium of communication for home study -- the printed study guide and correspondence assignment. Experience at the Open University has proven that the printed study guide and correspondence assignments are the indispensable elements of home study. This has been the consistent verdict of hundreds of thousands of students who have had access to such alternatives as radio, television, audio and video tape, telextext and videotext, telephone teaching and video-disc, just to mention

the most important. Students consistently report that they spend some 80% of their time in studying their study guides and writing their assignments. If the printed study guide and written assignment are to hold this central position in home study, there must be no relaxation in research and development aimed at improving both course design and correspondence instruction. Attention must be given to such elements of course design as its structure, self-sufficiency, and personality. Good structure is both internal and external to the written material. Externally, this means that what contributes to the course through non-print or supplementary material is conceived and prepared as an integral part of the course, not added on after the written course has been completed. Certain kinds of content and instruction are better delivered by each medium, so this must be considered from the very beginning of the course design process. A number of articles in such journals as "Teaching at a Distance" have discussed which medium is best used for which message, but there will have to be much more systematic research to test our beliefs about exactly which medium carries various types of educational messages most effectively. Internal structure refers to the relationships of the various parts of the printed teaching package -- between the form of expression of general aims and specific objectives, self-tests, assignment questions and examinations; it includes a reasonable conformity among authors regarding such matters as terminology and teaching style. Personal idiosyncracies are permissible and should be encouraged, but the general style of the material should be such that the student will develop a sense of overall purpose and consistency -- a wholeness in a work which may be in fact the sum of many parts and many contributors.

A second key word in good course design and in the design of good print materials in the future is "self-sufficiency". This applies to the overwhelming majority of home study courses. A minority of courses are prepared for use in face-to-face situations, but most students will not be able, or

will not want to participate in face-to-face instruction, and courses must be designed to be fully inclusive. Thus every teaching point will be considered very carefully to ensure it is fully explained, without ambiguity, without inaccuracy, "non-sequiters, gaps or other defects in the argument".

Thirdly the material will have personality. It is easy to be both clear and dull. The student must be given the sense of excitement, explanation, discovery and satisfaction which presumably will motivate the academics who write the course. Many academics are not able to write in a way that is both intelligible and exciting -- and to make their materials exciting is an important challenge for the educational technologist and editor. It is in this area that the audio and visual media will be especially valuable, but it is wrong to think of these media as always stimulating and motivating, or to think that a dull text can be saved by use of the other media. Correspondence texts are often dull and uninspiring, but they need not be, and will not be, if enough creative work is put into them. Finally, we should add a fourth key concept to these already-escablished ideas about course design. This is the idea of learner-contribution. The typical home study package is so highly structured that it gives the student little autonomy. The students may choose from a range of courses, but then must follow a precise sequence of course materials, may omit very little and bring in very little of their own experiences. Course designers typically determine the assignment to be wirtten by the student, and give the course instructor a guide as to what the student should write. While the objective of maintaining high academic standards is achieved by standardization and quality-control techniques, students acquire an idea of knowledge as passive and unproblematic, bought in a package like a commodity. In future, new efforts will be made to structure the distance education course to provide space for students to explore more widely outside the course and to use their own experiences. More attention will be given to replacing the written assignment with learner

designed projects in which the students are able to apply and test principles explained in the course in their own home or work settings. This trend to incorporate project work, discovery learning, even peer-teaching at a distance, in short to greater learner independence, is an important development which we are now witnessing and which will continue into the 1990's.

Turning from course design to instruction, I have a question. Put quite simply, since our research confirms what common sense suggests, that adult learners vary greatly in their motives, in the strength of their motives, in the way they learn, and the problems both academic and personal which influence their learning; since most home study programs depend on materials which are mass-produced and not all learners are able to adapt these materials to their own conditions, motivations, and learning styles, the question is: Should every home study system make provision for some sort of learner counseling or some other kind of personal support for each individual learner in an otherwise mass education system? I believe that in the 1990's we are likely to see local support and advisory services for those who learn at home through distance media. The answer to the problem of building such a support system is, like most educational problems, one of reorganizing and restructuring the resources which are already available. Local available resources will provide every learner who wants it with an understanding listener and an intermediary within the learning system. Problems which cannot be dealt with directly by the student in communication with the home study school, can be taken up by local advisors or by the learner after consultation with local advisors. Suitable arrangements to provide local advice can be made by the home studies institution and local partners in such institutions as hospitals, vocational schools, public schools and colleges, workplaces and public libraries. There is a second and related area of activity which will be carried on at the local level. If we look at our adult learner at the time when he or she is thinking of becoming a

