The Cambridge International Conference on Open and Distance Learning

The Convergence of Distance and Conventional Education: Patterns of Flexibility for the Individual Learner

Collected Conference Papers
September 1997

Edited by
Alan Tait

Open University
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Foreword

This set of conference papers provides the background thinking to the 7th Cambridge International Conference on Open and Distance Learning, on the topic of Convergence. The topic refers to the breaking down of the barriers between open and distance learning, which has worked separately to a considerable extent in this country as well as elsewhere from so-called conventional education. However two main streams of development have come to challenge this: firstly the increasing use of distance education methods to accompany conventional methods, known in Australia as the dual-mode model but increasingly becoming a multi-mode model (i.e. the availability of the same course from a menu of conventional/distance, part and full-time, independent and supported modes), along with the revolution in teaching and learning being driven by the new technologies throughout all education. These developments mean that the old separation between distance and conventional education is no longer visible so sharply, if at all, in a number of institutions.

The discussion in the papers centres around a number of issues:

- how fast is this convergence and how comprehensive?
- how well is open and distance learning carried out in conventional institutions, for whom it may for a lengthy period continue to be seen as of secondary importance?
- to what extent will open and distance learning be more effectively be carried out by conventional institutions able to jump earlier models of distance education which established systems retain?
- where does convergence leave single mode distance teaching institutions, in particular the 25 or so single-mode open universities around the world, in terms of flexibility and learner attractiveness?
- what are the implications for learning and teaching, and for both student support and teacher development, of the use of the new technologies and of distance methods in conventional institutions?
- which of the new computer-supported technologies provide the most effective learning opportunities and why?
- where in the educational field are converging systems most established so far, and why?
- how will the variety of learners be served in systems that are converging?

- what are the implications for access in converged educational systems?

These and other questions can be found in the collection of papers, and will serve as a focus for discussion during the conference.

Thanks are due to in particular to Emma Mayes for assistance with production of this conference volume, and as ever to Roger Mills with whom I work in providing the space for professional development which has come to be known as the Cambridge Conference.

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Convergence: Patterns of Flexibility and Rigidity

Cathryn Boak
The NODE (Network for Ontario Distance Educators)

Does the convergence of distance and conventional education necessarily lead to flexibility for learners and for practitioners? The position taken in this paper is that convergence may lead to flexibility or to rigidity: it depends on choices that are made on many levels. Convergence is part of wider dynamic of social, political, technical, economic and educational factors, but through a situated understanding of numerous small, "localized settings" (Suchman, 1997) we can come to discern and to understand larger contexts and patterns. The NODE/RÉDO (the Network for Ontario Distance Educators/ le Réseau d'éducation à distance de l'Ontario) furnishes such a setting. Drawing on my experience as coordinator of the NODE, I will look at emerging patterns of flexibility and rigidity within our postsecondary environment.

The NODE/RÉDO

The NODE/RÉDO (the Network for Ontario Distance Educators/ le Réseau d'éducation à distance de l'Ontario)[1] is a bilingual electronic network, located within Ontario, Canada and linking postsecondary distance practitioners and learners with each other and with professional information and resources. The network was established through a competitive process open to college and university consortia within the province early in 1996. The successful consortium, composed of the Collège des Grands Lacs, Fanshawe College, Confederation College, the University of Western Ontario, Larg*net (a hospital and higher education network) and Réseau Interaction Network Inc. (a privately-owned network with experience in postsecondary distance education) was funded for two years. Our purpose is "to lead collaborative efforts in distance learning by establishing, maintaining and animating a network of postsecondary distance educators supported by distance education technologies." From the outset, however, we recognized converging interests and needs related to learning technologies among postsecondary educators and learners generally and have tried to address them.

Working with a board and advisory committees from the field, the NODE/RÉDO supports the testing, evaluation and dissemination of "tools" of various kinds to facilitate the collaborative development of technologically-mediated programs, services and learning resources; we support research into distance education; we gather, organize, filter and disseminate professional information through our website and electronic newsletter; we develop databases and organize professional development.

[1] As the name NODE/RÉDO suggests, the network has a mandate to serve practitioners and learners in English and in French. There are English and French coordinators who work closely together but who recognize that processes and activities must often differ in order to meet the needs of our respective audiences. As coordinator of the NODE, I will be emphasizing the context and the objectives of the English network.

As NODE coordinator, my concern is to understand the opportunities and restrictions electronic networking and our particular network structure present. Cognizant of Menzies'(1994) claim that too often we work "within the belly of the beast," I recognize both how difficult and how important it is to understand the inter-relationships of our technical systems with almost every aspect of our lives. Indeed, we need to be more inquiring as information and communications technologies become more established as the settings and the contexts for our lives in general and for postsecondary education, in particular. As Menzies made clear in the report of the Advisory Committee on a Telecommunications Strategy for Ontario (1992), the growing invisibility of society's information technology infrastructure

> ...paradoxically signal[s] its maturity not just as a means to the end of transactions and other social interactions, which is the role telecommunications played in the industrial age. Information systems will become the setting, or the context, in which people live out more and more aspects of their lives. Locally and globally, they will become the medium through which and in which people do their work, and conduct their affairs...(22)

Canadian philosopher George Grant (1969), illustrated the ways in which the standards of a technological society become a "tight circle" enclosing and shaping much of our vision. We are constrained, but not helpless within this circle and as Ursula Franklin (1992) has observed, each of us is both "our own prison and our own antenna," enveloped in our experiences of technology and technical values, experiences which are nonetheless our means to a broader understanding.

Background

University distance educators in Ontario were advocates for a distance learning network for many years and finally, in 1992 a formal proposal for five-year funding for Network Ontario was put forward by the Council of Ontario Universities[2]. This centralized university service, whose primary objectives were to improve service to learners, to pool institutional resources and to reduce costs, was to coordinate "province-wide planning, development, delivery and promotion of the distance education offerings of Ontario universities (Stubbs, Executive summary, unpaginated)." These proposals represented practitioners' wishes to work cooperatively to create a more open learning university education environment for learners. But equally, the timing of the proposals reflected the desire of university administrators to independently fashion university-initiated, university-controlled

[2] Colleges were not included in the discussions or subsequent proposals. At that time, there was not a great deal of discussion generally between universities and colleges and, in addition, there was relatively little distance education within Ontario colleges at the time. The Ontario college system was developed in the mid 1960's, with the idea that each college would serve a designated local geographic area and until the early 1990's. Ministry funding regulations discouraged colleges from offering distance education.

administrators to independently fashion university-initiated, university-controlled solutions to address mounting calls from the private sector and from government for greater openness, consumer-orientation and rapid response.

The Network Ontario proposal was not funded, but the concept was revisited in 1994 (OCULL, 1995; Landstrom, 1995) under the province's Open Learning Strategy. By this time, postsecondary institutions had experienced successive cutbacks to their general grants, while new public money came largely in the form of small, specific, one-time grants for restructuring and for designated collaborative program development. Public assertion of the importance of postsecondary education to a "knowledge society" was accompanied by decreased public funding, shifting of responsibility from society as a whole onto individuals and questioning of longstanding assumptions about the conduct, roles and responsibilities of postsecondary institutions. Numerous discussion and policy papers outlined needs for greater market orientation, more cooperation across a university and college "system," increased institutional accountability and increased utilization of information and communications technologies to control costs, increase access and allow greater flexibility and responsiveness in programs (see for example, Pittman, 1993; The Ontario Council on University Affairs, 1994; Ontario Ministry of Education and Training, November, 1994; Ontario Ministry of Education and Training, July, 1996).

Government proved willing to fund a network on a short-term basis to address needs for collaboration and professional information across a system of colleges and universities. Within this context, I turn now to consider the nature of the convergence dynamic within postsecondary education and to look at emerging patterns of flexibility and rigidity (where flexibility is associated with the ability to exercise judgment and choice and rigidity is associated with fixity and lacking options) and our relations within them.

Convergence, Flexibility and Rigidity

Three aspects of convergence will concern me in the rest of this paper:

i) a convergence of the experience of postsecondary learners and practitioners around increased use of technologies to mediate teaching and learning;

ii) a convergence of values and practices between postsecondary institutions and the private sector and

iii) government promotion of a convergence of independent postsecondary institutions toward "system behaviour."[3]

[3] Because it is an enormous topic in itself, I am not going to deal directly with technological convergence here, although I readily admit technological convergence is inter-related in very important ways with the organization and capacities of the NODE and with the convergences I do discuss.

i) A convergence of practice within postsecondary education is neither new nor newly noted. Kirby (1993), for example, pointed to the growing similarity between university distance and contiguous education due to changes in both. While budgetary cuts and increased demands for access have caused universities to move away from small personal seminars toward large impersonal classes, the growth in the potential of distance education through technological development and "an evolution in the way it is practised (70)." have led to greater decentralization and interaction between learners and teachers. "The result," writes Kirby, is that the term 'distance' in distance education is fast becoming a red herring because students studying at a distance have an equivalent opportunity to interact with their instructors as do students in many of the large classes now commonplace on campus (71)."

One central challenge to our network is to link past practice in distance teaching and learning with present and future possibilities, without casting aside what is valued and valuable. In part, this involves understanding ways in which distance learning and on-campus learning are no longer dichotomies, and examining possibilities of blending the positive attributes and new capabilities of both. Maintaining continuity and building on current knowledge, objectives and successful practice are important ways to increase flexibility for practitioners and learners by helping them expand their repertoire of teaching and learning possibilities. The NODE promotes professional connection and information-sharing between distance educators and instructional/educational development centres (which are becoming more common resources for faculty in Ontario colleges and universities), between distance educators and instructional technology specialists and between practitioners and researchers.

The convergence of postsecondary practice is extended through the use of similar technologies to increase interaction among instructors and learners for discussion and collaborative work. With the advent of courses "on the net" these possibilities have become more widely known and available, although access for practitioners and for learners is very uneven, even sometimes for people working and studying with the same institution. Like most things associated with the net, organizations and individuals have experienced some sort of imperative, largely absent in regard to earlier technologies, to check out the possibilities and to make use of even rudimentary or experimental capabilities. It is perhaps inevitable that many faculty make more use of the Internet as a parking place for class notes than as dynamic processes for searching, linking, interacting and collaborating. At issue is the widely varying amount of training and assistance needed by and available to practitioners so that they come to see and use the potential of the Internet as a means of connecting intelligences across time and space (DeKerkhove, 1996) instead of using it "as landfill for information (Ursula Franklin, in Salutin, 1997)."

Muffoletto (1997) notes that we need to consider "*who benefits* from classes over the Internet, and *whose interests* are being served....We need to ask whether these interests are fuelled by the expanding marketplace, or if they are a result of the shifting and expanding interactive technologies, or if they exist because we may now address issues concerning equity and student voice in a manner that was before impossible (50)." Dumping course notes onto web pages may an efficiency for institutions but is hardly a good bargain for students if it means costly and/or difficult Internet access but little or no learning opportunity. Muffoletto echoes Apple's (1982) assertion that the *form* of

ways within the distance education literature and choices made about technical systems and form are closely inter-related. Human choices about the design and utilization of technologies [4] have vital effects on educational form and practice as well as learner and practitioner satisfaction. We must become attuned to the ways in which new forms may provide opportunities for more flexibility on one level, but introduce the potential for wider circles of rigidity and control. As an example, consider the experience of an American professor reported in AAHESGIT, the list of the American Association for Higher Education. Gilbert, who maintains the list, provides commentary on "an administrative decision to change the university Web 'presence'" which involved closing down the professor's site, and using some of the material prepared by the professor and his students in a new design without consultation, consent, or even notification. Press, the professor, writes

> I have put intellectual property on university-owned computers which can only be accessed over university-owned and controlled communication links. This leaves me feeling very vulnerable.... Faculty vulnerability will increase if, in the future, scholarly work migrates from print journals and proceedings to electronic media controlled by university administrators and teaching material moves from textbooks and notebooks to the Net.

As Gilbert notes, "Press raises issues of changing patterns and expectations, changing faculty relations to teaching materials, and changing the balance of power and controls in educational institutions."
Multiple levels of form and control - individual, organizational, societal, international - are often not obvious, nor easy to grasp, but they are vital. Part of our work is to come to understand the web of educational/social/technical/political/economic relations in which we are enmeshed and which we help to create so that we can act from understanding and continue to develop ways that create more flexibility for practitioners and learners. One change we experience in these relations is the rising influence of economic factors, increasing competition and a valuing of knowledge as a commodity to be protected, marketed and sold.

ii) Questions concerning a convergence of values and practices between postsecondary institutions and the private sector include issues surrounding knowledge as the basis of competitive advantage and the prospects for access to knowledge becoming more restricted as this occurs; the levels on which decisions about knowledge as a commodity are made; and the effects on flexibility/rigidity for

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[4] Three sources which look at different issues in human choice in the design and development of technologies to augment human practice are: Landauer(1995), *The Trouble with Computers*, which analyses the design and utilization of computers in business; Reeves and Nass (1996), *The Media Equation: How People Treat Computers, Television, and New Media like Real People and Places*, which illustrates that the variables in human relationships also apply in human relations with media and should be integrated into good design; and Zack and Serino (1996), "Knowledge management and collaboration technologies" which emphasizes the importance of both social and technical processes in developing and using technology to support collaborative work.

ii) Questions concerning a convergence of values and practices between postsecondary institutions and the private sector include issues surrounding knowledge as the basis of competitive advantage and the prospects for access to knowledge becoming more restricted as this occurs; the levels on which decisions about knowledge as a commodity are made; and the effects on flexibility/rigidity for practitioners and for learners. Firewalls, password control, proprietary rights, access costs and varying degrees of technical and social accessibility interject webs of control into the movement of information and the sharing of knowledge.

Public policy continues to support collaboration among institutions and among sectors, but increasingly, collaboration becomes part of a staged, competitive market strategy where individuals and institutions join together to collaborate at one level in order to beat others within a larger competitive framework. The entrepreneurial behaviour common in applied scientific and business research, with its associated development of products, processes and applications that can be patented and/or marketed is becoming more familiar in the development of courses and learning modules, as these products are protected and marketed by professors through their private businesses, by multimedia developers, by institutions and by public and private consortia. Accompanying these trends are expectations that institutions will become more self-sustaining, spin off profit centres and pursue the audiences and offerings that bring high returns to the institution. Service to a local community which may not be able to pay well can be replaced by serving the segments of the international market which can. Networks can enable international initiatives as well as services for learners that are costly and under-supported by individual institutions.

Also part of this trend is public funding that is targeted and short-term, rendering long term commitment to development and change difficult, if not impossible. As a network established "to lead collaborative efforts" the increasingly competitive postsecondary environment poses particular challenges to us. Universities, in particular, have been highly independent institutions. Increasing instances of collaboration and achieving sustainable collaboration involve complex changes that only occur through peoples' experience with each other over time, especially when there are countervailing forces toward differentiation and competition. Mediating collaborative processes through technology, does not make them easier, although it makes them possible across wider distances. The collaboration in "collaborative technologies" still rests with people and relies on their commitment to establish trust and viable working relationships.

iii) The NODE is a prime example of government's promotion of a convergence of independent postsecondary institutions toward "system behaviour." We are an extra-institutional project meant to serve system needs. A system implies a pattern, connection and commonalities, and although the collection of 17 universities and 25 colleges in the province have numerous organizational and structural features of a system, there are also many differences. Of most concern to us is the great variation in technological infrastructure, pedagogical knowledge about learning technologies and strategies to use them, personal/professional comfort and readiness, institutional support for practitioners and learners, and institutional vision for distance education and learning technologies within broader institutional mandates and priorities.

Just as the promotion of greater competition and institutional comparative advantage works against many forms of collaboration, it complicates system behaviour: competition forces a search for differentiation. But while greater system behaviour can create more flexibility for learners through credit transfer and other shared protocols and services, it can also reduce educational choices and opportunities through a "rationalization" of learning materials, courses and programs. In the rationalization of Canadian bookstores, for example, we see a trend to fewer, larger "superstores" which are part of a small number of chains (systems). Each store has many titles, but all are quite similar. While customers find more titles in one place than in the smaller independent stores which tend to specialize, it is questionable whether there will greater choice overall, especially if the smaller stores are squeezed out of business. In common with other factors I have discussed, "system behaviour" can create more or less flexibility and choice: it depends.

As a network for the postsecondary system, the NODE has to respect the diversity within postsecondary education and training, yet avoid being immobilized by it. What the diversity means is that we never come close to satisfying everyone- there is no *one* constituency, no *one* set of interests, objectives and needs. This means taking a somewhat fractured, niche approach in addressing needs and in building from current capacities and competencies toward future capabilities. Through this process, a common and uniting factor is to build community and connection based on professional interest by providing accessible professional information, professional development and accessible communication channels.

At the end of the day, the NODE must continue to interrogate not only what we do and how we do it, but also to inquire into the influences of convergences within postsecondary education of which we are a part. Does the convergence of distance and conventional education lead to flexibility for learners and for practitioners? It depends.

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Thoughts on the Efficacy and Ethics of using Digital Multimedia for Educational Purposes

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I Introduction

An important element in the widely reported growing convergence of distance and conventional modes of education has been the increasing use of digital multimedia in programmes of higher learning.

Digital learning media is most often encountered either in the form of self-contained courses of instruction on CD-ROM discs or by the presentation of interactive learning programmes on the World Wide Web. In the future, other digital technologies including DVDs (digital video discs), digital satellite transmissions and fibre-optic cable are anticipated to supersede CD-ROMs and the Internet (as we currently know it)[5].

Although courses on a CD-ROM disc and Internet-based programmes engender fundamentally different learning experiences, both of these new modes of educational delivery have provided individual learners worldwide with new patterns of flexibility in the pursuit of their tertiary studies.

As with the innovation and widespread adoption of any new technology, the introduction of digital multimedia into higher learning raises ethical issues concerning how such innovations may impact upon the individuals who use them and the communities into which the technologies are disseminated. Accordingly, any assessment of the suitability of digital multimedia for educational applications, whether by CD-ROM or on the Internet, should include consideration of the following fundamental questions:

1. Does the new technology bestow an added benefit upon the learners who use it relative to the modes of learning which the new technology displaces?

2. Considering the impact of the new technology upon an individual learner and the society that the learner is a part, is it ethical for an educational institution to promote such digital modes of learning?

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[5] cf [Negroponte, Nicholas, (1995) *Being Digital*, Rydalmere, NSW: Hodder & Stoughten] and [Gilder, George, (1995) *Telecosm*, New York: Simon & Shuster].

II Thoughts on the efficacy of digital multimedia for learning purposes

The first question concerning the efficacy of digital multimedia in learning raises a number of subsidiary issues including:

1. By what criteria may we usefully assess the effectiveness of a digitally-mediated learning experience?

2. What are the inherent strengths and weaknesses of digital media which either promote or hinder a learning experience?

3. Considering A and B above, by what strategy should we seek to optimise the effectiveness of digital multimedia in the learning process?

Although it is beyond the scope of this paper to definitively resolve these questions, the following preliminary thoughts, pertaining to the efficacy of the educational use of digital multimedia, are offered:

(A) Criteria for assessing the effectiveness of a digital learning experience

When designing a learning experience, whether it is to be mediated by classroom activity, correspondence, television, CD-ROM, the Internet or any other means, one must first ask "What is it that we want our learners to learn?" The literature is replete with evidence that best educational practice most highly values those learning experiences which foster a capacity for critical thought[6]. This trend reflects the growing influence of the constructivist school of cognitive psychology on educational design which seeks to promote understanding rather than the retention of information. Research into the nature of learning and the role of technology in education has identified widely accepted principles which provide benchmarks for assessing the design of a digitally-mediated learning programmes:

1. The primary purpose of the educational process should be to assist learners to develop their own cognitive strategies for using, managing, discovering and deriving their own meaning from knowledge[7] because:

   - "Information is not knowledge; knowledge is not understanding"[8], and
   - "Wisdom cannot be told".[9]

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[6] Clift, John and Chambers, Mark (1994) "Educational Considerations in the Development of a Generic Degree Program", Report to the New Zealand Qualifications Authority, December 1994.

[7] Wittrock, M. (1977) "The Generative Processes of Memory", in *The Human Brain*, edited by M. C. Wittrock, Englewood Cliffs, New Jersey: Prentice-Hall.

[8] Taylor, Mark and Saarinen, Esa (1994) *Imagologies: Media Philosophy* London and New York: Routledge, p. 12.

[9] Bridges, Edwin M., and Hallinger, Philip, (1995), *Implementing Problem Based Learning in Leadership Development*, Eugene, Oregon: University of Oregon Press, ERIC Clearinghouse on Educational Management. Bridges in using this phase invoked the memory of Harvard educationalist C. Cragg

2. Learning media should seek to foster in learners the skills and knowledge required for deriving solutions, evaluating their validity and judging the most appropriate solution for a given situation[10].

(B) Inherent strengths and weaknesses of digital multimedia as learning media
Measured against the criteria that the efficacy of educational multimedia be judged according to how well it promotes critical thinking, many digital learning applications can be seen to be deficient. Such shortcomings are particularly evident in many of the pre-packaged learning experiences offered on such mass storage media as CD-ROMs.

Although CD-ROMs are excellent for asynchronous presentation of vast amounts of data, many CD-ROM courses fail to engage learners in the process of critically assessing the merits or utility of such data. CD-ROMs and Internet-based courses appear to have been designed to present a set of "correct" facts which the learner is expected to commit to memory by rote. This shortcoming is particularly apparent in those computerised assessment systems which grade a learner's ability to feed back such "correct information" to a computer.

The literature suggests that computer-mediated communication (CMC) is mode of choice for task-oriented communication and problem-solving[11] and excellent as a medium for providing learners with drills for testing generic skills such as mathematics and languages. However, in a survey of studies, Palmer[12] delineated a number of perceived deficiencies of CMC as a means of interpersonal communications which limit the transmission of interpersonal and social information, including the restriction of "social presence", diminished social context cues and restricted number of channels, particularly nonverbal vocal and kinesic modes of expression.

Educational multimedia may supplement a learning experience by presenting a powerful simulation of a particular facet of the external world. However, what digital multimedia commonly lacks is the ability to interact dynamically and intelligently in a discourse with every learner about what such a simulation means.

The provision of a dialogue is the role of the human mentor that facilitates and manages the learning experience of an individual acquiring the cognitive and domain skills of a discipline. Again what is sought is not the acquisition of specific content knowledge but rather the growing sophistication of a learner in addressing problems typical of a discipline by using theories and concepts as tools of analysis.

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[10] Eisner, E. (1993) "Reshaping Assessment in Education: Criteria in Search of Practice" in *Journal of Curriculum Studies*, **25** (3), pp. 219-233.

[11] Palmer, Mark T., (1995) "Interpersonal Communication and Virtual Reality: Mediating Interpersonal Relationships" *in Communication in the Age of Virtual Reality*, Frank Biocca & Mark R. Levy (eds.) Hillsdale, New Jersey: Lawrence Erlbaum Associates Publishers, 1995.

[12] *ibid.*

This process of development in a person's cognitive reasoning capacities is best facilitated by a dialogue with an accomplished mentor. Until machines are capable of fully simulating the cognitive and social repertoire of humans, the role of a mentor will continue to be an irreducible element of an optimal higher learning experience.

(C) Possible strategies to optimise the use of digital multimedia in learning
Considering the advantages and limitations of digital multimedia for use in educational applications, this section offers three design strategies to optimise the efficacy of learning media:

1. The learning strategy known as problem-based learning (PBL)

2. Recognition of the importance of synchronous interactions between a learner and his or her mentor for optimal learning experiences

3. Bohm's world-view of "wholeness and implicate order"

a) Incorporation of problem-based learning into digital learning media
Problem-based learning is founded on the hypothesis that learning involves both knowing and doing. Advocates of PBL regard the ability to use knowledge is as important as acquiring it[13].

What is valued in the PBL approach is the opportunity for learners to gain practical skills by learning to how to solve difficult, novel and ambiguous problems by applying theoretical concepts as analytical tools to prior knowledge in a context relevant to the learner's present circumstances. This active creation of meaning by processing new information in the light of prior knowledge as the process we know by the word "understanding."[14]

It is advocated here that each problem be presented such that no single solution path can be deemed correct and will enable the learner to utilise virtually any aspect of the materials available on the CD-ROM (or Internet) in an integrative fashion to synthesise a solution. Problem-based learning focuses on the process not the product. This approach challenges learners to derive solutions to a series of tasks of increasing complexity. Learners are stimulated to seek useful information and focus on the process of thinking about problems rather than learning subject matter by rote[15].

PBL may be incorporated into digital learning media by providing a learner with a set of problems which the learner may reframe to be relevant to the life circumstances and

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[13] Bridges, Edwin M., and Hallinger, Philip, (1995), *Implementing Problem Based Learning in Leadership Development*, Eugene, Oregon: University of Oregon Press, ERIC Clearinghouse on Educational Management.

[14] Burns, Janet, Clift, John and Duncan, J (1990), "Understanding of Understanding: Implications for Learning and Teaching", in *British Journal of Educational Psychology*, **61**, pp. 276-289.

[15] Gibbs, G. (1991) "The CNAA Improving Student Learning Project" in *Research and Development in Higher Education: Volume 14*, A Viscovic (ed) Wellington: Higher Education Research & Development Society (HERDSA), pp. 8-19.

interests of the learner. In solving the problems, a learner would be encouraged to first subjectively formulate the criteria by which an optimal solution to the given problem may be judged. The learner would then be encouraged to utilise the digital technology (CD-ROM or Internet) only as a starting point to commence the search for the required solution. In this manner, the self-confidence and initiative of the learner would be fostered as would the recognition that all knowledge is conditioned upon the assumptions which one makes.

b) Synchronous interactions between a learner and his or her mentor

A theoretical rationale for the indispensability of the interpersonal interaction between a mentor and a learner, in an optimal learning experience, can be found in the work of the social constructionists who contend that all perceptions of reality (including learning) are constructed from discourse and negotiation. The central premise is that the social negotiation of reality is mediated through and made possible by language.

Social constructionists contend that the language used in a culture shapes the reality in which that culture exists. Gergen summarises the constructionist logic as follows: As the world is known through human experience mediated principally by language, and categories of language used to classify things are situational and derived from social interaction, therefore reality is socially constructed by the continuing communicative interactions of members of a social group or culture[16].

Biocca has theorised about the social construction of a learning experience embedded within the design of the course materials[17]. As suggested above, this paper advocates that the use of digital multimedia in higher learning be viewed as a potentially useful supplement to, but not displacement of, the learners interactions with a mentor. Each educational technology entails the communication of a discourse that influences how learners think about reality. The pre-programmed, self-contained course material frequently encountered on CD-ROM and many Internet-based courses are not able to simulate a dialogue that will meet the learning needs of any individual learner. This requires personal interaction from an intelligent and perceptive mentor. Accordingly, an optimal learning strategy recognises the essential role of human interaction whose support of the learner facilitates a constructive dialogue as the learner constructs meaning from the educational experience.

c) Bohm's worldview of "wholeness and implicate order"

A third strategy for effectively utilising digital multimedia in the learning experience embraces the world view of the late physicist and philosopher David Bohm who argued that study of social phenomena, as well as quantum mechanics, should be undertaken from the perspective of a "wholeness and implicate order" of an entire system rather than by a mastery of individual parts considered in isolation[18].

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[16] Gergen, Kenneth J. (1985) "The Social Constructionist Movement in Modern Psychology," *American Psychologist* **40**: 266-275.

[17] Biocca, Frank & Levy, Mark R. (eds.) (1995) *Communication in the Age of Virtual Reality*, Hillsdale, New Jersey: Lawrence Erlbaum Associates Publishers.

[18] Bohm, David (1980) *Wholeness and the Implicate Order*, London and Boston: Routledge & Kegan Paul.

An application of Bohm's methodology to the design of educational multimedia rejects structured non-linear instructional modules, as well as the production of mere linear digital textbooks, in favour of media which present problems without any predetermined solution paths. Such non-structured learning experiences will require the participation of a mentor who can provide cues and Socratic support to the learner as he or she constructs meaning relevant to a specific context or vocation.

Bohm's vision resonates with the constructivist problem-based learning strategy advocated above. It is highly desirable that learners are empowered to creatively draw upon to totality of the resources available to them in the search for solutions to their problems. Presenting problems, in which it clear that no preferred solution path has been determined, compels a learner to utilise his or her own judgment in formulating a solution rather than seeking to replicate the solution intended by course designers. An application of Bohm's methodology to the design of multimedia rejects predetermined non-linear structures for learning materials on CD-ROM or the World Wide Web, as well as linear programming, in favour of media which present problems without any predetermined solution paths.

Adoption of the Bohmian approach to making sense of the world by grasping whole systems, rather than minute analysis of their perceived parts, reinforces the central role of the mentor in the learning process. Without an interactive guide, an "unstructured wholeness" approach to the presentation of problem-based learning modules could leave a learner submerged in his or her options in a labyrinth of information.

III Thoughts on the ethics of incorporating digital multimedia into conventional programmes of higher learning

We live in a time when the electronic semblance of things are displacing the objects they represent. A predictable consequence of the widespread integration of digital multimedia into programmes of higher learning will be a rise of "virtual classrooms" and "virtual universities". There is a growing body comment in the educational literature concerning how digital technology may ultimately displace the bricks and mortar of schools and tertiary institutions[19].

Those who seek to usher in a new age predicated upon technology have a social responsibility to examine the how such technology will affect those who use it and the communities within which it is disseminated.

Before entering a virtual classroom it may be instructive to ponder who is in charge of the educational process. Although one may attend a virtual university in the comfort of home, one's alma mater may be operating from anywhere in the world. Once education is no longer situated in a local community or even within a national boundary and can be remotely delivered, the possibility opens that large transnationals such as Time-Warner, Microsoft, IBM and Disney Corporation can set up their own universities and enrol students across the globe.

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[19] Tiffin, John and Rajasingham, Lalita (1995) *In Search of the Virtual Class: Education in an Information Society*, London and New York: Routledge.

As the educational process has a powerful influence upon an individual's sense of self-identity and loyalties, the potential for adverse social consequences of the widespread adoption of digital technologies in higher learning cannot be lightly dismissed.

The introduction of information technologies into higher learning in general and the advent of the virtual classroom in particular presents a range of ethical issues including:

1. Cost and equity of access

2. Diminution of the role of the university as a "critic and conscience of society"

3. Erosion of civil society and true (proximal) communities

Again it is beyond the scope of this paper to do more than raise these issues and provide brief comment concerning the nature of the ethical issues which pertain to the use of educational digital multimedia.

(A) Cost and Equitable Access to Higher Learning

The proponents of virtual universities often cite the enormous potential for government spending reductions as the bricks and mortar of traditional universities are displaced by the computer hardware and software investments of the learners logging onto virtual universities from their homes.

Although IT innovations promise to reduce central government expenditures, the aggregate expenditure on higher learning may increase as individual learners are required to invest in the products which enable them to participate on-line. Some students will, of course, find the cost of technology prohibitive and others may regard such expenditures as wasteful, particularly as personal computers are notorious for their rapid decline in value into obsolescence. The financial burden of providing an educational infrastructure will have merely been shifted in great measure from the State and onto the students.

There is evidence in New Zealand that the adoption of IT for educational purposes is increasing rather than diminishing the cost of higher learning. For example, the deputy of Vice Chancellor of Auckland University[20] has reported that electronic delivery at his institution has been responsible for escalating operational costs of the university and has contributed to the rise in student fees. In his view, the anticipated savings to be achieved by replacing the traditional campus services with electronically-mediated learning, is an illusion.

(B) The role of the university as a "critic and conscience of society"

The advocates of the virtual classroom typically focus on the purported benefits of the remote participation. It cannot be doubted that there are indeed many students whose

[20] Hotere, Andrea (1997) "Technology pushes up the cost of education" *New Zealand Education Review*, Wellington, May 14, 1997.

life circumstances are such that distance education is the best mode of learning. For these learners, the virtual classroom promises truly enhanced learning opportunities with their cohort and mentors. However, for conventional higher learning, the dispersal of the campus into a virtual community will potentially adversely impact other university functions such as its role as a centre of research. A conventional university campus is a place where unpopular and unconventional thinking can first challenge dogma and ignorance. In this capacity, a university is able to serve as a "critic and conscience of society".

The very idea of a virtual university is at odds with the role of the critic and conscience of society. By their nature virtual universities are located in cyberspace and dependant upon software and telecommunications corporations for their existence. The law of the free marketplace jungle and economy of scale economics dictate that ultimately international virtual universities will compete for global markets. But how will a virtual mega-university based in Seattle, Tokyo or Cambridge serve as a critic and conscience for such places as New Zealand, Kenya or Costa Rica?

The cost of the loss of a local university as a concerned social critic would be very great because there are few alternatives in contemporary society to the contribution of independent scholars to the development of insights in philosophy, ethics, psychology, sociology and a host of other disciplines. An IT-driven "lean and mean" university may produce effective workers and managers serving what Lyotard has defined as the "performativity" agenda of the corporate sector to organise all activities according to market sector efficiencies[21]. But would such "lean and mean" universities produce creative *and critical* thinkers whose integrity in their capacity as a conscience of society is not compromised by the need not to displease one's employer or sponsor?

(C) The potential erosion of civil society and true (proximal) communities

Many commentators, such as Lanham interpret the impact of information technologies in a largely optimistic light. Lanham believes that the primary influence of the computer on modern thinking is humanistic with the digitisation of the arts serving to radically democratise them[22]. He argues that as digitisation makes all art forms radically interchangeable and accessible, we have entered a new age of interactivity which shifts the locus of creation from the author to the consumer.

What seems lacking in the analysis of the benefits of the new communications technologies is consideration of the implications of the technology for the constitution of the subjective self of an individual adapting to the electronically mediated realities of the emerging information age. The historian, Mark Poster, argues that a person's sense of self is constituted in acts and structures of communication[23]. In the digital age, Poster observes, people derive much of the information about the world through

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[21] Lyotard, J. F. (1984) *The Postmodern Condition*, Minneapolis: University of Minnesota Press.

[22] Lanham, Richard (1990) "The Extraordinary Convergence: Democracy, Technology, Theory and the University Curriculum", in *South Atlantic Quarterly*, **89** (1).

[23] Poster, Mark (1990) *The Mode of Information: Poststructuralism and Social Context*, Cambridge: Polity Press.

electronically mediated communications such as television. These modes of communication filter and frame the messages we receive to the extent that they begin to constitute our collective sense of reality.

We must examine the extent to which the increasing use of Internet and other emerging Information Technology will transform the context and quality of our collective intercultural experience. Technology is never neutral, but has enormous potential for configuring ways in which we inter-relate, and with whom we communicate, as well as transmitting the content of our communication.

Marike Finlay[24] has provided a framework for evaluation of the social impact of emerging communications technologies. Finlay argues that any assessment of the social impact of communications technologies must take into consideration three fundamental tenets of contemporary media theory:

1. "communication is not a mirror reflection of brute unmediated reality"

2. communication relations both mediate and constitute society

3. communication is more than content, but also a set of rules for how social interaction may occur.

Finlay contends that all communication activities (and the technologies which facilitate such communication) should be understood as modes of discourse which contain presuppositions about the nature of society and what we know about the world. When we change the technology we use to communicate we fundamentally change those presuppositions and ultimately how society organises its affairs.

What we choose to do with our time precludes other activities. The Berkeley educationalist Theodore Roszak considers that through our electronic preoccupations we may be losing our sense of shared cultural experience[25]. He questions whether the imaged "virtual communities" forming on the Internet will prove a true substitute to proximal interaction of people: "But will cyberspace become a vast collection of solipsistic enclaves where the like-minded exchange E-mail with one another and where we choose our own views of a no-longer shared world?"

When we use electronically-mediated communications in education, in lieu of face-to-face contact, we are filtering and limiting the interactions of people. There are often good economic, social and pedagogic reasons for using IT in education, but such uses are never the same as the direct interpersonal interactions of a learner and his or her mentor. The flexibility we are able to offer our learners may come at a considerable cost to both the individual and the community at large. We have good reasons on both

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[24] Finlay, Marike (1987) *Powermatics: A Discursive Critique of New Technology*, London: Routledge and Kegan Paul.

[25] Roszak, Theodore, (1986) *The Cult of Information: A Neo-Luddite Treatise on High Tech, Artificial Intelligence, and the True Art of Thinking*, Berkeley: University of California Press.

pedagogical and ethical grounds to proceed cautiously as we incorporate digital multimedia into our programmes of higher learning.

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Sharing the Drivers Seat

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Introduction

Traditionally, universities have been in the educational 'driver's seat'. In increasingly detailed calendars they have laid out the policies, procedures and processes that govern; who the students will be and what, when and how they will learn. Now, however, students are actively pursuing more flexibility and demanding more say from educational institutions as they try to meet their pressing career and personal goals.

For some time, changing student demographics, funding formulae, credibility issues, fiscal stringency and the demands of the workplace have coerced conventional universities to adapt their policies in 'piece meal' and often *ad hoc* ways. Generally, these changes have been driven by the need to compete with other public and private sector institutions in an attempt to attract students. In response to market realities, conventional universities have offered such half-hearted attempts as: special status for mature students, evening and off-campus courses and minor concessions for part-time students. These kinds of responses seem to be an attempt to 'plaster over the cracks' with special arrangements that do not fundamentally address the changing realities. How do 'mature student' provisions work, for example, when increasing proportions, maybe even the majority, of the student population are 'mature'?

The purpose of this paper is to focus on some of the pressures confronting institutions, and, it will be argued that although there are problems and risks, distance education is well positioned to finding efficient and effective responses to the pressures exerted by students.

Student Needs and Organizational Response

Student profiles have changed over the past 30 years (Statistics Canada, 1991). Today more women than men are studying at universities. In 1991, 45 percent of all adults aged 15 years and over had completed post-secondary qualifications, up from 6 percent 30 years before (Profile of Post-secondary Education in Canada, 1991). While more students are taking advantage of years of post-secondary education, almost half of them are doing it on a part-time basis.

Adults, (over 24 years of age) comprise a vital educational sector. Moreover, the distinction between front-end students (those aged 18 to 24) and mature students has

become blurred. Front-end students are older and the traditional distinction between front end and adult students in terms of their educational goals, strategies and life circumstances is less clear. At one time, age differentials served to structure educational provision. These differentials apply less and less. The student of the 21st Century cannot be neatly categorized into front-end or adult student designations. We shall refer to her/him as the life-long learner.

Life-long learners are encountering a turbulent employment scene. Jobs are hard to come by and difficult to keep (Baton *et al*, 1982). The well-paying jobs that are available favour applicants with educational credentials, and students are flocking to post-secondary institutions in unprecedented numbers to get these qualifications. At the same time, workers are going back to school. By the term 'workers', we include women who have shortened or deferred their education or career development to pursue their family responsibilities. Some workers (in the larger sense of the term) are seeking re-entry into job markets. Some are attempting to qualify for new careers. Still others, who do have jobs, are returning to up-grade their skills. Workers now joining the pool of candidate learners are placing new demands on educational systems. These demands include flexible curricula, open access and freedom from constraints to time and place of study.

Life-long learners may take a variety of paths to reach their educational goals. For example, they are apt to study at their own pace rather than an institutionally paced course of study. The average time taken to complete an undergraduate degree in Alberta, Canada, is now over five years. Some students are slow-

tracking through the system while holding jobs and/or taking care of family responsibilities; others are
fast-tracking by 'clearing the decks' for a few months or years of intensive study.

Life-long learners are choosing among a variety of educational providers for the courses they need when they are needed . Sometimes termed 'student consumers', these individuals take courses at universities, colleges and technical schools that offer the skills and knowledge they are looking for. Time, cost and place of study are important considerations for the choices students make as life circumstances must be included in the decision-making matrix.

Of increasing importance however, is their tendency to build self-determined programs "brick by brick". Individual courses rather than programs of study are being sought for their quality and the contribution that course credits earned can contribute to wanted programs. As a result, the quality of courses or units of instruction is of increasing importance; consequently, the credibility of institutionally prescribed programs of study fades into the background. Transferability among post-secondary institutions has become a crucial issue for both for the students and the institutions concerned.

Traditional institutions have accommodated to emerging life-long learner needs, but in limited and only partly effective ways. Typically, traditional institutions have a mind-set of pre-determined programs delivered entirely through the institution. The transfer of course credits to programs offered by other institutions is often discouraged.

Moreover, residency requirements have become more a matter of securing tuition revenue and meeting enrolment targets than in meeting student need. The sheer inertia of traditional institutions inhibits innovative responses to emerging educational demands.

Distance education institutions are positioned somewhat differently than conventional institutions to respond to life-long learner's needs. SWOT (strengths, weaknesses, opportunities and threats) assessment is a long-established tool in the literature on strategic planning for analyzing an organization's prospects within its economic and political environment (Schermerhorn *et al*, 1995). We will use this technique to provide an overview of the ability of distance education systems to meet life-long learners needs.

Strengths

Distance education facilities are well positioned to respond to the needs of the life-long learner. Among their strengths include the following.

- The ability to remove barriers of time and place of study. These barriers can be critical to the circumstances of the life-long learner.
- Collectively they share 30 years of experience in designing self-contained educational materials and tutorial support systems.
- Course materials are designed for adult students with multiple responsibilities.
- They have established a proven infrastructure to support course design, development, production, delivery and student learning.
- Collectively, they have long-term experience with a variety of delivery platforms and educational technologies including variations on face-to-face and technologically mediated instruction.
- They have a proven educational track record both in terms of successful teaching of students and in the value of credentials awarded.
- They have the potential to offer year-round student admissions and course registrations. This is an attractive option for students unable or unwilling to commit to semester pacing.

Weaknesses

Although offering many advantages to the life-long learner, distance education systems have weaknesses that may affect its ability to attract students. Some of these are the following:

- Continued adherence to Taylor's principles of scientific management (Taylor, 1911) burdens distance education organizations with a highly structured course development and production process, at odds with today's more organic management approach. Although distance educators have paid lip service to the value of course teams working at clearly defined tasks, and moving materials through a production system in an orderly manner, it is unclear that this system has ever been totally successful. However, distance education institutions have bought heavily into the model and will find it hard to change. Distance education typically involves lengthy development and delivery time lines. For example, typically three to five years are required to develop a new program. Two years is the norm for getting individual course offerings from start date to on-the-shelf status. Rapid response to life-long learner needs is doubtful if not impossible, under the Taylorist model.

- Dependence on economies of scale to recover start-up costs makes small market courses exceedingly expensive to offer.

- There may be an inability to adapt and revise course material should the need arise. Continued revision is simply too expensive.

- The establishment and maintenance of effective student and employer feedback loops tend to be complex and expensive.

- Distance education is prone to be highly didactic (i.e., uni-directional). This tendency militates against the ability of the institution to meet the needs of life-long learners.

- Getting locked into high-cost, high-risk technological ventures is a continuing weakness. Technologically-based organizations frequently find it difficult to resist the lure of the latest information technology by their very natures. Distance education institutions are not only prone to this lure, but have the added pressures of politicians who sometimes have the fond belief that high-tech education is cheaper and more effective than low-tech education. Too often, these initiatives have high costs and produce uncertain results.

- Distance education is rarely funded at the same level as conventional institutions on the assumption that inherently distance education has to be cheaper. Comparative differentials in public funding impairs responsiveness and initiative while creating disparities on the competitive field.

Opportunities
Opportunities for the future will likely be centered on further incorporation of information technologies. Some opportunities for distance education include the following:

- Using such technologies as desk-top publishing has the potential to free the organization from the constraints of economies of scale. Large print production runs are not needed and the time required for course development and revision can be considerably shortened.

- Computerized course development and production techniques now make possible the customizing of course materials. Meeting small market needs is now economically feasible.

- The introduction of wide-area computer networks (e.g., the Internet and the World Wide Web) allow low cost synchronous as well as asynchronous student-to-student and student-to institution interactions. The information resources available on these networks can also compensate for the lack of campus-based library resources. Additionally, commentaries on and contributions to course materials and subject discussion by experts around the world are possible.

- Students are expected to pay for an increasing share of their education. The majority of these costs are associated with relocation expenses and lost income opportunities. By minimalizing additional living expenses and opportunity costs, distance education is becoming more financially attractive.

- The pool of trained and expert educators and technicians in distance education has greatly increased over the past two decades. Previously, distance education institutions operated as isolated and frequently embattled enterprises. Today there is a synergy at work enabling distance education organizations to build on one another's successes and to learn from each others mistakes.

Threats
Well positioned they may be, but distance education institutions face some threats that may affect their future viability. Threats to local institutions may vary, but general concerns include the following.

- Increased competition from conventional institutions is now a serious factor. The conventional sector is becoming increasingly sensitive to enrolment levels and the tuition revenue they bring in. They are discovering any number of ways to draw students to their doors or to go where students are (including an increased investment in distance education). And they bring considerable resources to bear in doing so.

- There is an over-enthusiastic fascination with new educational technologies as the 'magic bullets' of education. This often misplaced enthusiasm can result in unfortunate consequences, the most important of which is that education decisions are driven by technological imperatives rather than the reverse. Other

consequences include: the costs of organizational turmoil associated with the continued need for retraining and upgrading; the high depreciation rate of technical equipment (typically three years or less); and, the added expenses that must be borne by students rather than the institution.

- The cost structure of distance education is commonly not as well understood as the cost structure of the conventional education organization. Free-standing distance education institutions are politically vulnerable because their high over-head costs tend to create adverse comparisons as being top heavy when conventional institution funding formulae are used as a yardstick. Dual mode institutions are less vulnerable because distance education instruction can share overhead costs with the conventional teaching branch, thus reducing the rolled-up cost of teaching for both.

- The terms 'customer satisfaction' and 'total quality service' have come to the forefront in educational circles theses days. As stated previously, distance institutions traditionally have had weak and precarious feedback mechanisms. Conventional institutions (perhaps with a distance equation component) are, at present, better able to adapt to the changing demands of the market place -- particularly at the technical institute and college level.

- Although there has been a general trend to the liberalization of credit transfer among post-secondary institutions, counter trends have emerged. The future of inter-institutional credit transfer has come up against the pressing need of particular faculties and departments to maintain or increase tuition and enrolment levels. Many distance education institutions such as Athabasca University are heavily dependent on system-wide credit transfer opportunities. In fact, most Athabasca University students have no intention of following a complete program of studies at Athabasca University. Instead they want to apply course credits earned at Athabasca University to programs offered elsewhere.

- Making higher education relevant to current societal needs is a difficult task for distance educators. Systems are set up for the production of long-term and stable products and these systems are not adaptable for rapid response. At this point, there is little likelihood that funding parity with conventional institutions is achievable. Conventional institutions, eager to keep tuition dollars flowing, are reading the signs and making significant inroads into what has been distance education's turf. Their access to resources makes them formidable competitors.

Conclusions

Clearly, there are problems to solve. The pressures to do more, to serve more students, to produce more graduates and to do so faster and at lower cost can lead to problems of lower quality and reduced credibility. If distance education is to maintain its hard-won credibility, it will need to improve the ways in which it ensures the quality of its courses and programs and the credibility of its education credentials.

There are any number of strategies that can be used to adapt to change. If we are to focus on a single issue which confronts distance education institutions it is on the need for organizational reform.

Distance education systems are well positioned to respond to the needs of the life-long learner. The chief impediment to response to these needs is the continued reliance by distance education institutions on the Taylorist model developed at the beginning of the century. Few administrators of today would espouse a machine-like concept of organizational functioning, but the principles of 'command and control' designed to achieve efficiencies in the workforce prevail in today's knowledge and skill-intensive organizations. Highly educated distance education managers and knowledge workers are stifled rather than mobilized to contribute all their intelligence and energy.

Distance education organizations tend to look for technological 'quick fixes' to what are underlying organizational problems. Technology has all too often become a expensive way to 'paper over the cracks'. The true innovative process that distance education institutions should be involved in is organizational reform. If distance education institutions are to be able to reposition themselves in the post-secondary constellation of providers, the organizational processes have to be re-examined. Technology can follow. And fiscal issues can be examined in context.

Perhaps, for example, it is time to take a fresh look at course teams. Teams provide a natural vehicle for cross-functional members of the distance education organization to share ideas, to solve problems and to implement improvements. They are well suited for the flexibility and responsiveness needed by educational organizations today. However, the team approach cuts across the grain of the linear industrial model. In order to succeed, course teams will need the ability to set their own goals and time-lines and be given the authority to resolve problems and implement action. Shedding the old mind-set about how the distance organization should work and developing new modes of operating that effectively mobilize organizationally disparate competencies and skills will be at the root of discovering and exploiting competitive advantages.

There are two strategic responses to adapting to a bewildering variety of demands on service and an environment in rapid flux. The first is an opportunistic response -- meet the demands in the best way you can and hope that when things eventually fall out your organization is well positioned (Pondy *et al*, 1988). The strategy of hedging one's bets has attractions, but there are serious risks involved for organizations with limited budgets.

The alternative is to develop simple and consistent organizational focus and concentrate on what the organization does well and where it has a competitive advantage. All too often, distance education institutions have chosen opportunistic strategies that have spread their resources too thinly for maintaining, let alone achieving, competitive advantage. A strategy of development or redevelopment of an organizational focus in response to change seems more likely to succeed.

In conclusion, we return to the title of the paper. Distance educators must 'Share the Driver's Seat' in order to flourish in the years to come. Distance Education must share the driver's seat with students, with their fellow distance educators and with the technological imperative.

Life-long learners are sharing the drivers seat by taking more proactive roles in making decisions about how, when and where they will study. In order to meet the increasingly heterogeneous and fast-changing curricula demands of life-long learners, distance education institutions will need to construct open systems to accommodate their need for flexibility. As well, distance education institutions need to establish and maintain effective student-institutional feedback loops so that life-long learners have increased opportunities to share their changing circumstances and developing needs with institutional responders. Together, life-long learners and distance educators can continue to devise strategies that work.

Distance educators also need to share the drivers seat with their fellow distance educators, whether they be administrators, academics or technicians, in order to find new ways to bring expertise to bear on improving excellence in teaching. Together they need to re-furbish the organization in order to meet the needs of life-long learners now and in the future.

We have argued that distance educators all too often have given over the wheel of their educational vehicle to a faith in the efficacy of technological progress. Distance education is, by definition, technologically mediated and technologies, whether high-tech or low-tech, are at its core. All educational technologies both expand and constrict the educational process. As such, it should share the drivers seat with educators and students. The key word is share, not do all the driving.

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"Learning Occurs Wherever we are, in the School Room, at the Cattle Yards or at the Dam": Conventional Schooling Plus Distance Education Equals Quality Home Elementary Schooling

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Almost ten years ago Garrison (1989) wrote that the "boundaries between conventional and distance education are being noticeably blurred with attempts to combine the advantages of the different organisations" (p.119). For too long the tertiary sector of education has written of the convergence of distance and conventional learning, ignoring practices that have occurred in the other educational sectors. This is no more evidenced than in the failure by researchers to acknowledge that models of convergence in schooling have existed for several decades in the elementary schooling sector such as the schooling of children living on remote grazing properties of Queensland in Australia. What the tertiary sector regards as innovative pratice has been a necessity in the provision of elementary schooling for isolated children in Queensland for most of the post war period. Such a lack of acknowledgement would seem to suggest that conventional schooling is being positioned to remain the normal form of schooling with open and distance learning being intentionally marginalised or at best being seen as an alternative to be engaged as needed.

This paper seeks to draw attention to one model of the convergence of conventional and distance learning being provided for the elementary schooling of one group of children. It draws on data from a current study into the schooling of children on grazing properties in Central Queensland. The paper draws on one site to demonstrate one family's efforts to bring sense to schooling through creating a model of schooling that becomes part of the family lifestyle. It shows how that family engages open, flexible learning, where schooling and learning have moved beyond conventional system initiated boundaries. Finally the paper identifies those practices which are blurring the boundaries between conventional and distance education

Actor network theory (Callon, 1986; Latour, 1996; Law, 1994) is applied to examine this site of remote home schooling. The boundaries between conventional and distance elementary education are demonstrated as being blurred as aspects of these two forms of education provision merge into a meaningful model of open and flexible learning. What is witnessed is a style of schooling that is exciting in its innovativeness as it strives to blend the routine of the grazing property, the needs of the children and the curriculum requirements of the School of Distance Education to make learning happen. This style of schooling is modelling the convergence of conventional and distance schooling and is enabling open, flexible learning to emerge.

Theorising with Actor Network Theory

Theorising with Actor Network Theory

Actor network theory has its origins in the sociology of science (Callon, 1986; Latour, 1988; Law, 1991) and is centred on the concept of the network in which one participant (or actant) has taken upon him/herself the pivotal role. By drawing others into the network, by engaging those others in the network and by speaking on their behalf, that actant determines the structure and form of the network; hence the actor network. Critical elements of the theory include examining the manner in which actants are attracted, drawn into and kept in the network, and how the group of actants are held together or translated (Law, 1991) so as to be identifiable as a discrete network with a single function. In this way it is seeking firstly to represent reality and secondly to examine how one thing (human or non-human) can represent something else. The significance of using actor network theory for this study is that all actants in the remote home school network, including non-human resources such as the print materials and the HF radio, have equal roles as actors in the network. Each human and non-human actant speaks within the network and contributes to the shaping of the network.