learner, the adult is aware that some part of his or her life would benefit from learning. How and through what process this awareness originates is itself a very important question. When the part of life is in a place of employment, it is quite likely the awareness comes from advice given in career-development counseling. Apart from learning in employment, however, a raised awareness of need-to-learn is always a result of chance. The single greatest area of weakness in our education system for adults is the almost complete failure to provide to the potential learner an advisory service. Adult programs in general and home study programs in particular are planned either on the basis of what is of interest to the enthusiastic professor or what the institution feels will be good for the learner or are planned in response to the demand of an articulate minority of the adult population. Outside work is very rare for anyone to approach the adult to identify his or her needs to learn. Those who come forward do so either because they are experienced students, perhaps already in a college program, and so we have the phenomenon of more educational resources being directed to the more highly educated than the less well-educated - or because they respond to an advertisement or hear about out programs from a friend or are persuaded to take a course by a family member, very often a growing child. Yet a great number of learner needs come from the adult's particular stage of development in the adult life cycle. Think the need for learning of the new mother, the person returning to work or college in middle-age, the child of a dying parent, the spouse of an alcoholic. We will begin to maximize the use of our educational resources and begin to deliver services to the majority rather than the present minority when we establish a systematic local service for assessing needs and helping learners enter the system and building new programs on the basis of the needs which we identify in the field. As I said before, the interstructure of such a system might be the public library system or the network of educators already employed by our

agencies. What is required is a shift of emphasis in their roles away from being content specialists. In future we will Leave the content to the centrally located content specialist. The design of content will be better managed centrally and its delivery will be through communications media to the student who learns at home. But several vital activities will only be performed where the learner is. The first of these, vital for both learner and educational institution, is needs assessment. In future, we will have a fieldstuff of specialists to help adults identify their learning needs, as well as to give support to the home student in his or her study. Research in distance education and home study has not kept pace with the expansion of practice, especially in this country. The Open University in Britain has its research department called the Institute of Educational Technology; there are similar institutes in West Germany, and research is undertaken in the Canadian and Australian distance teaching universities. There is some evaluation research undertaken by public and private correspondence schools and colleges, and by the Annenberg/CPB Project, and descriptive, statistical research such as that produced by NHSC, but there is very little basic research. Theory development has moved very little since I worked with Professor Wedomeyer in Wisconsin in the early 1970's, and there is no expermentation to speak of. It needs only some modest decision of our university policy makers to establish more graduate courses and graduate research in home study. Then home study and distance education will benefit from the scrutiny of research; some of our procedures will not survive this scrutiny; new methods and techniques will present themselves; a stronger theoretical framework will be established and the relationship between distance education and general education will become clarified. A vast range of variables and interactions await examination and the next decade will see increasing research to identify the optimum mix of distance media for teaching learners of particular cognitive and learning styles, various personality and instructional attributes, and teaching in

various subject areas.

At the present time the position regarding teaching and training is even worse. I have given a graduate course in Wisconsin each summer since 1979, but I know of no other graduate course in distance education in the United States.

There are several scholarly journals which report research and stimulate inquiry. Australia has the journal Distance Education; Candada has the Journal of Distance Education; Great Britain has Open Learning; and the European Home Study Council published Epistolodidactica.

It is my intention, my ambition, to improve on this situation, and I wish to propose to you as a purpose for the 1990's that you support, encourage, and collaborate in the development of home study as an area of research, training, scholarship and publication. The Pennsylvania State University is giving me support in establishing the American Journal of Distance Education, and I have received financial support from the Annenberg/CPB Project. Mr. Lambert has agreed to be a memberof our editorial board, along with representatives of University independent study, the armed forces, business and telecommunications. Our purpose in the 1990's will be to establish this journal as an organ of scholarhip in distance education and home study in America.

At the same time I hope to recruit a corps of graduate students who will take coursework and produce doctoral dissertations in our field. Such basic research should be of value to practitioners both directly in producing new knowledge about learning and teaching home students, and also by helping establish our field more securely among educationists. Even more directly will be the help we can give in training your program designers, course writers and instructors. I have recently received a number of enquiries about this, and will discuss the NHSC with you. I would be particularly interested in considering some way of training your personnel through home study methods, following the practice of the European Home Study Council which has produced its own Diploma course in correspondence education. I urge you to look to the further professionalization

of home study as a key purpose for the 1990's, and to allow those of us in the universities who share your goals to assist you. Scholarship, training and research is our business. But we do need financial and other support.