The context of remote home schooling on the isolated grazing property in Central Queensland, Australia

By road, the remote home school being examined in this paper is approximately 50 kilometres distant from the nearest neighbour and 250 kilometres from the nearest large town. The grazing property has two timber houses - the larger one for the owner of the property, the other for the permanent worker. The family may be described as being additionally isolated as there are more than 100 kilometres of gravel road to the nearest major road or highway. In reality, the road from the highway to the property can best be described as a 'dirt track'

Schooling for the children takes place in the home with the mother accepting the role of home tutor or teacher. The mother, through her role within the remote home school, is the one who presents the materials supplied by the School of Distance Education to the students. She determines when the schooling is to occur, thereby giving learning a legitimate place within the enterprise of the home and the grazing property. By assembling the various actants - the students, the teacher at the School of Distance Education, the learning materials, the HF radio - the home tutor takes upon herself the role of an intermediary between the remote home school and the teacher and positions herself to be the key actant where there is a merging of interests of those involved in facilitating student learning.

> Home tutor. *We start school at 7.30 am. We go straight into it and my idea about it, is to get through it as quickly as possible, because by noon or one o'clock the absorbing capacity has left them considerably. So we go through, well James at the moment has an on-air lesson at 9.30 am and Kate has her lesson at 10.00am which is a half hour lesson with their fellow students in their home room, with the school teacher at the centre. We go from there to a half hour smoko break, and then usually the morning session for James consists of handwriting, maths first and then we have an elective and then after their smoko break and their on-air lessons Kate and James will do their art. Depending on how the day goes, they also have activities,*

sporting activities. Depending on how they go we finish about one o'clock. We then have lunch and the rest of the day is spare.

The home tutor gives identity to others in the network of the remote home school - others who may also be found in various networks such as that of the teacher or the grazing property. In the various identified networks different relationships are evident. Whereas in the teacher's network the home tutor has her identity defined by the teacher, in the network of the remote home school the home tutor is defining her own identity while defining the actions, identities and goals of others. She is able to intervene between the teacher and others in the network of the remote home school and is frequently in conflict with other networks such as the home enterprise network, as these are constantly attempting to entice the students away from the network of the school to participate in the activities of that other network.

Schooling through flexible engagement

The remote home school is offered rules by the School of Distance Education - rules which have the potential to impose conventional pedagogical practices on an unconventional schooling setting. Such rules include weekly lesson booklets; set times for morning notices; set times for 'on air' sessions for each student. Considerable structure is offered by the teacher of the School of Distance Education to the routine that is provided to the remote home school. Some remote home schools follow those rules completely and without question. For them the rules give their schooling legitimacy - it gives them an appearance of being a conventional school. Yet in the case of other remote home schools, such as the one being explored here, there is evidence that such structures, while acknowledged, are not dominating the schooling process.

Q How do you find the materials to work through time wise, do you find you are rushing all the time to finish or have you got enough time to do justice to what you want to do?

Home tutor *It depends on the interest that the children show. I go with that a lot because I don't think any of us absorb anything if we are reluctant to be absorbing it and I find that if there are such areas that they show more interest then we spend more time on them. They do get a lot out of that and it is surprising how much more they learn because they are more interested in what they are doing. Things they are not interested in we will look at it and some of it we might say, well we may not do that we will look at something else. If James chooses for the day that he doesn't want to write that story then we will change it's format and we will do something else.*

Here the home tutor is demonstrating a capacity to take what she wants from the School of Distance Education materials and accommodate those tasks that suit the running of this particular remote home school so that maximum learning occurs. There is a sense of the learning fitting into the lifestyle of the home and into the enterprise of the grazing property with neither enterprise dominating the lives of the children. The networks of the home and the remote home school are determining how they can coexist and how the teacher network may be included but not dominate the

schooling process. Garrison (1989, p. 119) refers to this as the learning process being a mix of methods where living and learning can be fully (or partially) integrated. The home tutor acknowledges that routine in schooling is necessary, yet the evolving routine is not from the School of Distance Education recommendations but is from agreement within the family.

The family's day commences early so schooling also commences early. It is agreed by the parents that their priority for the children is regular, daily home schooling but that there is to be flexibility within the routine of the remote home school to enable the children to participate in the family 's activities centred around the grazing property. There is movement between the network of the grazing property and the network of the remote home school. The children are able to take time from schooling to be involved in mustering when that mustering is close to the home. They take time off from their schooling when the family has to travel to town for business purposes. Their identity as part of a grazing family is secure.

Schooling is about learning. As the home tutor acknowledges, learning occurs when there is interest (Biggs, 1993; McInerney & McInerney, 1994). Time does not become a factor. The home tutor realizes that, for meaningful learning to happen, certain elements are necessary. These include enthusiasm by the children for the task(s) required of them and a knowledge that they are achieving. There is the admission by the home tutor that topics that do not interest the children are passed over quickly or are ignored totally. Moreover the remote home school fosters interaction between the children even though they are in different year levels. They do not do their schooling in isolation from one another - informal interaction occurs regularly throughout the day. The reality of 'family' remains while learning is occurring.

> Home tutor *I found it works for us this way, They always have their ear cocked to what's happening in the same room, I find with the interaction and discussion that they learn and picking up more in the little breaks in the sense of "oh yes I heard about that" and they talk to each other about it and they talk to me about it and there is this thing happening. Instead of sitting there, they are having interaction and I find that they are picking things up. As the paper goes on and the subjects are similar they say "oh we talked about that" and then they can relate to that.*

Learning occurs through interaction - interaction among the home tutor, teacher and students. The tasks are done but not necessarily in the order planned by the teacher at the School of Distance Education. Rules are being created as the remote home school evolves. These rules are not the rules imposed by the School of Distance Education but are understandings of how schooling occurs in this remote home school. There is a flexibility of timing of schooling; a flexibility of content to be covered on a particular day; a flexibility that recognizes that learning happens wherever you are.

The home tutor talks of the flexibility and understanding of the teacher at the School of Distance Education. For the teacher to keep the remote home school in the

network she has established, she knows that she must give the remote home school permission to find its own identity, to find for itself a purpose and a worthwhile existence. Likewise, if the teacher is to remain a part of the network of the remote home school the teacher has to accept that the remote home school requires a degree of autonomy. It is agreed that the remote home school need not take all notice sessions nor is it possible for the children to be 'on air' each day. A maturity, an understanding and a trust have developed between the home tutor and the distance education teacher in accepting that learning can and does happen in ways that suit the family.

> Home tutor *The children are developing at their own rate and we [home tutor and teacher] are providing an environment where they can develop at their own rate. The material fit into what you want for your children and what you are achieving with the children.*

The teacher has the confidence that learning is occurring in this remote home school and is encouraging of the home tutor finding the most effective structure for this learning to occur.

> Home tutor *The teachers have been fairly good that way they do give us the leeway we need.*

Learning has moved beyond the '9 to 3' structure to one that is flexible and accommodating of the family and the enterprise of the grazing property.

Convergence and flexibility within remote home schooling

There is agreement in the literature that key concepts of open learning include that it is the learner who is autonomous, self-regulating, self-controlling; that there is legitimacy in the separation of the learner from the teacher; that the timing of learning is determined by the learner; that technologies can play a significant role in the learning process (Danaher, Wyer & Bartlett, 1995). However, while these concepts may be identified as the ones to have emerged in this study, there is an additional dimension in that the learning experience is determined by someone other than the student and with minimal input from the teacher - by an actant in the role of home tutor. It is the home tutor who has positioned herself so that she is central to learning happening. She gives the remote home school the capacity to be self-regulating and self-controlling; she determines when the technologies (such as the HF radio) are permitted to enter the learning enterprise; she determines the best time and place for learning to occur.

The functioning of the remote home school can be considered from two perspectives. Firstly, using Actor network theory, the remote home school can be 'black boxed' or viewed as an actant in its own right. In this way the various actants within the remote home school are invisible as the key for analysis is the relationship of the teacher with the remote home school. The teacher is seen to provide for the remote home school through a variety of strategies of distance learning. Other actants operate around the teacher and the 'black boxed' remote home school. If this approach is taken then it is possible to argue that it is the teacher who enables the remote home school to be self-regulating and self-controlling.

The second approach, and the approach adopted in this paper, is to investigate the functioning of the remote home school. What emerges then is the understanding that the schooling of this remote home school becomes mediated through the actions of one actant within the remote home school actor network - in this case the actant being the home tutor. The actions of the learner become mediated self-regulation and mediated self-control as the home tutor limits all direct communication between the teacher and the student. However the learning situation retains the notion of openness. It is the interpretation of the strategies through which openness is achieved that is of interest.

There is evidence of trust between the teacher and the home tutor so that learning will occur. The question of who is the teacher in this learning situation does not arise. Both the teacher at the School of Distance Education and the home tutor accept that the teacher's role is shared. While the role of the teacher from the School of Distance Education is vital to the enterprise of the remote home school, frequently the teacher is in a support role, to be accessed when required, and the home tutor talks of the flexibility and understanding of the teacher at the School of Distance Education. While the teacher gives structure in the form of materials and deadlines for the return of completed activities, this is where her involvement finishes. It is the self-regulating remote home school, the home tutor in collaboration with the students, which and who determines how the desired goals will be reached.

The study of the remote home school has enabled examples to emerge of the convergence of conventional and distance schooling. It has demonstrated that patterns of flexibility for the learner emerge within the learning situation and are to be capitalised on by the teacher. It has been argued that the model of remote home schooling at the site described this paper is one which is underpinned by principles of open learning.

From the study of this remote home school, it has become apparent that conventional schooling does not regard itself as having a responsibility to accommodate different forms of schooling. Rather, it is for other facets of schooling, the margins of schooling, to accommodate the demands of conventional schooling. Consequently, for convergence to occur and for flexible learning to have a legitimate imput into educational provision, they have to be repositioned from the margins of education and to assume a meaningful role as a facet of conventional education, at the centre. It is the agency of actants who will determine whether or not convergence and flexible learning are to become a reality and at the centre rather than a margin of education.

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Simutaneous Usage of On-line and Off-line Teaching Material - A Third Style of Computers in Education

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Abstract
In this paper, the convergence of on-line and off-line teaching materials is proposed. Multimedia materials and simulation programs are highly suited to educational purposes. However, such material has the distinct problem of being voluminous and voluminous data files require a long time to download from a server. In contrast, off-line teaching materials can handle voluminous data effectively, but they do not have the high degree of flexibility that on-line teaching materials have. Therefore, by integrating on-line and off-line teaching methods, their combined advantages would provide a much better learning environment. This article proposes just such a method for the simultaneous use of on-line and off-line teaching materials. The basic structure or 'template' of the teaching material is almost completely described in ASCII text and would be delivered on-line while voluminous data would be delivered off-line, for example on CD-ROM. Both of these two materials would work co-operatively. This article proposes the basic concept for using on-line and off-line materials co-operatively, as well as describing how existing WWW (World-Wide Web) browsers such as Netscape or Internet Explore could be adopted as part of the proposed method without need for any alteration.
Keywords: Distance Education, World Wide Web, HTML, Multimedia, Removable Storage Device

1. Introduction

Recently, computers have become widely used in the educational field with the term "*computer in education*" basically referring to two distinct uses. The computer-aided instruction (CAI) system refers to the typical traditional use in which almost all the systems run as *stand-alone* machines. However, with the rapid spread of computer networks we are now enable us to use computers for educational purposes in a different manner: the usage of network-connected computers in education. Nowadays, network-based education or distance education [Harasim, 95] is receiving much attention. By using distance-education systems, people can study without such constraints as time, space, or location. Currently distance education is mainly executed on personal computers or workstations which are connected to a computer network. Such computer networks support high speed communication and can be connected to high-performance personal computers that can readily be purchased and that are capable of processing various forms of multimedia data such as images, sounds and moving pictures. Therefore, multimedia data is widely used for educational purposes [Maurer, 1995].

The web-based education system [Hobbs & Taylor, 1996] is a typical example of distance education. In a web-based system, all data are stored on a server computer.

The client machine sends a command to the server requesting to download data. However, as multimedia data tends to be voluminous, the time needed to download data from servers via a network is long, with the process often requiring over a minute to complete. Of course utilising the latest data compression technology [Storer, 1988] can reduce this waiting time. However, the amount of data required for one page of information, including multimedia data, is still extremely long for downloading when using low speed networks such as standard public telephone lines.

Alternatively, various kinds of removable storage devices with large capacity, such as a compact disk read-only memory (CD-ROM) or magneto-optical (MO) disk can be used. For example, a standard CD-ROM can contain about 650MB in a single volume while MO disk can contain about 230MB to 650MB. Therefore, as multimedia content currently is usually stored on CD-ROM or MO, we too should use CD-ROMs for delivering large quantities of teaching materials. However, CD-ROM-based learning is basically an 'isolated, one way, and rigid' learning method.

In this article, a third style of on-line learning that combines both of the above mentioned methods, where the demerits of one can be countermanded by the merits of the other, as such, the 'integration of the on-line and off-line teaching materials' is proposed The term 'integration' is used to mean the co-operative working of on-line and off-line teaching materials. The *core* of the teaching materials is delivered on-line, and voluminous teaching materials such as large image-data and simulation software are delivered on removable storage devices such as CD-ROMs. The on-line teaching materials include commands which invoke software stored on CD-ROM, which, for example, reads images, or executes simulation programs with specified parameters. Using this proposed method, the download of voluminous data would become unnecessary, therefore improving response times to within comfortable parameters

In section 2, the basic idea is proposed. In section 3, a description of an implementation method which uses specialised software termed the '***switcher***' is presented And in section 4, some extensions of ordinal HTML are proposed.

2. Basic Idea

In this article, we assume that on line teaching materials are delivered as part of a web page described in terms of HTML (Hyper Text Mark-up Language) [Graham, 1996] with a series of extensions. (The extensions will be described in section 4.) These materials could be accessed by using browsing software such as Internet Explore or Netscape.

The basic idea to resolve the above-mentioned problem involving voluminous quantities of data is that such teaching materials should be delivered off-line in advance, and be used synchronously and with other smaller data files supplied on-line. In this way, the advantages of on-line material easily updatable and off-line material reducing the time needed for loading time of voluminous can be combined.

The basic structure of the teaching material are provided on-line. However, some of the voluminous data, such as that of images, sound and simulation software, are delivered on CD-ROM in advance. The on-line teaching material accesses the voluminous data from a locally stored CD-ROM as necessary. Furthermore, embedded

commands which invoke application software can also access the CD-ROM to execute them. As CD-ROM access speeds are usually much faster than those over networks, access speeds are therefore reduced.

Of course, there may be some updates to the teaching materials after the CD-ROM has been delivered. In this case, updated teaching materials should be delivered via the network. As the basic structure of the teaching materials is provided on-line, teachers / instructors can make full use of the flexibility of the materials on-line.

The proposed system has following merits:

- Flexibility:
  Structure of the teaching materials can be updated as necessary.
  Voluminous data that have not been included in the off-line teaching material can be downloaded via the network.
- Fast display speed:
  No need to access voluminous data via a (slow) network.

3. Implementation of Proposed Method

3.1 Overall structure

To realise our proposed system, we have established the following requirements:

- Users should be able to use their favorite browser. In other words, users can use popular WWW browsers such as Netscape Navigator and Internet Explore without need for modification.
- Synchronisation of the (local) applications such as simulation program and teaching materials should be realised
- Extensions using web-page description language (HTML) should be minimum.

In order to satisfy the above-mentioned requirements, we propose the introduction of a pseudo '*proxy*' server between the network (server) and the browser. This *proxy* server controls the data/command flows from the network (server) to the browser and / or local application programs, as well as controlling the data/command stream from the browser and / or application programs to the network (server).

Figure.1 illustrates the overall structure of the proposed system.

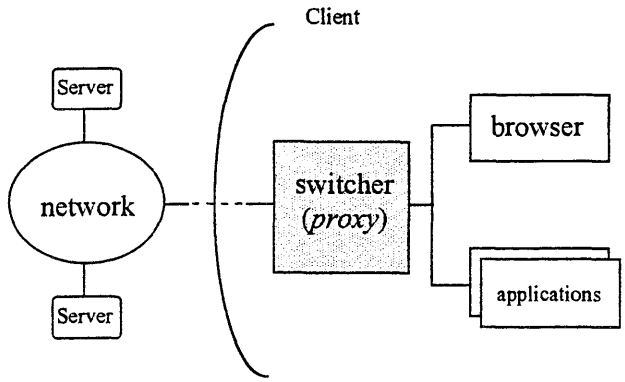

Figure. 1 Overall structure of the system

In conventional web-based systems, a browser is connected to the network directly. However, in our proposed system, an additional component refereed to as a "*switcher*" is inserted between the network and the browser. In figure 1, left-hand-side ellipse represents a computer network; the central rectangle labelled '***switcher***' is the software needed to mediate between the network and a browser and/or various software application; and the upper right rectangle represents a web browser such as Netscape Navigator or Internet Explore while the lower right rectangles represent software applications for lecturing.

3.2 The *'switcher'* software

The ***switcher*** provides the following facilities:

(a) Receiving data via a network which is then provided to the browser and local sofware applications: The ***switcher*** provides a communication port to the web browser. Web pages from the network are received by the ***switcher***.
(b) Detecting extensions embedded in the teaching materials' description and converting them to normal HTML descriptions: HTML extensions are detected and converted as necessary. The ***switcher*** passes the (pure) HTML data to the browser. Therefore, no alterations need be made to the web browser.
(c) Receiving the commands from the web browser and local software applications and passing them to the web server as necessary: The ***switcher*** receives commands from the web browser. Then if these commands are HTML extensions, the ***switcher*** will not send them to the host server but passes them to the appropriate (local) software applications, ie the ***switcher*** serves as a *'proxy'* server to the web browser. This structure has been referred to *'pseudo proxy architecture.'* The ***switcher*** provides a pseudo port for communication with the web browser. By using the ***switcher***, users of the web browser do not realise that special-purpose software for lecturing is being utilised as the user interface is identical to that of the existing web browser..

3.3 Inside the switcher software

Figure 2 shows a block diagram of the ***switcher***.

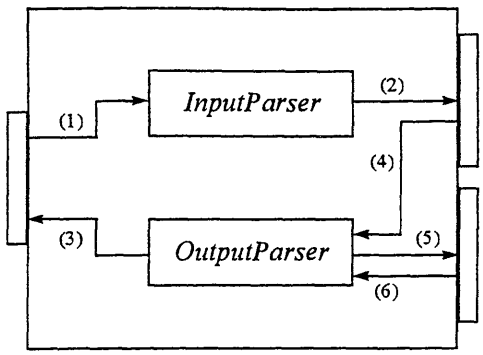

Figure. 2 Block diagram of the *switcher* software

There are, essentially, two components in the ***switcher***; the *InputParser* and the *OutputParser* and three communication ports; the *NetworkPort*, the *BrowserPort*, and the *ApplicationPort*.

- The *InputParser* receives web data from the network port and parses whether the received data includes the extensions to the HTML. If the extensions are found, the parser converts them into ordinal HTML description and send them to the browser through the *BrowserPort*. When no extensions are located, the *InputParser* forwards the data to the browser without alternation. Furthermore, the *InputParser* is able to invoke external application software as required. Requests for which are embedded in the HTML description.
- The *OutputParser* receives data from the browser port. Usually, the click operation of the link anchor issues the server access commands. *OutputParser* parses these commands and dispatches them. When these commands are for the requests to the web server (normal HTML description), it forwards them on to the network port. However, requests for application programs (extended HTML description) are dispatched to the application port. The *OutputParser*, of course, invokes external application software.
- The ***'switcher'*** communicates with the network through the *NetworkPort*. The *BrowserPort* and *ApplicationPort* are used for the communication with the web browser and application programs respectively.

Basic data flows are as follows:

- The ***Switcher*** receives data from a server through the *NetworkPort* and dispatches them on to the *InputParer* [(1)].
- The *InputParser* sends data to the browser through the *BrowserPort* [(2)].

- The *OutputParser* sends the data from browser or local application programs to the server [(3)].
- The *OutputParser* receives data(commands) from the browser [(4)].
- The *OutputParser* forwards the commands to the local application software through the *ApplicationPort* [(5)].
- The *OutputParser* receives the commands from local application software through the Application Port [(6)].

4. Extensions of the HTML

4.1 Three extensions of HTML

In order to use the above-mentioned features, the HTML should be extended and teaching materials written in this extended HTML. Below are three such extended descriptions we propose.

- Accessing local disk: The description '%%local%%' is provided for accessing a local disk. This disk contains voluminous data which would normally be delivered in advance on CD-ROM or by another method/media. Users prepare the local data by inserting the CD-ROM disk into the CD-ROM drive or by copying them to an appropriate (pre-defined) hard disk. This description is amended by the *InputParser* in the ***switcher*** to the real position of the local data. For example, when a CD-ROM is accessed which is located in the /CD-ROM directory of the user's system, the extended HTML description of '%%local%%/chap5/section3/figure1.gif' is automatically converted to
  'file:/cdrom/chapter5/section3/figure1.gif'.
  If the user copies the pre delivered data to the directory
  '/myLocalDisk',
  the same description is converted to
  'file:/myLocalDisk/chapter5/section3/figure1.gif'.
  The description conversion depends on the individual user's operating system and file structure and whether the ***switcher*** can recognise the configuration of the local directory[1]. By implementing this system of description conversion, an author need not to take account of the actual position of pre-delivered teaching materials. As this description is an alternative to the server access description in the normal HTML description, it can be used at any location in the HTML description.
- Invoking application software: The description '%%invoke%%' is provided for invoking a local application. This description can contain parameters to be sent to the invoked application. The general description scheme is as follows;
  <A HREF="%%invoke%%/app1" PARAMS = "listOfParameters">
  Texts </A>.
  This description means that when this link anchor is clicked, the application program 'app1' in the directory "%%local%%" will be

[1] Therefore, users must specify the location of where pre-delivered data are stored when they install the '***switcher***' and other support software. Furthermore, this information must be updated when the system configuration or storage location is changed.

invoked with the parameters "listOfParameters". The description of Texts indicates the appearance of this link anchor on the web page. The *OutputParser* firstly resolves the location of where this application program is stored. The description of '%%invoke%%/app1' assumes that this application program is stored in a file located at '%%local%%/app1'. It will be converted by the *OutputParser* in the ***switcher*** into the real location of the application software, and *OutputParser* will invoke the specified application. As this description is a variant of the normal link anchor description '<A HREF=></A>', the browser displays this description as a normal link anchor.

- Executing application program with specific parameters: The description '%%exec%%' is provided for executing application programs with specified parameters. This description is applicable only for those applications which interface through the communication port of the ***'switcher'*** software. This description can be embedded in a link anchor description in the same manner as '%%invoke%%' descriptions. The application receives a command which is executed according to given parameters. The result of this execution is dispatched back to the browser and browser redisplays the result. The general description scheme of this command is as follows;<A HREF="%%exec%%/app1" PARAMS = "listOfParameters"> Texts </A>.This description means that when this link anchor is clicked, the application program 'app1' in the directory "%%local%%" will be executed with the parameters "listOfParameters". Of course, the specified application program 'app1' must be invoked before this description is used.

4.2 Problem to be resolved

The extended description of HTML as proposed in section 4.1 has one problem. As the ***'switcher'*** can not convert normal HTML description, an error will not occur when users with the ***'switcher'*** to access any server. However, when users without the ***'switcher'*** access the server containing extended HTML extensions, a parsing error occurs while the browser parses the (extended) HTML description.

One method to resolve this problem is to add comment descriptions to the normal HTML. In normal HTML language, '<!-- This is a comment. -->' is provided for describing a comment. Therefore, if the extension can be embedded into this comment description and the *InputParser* can be enabled to extract the extension from the comment description, then this problem would be resolved. Such cases, the extension of a comment description such as '<!--# #-->' must be defined. Extended description need to be embedded between two sharp ('#') symbols. When this method is adopted, a web client without the ***'switcher'*** software would ignore the HTML extension and with no error occurring because the parser for the browser recognised this description as a comment, and the ***'switcher'*** software could detect the extended comment description and find the extended HTML descriptions.

5. Conclusion

This article proposed a method for the simultaneous usage of on- and off-line teaching materials. The core of the teaching materials would be delivered on-line and voluminous data would be delivered off-line in advance and stored locally on a storage device. On-line teaching materials would read voluminous data from the local storage device displaying images or executing applications. Therefore, our proposed method would be able to make full use of the merits of both on-line and off-line teaching materials. In order to implement our method, we proposed three HTML extensions and that all teaching materials should be written in this extended HTML. We have also described how exiting WWW browsers could be used in the proposed method. In order to use an exiting web browser, we have proposed a '*pseudo proxy*' architecture. In this architecture, the web browser would not directly communicates with the network or server but with a pseudo proxy server referred to as the '***switcher***'. The ***switcher*** would receive web data from the server monitor for HTML extensions, and converts the received data which include HTML extension into normal HTML description. Finally, we proposed that communication commands be established between the browser and the application software. Using these communication command, the browser would be able to communicate with local application software. Presently, we are developing the prototype of a distance-lecturing system using a TCP/IP-based computer network environment.

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Designing and Teaching a Distance Education Course: Reflections of an Initiate.

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Introduction

I have come late to distance education, hopefully not too late! In this paper I reflect on my recent attempt to design and teach a distance education course in qualitative research methods in an Australian university.

As a teacher and educationalist with over thirty years' experience, my theories of teaching and learning are fairly well developed. But, according to the theory on tacit knowledge, qua practitioner I cannot be fully conscious of my cultural and pedagogical predilections (Polanyi 1967). However, practitioners may be brought to a state of increased reflectivity about their practice, either self-induced or through the intervention of others, thus enabling them to recover some of their tacit knowledge -- to the mutual benefit of themselves and their students (Schön 1983; Hall 1994).

This paper may be regarded as a case study of self-induced reflective practice in distance education; and its highly personal flavour puts it also in the realm of auto ethnography. Fellow initiates may find sympathy with "what happened"; experienced distance educators are likely to find my account evokes a sense of professional superiority! Also, as a cautionary tale, it could be resourceful for administrators contemplating expansion in the field of distance education.

It was this time last year (June 1996) when I was asked to convert Ed 621, the Faculty's qualitative research methods course for postgraduates, into distance mode. As I recall, I didn't have much choice about it. Funds had become available for several postgraduate courses to be so converted, and the Faculty needed both the expansion and the funds! Along with the rectitude of being good corporate citizens, course designers were offered two sweeteners: one, the writing was to count towards, and thereby free us from some of, our teaching for the semester; and two, encouragement and help with layout was to be provided by the project coordinator.

I had been teaching the qualitative research course on campus for about ten years and it was undoubtedly my favourite -- something to do with the tutorial format, and a lot to do with the stimulation of working and learning with mature and typically enthusiastic postgraduates. Anyway, I had come to think of this course as being (like academic tenure!) sacrosanct and forever likely to be spared the indignity of being offered as a distance education course. Hardly a propitious attitude for an initiate!

In the remainder of the paper I recount decisions and developments in my design and writing of the study materials, and my rather unsatisfactory attempt to facilitate discussion through an email list.

Designing and writing it 'right'

Being reticent

As indicated above, I approached the task of writing the distance study materials on qualitative research with a certain reluctance. In the first place I felt a modicum of resentment for not having been consulted on whether Ed 621 should be offered as a distance course. Although, I remember thinking, with a surprising degree of equanimity, that in tough times there was probably some economic if not pedagogic justification for the decision. My disquiet stemmed primarily from the notion of offering in distant mode a course which (if I could be so immodest) had been successful on campus, and seemed less likely to be so off. And, coupled with this, I harboured doubts about my ability to produce a 'good' distance course, especially in being able to utilise what I vaguely perceived to be the necessary technology.

Not that I was a complete novice in the distance domain. I had written at least four distance courses previously; but these were undergraduate courses that could best be described as minimalist in terms of what they offered in the way of interactional opportunities for learners. In the case of Ed 621, I surmised, there would be a definite need for critical dialogue on philosophical and fieldwork issues, and I had only a slight appreciation of how this might be provided by the new technology.

Needing a Plan and planning for what is needed

Whatever my doubts and fears, I had to steel myself and get on with designing and writing the course. But where to start? On the advice of my colleague, (the aforementioned helper and coordinator of the Faculty's project), I decided to begin with the Study Plan -- typically a three or four page package of information which includes: a brief overview of the unit, aims and/or objectives, modes of instruction, textbooks, assessment and administrative details. The idea was that by doing the Plan first I would have a sense of direction and some impetus for the more substantial Guide (instructional and assignment details) and set of Readings to follow.

At this point I began to consider the needs of the prospective distance learners. It has been my practice with on-campus learners to consult with them and try to build their interests and needs into the design of my courses; although such consultation transgresses the University's regulation that lecturers present to their students, at the very first class, a course outline with a fully developed teaching plan. But in this case I felt I had no alternative but to design/write 'in the dark' and hope for some negotiation on the learning contract later.

Here is a 'gloss' on my intentions when designing/writing the Plan:

* In the "Introduction to the unit" I tried to be welcoming to learners and to allay any fears they might have about the nature of the unit.

* Likewise, my stating of the "Aims" in terms of inducting learners into the qualitative methodology and encouraging them to find their 'voice' as qualitative researchers, was a further attempt to attract them to the fold.

* When it came to writing course "Objectives", I was less concerned with the curriculum debate about whether one should set specific, measurable outcomes (Dick and Carey 1996), more with modelling a qualitative research epistemology which emphasises the exploration of particular cultural behaviours and the provisional nature of research knowledge; thus I opted for objectives in the form of general competencies.

* In the "Modes of instruction" section I tried to convey to learners that the main thrust of their learning would be by doing (through field exercises), not by reading about what others had done. And I backed this up by apportioning 80% of the "assessment" grade to the two fieldwork exercises.

So much for my initial planning effort. Now to account for my guiding of the learners towards the enactment of these plans.

Writing a Guide and guiding the writers

I once heard the Head of the Research Branch of our state Education Department say dismissively "most research is done at the point of a pen". At least I assume he was being dismissive because soon after this he helped close the branch down! I was bemused by the thought that he had only recently completed his PhD thesis which reported on a qualitative study of teachers' thinking and work practices -- a research approach, presumably, which entailed extensive fieldwork (and pen work)!

I had no such qualms about the relationship between writing and research, and as I set about writing the Guide for Ed 621 I had two purposes guiding the point of my pen: one, to inform my prospective distance learners about the fundamentals of doing qualitative research; and two, to present the doing of qualitative research as an inviting prospect.

Pertinent to my first purpose, I had decided to not assign a textbook for the course and felt doubly responsible for producing a Guide that was authoritative. As for the second purpose, I wanted my instruction to these adult learners to be attractive and accessible, so I tried to write in a 'reader friendly' manner. Moreover, I wanted to encourage these initiates to develop their voice qua qualitative researchers; hence I felt the need to model a style which was reflective, expressive and personal. I happen to work in an institution where positivism 'rules the roost', and I was conscious of the risk that my writing in the Guide (as in this paper!) would appear to be 'too subjective'. But this seemed a risk well worth taking.

With a view to producing a Guide that was both accessible and authoritative, I employed the following devices:

* Because I was keen to converse with the learners, I began the Guide with a preface comprising mainly my autobiographical sketch. Having decided to ask learners to write such a sketch themselves and send it to me privately (below, I reflect on the implications of this decision for the quality of our email discussion), I thought it only fair I should show the way.

* I continued to write in first person active voice throughout the Guide. I also: tried to break the text into manageable chunks, with the liberal use of sub-headings; and to provide further relief from my expository material with readings -- as either illustrations or elaborations.

* Section One, "Philosophical and paradigmatic matters", was fairly didactic at first, with a heavy concentration on key definitions; but through the introduction of readings, first on historical and conceptual matters pertaining to ethnography, then on the so-called qualitative versus quantitative debate, I tried to break down the density of my 'information' and imbue learners with a sense of the constructedness and fallibility of qualitative research.

* The remaining four sections of the Guide, "Getting started on fieldwork", "Doing naturalistic observation", "Qualitative interviewing", and "Analysis and writing up", were designed to teach the rudiments of doing ethnographic research -- in conjunction with the requirements of the two major assignments (which followed the instructional sections).

Since the two research exercises were so individualised and personal in nature, I assumed learners would want and need to discuss their 'work in progress'. Here, I envisaged, the email discussion list would come into its own. But, as I have learned in retrospect, the technology does not 'deliver' on its own.

A medium without massage

Off to a shaky start

Due to certain exigencies, my deadline for writing the study materials was fast approaching and I had left myself little time to organise for the electronic discussion. I had to hastily consult the local 'expert' in distance education at Curtin -- who advised an email list rather than a Web discussion page -- and arrange with the Faculty technician to set up the list.

At this juncture, I was somewhat familiar with the use of email for discussion purposes. I had belonged to an international discussion list for (you guessed it!) qualitative research in education for two years, albeit more as a 'lurker' than an active participant. I preferred on most occasions that I contributed to discussions to do so on a one-to-one basis rather than to the group list. It is likely my 'shyness' as a participant carried over into my style as an email list moderator.

Soliciting discussion: the sounds of silence

Notwithstanding my discomfort as a participant in a large discussion list, I was impressed with the power of the email list technology. For one thing, I could see the opportunity it provided for all and sundry to receive help from colleagues, eg for the citation details of a title that had become mislaid; for another, I appreciated the benefit of occasional robust 'jousting' between peers on conceptual or method issues. And for those neophytes who had the courage and confidence to formulate a request, sage advice and useful resources were often forthcoming. Even for the more passive 'lurkers', there was clearly much to be gleaned.

As moderator of the Ed 621 list, I wanted, on the one hand, for my distance learners to take advantage of the benefits to be derived from 'full participation'; on the other hand, I respected their right as adult learners to remain (as I had) a passive participant. However, I intervened to the extent of requesting that all four members of the class gain access to the email so they would have the option of enjoying the potential 'fruits' of participation. Three of the four needed little persuasion in this regard: 'Sally' and 'Grant' were already avid users of the email and Internet, and 'Bruce' was keen to take up the challenge. The fourth member, 'Bill', was and still is a reluctant user. I made a couple of phone calls to Bill to persuade him to organise email access; but so far he has chosen to communicate with me only via fax and conventional mail and he has yet to make his debut on the list.

Once the list had been set up, I made a further intervention. I asked members to briefly introduce themselves and say something about how they were progressing with the Ed 621 course. At this stage learners had submitted their autobiographies to me and were working on the assignment about philosophical/paradigmatic matters. I had hoped this rather clumsy solicitation would yield a juicy conceptual 'thread' that would get people conversing back and forth for a while. This did not happen. Each of the messages posted by Bruce, Sally and Grant to the group list was rather perfunctory and elicited no responses from the others. It was a case of 'back to the drawing board'.

Prior to the formation of the group list I had been in touch with the three contributors via conventional email. Bruce, the last of the three to become a user, had been the most active correspondent (it seemed he had an enthusiasm for intellectual discourse, and perhaps more time than the others to pursue it). I was able to use a 'private' two-part query from Bruce as my next ploy to get the group discussion moving. I gained Bruce's permission to post this message on the group list, then proceeded to respond to the first part only, inviting others to deal with the second. This 'cunning' device did not have the desired effect and it was Bruce, himself, who eventually broke the silence with further comment on my response.
Some time later Bruce took the bit between the teeth and initiated a new conversation on the list. All to no avail. This time I made the strategic decision to refrain from responding. The others refrained for their own good reasons. Perhaps we were suffering from the tyranny of too few conversationalists?

Meanwhile my on-campus class on qualitative research was continuing apace. After referring in class on a couple of occasions to my recently written distance education Guide, I had decided (by about the third week) to make it available to the on-campus learners. Interestingly, this resulted in less time being spent on instruction and more (much more than usual) on learner-initiated discussion. Hence my next 'bright' idea to stimulate discussion: I decided to seek the permission of distance learners to allow on-campus learners to join the list. Permission was granted; most of the eight on-campus learners took up the invitation to join (albeit in dribs and drabs); and soon after the standard introductions of new members we had our best discussion yet. Bruce came to the fore with an intriguing concern about the accuracy of interpretation in the context of participant observation; two of the new members made thoughtful, elaborate responses; and Bruce came back for another go. Again I stayed out. Alas, the conversation was short lived and again we reverted to silence.

Reflecting on the nature of our email conversations

I have not asked Bill why he has chosen to boycott the use of email; nor have I asked Sally or Grant about their relative passivity, or Bruce about his enthusiasm for the medium. In due course I will ask all four to make evaluative comments and no doubt such constructions will provide both resources and topics for further investigation. For the time being, though, I hope to gain from these reflections:

* ll three of the list participants have been more expressive and 'open' in their private email writing than on the list; it seems reasonable to assume that this has something to do with their confidence about writing in a public place.

* In my experience such confidence is likely to be more of an issue for mature adult learners; and it is well to reflect on the ways in which public displays of cultural/academic competence are different from more protected private environments

* Continuing with the confidence theme, I regret not having asked learners to post their autobiographical sketches on the list; of course it is speculation that this would have induced lively discussion, but since I always try to 'break the ice' as soon as possible with my on-campus learners I feel I missed a 'golden' opportunity to do so here.

* My strategy of trying to avoid being the 'authority' and the most active discussant did not have the desired effect, and recent reading (Mason and Kaye 1989) has persuaded me to want to be a more facilitative moderator in the future; however, I suspect that email discussion, like the game of squash, works best amongst peers at about the same level of development; likewise, power differentials (such as having an instructor on hand and possibly assessing the email contributions) are likely to be inhibiting.

* Whilst what we gloss as ethnicity and gender are bound to be ingredients in the culture of diffidence we have constructed for ourselves in our use of the email list, I find it difficult to make their particular influences opaque. All five of us are Anglo-Australian professionals with much in common in terms of our ethnicity; Sally, the only female member, has been characterised as relatively passive in her participation, but this may have more to do with her work load as an administrator than her gender; as it happens Sally has decided to postpone the completion of this course until next semester and has indicated in her early work that otherwise she would have been an active contributor.

Conclusion

As a relative newcomer to distance education, I have constructed myself in this paper as being tentative about my practices and 'findings'. With a brand new tool at my disposal – the email discussion list -- I had expected this distance course in qualitative research methods for postgraduates to more interactive than others I had designed and taught. But, as my self-reflections have suggested, there is considerable scope for improvement in this regard.

However, all is not lost. In writing this paper I have been able to recover some of the tacit knowledge underpinning my imperfect practice, and I look forward to critical, constructive feedback from readers. Furthermore, as the conference theme enjoins, I have made some "convergence" between my distance and on-campus teaching -- a phenomenon that warrants further investigation. Meanwhile, despite the apparent breakdown of critical dialogue between the distance learners and myself, the quality of writing by distance learners has been generally high. I have decided to keep the discussion list going beyond the life of the class, optimistic it will eventually bear fruit – and allow for further reflections!

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Facilitating Reflective Practice in University Teaching: Seminars and Distance Modes

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Introduction

This paper is a reflection-on-practice of an academic staff developer engaged in distance education (the author) and in keeping with the character of reflective practice it is written in the first person. The paper is written with the intention of offering some useful insights for fellow academic staff developers who are about to 'go distance mode' and for distance/open learning experts who may be called upon to guide them.

Where I work in the Teaching Learning Group at Curtin University of Technology we have both academic staff developers and distance education/open learning experts. As a university of technology, we pursue the development of open and flexible learning programs for students vigorously (Latchem 1995) and in staff development we have pursued open learning more along the lines of that espoused by Illich in the 1970s. That is, a concept of open learning without a particular emphasis on technology. We are probably typical of most Universities in that until recently these two groups of academic support staff worked separately. This situation is also reflected in the literatures on open learning and staff development, which, as Cowan (1996: p. 5) points out, have emerged separately. While the two fields of literature have much in common they have not often been used in combination. For example, there has been little research into the use of open and distance learning in staff development.

The paper is a reflection on my attempts to integrate two modes of distance education into a conventional academic staff development program. The paper begins by situating the teaching carried out by academic staff development lecturers in relation to the teaching carried out by lecturers of university students. This leads to a description of the program *Reflective Teaching Practice in Higher Education* at Curtin in which conventional and distance/flexible patterns of engaging in learning are being integrated. From here I recount attempts to integrate two mediums of distance education, videoconferencing and discussion through a Web Site, within the basic program. The conclusion, in the form of 'lessons learned', provides an analysis of these experiences in light of both the circumstances and some of the relevant literature.

Being a Facilitator of Academic Staff Development at Curtin

The teaching of lecturers who are academic staff developers differs from those of lecturers who teach university students in that academic staff developers provide professional development, of which only a small part comprises teaching courses which are linked to qualifications. This means that with fewer constraints of assessment and University administration procedures we have the luxury of including some of the features of open learning with adult learners as advocated by Kember and Murphy (1992: pp. 4 - 10). However, whether this difference in teaching will remain so stark, in light of the current trend for academic positions to require qualifications in teaching, is a matter for conjecture.

As professional developers at Curtin, our practice is based on principles of adult learning (Knowles 1980) with emphases on collaborative learning, modelling, self-directed learning, inquiry-based learning, work-place learning and life-long learning (Candy 1991). Underpinning our work is a view of teaching as a scholarly activity (Boyer 1990) and we manifest this view through concerted and sustained efforts which are gradually serving to develop a culture of lecturers as reflective practitioners (Hall 1997).

Currently, we are integrating distance education in our programs for academic staff development. The process is very much a team effort amongst the two academic staff developers and a distance educator but I have ended up being the principal carrier of this torch because I co-ordinate the program *Reflective Teaching Practice in Higher Education* in which we are carrying out the integration. Just how this integration is occurring is described later in the paper, but first, some information about the program itself.

The *Reflective Teaching Practice in Higher Education* Program

The program *Reflective Teaching Practice in Higher Education* is a series of 12 sessions for new and continuing academic staff at Curtin. It is offered every semester as both a professional development program and (with the addition of specified written assignments and readings) a unit which can be claimed as credit within Curtin's postgraduate courses in Higher Education. At this point in time, most participants undertake the program solely for the purpose of their professional development. The program is described as follows.

> *Sessions will include input on specific aspects of teaching, reflection on and planning for teaching and opportunities to network with colleagues across the university. They will be conducted through a variety of learning formats in which lecturers can acquire: teaching methods and approaches; varied perspectives from which to critically reflect on their teaching; and, familiarity with the University Teaching and Learning Strategic Plan. Sessions will be facilitated by TLG staff with input from lecturers from varying disciplines and Schools. Credit towards qualifications in Tertiary Teaching can be gained from participation in the sessions together with completion of readings and assessment tasks.*
>
> (Extract from the program outline for *Reflective q Teaching Practice in Higher Education,* Semester One, 1997.)

Each session in the program is devoted to one topic which serves as the focus of reflection on practice. The topics, which are chosen as "hot issues" in university teaching, are reviewed and updated each semester. The list for Semester One, 1997 was as follows.

Session:
1. Beginning a teaching portfolio
2. Creating a positive classroom
3. Helping students learn more effectively
4. Teaching students in small groups

5. Teaching students in large groups
6. Student assessment at Curtin University
7. Monitoring and developing your teaching
8. Identifying and using a variety of educational media
9. Supervising postgraduate research students
10. Teaching in a cross-cultural context
11. Writing integrated unit outlines
12. Unit co-ordination

It is made clear in the advertising that participants can attend any number of the sessions according to their interest and time available. This open choice is also carried through in the credentialling of the program in that participants get a certificate of participation when they have eventually attended 75% of the total number of sessions. Furthermore, those who have received a certificate of participation and want to claim credit for the program as a unit within a postgraduate course, can complete the assessment component at their own time and pace before we pass their marks on to the School in which they are enrolled.

In keeping with the previously mentioned educational philosophy of our programs there is an emphasis on collegial input and, as Schön (1987) would put it, *reflection-on-action*. Because the participants are not a fixed group (some come regularly but the membership changes from week to week) this collegial emphasis is made explicit on the back of the agenda for each session. A reduced version of this message is inserted below.

REFLECTIVE TEACHING PRACTICE SESSIONS

HOW THEY WORK

These sessions are a forum in which academic staff from varying disciplines can come together to discuss, challenge their thinking about and plan for important aspects of university teaching and learning.

But that's not all - at these sessions you will also:

- receive and contribute input about teaching;
- be invited to reflect on this input in the light of your own teaching;
- be invited to debate issues and network in a collegial setting;
- make plans to try out in your own teaching; and,
- hear about other professional development opportunities.

Therefore, some ground rules for participation:

- be prepared to talk - make your thoughts explicit
- interrupting is okay (by negotiation!)
- talk about your own teaching - we want to listen!
- give feedback to presenters, fellow participants and the facilitator.
- coffee break is another chance to talk with, as well as to offer and seek help amongst, colleagues. Make the most of it!

Reduced extract of the reverse side of the weekly agenda sheets in the *Reflective Teaching Practice in Higher Education Program,* Semester One, 1997)

A successful seminar program

The program has now been running for four years and its success is evidenced in feedback elicited through weekly feedback sheets, end-of-semester review sheets and the prevalence of word-of-mouth recommendations. The average weekly attendance is 15 people with usually between 50 and 64 different people attending over a semester. The general flavour of the feedback is expressed in the following sample of anecdotal comments.

> *I liked the contributions from the group. The atmosphere was good - and it made me feel like taking up suggestions.*
>
> *This was a good forum to speak to colleagues from different disciplines and share teaching philosophies.*
>
> *The presentations were always interesting. It is good to hear colleagues talking about what they actually do. The discussion was stimulating.*
>
> *I am heartened to have met a group of academics who have some vision beyond the specifics of the syllabus - an superb group leaders too!*
>
> *This program has caused me to radically change the way I teach.*

This success is often regarded with intrigue by colleagues from other Australian Universities who ask *You mean they come voluntarily.?* and *How do you get them to come?* Apart from the fact that we run an extensive advertising campaign and that our feedback indicates that the sessions are valued, we see another reason for continued attendances. That is, we see this program as one in a number of our programs which work synergistically towards the earlier mentioned goal of setting up a culture wherein teaching is regarded as a scholarly activity. And we are being met with the message that lecturers like building and belonging to such a culture. However, despite the fact that the program has been a success for those who could attend in person there are still other needs to be met.

Needs still to be met for those who can't participate in the seminars

There have been many staff who were teaching at the time of the session/s and who called or emailed to register their interest and expressed that they hoped their teaching schedule would allow them to attend in the following semester. (A way of saying "keep the fire burning until I get there".) Others who can't make it to the sessions ask for the presenters' handouts. Not only does this result in extra 'after session work' for the secretary and myself in organising mail-outs but I have doubts that many of the handouts will hold their integrity without the accompanying explanation and discussion which took place in the presentations. Nonetheless, we 'hear' the need and take it as a sign that something needs to done to enable more access.

This problem with access is exacerbated by the fact that Curtin has four campuses other than the main one at Bentley, in Perth. Whereas some lecturers from the other two city-based campuses travel over to the Bentley campus for sessions, people from the two country campuses at Kalgoorlie (600 km away) and Northam (60 km away)

have to participate through videoconference. This has created another dimension to the program and brings its own particular set of problems which warrant closer attention.

Problems with videoconferencing

Videoconferencing the Reflective Practice sessions has been a problem for me from the outset. As an educationalist with extensive experience in facilitation and research into reflective teaching practice, I saw videoconferencing round table sessions as an inappropriate way to proceed with the program. My colleagues who initiated this program thought likewise, but had undertaken to videoconference because they were obliged to provide outlying campuses with access.

Given these predispositions, the fact that none of us (staff developers) was really at ease with using the equipment did nothing to help our attempts to achieve a sense of 'groupness' between on-campus and off-campus groups participants. It also made it hard for us to facilitate an equal share of the 'airplay', or *symmetrical communication* (Werner and Drexler: 1978). In taking on the role of facilitator, my first action was to quickly seek and take lessons in handling the equipment. However, the task of facilitating reflective discussion in this dual mode was more complex. Most of the time talk by presenters was directed to those on the screen, whereas talk by those around the table at Bentley was directed to someone within the room. At times the country campus groups felt left out and at other times, depending on the participants, the questions and comments from the country campuses took precedence to the detriment of discussion around the table. Interestingly, my colleague who facilitated the sessions in my recent absence, made the same observation. Not only were those 'on the screen' missing out but the quality of interaction around the table (the biggest group) was also impeded.

Some of the problems were related to physical factors and one of them was the imposed layout of the furniture in the room. This layout was imposed by the 45_ camera lens which dictated that the only viable table configuration was an oval board room structure. This meant that the facilitator (who needed to operate the equipment) and the presenter sat at one end and the 15 or so participants sat at the sides. In more crowded sessions, rather than form a second row of seats around the table, participants chose to sit at the end nearest the camera which occasionally resulted in some interesting 'ear lobe' shots being transmitted to the country viewers! Meanwhile, those at the side of the table found themselves focusing on the screen rather than on colleagues around them.

Another physical factor which impinged on the discussion was the noisiness of the equipment. Those who sat near to the monitor screens complained of the noise emitting from them. This could only be reduced by lowering the volume of the in-coming speakers which in turn made it harder for us to hear our colleagues at the other end. None of the above influences was conducive to promoting reflective dialogue amongst colleagues.

In seeking to redress the above problems I looked for literature and advice from distance education and open learning experts but I was met with the dichotomy of foci between staff developers and technology experts which I referred to earlier. Those

who knew about facilitation of discussion in an actual classroom could see the way in which the technology was obstructing my 'teaching' and those who knew about using the videoconference had never used it for this purpose and could offer no insights. Neither was any of them aware of any literature which might be informative on the matter. I did experiment with some different desk arrangements but they were thwarted by the limitations of the camera which, by the way, didn't reach even around the oval table on the 'centre wide' setting.

Furthermore, when I sought ideas from the participants at Bentley, they said that the inhibiting influences of the table layout and the dominance of the video screen on interaction was exacerbated by the darkness and blandness of the videoconferencing room. In response to the latter, I managed to form a delegation comprising one participant, the Head of the Teaching Learning Group and myself, to go and purchase some prints for the grey felt walls. And, after consultation with our videoconference technicians this was done with care to retaining a non-glare environment.

Despite the fact that this videoconferencing situation was not proving to be conducive to running a reflective discussion group of our size, there was no option to discontinue - University agreements meant that we had to keep our access open. And surprisingly to me, we managed to continue to get a few people from the country campuses joining in each week.

Over three or four semesters, I worked hard at trying to improve this situation. In the course of time, I managed to facilitate so that the Kalgoorlie and Northam participants could feel more included. I asked for and acted on their ideas of how to do this and Bentley participants also contributed some useful suggestions. But with my attention focused on this aspect of the sessions, there were still logistical and organisational matters which took longer to solve.

Part of my practice was to deliver materials to the Kalgoorlie and Northam campuses before each session - I enlisted a co-ordinator at each location and provided them with the list of topics for the semester program. But since there was only one videoconference line available the question of turn taking had to be sorted out. In the beginning our main objective was to provide equity of access and so we negotiated for each campus to have an equal number of sessions each semester. The choice of sessions allocated was made on the basis of the relative interest each location had registered for particular sessions on the program outline. So we began the semester with designated days for each country campus. In theory this may seem simple but in practice it resulted in what I came to call *the Friday morning flurry* . This was characterised by a litany of phone calls and faxes, going back and forth to Kalgoorlie and Northam, all of which related to the question *who is on today?* On a couple of occasions, to my chagrin, the confusion arising from this *flurry* resulted in us dialling through at the start of the session to find that there was no-one there! Fortunately, this problem was resolved the following semester when the co-ordinator from Kalgoorlie suggested the two country campuses take turns to join in by videoconference every alternative semester. So simple, but I suspect that it would not have been agreeable without the hindsight of experience. This new arrangement ran smoothly for some time before a request to video-tape the sessions raised another pedagogic issue as well as an ethical issue for me as facilitator.

Pedagogic and ethical issues in video-taping videoconference discussions
The request to video-tape the sessions came when the regular participants from one of the country campuses had their School meetings rescheduled to a time which coincided with our session. In addition, there was a prospective participant who wanted some input on the topic. My pedagogic concern with video-taping the sessions was that they were designed to be interactive forums for reflection rather than 'deliveries' of information by experts. My ethical concern was that these sessions involved participants in talking about personal practice which sometimes meant that they also shared their personal impressions of the contexts in which they worked. I was worried about the possible implications of this talk being taken out of context. I was also worried that the risk of this happening would likely impede the open discussion which I had worked so hard to achieve within the sessions.

As was the case with the issue of dispatching hand-outs to people who couldn't attend, I found my concerns about pedagogic and ethical matters were not equally felt by the country participants who saw their request as a simple one of them being kept informed. As a compromise, I shared my concerns with both groups involved (Bentley campus and the country campus) and with their co-operation, established the following procedure. Prior to taping a session I sought permission to have the discussion taped from all participants before giving the co-ordinator at the country campus permission to go ahead and put the tape on. This took very little time but nonetheless, it became yet another thing to add to my long list of facilitation tasks. And I suspect that it bemused new-comers to the Bentley group who had not been privy to the preliminary discussions.