My assigned topic was "Purpose and Practice in the 1990's". Nothing could be more practical than my recent comments regarding course design: before that, I suggested some changes in communications technology, and especially a growing place for the computer in learner management and support; I have talked about new learner support systems; previously, I suggested structural changes in the delivery systems at local state and national levels; this has all been predicated on the assumption that the demand for home study will grow as a result of changes in work, leisure, and an increased interest in learning for personal development.

During the 1990's, I believe our practices will continue to improve along the lines that I have indicated, as indeed they have been doing throughout the 70's and 80's. Our purposes, on the other hand, I think will remain constant, consistent, and relatively unchanged. I referred earlier to the roots of home study and to the pioneers who gave us, I believe, purposes that we may continue to aspire to. Home study was, is, and will remain above all else, about opportunity for self-improvement. Home study was, is, and will remain about minimizing restrictions on learning. A purpose of home study has been, is, and will remain, to use the most suitable technology available to achieve its educational goals. Like the pioneer correspondence educators, we will include among our purposes in the1990's, the intention to make opportunity available to those who are unable to advance themselves in other ways. We will continue to provide opportunity for those with physical handicap. We will continue to provide opportunity for those who are restricted by their role of homemaker and parent. We will continue to provide opportunity for those whose learning is limited by the demands of employment, including the mobility of military service. We will continue to provide opportunity for

those with the misfortune of being imprisoned or hospitalized. We will continue to provide opportunity for those whose circumstances of geography put unbridgeable distances between them and those that can teach them.

The roots of home study also in the reaction by the pioneers against the elitism and conservatism of educational institutions, especially the universities, and both their control of access to post-school education and their monopoly of accreditation and thus access to the labor market. The situation has greatly improved in this country, though not so much elsewhere, where study at nome is still the only avenue of continued education for most people. Even in America, though, access to education is easier only for younger learners. While it is true that a small proportion of the university population are now so-called "returning adults", the university makes few adjustments in its curriculum, instructional methods, or administrative procedures to accomodate the adult learner. During the 1990's, we will see an increase in the number of adults who find opportunity in conventional education. They will still have to jump through the admissions and attendance hoops that are applied to the so-called "regular" i.e. young student, and only a small minority will be willing and able to do this. Therefore, a continued purpose of home study will be to provide instruction for the majority who, in the words of Professor Wedimeyer's book,must learn at the back door.

Home study also has one of its roots and one or its purposes in each generations need for vocational training, and retraining, at an ever-increasing rate. According to Noffsinger in 1926, "For the industrial worker the business-man, if either is to succeed in elevating himself from the ranks, far more of preparatory training, of specialist training, is required than ever has been required of men at their work before." And we would add, for the 1990's, home study will continue to meet the needs for specialist training of both the industrial worker and business people, both male and female. While one purpose of home study will continue to be to assist those in work to adjust

to technical change, a new and emerging purpose, as suggested earlier in this discussion, will be to give alternative directions for the self-fulfillment of the increasing number of people who will not be in work. When there is leisure as never before, what will people do? What is to become of their time, of their lives? Will technology be used to bring an abundance of art, music, literature, science, and history into their homes, achieving the Greek ideal of the learning society, with slavery replaced by technology? Or are we to experience a difference Brave New World, of mind-numbing electronic pasttimes and diversions? Individual, community, and social growth through learning, or mental, emotional and social atrophy and decline? Unless we educators are better organized and plan to take up the opportunities for using new media for our own purposes, we will lose them to the Philistines. Our history has not always been one to make us hopeful. Of all human inventions which have been more abused in the United States than than potential medium for home learning, the television? As one views with despair and frequent disgust, the junk programs fed hour after hour and consumed by the people of the richest nation in history, one is apalled at the prospect, at a time when more and more people have more and more time at home, the control of new, interactive and more intimate media will be in the hands of the anti-educators. Such views may be dismissed as fanciful, unrealistic, and irrelevant, which in the short run is true. But now is the time to be thinking beyond the short term. The time to think about our purposes, and our practices in the 1990's, the decade of work and non-work, the decade of new media as well as old, a decade of opportunity but also of challenge for home study, the time to think and to prepare, is now.