Overall, though, I eventually felt that I had reached a balance in achieving the need to provide equity of access while pursuing the overarching goal of facilitating reflection-on-practice. But this progress has been at considerable cost. For me, it caused a strain on what was an already heavy work load, often cutting in unexpectedly on time allocated to my other staff development roles. Similarly, it has required considerable effort from the two country co-ordinators who, despite their commitment and efforts, were somewhat frustrated at usually not being able to attract more than two or three staff to participate. Sometimes I do wonder whether the resources used on videoconferencing the program can be justified in terms of the number of people and the level of benefit.

Moreover, recently, in Semester One, 1997, the attendances from the country campus have dropped even further to the point where we had no country participants at several of the sessions. At present this phenomenon is still a mystery to me because I was absent for six weeks of the program and have not yet received the feedback from that campus. However, on my return to the program my colleague, an experienced and competent staff developer, who facilitated the sessions in my absence, reported that she thought that the reason that videoconference participants had dropped off was because they had felt left out. In retrospect, whatever the reasons for the falling participation, this outcome is not surprising in light of my above account of the way in which the process of facilitating a videoconference reflective practice session required constant attention, problem solving and fine tuning. And the body of working

knowledge which is accumulated through such a process needs to be explicated before it can be passed on.

Coincidentally, the phenomenon of the declining videoconferencing attendances occurred simultaneously to my being asked to contribute to a Web site Chat Page as part of a guest lecture which I was giving within a postgraduate course on research methods in the School of Design. Another colleague, a distance educator, had also been asked to contribute a lecture in the same course and to set up the Chat Page as an accompaniment to the classes. Most importantly for me, he offered to help me use the technology in order to contribute something for my own lecture. This experience reminded me that one of our Reflective Practice participants had once asked me to consider setting up an email discussion group and I began to think that a Web site discussion might fit that need.

Introducing a Web site discussion page

With the help and urging of my distance educator colleague and encouraged by my experience on the Web Site Chat page for the School of Design, I designed the text for a discussion page on *Reflective Teaching at Curtin* . Then with the aid of our graphic designer and a computer programmer the site very quickly came into being. The URL for this site is:

http://www.curtin.edu.au/learn/unit/RefPrac/

Early stages

The *Reflective Teaching at Curtin* Web site was introduced to the participants who attended Session Eight, *Identifying and Using a Variety of Educational Media* within the *Reflective Teaching Practice in Higher Education* Program. The site was also advertised by a special email message on an internal Curtin network, *academics* and in the Curtin newspaper, The VOICE. At the time of writing we consider the site as a draft which will be improved as feedback and resources come to fruition. Currently, it is designed as a medium for reflective discussion and for making resources available on particular topics. At the time of writing we are seeking funding from the University to have relevant Teaching and Learning Group publications, as well as some useful instruments, policies, guidelines and templates, linked to the titles of the session topics.

Meanwhile discussion has commenced and with the permission of the author I insert a sample:

> Posted by Ashley Aitken on May 28, 1997 at 23:00:55:
>
> Howdy One and All,
>
> I hope I'm not shooting myself in the foot (or head) here but ... More and more I am seeing my role as a lecturer become that of a facilitator (and I guess this is generally agreed upon) rather than a "teacher."
> There is something lacking in directing students to chapter so and so to learn on their own, compared with explaining difficult concepts and ideas, for example, to them. I guess "explaining" is the keyword here - I enjoy grappling with complex issues and trying to explain them in the simplest way (and I even enjoy it more

when the students "get" it). Are we (as lecturers) destine to become pointers (animate hyperlinks) who do loads and loads of marking, or is there a way out? Just something (else) on my mind.

All the best,
Ashley Aitken
School of Computing

In response to his responses Ashley later writes:

Thanks for your comments Alex (and Cal).

Re: "Ashley, I think your dichotomy between teacher and facilitator is too extreme. "
Yes, I agree. I think I was working way too late when I posted the original question, and was only seeing things in "black and white." I guess also I am partly stuck in the "old" School where lecturing was lecturing :-) - my University "idol" was Richard Feynman (of the Feynman Physics Lectures fame). He lectured. I still find it confusing, even the titles "Lecturer" and "Lectures", tend to suggest teaching - and as has been discussed, this is what students expect (at least to start with).

Re: "I like the facilitator model better for a number of reasons ..."
[a number of good reasons] And very good reasons they are. I guess it is just because I am new at this, but I do feel uneasy about being the facilitator. It may also be due to my lack of confidence in a large proportion of the students (in actively undertaking their own learning). I can just picture some of them at the end of the year failing and saying "well what did you teach us anyway?" Of course, I know this is not the right way to look at it. Sometimes I think Universities are becoming more and more like tertiary schools.

Re: "Just as an aside, I recently read an article which suggested that adults do not classify listening and
seeing as cognitive processes, ie you don't have to think in order to hear or see."
That's very funny :-)

Cheerio,
Ashley.

Ashley has since told me that he and Cal (one who responded to his message) have started up a further private conversation by email which is proving to be very helpful.

As an initiate to Web site discussions groups, my main doubts are about the organisation of the message titles in the "Discussion Room" (which newcomers like me might call the contents page). I am not sure how the categories of messages can be contained and made accessible as conversations grow. But I am sure that help with that task will come from my distance educator/open learning colleagues.

In the first six weeks of the site's development there have been 110 visitors, mostly browsers, with some posting messages. Comments we have received indicate that it has been welcomed by many of whom one is quoted (with permission) below .

> Posted by Ian Howard on May 22, 1997 at 08:15:04:
>
> In Reply to: Congratulations posted by Joanne Goodell on May 19, 1997 at 14:01:24:
>
> Truly a marvellous idea, this discussion site. As one who seems to always be occupied on Friday
> afternoons (reflecting on Monday's lecture), and so can't attend the sessions, I look forward to
> participating and learning from others through the site. Having been involved in teaching for some
> 3.5 yrs now, it sure is time to reflect and take a look at where we're going. All the best and keep up
> the great work.

On a sobering note, when I called Ian to seek permission to use his comment, he added that although the Web Site was a great idea it takes a lot of courage to lay out your thoughts about your teaching in such a public forum. As he suggested, such exposure can actually work against you. Perhaps I should lead the way into this issue by opening up a discussion on the topic? Clearly the Web Site discussion also has its limitations for facilitating reflection on teaching practice but it does offer another dimension to the flexibility of the program.

Lessons learned

The first lesson learned from these reflections is that just as the lecturers of students in our university have found that increasingly they need to make their courses available in distance modes, so do we as lecturers in academic staff development .

The second lesson for me was that videoconferencing, at least in our context, was not a successful medium for facilitating reflective dialogue about teaching. This finding was vindicated by our staff development colleagues from the Australian National University who sought our help when confronted with the task of advising lecturers about the pitfalls of 'delivering' lectures to overseas classes. Furthermore, Laurillard (1995: p. 174) makes the same point:

> *We would expect the conferencing media to handle the discursive aspects of the learning process well. However, while both audio-conferencing (especially audio-graphics) and computer conferencing can support this , video-conferencing tends to approximate more to the lecture than the conversation.*

The third lesson for me is that the Web site shows potential to complement the seminars very effectively. Notwithstanding Ian's cautionary comment about the issue of the risk of exposure, it can provide access to those who can't attend the seminars or who prefer to converse through writing. And it may become the preferred mode for staff in country campuses.

The fourth and last lesson for me (at least at this point!) is that by chance, I have now stumbled on a way of offering learners the option of generating the topics for reflection. The fact that our program included predetermined topics for reflection had been one of my first concerns when taking the program on. The practice of allowing learners to choose and collaborate on topics of their own choosing was, I recall, one of the central features of open learning as espoused by Illich (1971). It is also central to Schön's (1987, ibid.) notion of engaging in *reflection-on-action*. Now, I have found that while the Web site does make available the list of topics offered in the sessions, contributors have also raised other topics related to reflective teaching. Perhaps we are moving closer towards the ideal.

In concluding, I should say that in academic staff development at Curtin we fully support Boyer's (ibid.) notion of teaching as a scholarly activity in which lecturers reflect on, conduct research into and publish about their teaching practice. However, we do not support the scholarship of teaching which is divorced from practice. Rather, following Schön (1987) we consider the scholarship of teaching to incorporate *reflection-on-action* and *reflection-in-action.* And while we realise that discussion groups, alone, do not constitute reflection-in-action (we have other programs where this is pursued more intently) I would suggest that actual discussion groups may bring people one step closer to practice than do virtual discussion groups on the video, email or the Web. In other words I have a hunch that talking about practice in a face-to-face situation is somehow more compelling and more likely to prompt people into taking action. This is a topic for further reflection and exploration.

However, regardless of which mode is more effective we need to provide a variety of modes to meet the various circumstance and learning preferences of our academic staff. Finally, as a curriculum theorist who is new to teaching in distance mode, I am heartened to find that the integration of distant education technology with conventional 'teaching' is not exempt from basic principles of introducing any other form of curriculum change. It needs to be done at a time and space which is right for the teacher. In my case it seems the time and space is now.

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On Access: Toward Opening the Lifeworld within Adult Higher Educational Systems

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> The spirit and meaning of education cannot be enhanced by addition, by the easy method of giving the same dose to more individuals. If learning is to be revivified, quickened so as to become once more an adventure, we shall have need of new concepts, new motives, new methods; we shall need to experiment with the qualitative aspects of education. (Lindeman, 1926, p. 4)

Introduction

It is just and good that more people and more people of different of kinds have access to higher education. It is just because through access to higher education people are more likely to acquire power and prosperity. It is good because achieving such success is so commonly understood as at least a necessary condition of happiness. Higher education, therefore, is an all but necessary instrument for fulfillment in today's world. In turn, access to higher education becomes an important political demand because, despite the hugely growing numbers of people attending college, the majority remain excluded, possibly for lack of ability, but assuredly for lack of means and for who they are. The struggle for access to the academy remains a powerful problem of social and educational ideals.

At its simplest, access means opening opportunities for people to attend college who had heretofore been excluded for whatever reason. But access also carries more than numerical consequences. It has led to the presence of populations of students and faculty, historically more or less homogeneous, which are increasingly diverse in age, ethnicity, gender, class, and a variety of other ascriptions that had been seen as disqualifying. With these new persons, new voices are heard, new experiences become available to the entire academic community. As a result, many basic assumptions of academic institutions have been opened to question. These include assumptions about curriculum and canon, the organization and process of learning, the constitution of knowledge, the grounds of intellectual authority, and the purposes of formal education. Thus, what began as a matter of making more room for more people, has become a persisting battle over the very architecture of the academy (Herman, 1992). The predominantly pragmatic aspects of access open on to normative perspectives, to questions about fundamental values.

Of course, from a historical perspective, the access debate has never been simple, has never been about practical issues alone. Whether it was a matter of women being allowed to go to college, or African-Americans, or older students (such as GIs returning from war), every "new" population was suspect. Were they intellectually and temperamentally eligible for authentic participation in higher learning? Would they disrupt the presumed stabilities necessary for serious scholarship? (Nasaw, 1979, pp.

170f.) Even today, when it might be commonly assumed that such questions have been put to rest, "unusual" students by their very presence are thought to dilute the quality of educational activity. For example, some undergraduate and graduate programs continue to deny admission to part-time students on the grounds that only a full-time commitment to scholarship will enable one to partake in the most advanced exercises of the life of the mind. This normative claim thus has the practical consequence of excluding most adult students. The example also illustrates the more general point, that seemingly practical decisions are embedded in normative claims about what is true, what is just and what is fitting. And, our responses to such normative questions (however implicit they may be) always have practical consequences. The issue of access continues to have the authority that it does exactly because it turns on this conjunction of the practical and the normative. The issue is not and never will be only about room and resources in the academy for those admitted; it is also and inextricably about who belongs, and the true and proper nature of the learning to be done there.

In this paper we will explore the intimate connections between the practical and normative aspects of access, especially with a view to developing their implications for educational theory and practice. We will first discuss contemporary criticisms of a largely pragmatic approach to access; then we shall critically examine those criticisms; and finally, we shall offer an alternative approach. It is our contention that fully appreciating the normative implications of the access question is necessarily both political and pedagogical. In other words, from this critically informed normative perspective, addressing questions of who learns, and how, what and why they learn also means confronting decisions about fairness, authority and democracy. Thus opening up the problem of educational access in this way demands that we deal with how people, including students and faculty, struggle with tension between succeeding in a harsh world and thriving in a cherishable one.

Throughout this paper, we will draw on the work of Jürgen Habermas, especially his analyses of the tensions between "system" and "lifeworld." We shall understand "system" to mean the realm of rationally related, rationally calculable pragmatic functions, dominated by the values of efficiency, money and power. In contrast, the "lifeworld" refers to the realm of normative values -- truth, justice, beauty -- which enduringly attract both human affections and rational inquiry (Habermas, 1989). Our understanding is also informed by our own experiences of and reflections on the practices of adult education, on what it can mean to open institutions to new students and to open our own faculty roles and assumptions to accommodate them (Mandell and Herman, 1996). This exploration, at its heart, confirms two things: no adjustment, of the educational system and the larger social system it reproduces, no matter how critically sophisticated, can avoid responding to the normative claims of the lifeworld. And, no concern for the basic values of everyday life, no matter how caring or politically committed it may be, can ignore the implacable demands of these systems. Indeed, we shall offer an approach to accesssible education which we believe works equally on both of these domains.

Here is the course of our argument: Making educational opportunities more accessible to those it has excluded does not ultimately make the system fair. But drawing out the curricular and learning process implications of truly listening to and sharing authority

with non-traditional learners does challenge systemic assumptions about legitimate learning and knowledge. Acting on these new assumptions with students creates within the academy a set of democratic learning relationships, a kind of "in vitro" community. Forming this democratic community "in vitro" has, we contend, direct consequences for the "in vivo" conjunctions between system and lifeworld beyond the academy. The occasions of academic learning are "miniature public spaces" (Rose, 1995, p. 5), which can be preparatory schools for thought and action in the public spaces writ large beyond.

We prepare for and complete this line of thought in three "moments." In the first, we explicate the limits of a purely pragmatic understanding of increasing access to higher education; we look at the ultimately self-contradictory qualities of education sought and provided as soley an instrument of upward social mobility and increased prosperity. In the second, we more or less follow the "critical theorists'" analysis of the processes of adult learning as a "commodification" of learning itself in the service of systemic imperatives. We track the consequent diminishment of the opportunity for both students and faculty to engage the normative issues of human life, the very substance of the lifeworld, which have traditionally been the hallmark of "higher" education. And in the third "moment," we part company with the critical theorists. Applying maxims of what Habermas calls "discourse ethics" (1990), we demonstrate the claim that with careful, cherishing attention to the normative implications of genuinely collaborative inquiry between faculty and students, lifeworlds are created within the academy and can reverberate beyond it. We believe this "co-governance" (Shor, 1996, p. 200) of students and faculty over both curriculum and learning process offers significant possibilities for the reform of the academic, as well as the enveloping socio-economic system.

Such an effort requires not only commitment from students and faculty, but also a hospitable institutional environment. The public college in which we work, Empire State College, can be such a place. Although it is prone (as we illustrate), like all colleges, to the domination of systemic imperatives, including market forces, it does offer chances to create and sustain lifeworlds of inquiry with students. These surviving manifestations of the idealism in our college's original mission enable us to engage in genuinely "student-centered" education: to work with students individually and in small, improvised groups; to develop "learning contracts" and degree programs with students which in both the content and activities of learning reflect their individual experiences, curiosities, abilities and educational goals; and to set the schedule and place of learning to suit student needs. Because of the actuality of this hospitable institution, we can offer examples, case studies, of our work with students to illustrate and demonstrate our abstract analytical and normative claims. Perhaps even more important than this rhetorical value, we believe that through the very process of reflecting on our work with students, we have been able to understand, develop and keep faith with the idea of creating within an oppressive system a lifeworld-in-inquiry.

Moment I

The call for access to higher education began as part of a broad movement that demanded spreading opportunity to participate in the prosperity and power of contemporary society. It was supposed to become almost a matter of common sense and simple fairness that all citizens should be able to acquire the learning they needed

to succeed. However, rather than simply an expression of social justice, public policies that eventually responded to collective voices for these demands (for example in the 1960s) could be equally well and perhaps better understood as the outcome of a series of pragmatic calculations intended to preserve social order and established interests. Keeping people out of decent jobs and out of the growing culture of consumption was just too costly in both money and stability. Opening up the universities to people of color, to more women -- indeed, creating "alternative" programs and institutions for "non-traditional" students -- was in fact a victory for moral idealism (Kett, 1994, pp. 447-448). But it also became and remains an extremely lucrative and effective means of certifying and portioning social mobility. That is, as true as it is that more people of different kinds could get access to higher education, it is also true that college degrees are now more necessary for people to get ahead at all (Lehmann and Maehl, 1995).

In this perspective, for both the policy makers and managers of the higher education system, as well as for its potential "clients," gaining access to educational services becomes increasingly a matter of practical gain. But, critics of this pragmatically fueled access have accurately identified the self-contradictory nature of the system. They have persuasively argued that while the system opens itself to new participants, it simultaneously generates two kinds of restrictions: For those people who do get in, the requirements for social success and security multiply in terms of continuing (and often expensive) education, certificates and degrees. It is no accident that just as more and more people of different kinds are now getting into college, many jobs which had never required degrees at all now do, and those that did now require more advanced degrees and even "lifelong" credentialing. While for those people who are excluded, the social, economic and personal consequences are more drastic than ever. It is also no accident, for example, that at the same time that women and "minorities" are more represented in workplaces proportionate to their numbers, permanent job security is increasingly obsolete and productivity requirements have dramatically escalated (cf., among others, Reich, 1990). Further, the very claim to openness has provided another rationale for the marginalization of those who are altogether excluded and for those who never got very far. In fact, for the social economic order to function as it currently exists, it must distribute its rewards according to ever finer stratifications and preserve its prosperity through the declining real incomes of most working people and the dismantling of reliable and sufficient securities for the poor. Deflecting attention from these systemic inequities, it is supposed that those who do not prosper fail for lack of sufficient individual initiative to take advantage of the opportunities available to them.

Access thus shows two faces, of invitation and of exclusion. While offered as a new path to freedom and expression of democratic opportunity, access to higher education also introduces a sequence of markers for legitimating inequality. These ideas are echoed in the experiences of our students as they encounter the Janus-like nature of higher education. They are grateful for the welcome into institutions which had formerly been inaccessible to them. However, they are also preoccupied with the oppressiveness of the academic requirements now added to their already complex and demanding lives .

> Jim is one of our students whose experiences exemplify this tension. In middle age, during a successful career as a facilities manager at a manufacturing plant,

he was told at first that in order to be promoted or even maintain his current status, he would have to complete a two year college degree. Jim had never before been to college; however, through technical schools, on the job training and his own inquisitiveness, he was used to learning the newest information and skills pertinent to his work. Were it not for the opportunity funded and the threat implied by his company, it's unlikely that Jim would have been able or would have chosen to go to college. Though acutely conscious of the status of becoming a "college educated" person, he also worried about fitting academic work into his already busy schedule and about being "smart enough" to do it successfully at all. Further, while not strongly resentful, Jim noticed the unfairness of having to "get an education," and under difficult circumstances, so as to be allowed to continue in the work he had already so capably performed. Upon completing his two year degree, Jim's company then informed him that in order for him to be upgraded within his current job title, a four year degree would be necessary, which the company would fund, and that if he wished to be promoted, a master's degree would be preferred, which the company would not fund. Jim is completing a baccalaureate degree; he is considering a master's. For Jim, access to college is a gift he gratefully receives and a blow he has to absorb.

Leslie, another of our students, is more acutely aware of the precariousness of her own situation, of the power of certified learning both to offer a way out of and to maintain it. As a former prison inmate, she is interested in establishing a career and in understanding the racial and social ascriptions which have marked her life. She is eager to learn and to use that learning both to earn the rewards she needs and respects, and to critically evaluate the world she deeply resents. For Leslie, becoming a student is an invitation to a form of intellectual exploration she's always desired and been denied. She also knows that going to college would almost be impossible were it not for publicly funded financial aid, an accommodating admissions policy, and the support of her superiors at the social service agency where she works. It is her goal to acquire their learning and authority, and going to school offers her that opportunity. But her situation constantly echoes for her a basic unfairness: the insight and intelligence she's developed through her life are not in themselves sufficient for her to penetrate institutional judgments and barriers; she is expected to add to her record of skilled work, the stamp of an academic degree. For Leslie, access to college means entering a world of learning and status she genuinely desires, but also going through the performances imposed by a society she has found no reason to trust. Making it through college, she knows, is her best or only means of escaping the lower margins of society where she has dwelled. Yet, in an embittering irony, during the very time she is skillfully working to improve that society in a human services agency, she is learning, through her college studies, that the degree her employers require of her and which is her access to individual success, also symbolically represents the power and authority of the institutions which enact and enforce the oppressive social stratifcations from which she and so many of her fellow citizens have suffered.

These instances illustrate the claim that increased access to higher education really does increase the prosperity of adult students (Kett, 1994, pp. 403f.); however, the

experiences of these particular students also suggests the powerful inequity of a system that uses educational credentials as a series of excluding and stratifying gates. Educational access that does not offer opportunities to reform the institutional and social systems it serves, provides an increased chance of success for some, delivers a severe socio-economic punishment for those altogether excluded, and imposes arbitrary criteria of merit for everyone. We should thus ask, how is it that institutions, students and faculty, through efforts to achieve their own individual success, lend themselves to conditions which ultimately corrode their highest values?

Moment II

Educational institutions and scholars championing increased access for adult students, have developed a variety of techniques, services and processes which make the delivery of learning more responsive to the practical learning needs and life exigencies of their new clientele. These include evening and weekend classes, specialized training and professional transition programs, customized learning curricula and contracts, and sophisticated distance learning opportunities which transcend, through the use of increasingly elaborate technologies, limits of time and place. And, in addition, changing attitudes, as well as the necessity that colleges aggressively market themselves, have by and large removed the traditionally second class status of older students. There is no doubt that it is easier to be an adult college student than ever before.

At the same as these programs of adult education have become well established and systematized, there has also grown a routine theoretical critique of those developments. These "critical theorists" (Connelly, 1996) have argued that adult education has succumbed to "a business corporate ethos" and, in becoming so entirely pragmatic, has lost its identity as an agency of positive social change through "emancipatory learning" (Collins, 1995, p. 88 and p. 80). Indeed, in our experience and as our examples show, most adult students do chose to continue their educations for quite practical reasons: They want to acquire the learning and the certification necessary to succeed in a changing economy (Merriam and Caffarella, 1991). And the programs which have accommodated them, even those that retain a patina of a liberal arts education, have not only acceded to this market demand but also claim workplace-relevant or "instrumental" learning is the most important product the academy can contribute to society. In other words, these changes in the academy not only reflect an institutional responsiveness to the perceived and expressed needs of new students. But also, with even greater social consequence, adult education programs build their legitimacy (and thereby seek to secure their financial viability) by presenting themselves as valuable instruments for sustaining economic growth. They offer themselves as allies of a social system which claims economic imperatives as its most fundamental values.

The critical theorists have also maintained that educational institutions within this system are creating a caste of new professionals. It is a faculty trying to accommodate the demands of both their changing academic workplace and students. As well, the faculty are responding to their well founded anxieties about tensions between the traditional value of scholarly work and a demanding new role as expert facilitators, academic entrepreneurs and managers of learning resources. In a market-driven, global and diversified post-industrial world, the professoriate can no longer be valued

as it once was. We cannot buffer ourselves from that world by maintaining our integrity as guardians and sustainers of a cherished cultural tradition, ironically, in good part because we ourselves have deconstructed that once secure and admired ivory tower. Rather, as educators of adults (and of younger students preparing to enter the adult workforce), faculty have turned their efforts to serve these students and the market into a distinctive expertise. In so doing, the critics argue, the faculty have created a "thoroughly professionalized practice" that legitimizes their standing by wholly serving the demands of the market system (Welton, 1995, p. 132).

In such an "educational service economy" (Welton, 1995, p. 133), methods and processes of learning, with an emphasis on efficient and comfortable access to information, become the center of education. Attenion to the abiding questions of human life, and especially to efficacious social criticism and alternative visions, falls by the wayside. Thus, at the same time that faculty are framing a socially valuable identity niche for themselves in an academy whose traditionally contemplative enterprise is no longer sheltered from the marketplace, they inevitably participate in transforming the learning of which they had been the creators and conservators into a commodity. That is, learning becomes understood in terms of its exchange value, as something to be accumulated and traded for something economically useful, such as a marketable skill. The knowledge most worth having no longer has as much to do with enlightened and liberating inquiry as it does with promoting success.

> Ellen is a classic case of upward mobility. She had devoted herself almost entirely to work since graduating high school. Over a decade, she rose within a company from assembly line worker to supervisor. Then, when she had completed her associate's degree (majoring in Business), she became a middle-level manager, and, upon finishing her baccalaureate degree (majoring in Operations Management), she had charge of the production of an entire division and was on the verge of a vice-presidency. As she began to design her baccalaureate curriculum, Ellen was clear, certain and assertive about three goals: completing her undergraduate education as soon as possible, obtaining as much college credit as possible for the learning she'd acquired through her work experience, and studying, as much as possible, only work-relevant subjects. The policies and procedures of our college accommodated these goals quite smoothly. Her agenda was well satisfied by our flexible enrollment options, curricular customization, and variety of study modes to suitable to her schedule and preferred learning style. Moreover, by most criteria of institutional performance, Ellen was definitely a success for our college: she helped us meet our enrollment target, her company paid her tuition because her degree was work-related, she contributed to our rates of retention and graduation rate, she made good use of the range of our learning resources, and she spoke well of us to other potential students. Her pragmatic attitude to learning and her sound academic skills profited the system and cost it little.
>
> Because of our college's one-to-one approach to advisement and teaching, Ellen and I formed a good working relationship. Even so, her intense and nearly exclusive concentration on practical learning was sometimes troubling. She rarely seemed to take advantage of making the contemplative, reflective possibilities of her work and personal life into deeper academic inquiries. In

our college, those possibilities could have easily been turned into meaningful, individualized liberal arts tutorials. However, Ellen's priorities were elsewhere, and here too, the malleability of our academic requirements allowed her to meet them in her own way.

Just as Empire State College helped Ellen become a "captain" of our industrial system, we helped Bob become a governor, an enforcer of that system. He came to our college because he needed to accumulate, as quickly as possible, enough credits toward a bachelor's degree to be eligible for a police lieutenancy. Achieving that rank, he would have, in addition to job security, very good pay, the prospect of retiring prosperously at age forty, and enviable public status.

The degree program Bob created imitated the Criminal Justice curricula of other institutions whose requirements he had researched. He transferred the credits he'd earned at a two year college, and added to them credits we awarded him for learning he'd acquired at the Police Academy and through on-the-job experience. For his remaining credits, Bob chose a number of liberal arts studies. In our conversations, he voiced an interest in American History, and he and I decided to include work as well on research writing and a final study on the Bill of Rights. Through that, he might link his knowledge of criminal justice with learning about American politics and political philosophy. He was a most competent student, who carried out his assignments according to schedule (in the face of a demanding and always shifting calendar). He was certainly interested in the content of his studies. Moreover, he understood, with a lingering cynicism, that his place of employment had added to their promotion criteria a set of academic requirements that he was sure were unfair and only tangentially related to job performance. Nonetheless, both he and I accepted the overriding fact that he would do what was required to accumulate the credits necessary to get ahead.

The faculty role for Bob was to facilitate his progress towards a degree, to arrange that the learning and certification he required would be met smoothly and efficiently. As a part of growing market of student clientele, upon which our college is increasingly dependent, it was important for the faculty to suit Bob's academic needs. But in doing so, it could be asked whether the faculty had become more adept providers of pre-packaged academic material generically relevant to any police officer in his circumstance, rather than thoughtful teachers helping this individual person to question, explore and reflect. Judged by the criteria of professional facilitation, Bob and the college were served well. Judged by the criteria of active learning, opportunities were missed to engage with Bob in deep academic inquiry. Predominantly, as in Ellen's case, conventional academic standards were adhered to, the college produced a graduate, the student achieved what he wanted, and he has, no doubt, spoken well of his experience to other potential students. Bob will acquire a high and prosperous place in our social system. I am pleased that we could help him, but I am also troubled by lubricating the reciprocity between the powerful social institutions we represent. We made access to and progress through college easy for Bob, and his satisfying experience sustained our

access to a ready-made, somewhat "captive" market of potential students who need us to improve their prosperity and social power.

Robert Kegan, in *In Over Our Heads* (1994), nicely describes the dilemma we experience of succeeding so well at satisfying everyone's pragmatic interests but failing to find a place for the expression of the soul:

> In some quarters adult education as a field of practice is paralyzed by what it perceives as a choice it does not want to make: Shall it support its traditional, noble mission -- the liberation of the mind and the growth of the student -- at the risk of losing a large portion of its adult clientele, who will feel that what it has to offer is irrelevant to and neglectful of their adult practical needs? Or shall it respond to what it perceives as its adult clients' demands for practical training, expedient credentialing, increased skills, and a greater fund of knowledge at the risk of demoralizing or losing its best teachers, who are dismayed to find their professional and career identities being refashioned according to those of vocational education? (p. 273)

One way to understand the experience of our students and ourselves with them is to propose that their educational goals have been "colonized" by the imperatives of a market-driven economic system (Habermas, 1989, pp. 325-327). They are pressed to see their academic learning mostly in terms of its exchange value, and educational institutions are driven by same exigencies, which, in turn, we accept, at least to hold our own positions. And, even though we might express discomfort at this instrumentalization of learning, more and more we find ourselves placing our skills in service to those goals. We come to practice a somewhat mechanical facilitation which does not call upon us to engage with our students in the kind of reflective, deep inquiry that which faculty have cherished as the heart of their professional identities.

To be sure, faculty cannot claim a monopoly on attending to the fundamental lifeworld issues. Indeed, ideally, care for those issues is integrated in everyone's thinking and action with attention to such practical necessities as food, shelter, safety, and comfort. Nonetheless, the academy has traditionally been a place where, in leisure and freedom from those practical preoccupations, normative questions are expected to be carefully addressed and offered to the lifeworld of the larger culture. According to Habermas, the lifeworld is literally constituted by discourse -- whether academically formal or as part of the conversations of everyday life -- about what is true, what is just, and what is authentic or beautiful (1984, pp. 70-71). It is through respectful discussion of these topics with each other, in taking "communicative action" with each other, that we form and live in fully human communities. In so doing, we rationally express our identities as individual selves, family members, friends, associates, neighbors, and as responsible and free citizens of a democratic society (Habermas, 1996).

For Habermas, when education becomes a commodity and teaching/learning becomes largely instrumental, our lifeworld shrinks. The more attenuated our conversations about the normative questions of our lives (about truth, justice and beauty), the weaker our lifeworld becomes and indeed the less capable we become of speaking for human values in the face of pervading reduction of our selves to merely functional and expendable parts of a system (Habermas, 1989, pp. 284-285). There was little room for meaningful conversations of this kind in our work with Ellen and Bob. Moreover,

even our own scholarly activities, where we might have engaged colleagues and our students in reflection on the most important questions as they appear in our discplines, have become constricted to a "culture of expertise," a technocratic support for system functions (Fischer, 1990). We ourselves therefore make little contribution to sustaining the lifeworld.

It would of course be presumptuous to assume that our students (and for that matter, we) are unaware and unconcerned about the normative dimensions of human life. What is at issue, however, is that there is so little space for attending to them within the very type institution which has historically offered itself as the special place for doing so. Whether a college presents itself, as ours does, as a center of learning services for adult students, or simply, as is more common, as the place to acquire the higher learning preparation necessary to succeed in this society, the academy itself can be seen to have become a creature of a much larger process of a lifeworld-diminishing system. Thus, respect for the laudable ease with which many adults gain access to college and for our facilitating their progress must be tempered. It must be tempered with the critical reservation that our students' workplaces, as well as the academic workplace we share with them, are primarily domains in which systemic powers are exercised -- where "unfettered partnership or communication cannot enter," places of "dumb necesssity ... solitary and silent" (Keane, 1984, p. 136). We must therefore ask, what are the opportunities for emancipation in such a misleadingly accessible environment?

Moment III

From the perspective of the critical theorists, it would appear that answers to this question demand direct action, both within and outside of the academy. Professors can lend their expertise to political work to that provides criticism of and even revolutionary challenges to current arrangements in non-academic spheres, such as families, workplaces, governments and the legal structures of the marketplace. That is, as Habermas might say, academics can act directly on the "steering media" of society: money and power (1989, p. 183). Within the academy, we could teach, by more or less traditional means, "an education for life." (Hart, 1992, p. 214), overtly increasing the room for "deliberative discourse" about society in relevant moral and theoretical matters (Plumb, 1995, p. 188). Instead of curricula designed implicitly or explicitly to prepare students for success in the current system, we could offer knowledge that is lifeworld-enhancing: information, skills and abilities that are life affirming and socially responsible, which are relationship building, and which engender self-expresssion and sensuous enjoyment even in the workplace (Hart, 1992, p. 21). In other words, through such a "transformative" approach to teaching, we could directly teach students about a better way to live (Giroux, 1988).

An alternative to this didactic approach is to take a more relativistic point of view and thus value "diversity" for its own sake. In consequence of the post-modernist deconstruction of rationally or objectively legitimated normative claims, the way is ostensibly cleared for accepting and appreciating "all varieties of educational tradition" (Usher and Edwards, 1994, p. 31). While this may be a sentimentally attractive idea, it is also an implicitly normative assertion (namely, that diversity is a fundamental good). However, if we accept the deconstructivist premise that such assertions cannot be rationally legitimated, the security and authority of valuing "diversity" is left to stand

solely on the brutal mercies of money and power, on exactly the dehumanizing systemic imperatives celebrants of postmodernism hope to dethrone (cf. Herman and Mandell, 1996, pp. 58-59).

These approaches should not be taken lightly or disregarded. Indeed, we largely agree with their critique of inequity, domination and alienation in contemporary social (including academic) arrangements, and we share their hopes for a more "utopian perspective" (Hart, 1992, p. 200) to guide our educational practices, which also includes making space for genuinely diverse disputation and opposition within the academy (hooks and West, 1991, pp. 27-58). However, we believe it is essential that this very urge toward emancipatory learning should not, in a political irony, result in undercutting access to higher education. It would not serve to allow more people into the academy only to alienate them once they are there by treating suspiciously or condescendingly the very hopes, however instrumental, which motivate them.

In fact, it is through nurturing a process of listening to and honoring those instrumental goals, that the potential for emancipation arises in communicative dialogue. By genuinely sharing authority with students in the inquiries we undertake with them, we believe that democratic learning relationships are formed within the academic context which can have important consequences outside of it. That is, by enchancing experiences of reciprocal, collaborative and open communication within formal higher education we help to expand the lifeworlds within and around it.

For Habermas, an appropriate response to the shrinkage of the lifeworld as it is colonized by systemic imperatives is to engage in "communicative action." This does not mean only introducing into discussion the contents of the lifeworld, the normative topics of truth, justice and authenticity. There is also an absolutely essential regulative or process-attentive dimension of communicative action -- a "discourse ethics" (Habermas, 1990). This kind of communication, such conversation, is properly regulated by maxims: Everyone with an interest and competence (i.e. the ability to communicate) to participate may do so. Force or coercion may not be used to exclude communication or to establish a position. Every participant should assert only what s/he really believes. Participants should not contradict themselves or use the same expressions with different meanings. Every participant who makes a claim or disputes one should give the reasons and/or evidence to support it. Any assertion may be questioned. From these maxims, adapted from Habermas (1990, pp. 86-90), can be derived two more: No conclusion should be held binding on the participants unless all can sincerely assert that they believe it. All conclusions are provisional until no more questions can be raised about them by the paticipants. In effect, these maxims constitute and prescribe human behavior in an emancipated lifeworld. They also serve as the guides to the rational practice of inquiry by which human beings can regain the experience of the lifeworld of a democratic culture in societies like our own where system imperatives dominate.

What would it mean, what would it look like, to use these maxims in formal higher education? It is easy to imagine what genuinely communicative inquiry would be in a non-institutional setting. It would be something like the free flowing and never quite completed Socratic dialogues taking place in the relatively open space of the agora (Herman and Mandell, 1996). In such dialogues, the participants can be aristocrats or

slave boys; the conversations are spontaneous, improvisational, playful and deep; and although the participants learn, none leave or should leave with the belief that they have now finally acquired the truth. However, unavoidably and inexorably, learning taking place and credited within a formal system, an academic institution, cannot be so indefinitely unbounded. Indeed, it is in working with the tensions between the ideal maxims of the lifeworld and the typical demands of life within systems that we actually generate experiences of freedom within formal academic discourse. The faculty role, student expectations, and even definitions of important knowledge -- all must float within this tension. In large part this ambiguous environment is formed by structures and requirements of institutionalized authority, but also, in contrast, by our normative imaginings of genuine communicative action.

It is essential to appreciate the sources of this tension. One is the sheer coercive force of social reality as it happens to be. We should not give it normative authority, the right, as it were, to participate in, to define education. However, it nonetheless must be taken into account if education is to exist at all. Our students, our faculty jobs, our academic institutions would simply not exist were it not for the systemic force or imperatives of social prosperity and power. We can criticize, we can try to learn to shape and regulate these forces according to normative, emancipatory imperatives, but they cannot be disregarded.

Second, and this is essential for understanding the dialogues we are about to describe, there is the maxim of discourse ethics that the sincere claims of every participant deserve full attention. This means that in genuinely collaborative inquiries with our students we ought not disregard or otherwise disrespect the assertions of instrumental educational goals and interests which our students bring into our work with them. It's not only that we risk losing their engagement or their enrollment if we fail to attend properly to those claims. Also, as a matter of our responsibility to the ethics of discourse, we ought not fail to give our students' pragmatic assertions the status they deserve. This propriety is not given by our friendly or condescending regard for students, but rather from the recognition that we ought to take seriously any reasoned position, of which our students' instrumental goals are surely an outcome. And, in giving these practical values their due -- in engaging them not as impediments but as opportunities -- we are saying that both faculty and students will be able to recover truly meaningful connections between system and lifeworld. Indeed, it is by embracing the inevitable tension between system and lifeworld in our formal academic work with students that the abstract imagining of the lifeworld becomes lived experience.

To illustrate how emancipatory inquiry can emerge from academic discussion initiated by respectful attention to students' instrumental goals, we shall return to our cases. Although all four contain significant experiences of the lifeworld, for the sake of brevity, we shall discuss two. We have taken the first from Moment I in order to show that even when a student is caught between the seductiveness of easier access to college and the harshly unfair socio-economic imperatives that ease disguises, a communicative collaboration between teacher and student can open both intellectually and politically freeing possibilities. And, we have taken the second case from Moment II in order to suggest that even when both student and teacher are deeply emeshed in attending to practical, success-oriented features of the system, they can still create consequential experiences that draw them into the lifeworld.

For Jim, certainly, practical goals were his primary and only expressed concern when he began his studies at ESC. He had no formal college background, his training and work experience were technical, he was not a reader (save for technical literature), he was not politically active nor, seemingly, much interested in community affairs, and he urgently wished to complete his undergraduate degrees to secure and advance his position within the company for which he worked. On the other hand, Jim was naturally curious, both appreciative and concerned about the quality of life in his organization, and very committed to providing a "good life" for his family. I let our early conversations and studies dwell upon the questions which concerned him most: How much college credit might he obtain from the learning he'd acquired through his work experience? How quickly could he finish a degree? What workplace-related learning might he turn into topics and projects for his remaining studies? I offered him encouraging but reasonably estimated responses, cautioning him only that since he was seeking a degree from a liberal arts college, he would be required to do a certain amount of, perhaps unfamiliar, less vocationally oriented studies. After telling him that these traditionally included subjects like literature, philosophy, history, math and social studies, I also explained that perhaps there might emerge during our conversations about his work and other experiences themes and questions important to him and upon which we might focus these liberal studies.

He listened patiently, and at first non-committally. He gradually became more relaxed, more skillful with academic tasks, and more confident that his practical primary concerns would be fairly addressed. We got to know one another better, and in fact more genuinely interested in one anothers very different interests: I was curious about his complicated, high-pressure industrial workplace and visited it a couple of times; he was curious about my education and scholarship in literature and philosophy. I realized that he, as a manager, was very attentive to the "human" needs of his supervisees and often went out of his way to design responsibilities for them which suited their interests and abilities. He'd thus "saved" several employees whom, he noted, other managers in the company had given up on and would have fired. (This virtue also manifested itself in the intense care Jim demonstrated for his disabled son and for several friends, also in late middle age, who were suffering from dangerous or fatal illnesses.) He said he wanted to learn something about philosophy, literature, and history.

Rather than selecting survey courses on these subjects, Jim and I gradually devised themes for our "learning contracts," themes which seemed to him to express focal points of his increasing reflectiveness about his own experiences: honesty and compassion in the face of force, the obligations and abuse of authority, the collective power of weak and exploited persons. He supplied the generating "data" and purposes of our inquiry. My role, drawing on my own experience, was to describe and suggest some pertinent authors, works and topics he could study. (Jim eventually read, among other things, Plato, Aristotle and Nietzsche; *The Heart of Darkness*, *King Lear* and selections from the Bible; and in American social history, with a particular emphasis on the

labor movement.) Just as important, my role, as a "professor," was to academically legitimate his curiosity by helping him name his ideas and, especially, by simply taking them seriously. Jim was fascinated and in all respects a "good" student; I was fascinated and often enlightened by the richness of the work and other life experiences he brought to understanding our readings. Now that Jim is contemplating a master's degree, no doubt affected both by his non-technical studies and his increasingly sharp notices of how expendably his organization often does treat its employees, he is considering designing a graduate curriculum focusing on both politics and human resources management. Jim and I learned to trust, be interested in and admire one another. And from this little lifeworld we created, he has not only expanded his intellectual concerns but is also thinking about how the care he was accustomed to show his associates might be extended within organizations as a whole and the socio-political environments in which they function.

The same elements were present in the academic work Ellen and I did together: Priority was given to her instrumental educational goals; we learned to understand and appreciate more about one anothers work and interests, discovering therein a mutual concern, though exercised in vastly different contexts, for "normative meanings" (as I would call them) and "good values" (as she would). Together, we eventually designed learning explicitly addressing those common interests; and our college's curricular and procedural flexibility allowed us time and inventiveness with content to do so. As suggested above, in the initial statement of this case, Ellen's practical goals, her desire for success, remained paramount. Perhaps presumptuously, I rarely felt that she deeply engaged -- relaxed into, as it were -- the normative, lifeworld possibilities inherent in the pragmatic density of her experiences. But there came a moment, during an almost idle chat, when Ellen contemplatively described a large, very expensive machine she was about to purchase for her production department as "beautiful." I asked her why she thought it so. The ensuing conversation we turned into a small course of study on aesthetic judgements and, interestingly, an even more extensive learning contract on the possibilities of self-expression in the workplace and the caring, ethical design of work itself. I am not sure how much these inquiries reverberated beyond our discussions. However, it is notable that shortly thereafter, Ellen very deliberately, as she later told me, separated herself from a male associate who, she'd felt, consistently abused and suppressed her. Ellen certainly strengthened her lifeworld; and I extended mine to learning to think that industrial machinery might be "beautiful."

Conclusion

We have tried to show that when access to higher education is considered as a laudable goal, it can no longer be understood as solely a practical matter. That is, the issue of access can never only be about the efficiency with which the educational system serves greater numbers and varieties of people. To be sure, we must always continue to look for ways to keep our doors open to people who need to acquire learning and degrees to survive and thrive in this society. However, although this pragmatic dimension should never be lost, it is not sufficient. Normative claims do press for and ought to occupy more and more attention in shaping both the content and process of learning.

We have argued, first, that if we attend only to allowing in greater numbers of more diverse students, people who, traditionally, might never have been inclined to attend or be welcomed in college, we would be mainly perpetuating the very inequities of a larger socio-economic system which impelled those people toward college in the first place. Second, if our efforts are mostly directed toward the welcoming and smooth servicing of these "new" students, then both they and we (as faculty), neglect the opportunity to engage and struggle with the deeper issues of life, whether in terms of traditionally humanistic studies or, as the critical theorists advocate, in terms of a program for the political, cultural and economic reform of society. Finally, we try to demonstrate that when faculty actually share authority with students in creating both the content of curriculum and the process of learning, we form little lifeworlds within the academic system. In this lifeworld, we (both faculty and students) experience something often denied in our everyday lives: we glimpse qualities of reciprocal communication and gain practice in listening, in respectfully taking the position of "the other," in critically reflecting on our own assumptions, in questioning the definitions of valuable knowledge, and in learning to manage the inherent tension between the pragmatic and the normative. In short, faculty and students learn the practices of democratic community. They acquire the satisfaction of nurturing and experiencing them within the academic system, and thus, some well-founded hope, the transferable skills, for enlarging the lifeworld beyond.

The case studies we've offered illustrate these ideas. However, they also reveal how important a hospitable academic environment is to actualizing them. Just as the pragmatic purposes of students cannot and should not be ignored, sustenance from an institutional system is a necessary condition of creating rational lifeworlds. We urge faculty to use their acumen to find existing opportunities within their colleges to try the practices of student-centered learning, to explore the normative meanings of "access." And we urge faculty to use their collective power within academic institutions to legislate lifeworld-enhancing "factual-normative" conditions (Habermas, 1996, pp. 28-32), to reform policies, structures, standards, contents and processes of learning so as to increase the hospitality of those environments to lifeworlds of collaborative inquiry.

Finally, our case studies, representing only several of hundreds of possible examples, also demonstrate the value of "learning from experience" -- an aspect of reflection which has a vital place in opening work with students to potential lifeworlds. In fact, just as within conversations with students we gradually and reflectively uncover in their individual pragmatic concerns abstract, normative preoccupations and themes, so by reflecting on our own experiences with students have we been able to gain access to understanding how secreted within the brutal imperatives of systems, the seeds of the lifeworld live and can be germinated.

We believe, with Eduard Lindeman, that education is "once more an adventure." For we have experienced, and offer here in our reflection on the meanings of access, a reintegration of the pragmatic and normative dimensions of learning. We believe that attending carefully to learning about what is necessary to live and thrive, necessarily includes and enlarges attention to the qualities -- of truth, justice and beauty -- that make human life worth living.

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The Distance Learner's 'Language Centre': A Flexible Model of Language Support, Transferable to other Institutions.

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Writing has laws of perspective, of light and shade, just as painting does, or music. If you are born knowing them, fine. If not, learn them.
Truman Capote

Being unable to express yourself in clear accurate written English is an enormous barrier to learning effectively. Generally speaking, people assume that if you enter a university you have the necessary level of English to study effectively. Increasingly this is being proved to be false in school leavers entering conventional universities; it is even less the case in Open University students, almost all of whom are mature students. *Some have not had to write academically at all since they were in their early teens. It is possible for students to take a science route at this point and arrive at university via BTEC or HNDs, and so have no concept of what a university essay looks like* (Peelo 1994). When the Open University was set up this problem was addressed in some ways by incorporating study skills (although not necessarily language skills) within the foundation courses. However, now that only a minority of our students enter via a level 1 course and they come from increasingly diverse backgrounds, the issue of undeveloped language skills has become more apparent. There is therefore a greater need to address it.

Tutors and tutor-counsellors have increasingly noticed that they are having to spend more and more time correcting scripts, giving useful feedback on how to improve writing and spending time in tutorials addressing these issues. Difficulties with written language is by no means exclusively a problem for the Open University student, but there are many reasons why it is more acute within our institution. This is partly to do with the students we attract and partly to do with our mode of study.

Our open access policy means that students do not have to have achieved a particular standard of education in order to begin studying with us; therefore they have not 'proved' their language abilities by passing examinations. This is also becoming the case for many universities - particularly the newer ones - who are increasingly recruiting mature students, many of whom have come through the access route. Yet *Institutions of higher education are not open to all. One of the conditions of membership is being able to operate in the world of academic literacy...which include[s] being able to conform to the conventions of academic writing...*(Benson et al 1993). Mature students have usually had a larger gap from studying and therefore are out of practice at writing, and maybe have never had to write anything 'academic' before. Amongst these will be students who have not responded particularly well to previous educational experiences and who may therefore have more difficulties with language. Some of these will have developed 'language avoidance' strategies and so

will have to confront the act of writing with a large amount of preconceived prejudices. Mature students tend to be more aware of their inadequacies and as a result can develop one of two different strategies: they may see the problem as more acute then it really is and so work desperately hard to improve their language skills, or they may avoid writing difficult words or developing a more complex style in order to mask the problem. Finally, the Open University, alongside conventional universities in large cities, recruits students from a very wide cultural background and these different cultures bring with them different language conventions, not all of which are compatible with accepted 'academic' english.

The very nature of the Open University's multi-media distance form of education brings its own problems to its students. Firstly, the main medium we use is the written word and so a student needs to be able to read and write effectively from the start in order to engage fully with the material. There is limited tutorial time and not all students are able to go to sessions with their tutor and fellow students. This means that there is little or no time to address language issues in a classroom situation as might be done in other institutions. Our students also do not have the same opportunity for peer group support, for instance the exchange of assignments, or the working through of an essay together. This can be helped by the tutor facilitating self-help groups amongst the students in his or her group, but it becomes difficult on courses with a low student population or where students are spread over a wide geographical area. Open University tutors vary in the degree to which they feel they are able to support students in their negotiation with language issues; higher level tutors in particular are recruited for subject expertise and therefore may not have the skills to offer more basic support.

Part-time study has its own difficulties. Students lack immersion into the educational experience, so each time they sit down to study they have to make the transition from their world of work, relationships and domesticity afresh. This can lead to both a lack of confidence and a lack of experience of reading texts and writing responses; often therefore have the same access to an educational environment where they are able to look up references, use dictionaries or thesauri or even have a quiet place to study. Although the use of computers is increasing amongst the student population, many are still denied this facility and thus the ability to word process and spell-check.

There are also specific difficulties that arise from the modular nature of our courses, and which must be shared by students in other institutions that are studying in a modular way. Each subject or group of subjects has its own conventions and style of writing, and so a student who is constantly moving from one area of study to another has to learn afresh each time new conventions and styles of writing. It is important that students are enabled to use the appropriate discourse when moving from one discipline to another, as being able to express concepts, ideas and opinions in the appropriate way, gives a student power as a member of the academic community. In full time education students experience a variety of academic language all at once as they are constantly moving from one discourse to another, whereas Open University students learn one thing, one style or model at a time and then have to re-learn again as they move on to a different course the next year. They thus are deprived of the interaction and connections that can be made by several courses being studied alongside each other which in itself helps to develop language awareness.

All these factors have been made more apparent by two recent developments within the Open University system. The first is that we are expanding our recruitment of students who study in Continental Western Europe and beyond; and the second is that we now allow students to enter at any level. When all undergraduate students entered via one of the foundation courses we knew that they would all get at least some language support built into the course in the form of study skills, more tutorial time and a more holistic approach from their tutor-counsellor; now that they can enter straight on to a higher level course there can be no such assurance.

In answer to the perceived need of our students we have begun over the last few years to develop the notion of language support. Because we have no 'home base' for our students we have not been able to build up the sort of Learning Centre or Language Support Centre that increasingly has been growing in conventional universities. We have thus devised ways of providing language support which can be used either in isolation by our students or mediated by a tutor, tutor-counsellor, or a specialist language support tutor.

The help for individual students is based around a referral system. We ask our associate lecturers, both tutors and tutor-counsellors, to identify students who are having difficulty expressing themselves in effective english in their tutor-marked assignments. Once aware of such a difficulty they are asked to complete a referral form which begins to analyse the problems. This is then sent in to the Preparation, Induction and Learning Skills team within the Regional Centre. These students can then be offered a special session with their own tutor, an invitation to a small group session run by a language support tutor, or an invitation to a larger workshop where a mixture of group work and individual help is offered.

If no form of face to face contact is possible, then the referrals can be used as a basis for support either by telephone or via correspondence. It has been absolutely basic to our development of systems and materials that help can be given in a variety of modes, because unlike the conventional university it is not possible to guarantee that our students can attend any sort of face to face session.

Much of the work that goes on in these various ways is based around the materials in the Open University's *Open Teaching Toolkit: Effective Use of English* (1997). This Toolkit is a staff development booklet sent to associate lecturers which includes: discussion of the issues around language support, advice on how to explore a student's language history, notes on good practice concerned with feedback, materials to use in an interactive way between tutor and student either face to face or by correspondence, references to useful materials for future language development and support, and handouts that can be sent direct to students. These handouts all have space for personalised comment from the tutor, 'rules', exercises for the student to undertake and advice on books which offer further help. One of the aspects that the Toolkit covers is that of effective feedback on continuous assessment. Good correspondence teaching underpins all study with the Open University, and the approach taken in the Toolkit tries to encourage tutors to include language development within their feedback. To help this we have included a tutor checklist for evaluating tutor marked assignment

answers which directly addresses the problem of analysing the difficulties that a student is having with his or her writing.

We are at present exploring the use of computer software packages to enable self help amongst students and the use of computer-mediated conferencing for tutor help and guidance in language development. In the United States, there has been the exciting development of Online Writing Labs (OWLS). These are world wide web sites designed to support students' writing by providing early access to electronic resources and online tutoring. By placing these resources online OWLS can serve students who are unable to access conventional forms of support. *For example, Purdue University, one of the first institutions to offer writing assistance on the Internet, provides an impressive list of electronic handouts on potentially troublesome aspects of English grammar, punctuation and spelling* (Anderson-Inman 1997).

Clearly, in order to support our associate lecturers in this work there is a need for consistent staff development both for specialist tutors and for all staff. The Toolkit has a primary function here and since its launch in March 1997 it has both provided a direct form of staff development and been used as a focus at staff development sessions with full-time regional academic staff nationally and with associate lecturers regionally. There has always been a programme of staff development around correspondence teaching and the notion of language support could usefully be incorporated within this.

As well as staff development with a practical focus, there is also a need for consciousness raising; staff need the chance to explore issues around language support. Language is an emotive issue as the language we use - both spoken and written - reflects the person we are, so any work that is done with students in this area has to be approached in a very sensitive way; tutors may well need help with this. *How people feel about themselves and life can be enmeshed with study; writing, in particular, is an activity which can reach down inside and find the sensitive parts.* (Peelo 1994).

Although language should be developed alongside academic concerns, it is often extremely valuable to undertake staff development in cross faculty groups as this enables tutors to focus on the main issues, to develop their thinking and to help them decide what approach best suits them as individuals as well as within their faculty. This can lead to illuminating discoveries by staff who have hitherto approached writing from a particular standpoint.

As well as the initiatives that have been led by regional academic staff, the Open University as an institution is beginning to respond to the need for language development to be considered alongside other academic concerns. Faculties are beginning to consider language expectations when writing course guides; the examinations and assessment area are considering the implications of spell checkers and the use of word processors in examinations; and courses such as *U210: The English Language: past, present and future* have been produced. A small group has been set up to investigate the possibility of a course in english as a foreign language and regions are working on producing diagnostic materials for student guidance at the enquiry stage.

The student materials within the Toolkit are in the process of being adapted to form a Student 'Toolkit' which could be sent to students direct. This would not replace the support they get from their tutor but would supplement it for those who find it difficult to attend face to face sessions, or who want additional help.

Many of the ideas, strategies and materials that have been developed within the Open University could usefully be transferred to conventional universities. Clearly the Open Teaching Toolkit: Effective use of English, could be a staff development 'manual' for any staff in any institution; similarly the student 'Toolkit' which is in production could be a resource for any student anywhere. The Open University has always been rightly proud of its staff development and within the area of language support we have developed a programme of staff development which could be replicated elsewhere. This programme includes sessions for tutors and also for those who are training them.

In reciprocation what would be useful to the Open University would be access for our students to the facilities that are available in the Learning Centres or Language Support Centres increasingly to be found in conventional universities. A place for students to drop-in, to seek individual help is what they lack. To be able to access materials, use computers and get personal advice at a place that is near their home would enormously strengthen the support that we already offer.

We have much evidence that what we are providing is filling a need and is working to support our students. Above all, we have devised a flexible system that can support students according to their individual needs both by face to face and correspondence. A good referral system is enabling us to target our help more closely. By raising awareness amongst our associate lecturers we are ensuring that referrals are being made effectively. The materials that we have produced and that are incorporated into the Toolkit are being used in a variety of ways: by individual tutors and tutor-counsellors, by language support specialist tutors, with individual students and in small groups and at larger workshops. Associate lecturers are attending staff development sessions and are finding them useful. Our expertise within the area is being recognised by other institutions and we are being invited to contribute to their thinking on the subject.

Our work has been evaluated and written up in a number of reports: *London Region's Language Support Project; RAS Training the Trainers Report of the Toolkit launch; R01 Staff Development day; R04 Toolkit launch Staff Development; R01 Report on Language Workshops for Students.* The publication of the Toolkit itself is a recognition that the materials and methods we have developed work.

The area of language support is one that needs constant re-visiting: just as language development never really finishes - we are all always developing our skills in this area - the need for evolving new methods of support never ceases. Within the Open University we feel we have begun on a journey of exploration in this area and have produced a structure of support; in order to move further down the road we now need to collaborate with other institutions in order to offer a really comprehensive programme of language support that will benefit both their students and ours.

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Introducing and Supporting Change Towards More Flexible Teaching Approaches

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Introduction

In Australia as in many countries throughout the world, there has been a blurring of the boundaries between distance education and on-campus teaching. Universities are now more commonly using terms such as 'flexible delivery' or 'flexible approaches' to label moves towards the provision for *all* students (on and off campus) of teaching and learning approaches which are less time and place dependent. Such moves have been stimulated by many diverse factors, including: equity and access issues; the higher levels of mobility of students; the tendency for many full-time students to have significant levels of employment to support their studies; a recognition of the range of student learning styles and needs; reductions in funding and staffing levels of universities concurrent with increases in student enrolments; the potential offered by various technology and media developments; and a recognition of the need to develop students as life-long learners.

Although some universities in Australia have long established traditions of involvement in distance education and, therefore, can relatively easily transfer their resources, support and 'know-how' to bring about more flexible approaches across the board, other universities have no such established tradition. For the latter universities, policies and practices have been based on the assumption that students attend classes and are taught in ways largely based on face-to-face interaction. In these universities, the changes to implement flexible approaches must begin from a very low base of experience in this area and such changes can be quite daunting for all concerned. This paper will suggest elements of the change process needed for a university that is moving towards more flexible approaches from a beginning point of minimal experience in this area. Although the paper is based on a scenario of a university moving towards flexible delivery from a tradition of face-to-face teaching, many of the points made will be applicable to all universities introducing some form of change, whatever their position on the continuum between very flexible approaches and traditional face-to-face approaches.

For those universities that have resolved to increase the flexibility of their teaching approaches, the changes required are far-reaching. Such changes impact not only on the teaching approaches of individual academics but also on administrative procedures, curriculum and assessment practices, the provision of student support, general timetabling and organisational arrangements, library and computer support, technical and infrastructure provision and support, procedures for allocating workload for academic and non-academic staff, and reward structures for academic staff. Such far-reaching change is often a slow, difficult and complex process. This paper will draw on literature related to educational change and also on studies of change that has been

directed towards flexible delivery to suggest some general steps that need to be considered when managing such changes.

What Do We Know About Educational Change?

Over the years, much has been written about educational change, including change in university settings. One of the enduring observations about change is that it is most often a complex, non-linear process. In large, multi-faceted organisations such as universities, the complexity and slowness of change are particularly evident. A favourite axiom is that change is a process not an event. Fullan (1993) has synthesised much of the literature and experience about educational change into eight "lessons" or points:

1. You can't mandate what matters - the more complex the change is, the less you can force it.
2. Change is a journey not a blue-print. Change is non-linear, loaded with uncertainty and excitement and is sometimes perverse.
3. Problems are inevitable and you can't learn without them.
4. Vision and strategic planning come later. Premature visions and planning can blind.
5. Individualism and collectivism must have equal power. There are no one-sided solutions to isolation and group-think.
6. Neither centralisation nor non-centralisation works. Both top-down and bottom-up strategies are necessary.
7. Connections with the wider environment are critical for success. The best organisations learn externally as well as internally.
8. Every person is a change agent. Change is too important to leave to the experts.

Although some general principles and good commonsense appear in the literature on change, these often do not offer sufficient guidance about the process needed at an institutional level to bring about a specific change such as that required to introduce flexible approaches. Within any university which does not have an established distance education tradition, there is likely to be wide range of opinions, attitudes and levels of expertise in the area. There will also be disciplinary differences in the attitudes of academic staff to changes towards flexible delivery. Waggoner (1994) has suggested that attitudes towards using technology in teaching depend on such factors as: experience as a teacher, ethos of the discipline, environmental context, assumptions about students and perceptions or beliefs about technology. Some staff will be experimenting with flexible approaches on their own initiative and may be well along the track, using cutting edge approaches. Most, however, will be much more uncertain about the efficacy of such approaches and the means by which such approaches may be integrated into their own teaching. It is likely that attitudes will range from enthusiasm and interest to ignorance, apathy and resistance. Those individuals and groups with some experience of flexible approaches will be advocating their particular ideas and there may well be a tendency for different groups to be working in conflicting directions, possibly causing confusion and even antagonism.

At this early, somewhat disparate, stage of development, there is need for a managed change process even if, as the literature suggests, such a process will not be followed

sequentially. A managed change process will provide some direction and confidence to those who seek more certainty and guidance. The managed change process does not need to be rigidly adhered to but rather should provide a framework for action which is itself open to scrutiny and re-evaluation.

The Role of Early Adopters

With flexible delivery, particularly those forms involving the use of technology, it is important to consider the role of early adopters because they dominate much of the literature and they will be the ones who will be providing much of the impetus to the directions which changes will take. In any change process, there is a relatively small percentage of the population who embrace the change quickly. Geoghegan (1995) has argued that the early adopters of technology in teaching, as for any new approach, comprise about 10 per cent of academic staff. These are the people who feature in much of the literature about flexible approaches and who contribute the 'success stories' which are often used as a gauge of how the field is progressing. Some writers have drawn attention to the problems of using the experiences of these early adopters as indicators of any depth in acceptance of such approaches throughout the academy (Caladine 1993; Spotts & Bowman 1993). These writers have suggested that the 'success stories' of early adopters give a false impression of how widespread developments are.

Geoghegan (1995) characterises early adopters of information technology in their teaching as:

- favouring revolutionary change;
- visionary;
- strong in their technology focus;
- risk-takers;
- experimenters;
- largely self-sufficient; and,
- "horizontally networked" (used to working across disciplinary boundaries and across groups).

In contrast, the mainstream majority who are slower to take on such new teaching approaches are characterised as:

- favouring evolutionary change;
- pragmatic or conservative;
- strong in their problem and process focus;
- risk-averse;
- wanting proven applications of compelling value;
- needing support; and,
- "vertically networked" (used to working within the boundaries of their discipline).

The major implication of Geoghegan's distinction is that the support needs of both groups are quite different and that "a veritable chasm" has developed between the two groups. He argues that the systems that campuses have put into place have been designed "by and for the early adopters themselves, under an unstated assumption that all potential adopters need the same kinds of encouragement, facilities and support, differing from one another by degree, perhaps, but not by kind" (p. 31). Instead, the needs of the two groups are quite different with the mainstream majority approaching

the change with caution and needing additional support. More particularly, the mainstream majority will not be swayed by the excitement of the technology, but rather by the practical benefits the changes will bring for their own teaching and for the learning of their students. Therefore, we need to be careful that planning for developments towards flexible delivery are not left to the early adopters who have little understanding of the needs of the mainstream majority. While recognising the importance of capitalising on the expertise and enthusiasm of the early adopters, we must not use these as the benchmark of what is possible for all staff and for defining what staff need to take up flexible approaches with ease.

A Suggested Change Process

What follows are some suggested elements of a change process which attempts to introduce more flexible teaching and learning approaches in the situation described above. The starting point is one in which the early adopters have taken up the approaches with enthusiasm but there is no co-ordinated strategy to move these pockets of enthusiasm to a coherent, institutionalised direction.

Establish which individuals and/or groups will have overall responsibility for planning policies and a strategy for flexible delivery.

This may require the establishment of a specific high level steering committee composed of key stakeholders. Such a committee will then co-ordinate the work of other groups and individuals who have an interest in flexible delivery. The committee would also have responsibility for the steps listed below. Many writers (for example, Laurillard & Margetson 1997; Taylor, Lopez & Quadrelli 1996) stress the need for strong leadership when introducing flexible approaches. This applies to all innovations. Such leadership not only creates a context in which the change is seen to be important, but also works towards creating an environment conducive to such changes, through developing policies and providing incentives, support and resources. Strong leadership does not necessarily imply a top-down approach. Rather it suggests an environment in which bottom-up action is encouraged and supported in order to meet shared goals.

Define and disseminate a rationale for the university's move towards flexible delivery.

The mainstream majority are persuaded by arguments that the change will have practical benefits for the university, for staff and for students, so such benefits have to be carefully articulated and agreed upon. Moreover, the developments will need to be seen as fitting with the overall directions and mission of the university and its staff. Why is it important for this university and for individual staff? Such a rationale is important for gaining staff support. The rationale should be tied to the university's mission and strategic plans.

Determine what flexible delivery means in this university and establish the types of flexible delivery that the university will set as its priorities for the short- and longer-term.

Flexible delivery takes many forms and means different things to different people. Flexible delivery is not confined to approaches that involve technology. Even those which do involve technology differ in terms of their teaching approaches and technical requirements. What form/s of flexible delivery do we want to support in this university? Rather than being presented with a huge array of options and possibilities,

the more conservative staff members will prefer some examples which can be shown to work with available resources.

Determine priority areas for the moves towards flexible delivery.

Developments of this type probably cannot proceed simultaneously across all parts of the university. Are there particular faculties, departments, programs, courses or units into which the university should direct its resources so that these can act as exemplars for further developments? Here, care needs to be taken so that all funds and support do not go to the early adopters and to developments which are confined only to a small groups of staff who are at the cutting edge. It is likely that the early adopters will continue their developments with minimal support and resources while the more widespread institutionalisation of flexible delivery across the majority of staff will take considerable support. Limited resources will need to be targeted strategically to those groups and initiatives which can then be used as exemplars for others.

Negotiate appropriate university and faculty targets for the introduction of flexible delivery in the shorter- and longer-term.

There is little doubt that changes are most likely to occur when targets and time-lines have been established even if these are not rigidly adhered to.

Incorporate these into university and faculty strategic plans.

Develop resource and management plans for flexible delivery at the university and faculty levels.

At every opportunity, flexible approaches need to be mainstreamed and institutionalised so that they are perceived by staff as an important element of the university's overall strategy. Although plans will not necessarily achieve change by themselves, they send messages that such changes are important and expected. Collaboratively developed plans allow staff at all levels to interpret the university's mission in terms of their own particular discipline or area of responsibility and determine what flexible delivery might mean in the local context and how it might be implemented. Strategic plans also have in-built monitoring and accountability procedures thus ensuring that developments towards flexible delivery are documented and reported upon.

Compile an inventory of support and resources currently available in the university.

Determine if there are gaps in staffing and technical support across the university.

Determine infrastructure needs and plan for appropriate development of infrastructure.

Given the diversity of interest and expertise in a university, it is likely that some staff can offer expertise in flexible delivery even if this does not form part of their current responsibilities. It is important to build a sense of what expertise exists, to determine ways of using this expertise and to plan to fill gaps when expertise is not available locally. Gaps in expertise may be filled by recruiting new staff, by bringing in the expertise from elsewhere on a temporary basis or by building the expertise of existing staff through staff development. Physical resources should also be documented and considered in a similar way. The sharing of physical resources with other institutions may be an option worth investigating.

Determine staff development needs and plan for appropriate staff support.

Staff development and support form a vital element of introducing flexible delivery, a point which has been stressed by a number of writers (Land & Rist undated; Taylor et al. 1997). MacKnight (1995) has highlighted that the level of comfort staff must reach to integrate these new approaches into their teaching is not achieved through a single event, but rather "through continuous exposure, encouragement and support from colleagues, students and academic support personnel. The process involves moving from one successful experience to another." (p. 35). Such comments contradict any tendency to equate staff development and support with simple courses or workshops. Although these might form one component of a comprehensive staff development program, alone they are unlikely to being about changes in teaching approaches. Johnston and McCormack (1996) have argued that supporting the needs of the mainstream majority involves such all-encompassing considerations as: developing an institutional culture which values and rewards innovation in teaching; assisting teaching staff to reflect critically on their teaching; raising awareness about the potential of different approaches to enhance teaching; providing instructional design assistance; supporting production and implementation of new approaches; and ensuring that the university is a technologically comfortable working environment. These suggestions form a much more comprehensive approach than simply expecting one-off courses to bring about changes in teaching practice. They also cater for the mainstream majority by placing the focus on enhancing teaching and learning rather than using new technologies for their own sake.

Establish procedures for monitoring and evaluating the university's developments in this area.

Although written as a final step, monitoring and evaluation cannot be left until the end. Rather, evaluative procedures must be built progressively into all new developments. It is important not only to evaluate the outcomes but also to evaluate the processes used to achieve those outcomes. It is likely that moves towards flexible delivery will use considerable resources through investment of both time and money. Evaluative procedures must ensure such resources have been used effectively and that the process and outcomes are worthwhile. Such issues are not addressed through simple data collection procedures and, for this reason, formal evaluation is often a neglected step in the change process.

Concluding Comment

Although these stages might appear like a carefully orchestrated and rigid series of steps, this is not the intention and no strict chronological sequence is implied. It is unlikely that the stages will be sequential, with many or even all of these steps occurring concurrently and iteratively. Sometimes energies will be devoted to some of the steps at the expense of others. There is also no intention to portray the process as a top-down one. The overall process is aimed at senior management because of the expectation that leadership should come from at least that level. However, the assumptions behind the process are that genuine consultation and involvement of all staff at all levels should characterise the process. Furthermore, although key issues such academic workload and rewards are not tackled explicitly in the process, they are certain to arise during discussions among academic staff. They will need to be resolved before commitment from academic staff will be forthcoming. Thus the

process is intended to be more flexible and more encompassing than can be conveyed by a series of summary steps.

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Becoming Flexible: What does it Mean?

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Abstract
Flexible learning reflects a more general transformation of higher education influenced by technological change, public accountability, increased competition, restricted funding, and catering for the needs of a semi-mass rather than semi-elite system. This paper seeks to problematise some of the assumptions surrounding the increasing emphasis on flexible learning in higher education and its effects on academic culture and practice. This will be done with reference to the introduction of flexible learning in one university.

Introduction
Flexible learning is not an isolated phenomenon but part of much broader changes affecting higher education. The growing trend for universities to focus attention and energies on the development of flexible learning initiatives has been given impetus by a range of factors including the rapid advances in electronic communications technology that introduce flexibility in production, distribution and interactivity in education and the consequent tendency towards globalisation of education. However technological change is not the only factor encouraging this move towards increasingly flexible approaches to university teaching.

Increased attention to flexible learning reflects a transformation of higher education in general. Technology, public accountability, increased competition, restricted funding, catering for the needs of a semi- mass rather than semi-elite system (Shapiro, 1993, Chubb, 1993). Strategically, flexibility of operation and flexible learning are seen as both a defence and offence for educational institutions in their competition for high calibre students. Higher education institutions in Australia are engaged in competition for market shares of Australia and off-shore markets especially at post-graduate level. Flexible delivery and flexible learning can be exploited to give the competitive edge.

Commentators on information technologies argue that flexibility is the key to the survival of educational providers responding to the needs of the "new" learner. They argue that consumers will drive the direction and demand for knowledge according to their perceived needs, with legitimation of knowledge becoming largely a factor of its demand. To exist in such a climate it is necessary to structure information in flexible ways (eg changed nature of courses, modules, updating information, just in time training).

This focus on alternative ways of delivering courses to students has also been encouraged by a recognition of the changing needs of students and industry. There are a range of reasons for thinking about providing education in different ways. The more flexible offering and delivery of higher education may achieve the desirable social goals of increasing access to education and democratising teaching and learning process by

giving greater control to the learner. The literature reflects a growing emphasis on the delivery aspect of *education* rather than thinking of ways of making student *learning* more flexible.

Flexible learning as information technology is a direct consequence of the way that new technologies are changing education. New technologies suggest different roles for universities. The growing range of information providers via the Internet, offering alternative sources of knowledge creation and credentialling, challenge conventional models of provider driven education. In this context universities will have to compete with multi national information providers for a market share of students. As a consequence of this globalisation, the traditional notions of scholarship are replaced by continual just-in-time learning. Teaching is seen as less place-bound, replaced by networked learning using global connections.

Flexible learning and flexible delivery imply an intention to increase learners' access to, and control over particular teaching and learning environments. Flexibility is a characteristic that may satisfy many stakeholders in education. It can serve the interests of managers and politicians who focus on effectiveness, efficiency and budget solutions to the delivery of a service. For students and teachers it can suggest a student centred approach to learning and democratisation of processes of learning and teaching. For curriculum developers it may mean the availability of a range of service approaches to suit student diversity. For those marketing educational services it can mean the production of commodities which can be used competitively in a global market. For those students who either can not, or choose not to attend a physical site it can mean the opportunity to engage in education as it is delivered to the home or work place in ways and times to suit the circumstances (Nunan, 1994). Similarly it can imply the end of the suite of academics' offices as staff conduct their teaching from places other than the institution. Hence in intent, as well as form, it can mean different things to different stakeholders and have markedly different consequences and implications.

Consequences

A consequence of the growth of communication and information technologies (CITs) is an increased community expectation that modes of delivery will be diversified (Senate EETR Committee, 1995). This is reflected in the widespread adoption of technologies to support learning that in many cases have come to be seen as 'flexible learning'. Lundin describes a convergence between ODE (open distance education), CIT and face to face teaching (1993, 12) "It is now becoming common for the whole field [of ODE and CIT] to be discussed in terms of 'flexible distributed learning'. That is, the external-internal, on-campus-off-campus and other categorisation of learners based on models of delivery are being abandoned because they no longer represent what is being practised. All forms of delivery including face-to-face, are now recognised as valid options to meet identified needs of learners." One is prompted to question just what are these needs of learners and who has identified them. There seems to be little reference to finding out just what the learners really want and what forms of learning and teaching meet their needs. There is once again a focus on the delivery of education if the learners' needs are investigated it is most frequently in relation to the mode of delivery or timing. Little consideration is given to the relations between learners' needs and substantive content.

Although policy documents may state support for a broad view of flexible learning, encompassing a diversity of ways of increasing accessibility to learning, this may not be the message perceived by staff. When a large proportion of available funding is directed at technologically driven approaches individuals may interpret this to mean that high tech approaches are preferred. When such initiatives are accompanied by the establishment of substantial highly visible infrastructure the message is emphasised. Flexible learning ventures that include some form of information technology then appear to more "valued" within and by the institution.

Taylor (1996) argues that a feature of policy that will provide guidance about what is permitted and possible is a definition of the scope of flexible education for meeting the extended mission of the university. There needs to be clearly understood and shared meaning of the term/approach. Within the literature a range of terms are used often interchangeably. What is spoken (or written) affects what is performed. When the meaning of flexible learning is not clearly defined within an institution, the university becomes a site of contestation. Multiple discourses emerge and large amounts of energy are directed at claiming territory and establishing dominance. Individual staff members spend time defining flexible learning for themselves, there are developing feelings of unease and disquiet about "what should" be done and there is much duplication of effort and subsequent wastage of resources. While it can be argued that such an approach can encourage individual interpretation of flexible learning and allow individuals to develop the most appropriate responses to student needs it is important that there is some shared view of what is involved. The negative consequences of a "blurred" vision create serious barriers to effective implementation of more flexible learning opportunities. If the vision is fundamentally about making the university's offerings more accessible to a broader range of students in a more diverse range of educational settings at a range of levels there still needs to be a clear articulation of what is meant by this. When flexible learning is couched in terms of flexibility of delivery it is not surprising that the focus of academics is on ways of transmitting. Rather than encouraging more learner centred approaches, focusing on the needs of the learner, making learning more flexible for them the emphasis is placed squarely on the mode of delivery. While this will undoubtedly make access to higher education easier for some students it is about access and the handing over of information rather than increasing flexibility in learning.

Developers of courses and subjects that seek to offer more flexible learning opportunities need to have an understanding of that concept, which is shared among multiple course developers and articulated in a way that communicates them clearly to those teaching the course. In addition, individual subjects or units within a course should "work together" to support the development of a coherent view of relevant professional formation. These concerns are no different from those that apply to any type of course development, however the inclusion of the demands that the course incorporate the ubiquitous and ambiguous flexible learning brings an additional set of issues to be addressed. The outcomes of courses are not just the result of stated curriculum and policy, they result from the teaching staff's interpretations of the policy and curriculum documents.

Implications

The introduction of flexible learning has important implications for the culture of the university. It requires a changed culture in order to accept and implement it as well developing a changed culture in response to it. How have individuals and groups of academics responded to the stimulus for more flexible learning?

While the new technologies play a significant role in the development of flexible learning initiatives, if these are to increase flexibility (rather than flexible learning simply becoming code for computer mediated instruction or course delivery), and if they are to be truly educative then genuinely flexible learning must consider all options. Laurillard and Margetson (1996) argue that rather than just electronic media and communications technology flexible learning must include "anything that increases flexibility of access". I would argue that in order to be truly flexible we should be considering more than access. A broader view of flexible learning will include flexibility and choice in ways of learning, determining outcomes and ways of achieving those outcomes.

The introduction of more flexible learning approaches often requires sophisticated activities and technologies, technical backup and support structures. There are often complex production processes in the case of distance education or multi media development which require centralised planning and control along with specialised technical infrastructure and support. Not only does this conflict with the culture of post modernism which has supported moves towards the "choice, flexibility and diversity" offered by flexible learning (Hartley, 1995) but it does not fit the traditional autonomous culture in which academics expect to work. Moves towards the more industrial and bureaucratic processes necessary for the production and distribution of learning material whether it be through distance education print materials or videoconferencing create a tension between the "person culture" which may be seen to represent conventional, individual based views of university and the emerging "role culture"(Handy, 1993) of the organisation.

Not only must technical and structural barriers be overcome if higher education is to adopt more flexible approaches, the attitudes of staff to these changes, and their beliefs about what is valued learning and their roles in the education process can also obstruct change. Other writers (McNeil, 1990; Stofflett, 1994; Taylor et. al, 1996) lend support for the notion that attitudes and beliefs provide significant obstacles to change. The introduction of flexible learning approaches suggests a changed relationship between the goals of the university and the individual academic. McInnis (1992) has suggested that in the past academics could act autonomously, offering token acknowledgment of institutional goals. The nature of the academic's role and manner of performance was very much an individual decision. Moves towards flexible learning occur in a time of increased accountability, flexible learning is a key feature of university and faculty strategic goals, indeed in many cases lower levels are instructed to include flexible learning in their planning. This make it increasingly difficult for individual academics to ignore the calls for increased flexibility. This is particularly the case when funding for initiatives and development are tied to demonstration of increased flexibility. The desperate rush for funding sees all departments agreeing to take on flexible learning in order to win much needed resources. Frequently done with little or no consultation between staff (for a range of reasons) the consequences of this

form of commitment to new approaches are usually resistance from staff who have not been involved in the decision making but are expected to implement the changes. Hence the reasonable resistance to the introduction of different ways of teaching is heightened by feelings of anger at the imposition of innovation to which staff have not agreed. The perception that flexible learning" is being imposed on academic staff becomes more widespread. Taylor suggests that one feature of a context that will encourage staff to adopt flexible learning is the linking of involvement in flexible learning to opportunities for promotion. While staff involvement may be rewarded by promotion, this may also be viewed as a punitive measure ie staff who do not become involved in flexible learning initiatives will be "punished" by having their opportunities for promotion restricted. Flexible learning can bring with it a set of surveillance mechanisms that are introduced that belie the altruistic principles purportedly underpinning them.

The practices of flexible learning can support views about teaching, learning and access which affirm liberal and humanistic views of education. Flexible learning and delivery can be represented as the method of enacting lifelong learning and student-centred learning. This has important implications for the culture of the university. Traditionally, academic work has focused on the transmission and creation of discipline knowledge rather than the creation of conditions for student learning. This assumes that the role of an institution is to reproduce particular knowledge areas ensuring the development of new knowledge in these areas, and the protection and handing on of the traditions of these knowledges. Protection of this ideal has resulted in a mythology which devalues any intellectual exercise which does not focus on discipline concerns. Flexible learning challenges this view of knowledge and the role of the academic.

There are powerful barriers to taking seriously the problematic concerns embedded in flexible learning and delivery. If academics are to embrace this shift in emphasis they need to develop a knowledge base which allows them to understand the pedagogical practices which underpin approaches to teaching and learning that allow for independent self directed learners and lifelong learning. The focus of flexible learning should be on the student learning not on the technologies. However when proficiency in the use of the technologies (whatever they may be) is the primary concern of the individual who must use them in order to fulfill their teaching role (and maintain a public and private image of competence in teaching) it becomes difficult to direct attention to a focus on learning. This is further complicated when in the early stage of introduction the institution's attention and resources are directed towards the purchase of technologies and development of infrastructure. While flexible learning should be about student learning there is a marked lack of reference to students or learners in policy documents or in the conversations of academics as they talk about what they think flexible learning might be and what it means.

Academics' reactions to the move to adopt more flexible modes of delivery and the associated articulation of ODE and CITs can be located within a bigger picture of discontinuities between what Morrison calls the "inherited model" and the 'new design' of higher education (Morrison, 1995, p. 188). One concerns the location of higher education in relation to the major issues and processes of most societies: higher education no longer provides only to an elite, consuming a small proportion of public resources. The traditional model of higher education does not cope with the 'axial' role

that higher education plays in most societies today. He argues that higher education has traditionally responded to social and economic change by adapting curricula- "changing what is legitimately taught" (p. 190) If higher education is to provide an appropriate response to the dynamic processes of social and economic change it must address 'how issues'- "how to access learning, how to organise research, how to manage institutions and systems" (p. 190).

This cultural discontinuity is associated with a sense of institutional identity crisis including an identity crisis of academics. Nixon (1996, p. 5) suggests that a necessary precondition for the restructuring of higher education is the reconstruction of [academic's] professional identity. However, many academics are unaware of the potential changes in their roles that will follow from the adoption of more flexible approaches to teaching and learning. McInnis suggests new university environments that include more flexible learning will be accompanied by a changing view of what constitutes academics' work. Changed patterns to the academic year resulting from block mode teaching, summer schools, short courses etc will alter the autonomy of the individual to self regulate their daily work practices. Flexible learning also challenges the direct and proportional relationship assumed between teaching contact time and productivity, and teaching time and the allocation of financial resources. If more flexible learning involves greater liaison with industry there will be a need for academics' to develop skills in negotiating curricula and learning contracts between student university and organisation, developing links with industry in the first stage and increasing knowledge of the world "out there".

Technologies alter the way we think, different discourses are constructed, using technologies reflecting the technical capacities of the technologies and the ways in which teachers and learners wish to use them. They alter the nature of the traditional community controlled by teachers in university learning. Ideas of community, discourse and power (Hawkins 1991; Landow, 1992) within conventional teaching and learning situations are changed by the new relationships between production and delivery. Technology alters the pattern of control and power that conventional education takes for granted in designing, delivering and evaluating teaching and learning. Conceptions of teaching and curriculum contain the idea of order, structure and sequence in ways that information becomes part of an intention for learning. Technology allows access to a radically different situation where information is unscreened or ordered. The possibilities of electronically mediated learning make redundant the idea of a self-contained classroom where teachers are the centre of most of the control and structuring of information and communication. Flexible learning replaces this idea of order, structure and sequence with self containment and provider control. For many educators flexible learning (and delivery) becomes the form of learning carried by the information technologies.

McInnis suggests that "contact" with students is one source of intrinsic reward for academics. For many academics this regular "personal" interaction is what constitutes teaching, this is what defines them and their jobs. What happens when this interaction is removed? Not only does the nature of their job change from "teacher" to creator of learning materials but an important source of their academic professional identity is removed or at least altered. Traditionally "good" teachers have well developed skills in interacting with students in their classes. Studies of good teaching find it hard to go

past personal interactive attributes when describing what it is that makes a good teacher. What will make a good teacher in these more flexible learning environments? If the quality of teaching has not been the focus of attention in university life, what will happen when the familiar teaching- learning environments change? Will this provide more encouragement to ignore the pedagogical practices? Or will it lead to a refocusing of academics' attention on pedagogic issues as they seek to control new contexts for learning. What happens to the professional identity of those academics who fail to "master" the technologies or do not make a comfortable adjustment to the new teaching contexts? McWilliam and Palmer (1995) claim the "body" plays an important role in making up the "body of knowledge" in teaching and learning. What happens when flexible approaches remove the body? Do academics have a 'language' with which to teach in this new environment? Taylor (1996) argues that we must reform academics' practices by focusing on reforming the context and that attitude is the most important barrier to reform of academic practice. He highlights the need to distinguish "new visions of practices" from "memories of past experiences" with specific reference to traditional views of distance education. Is the task made easier when there is no corporate memory of these practices? It seems that even with no memory of past experiences we look to the memories of others. While it is important to look to developing new practices we must not lose sight of what was effective and valuable in our past practices. Suggesting that flexible learning demands "new practices" devalues those activities which have comprised academics' previous roles. A consequence of an emphasis on flexible learning as innovation is the abandonment of past practices in the flurry to become part of the 'new wave". It also creates a particular view that flexible learning must be something which had not been done before.

Academics' senses of professional identity are also in part defined by the institution in which they work. Universities position themselves in the market place to develop a reputation for strengths in particular fields and in attracting particular types of students. Flexible learning has the potential to alter this. For a university which has a clearly described local student client group and which has historically refused involvement in any form of ODE, the introduction of flexible approaches opens up a whole new world of potential students. If universities (and individual academics) define themselves in part by the nature of their students, these changes in students and the nature of teaching and learning resulting from increased flexibility, have significant implications for institutional and individual professional identities.

Conclusion

Flexible learning has evolved in response to a range of social, cultural and economic factors. Discourses have emerged which include the use of information technologies, open and distance learning, and flexible attendance requirements. The ways in which flexible learning is perceived will play a significant role in determining the form that it eventually takes. It will both be influenced by and influence what is valued in the university in terms of learning and teaching. The nature of flexible learning and its subsequent effects on the university have serious implications for the academic culture that develops and the practices in which academics engage. It requires a changed culture in order to accept and implement it as well developing a changed culture in response to it.

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A Case Study of the Convergence between distance and Conventional Education

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Abstract
The article deals with the establishment of a distance education branch of the Technikon of the Free State in Qwaqwa. Since the April 1994 South African elections for a new constitutional dispensation, Qwaqwa has been incorporated in the Free State Province. Due to former planning of the Technikon Free State to expand its branch system (which is a form of distance education) to Qwaqwa, this venture reflects the new trend that awaits technikon education in South Africa. The subject matter could be divided into two main areas, namely the theoretical verification of the system within the context of world literature and, secondly, the implementation of this First-World system in a typical Third-World situation.

A Demographic Overview

The Technikon Free State is the only residential technikon in the Free State/Qwaqwa region and is situated in the capital city of Bloemfontein. It provides distance education for the Faculty of Management to four branches in the Qwaqwa region; the agricultural maize triangle of the Northern Free State; the highly industrialized Goldfields and also to a trans-provincial branch in the Northern Cape region.

With the establishment of Technikon Free State in 1981 a new era of tertiary education was introduced in the Free State region. Although Technikon Free State is physically situated in Bloemfontein, the management accepted responsibility to make technikon education available as far as possible to all inhabitants of this central region of the country. The geographical reality caused Qwaqwa, as a former self-governing region, to fall within this sphere of influence.

QWAQWA - A Demographic Overview

Although Qwaqwa functioned as a former self-governing state within the former political system, this area socially and economically now forms an integral part of the Free State. The main population group, namely South Sotho, is also the largest population group of the bigger Free State. To a great extent this results in social and cultural intertwinement. Political alliances between Qwaqwa and the Free State can be traced back as far as to the start and the existence of the former Republican era (1856-1902). Pretorius (1993:11) states that historical proof exists of a healthy diplomatic relationship between President Brand and Captain Charles Mopedi of Witsieshoek.

Being the main seat of Qwaqwa, Phuthaditjhaba developed historically as nodal centre. Of the entire de facto population of approximately 350 000 people who are resident in this area, only 7,3% reside in Phuthaditjhaba. The formal economy is incapable of offering employment opportunities to all the inhabitants. This economic reality inter

alia results in the fact that the nominal gross national product (GNP) per capita amounts to approximately only R1 880,00 compared to the average R6 028,00 of the Free State (ibid).

Pressure on the side of the community was well organised, and this resulted in the fact that the previous regional Government in Qwaqwa was forced to grant official permission to Technikon Free State on 2 December 1993 to commence classes in Qwaqwa from 1994. As such it is important to note that it was a community driven need for a technikon, which currently complies with the most modern philosophical approach to distance education and open learning systems.

The Qwaqwa branch recently offers intrinsic characteristics of a typical dual-mode distance education system (cf. Mugridge 1992:79, 141, 153) which forms a convergence between distance and conventional education. Hypothetically it also represents a classical dualism of a First-World technikon education system within a Third-World region.

As is the case in many a developing African country, the contemporary higher education scene, however, is much distorted. The trend in South Africa, for instance, is that the number of technikon students are increasing more rapidly than those of universities (Kiesouw 1994:6-8). A need-driven research programme is thus necessary for the Qwaqwa region.

Convergent Characteristics O
The two main issues that characterize the distance education programme of the Technikon Free State are the following merging aspects:

* A well-functioning distance education institution i.e;

  - By definition
  - Trends
  - Cost-effectiveness
  - Administration
  - Academic advantages

* An approach towards an open-learning system based on the principles of Bridging Education (De Beer (2) 1995 : 34) i.e;

  - By definition
  - Models
  - Comparisons
  - Advantages
  - Student needs

A Well-functioning Distance Education Institution
Distance education exists in two principal forms. It comprises either contact teaching at the institution plus an additional distance education programme, or it is "solely devoted to teaching at a distance" (Croft 1992:49). Technikon Free State is not exactly such an institution, but rather an extramural off-campus system with assistance

from campus lecturers, generally referred to in the literature on the subject as a Dual-Mode Distance Education System (Mugridge 1992:153).

Definitions
By definition the Technikon Free State programme in Qwaqwa does not totally compare with the well-known definition according to which distance education (DE) is structured learning where the student and the lecturer are separated by space (cf. Swift 1993). Qwaqwa students may be distant from the main campus in Bloemfontein, but they are not isolated. They still have a part-time lecturer nearby from whom they receive contact teaching and whom they can phone or consult after hours. In this regard the report of the South African Institute for Distance Education (SAIDE) Workshop on the subject agrees that: "The precise form of each feature will differ greatly across institutions because each must be designed to fit the specific practical, economic, academic and cultural context in which the courses are to be offered:" (SAIDE Report 1994:3).

Trends
Mugridge (1992:154) explains that a common trend is a world-wide tendency towards the enrolment of growing student numbers and towards a growing use of distance education technology. Especially in the Free State\Qwaqwa region, it is a matter of dealing with the question of resources which is becoming increasingly vital within an ever-growing population explosion - the vital consideration to investigate in connection with the increase of access to technikon education, both in developing and developed countries. The only difference is the scale, rather than the nature of the problem in the Third and the First World (ibid : 155).

Cost-effective system
Cost-effectiveness prohibits a free-for-all system because it could only develop into a financial burden for the main campus. The ideal is thus to try to counterbalance the large student numbers of the Qwaqwa branch with low unit costs. The answer according to SAIDE, is "to have a structure of student support that can make success possible for very large numbers of students in each course. Therein lies the key structural difference between modern distance education and correspondence education" (SAIDE Report 1994:5). Consequently much strategic planning had to be done about the enrolment pattern and needs of students in the Qwaqwa region. (Le Roux 1995 : 60)

Administration
A well-functioning system is consequently based at the Qwaqwa branch, which is aimed to be user-friendly towards its student clientéle. This includes the following administrative measures:

* Counselling services (academic support)
* Feedback mechanisms (Bloemfontein to Qwaqwa and vice versa)
* Fully equipped library
* A proper staffing structure of qualified part-time lecturers and permanent administrative personnel
* A continuing staff development programme concerning distance teaching methods.

Academic advantages for the main campus
Valuable self-instructional study guides that were compiled by peer lecturers at the main campus in Bloemfontein for Qwaqwa students, simultaneously serve as examples for their own students on how to do self-paced learning and also lead to self-improvement of lecturers' own teaching skills. Convergent systems thus enhance the quality of teaching and learning. In this process of academic cross fertilization, Technikon Free State as a functional dual-mode technikon, could also be merged with the characteristics of a mixed-mode institution (cf. Renwick 1992:151). As such it reflects a convergence between distance and conventional education.

Finally, the Technikon Free State branch at Qwaqwa provides a community service. It provides access to technikon education which is conveyed from a First World environment to part-time lecturers in a Third in World region. They in turn, plough back their own experience with value-added knowledge into their community.

Hollistic Approach to Open Learning (OL)
While distance education deals with the collection of delivery systems of teaching and learning, OL deals with the philosophy or concept of the educational system itself. In this sense the lecturers in a convergent system, such as in Qwaqwa, also practise a dual role which could be compared with a variety of principles or concepts of supplemental instruction modes, tutorial systems, or even basic adult education. (De Beer (1) : 1995).

Definition
Open learning is defined as follows: "It can be a person who 'instructs' orally, perhaps making use of one or more other media. Alternatively the 'teacher' is not a person at all. It is a designed (ideally multi-media) course in which syllabus content is made available to the student by media other than the spoken word. 'Support' for the student is given by a wide range of organized structures like the multi-media course itself; regionally based counselling, tutorial and study centre facilities; peer support groups; 'summer' school opportunities and computer networks...." (Swift 1993:1).

In the strategic planning for a future infrastructure, the OL forms part of the visionary mission of the Technikon Free State at large. Subsequently it is already important to combine the advantages of certain OL-models where possible.

The industrial model
In 1969 the British Open University introduced the so-called industrial model, which is a mixture of one-way study material to students with some correspondence feedback or a kind of contact teaching with tutorials. Since then, autonomous institutions have developed with single-mode systems. These institutions award their own qualifications (ibid : 3).

Already in this respect the Technikon Free State 'convergent model' appearance reflects similar characteristics based on the industrialised model. Although the Qwaqwa branch is smaller in student number than typical industrial models, equal qualifications with equal academic status could be obtained as at the main campus. Due to the high cost of interactive technological distance education, however, students at the branch

do not enjoy the full advantages of electronic information as in advanced third generation distance teaching.

Comparisons and advantages
From the literature it is evident that the Qwaqwa branch has not developed along the lines of a true free-standing industrial model. It may, however, develop in a unique combination with other tertiary education institutions in the region to serve specific community needs (cf. ibid : 4).

It is also agreed that the traditional role of lecturers will have to be changed through staff developing programmes to suit the needs specific to students in the community.

Some important advantages within the current system at the Qwaqwa branch are the following:

* Flexibility in learning
* Recognition of prior learning experiences
* Accumulation of credits within and across different learning contexts (certification)
* Quality assurance in learning programmes
* Counselling
* Joint programme and course development
* Research, evaluation and development (UOFS 1994).

Student needs in Qwaqwa
Because the Qwaqwa branch could not exactly be moulded into either a dual-mode or on open-learning distance education system, it therefore represents some kind of convergent model of distance and conventional education.

As foundation for a marginalised society, e.g. the theory of Bridging Education, it is as important to succeed with an open-learning system as it is to improve the quality of the lives and standard of living of the whole community in Qwaqwa. Although it is agreed that not all the technikon students will be employed in the region, it is still important to invite potential students in the event that they do not decide to disinvite themselves and that they discourage and lower another's sense of personal worth (Russel in Steyn 1994:53).

The Reconstruction and Development Programme in South Africa, and for that matter in Qwaqwa, could only be supported by an education and training system that ensures that people are enabled to realise their full potential in society (RDP 1994:59).

Enrolment and Student Compilation
On 1 and 2 February 1994 students registered for five National Diploma programmes. The number in each teaching programme was determined by the data as compiled in a needs assessment.

Bearing in mind the principle of cost-effectiveness, the personnel corps was compiled as follows:

1 Full-time secretary
1 Part-time co-ordinator
27 Part-time lecturers.

Lectures are presented on a part-time basis on Monday, Wednesday and Thursday evenings from 17:00 - 21:00.

Generally spoken, the co-ordinator is described as the administrative and academic head of the branch, while the secretary accepts responsibility for all matters concerning student administration as well as for rendering support services to lecturing staff.

Quality Assurance
The following measurements are aimed at ensuring parity between the academic standard of the main campus and that of the branch campus:

* The presentation of lecture orientation sessions by subject heads from Bloemfontein.
* Study guides which provide specified information about the didactics as well as a work programme and a time schedule, are supplied by the main campus.
* The exchange of test papers with the main campus.
* Analysing test statistics in order to identify deficiencies.
* Examination papers are set by the examiners at the main campus. The moderating of papers takes place at the main campus.

Futurist Prospects
Authors on the subject vary in their formulations of instructional industrialism. Some see it as a student support sub-system (Granger 1994:58). This description may be more applicable to the Qwaqwa branch than all the other convergent models of the First World. This is because the co-operative education system of technikons and industry, after all, may really force the whole tertiary education/system to move from a linear mechanical model of operation to a more flexible "systems" model which recognises the variable interactions among the different components. Much the same as the different demands of students (ibid) into the year 2000.

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Language Advising: Support for Language Learners in ODL

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Abstract
The aim of a Language Advisory Service is to raise the learners' awareness of the learning process and in so doing turn them into proficient language learners for life. Language classes tend to fail because learners consider that the contact period with the tutor is the only learning time. Likewise, distance learners might take the set text book to be the only learning input.

Through the advising process the learners are helped to identify what they want to learn and how they are going to achieve it. They become aware of how and when they learn better and what are the most appropriate approaches to suit their needs and likes. They are constantly making informed choices about how to proceed.

The statement 'The best way of learning a language is spending some time in the country' can become a comprehensive learning plan by making learners reflect on the conditions they experience while they are abroad. They should realise that so much learning takes place because they are surrounded by the language in many forms: they hear it, they read it, they use it and they act upon what they hear, read and say. Analysing their intuitive ideas about language learning, they see the value of varied input and of interaction with materials, with other learners and with native speakers. Learners will need the **Language Adviser** less as they progress in their learning journey. The **Language Adviser** does not need to feel threaten by this because satisfied customers will send other friends to the service.

The aims of a Language Advisory Service are to:

1. give adequate guidance and support to learners who either want or need to learn a language, for personal or work-related reasons, to work autonomously
2. help its institution to provide and keep up to date language learning opportunities appropriate to the demands of their learners. The need for becoming proficient at language learning is pressing in the European Union and with the globalisation of the economy.
3. turn users of the service into proficient learners for life, becoming aware of the learning process. In this day and age nobody is trained for life. People are constantly required by either their employers or their circumstances to do some retraining, relearning, recycling to become proficient at their jobs, to enhance their careers or jobs opportunities, or to obtain personal satisfactions. This learning is carried out frequently by distant learning, by self-direction, on a part-time basis. Becoming an autonomous language learner is a

transferable skill that goes beyond the practical use learners make of the specific language they are learning.

Necessary Qualities of a Language Advisory Service

The Language Advisory Service should respond to the interests of the learners. This means that learners have to be assured of the confidentiality of the information provided to them and it has to be able to give advice independently of the way in which this advice immediately benefits or not the institution of which the service is a part. In the long run, adequate advice will benefit the institution. Satisfied customers are likely to return and tell others of the service.

Its existence has to be widely know and its access has to be made easy to all interested in visiting it. Clear maps should help learners to find the place. Learners should know if they have to make an appointment, how and where; or if they turn up at any time. The **Language Adviser** has to decide how much time can be allocated per interview, the way in which interruptions will be stop, and privacy will be safeguard. If the service can have a waiting room, the conversations should not be overheard.

The **Language Adviser** should have access to necessary information such as catalogue and leaflets and should have a system to keep careful records of the language advising work, to be able to refer back to it when seeing the learners during subsequent interviews. The records can also be used to draw a profile of the service, identifying the type of learners and requests made.

An enquiry may be made in a face-to face-meeting, by telephone, by mail and by e-mail (Makin 1994). The contacts can be started by one means and continued by other.

The Learning Journey

Conducting an Interview

It is the **Language Adviser**'s duty to create an atmosphere in the interview that would allow the learners to explore the main points to start their learning journeys. The space the learners are given to talk is crucial to the success of the interview.
When conducting the interview the **Language Adviser** has to be aware of his or her body language: opened arms, eye contact, welcoming smile would make learners feel at ease. The first impression the **Language Adviser** makes on the learners will have an effect on how they feel during the interview. Arms crossed, fidgeting, moving things on the desk, can give the impression of not being interested on what is been said.
During an interview the **Language Adviser** must use plain language and open questions to allow the learners to talk. Pauses should be longer that in normal conversation to give the learners enough time to think, to retract what they have said, to expand, to move the conversation forward. The **Language Adviser** will not interrupt, will nod encouragingly and then will paraphrase and summarise to check understanding avoiding any judgmental comments, and ask further questions that will lead to further clarification on the part of the learner. The learner must do most of the talking because one's own contributions is what is recalled best.

Structure of the First Interview

The **Language Adviser** must be prepared to help learners explore any or all of their reasons for considering a course of learning. According to Little (1989: 56-55), among his or her tasks is 'learner-training, which means helping learners to learn how to learn. More specifically this means helping learners to:

- identify their needs;
- define their objectives;
- select appropriate materials;
- organise themselves (when? where? how often? how long?);
- evaluate and monitor their progress.'

So the structure of the first interview is as follows:

- Identify long term aims
- Choose concrete objectives
- Decide on methodological approach
- Make a time commitment
- Draw up a plan for action

Learners' Needs

Learners might express doubts about what language to choose. They should be encouraged to explain why they have chosen a certain language so that the purpose for learning it can emerge. They have to realise that the subjective reasons are powerful motivating factors, not to be disregarded. Above all the degree of enthusiasm a person, who has an already heavy working load, will put into doing something he/she likes overrides any practical considerations. As Tudor (1992: 35) points out about motivation: "The key factor ... would seem to be a *personal perception* of need for the target language, and a consequent willingness to make a sustained investment in the learning process."

Learners' Background

In order to advise accurately it is necessary to find out learners' existing knowledge and attitude to learning. Learners tend to underestimate their knowledge: 'I *only* did it at school'. They can be prompted to recall how their learning experience had been. Revealing comments can come up 'It was OK, but I had to give it up because it was not offered at my school.' or conversely: 'I was no good at languages', 'I never learnt a word' or a popular misconceptions: 'English people are no good at languages'. This information is crucial for the **Language Adviser** to estimate how confident the learners are at the start of their journey. Identifying bad experiences can help enhance the advantage of this self-directed approach. If the experiences have been good, when recalling them they will be in a positive frame of mind to start.

Learners' Aims and Objectives

Learners have to be made aware that time and energy are finite and only having a clear and achievable goal will help them make the best use of both. Even when learners state a broad aim such as: 'I want to keep it up' they have to think of the most likely circumstances in which they imagine themselves using the language. So they might add: 'I would like to read novels', 'I would like to watch films', or 'I want to go on

holidays there'. From these comments it emerges if they want to develop a passive knowledge of the language, a listening skill or communicative ability. They can think a long term aim and short term objectives, i.e. what they have to be able to do to achieve this aim. Thinking along these lines they can prioritise and concentrate their energy on what they need most.

The **Language Adviser** can ask: 'Is you are going on holidays to Spain, how do you think you are going to use the language? What are you most likely to talk about?' Learners can thus set objectives such as 'asking questions' 'learning the names of fruits' 'understanding directions' 'learning numbers'.
The advertising for courses to learn languages has created many false expectations on learners. They might have unrealistic ideas of the impact of new technology and methodology, and hope to learn languages in no time and with no effort. The **Language Adviser** must help the learners recognise unrealistic goals.

Presenting Learning Options
Learners have to be aware that there are a range of learning options: learning in a **Language Centre**, reading books, joining a class, watching TV and films, talking to native speakers, joining a society, listening to the radio, listening to cassettes, using CALL programs, navigating the WWW, contacting penpals, joining email groups. The more varied the diet of input the better.

Language Centres have a wide range of resources available that can be underused. Learners can be traditional in their approaches to learning and be unaware of the value of a varied input to maximise their effort. Learners can be made aware of the its value, simply by making them reflect on their intuitive ideas about language learning.
The statement 'The best way of learning a language is spending some time in the country' can become a comprehensive learning plan by making learners reflect on the conditions they experience while they are abroad. They should realise that so much learning takes place because they are surrounded by the language in many forms: they hear it, they read it, they use it and they act upon what they hear, read and say. Analysing their intuitive ideas about language learning, they see the value of varied input and of interaction with materials, with other learners and with native speakers. When learners join taught courses they have to be aware that the period in the class is only a part of the learning time. Classes tend to fail, precisely because the learners do not take this point seriously. Classes frequently follow a set text and are dedicated to activities that promote fluency, and assign some regular homework. Learners should realise that to succeed, in their own time, they have to do exercises such as drills to ensure accuracy, use a CALL program to revise basic functions and grammar of the language, watch TV and videos to expand what they have learnt and develop a listening ability, read material for their own entertainment to expand their vocabulary and develop a cultural awareness of the country. This time working on their own is as important as the contact teaching time, and both should be integrated.

If learners either have already joined a class or have started working with some materials is important that they reflect how appropriate these are for achieving their stated aims. Bearing their aims in mind, they should think if their class / material covers enough, too much or too little of areas such as vocabulary, grammar, structures, drills, listening activities, reading, speaking, and country background. Being aware of how

suitable their choices have been they are in a position to either change, or, more likely, to complement them with other material and other activities from the options available. As Nunan (1996: 20) points out "Autonomy is enhanced when learners are given opportunities to select content and learning tasks and also when they are provided with opportunities to evaluate their own progress."

Time Management
After learners have decided on what they are going to do they have to decide when they are going to do it. They have to put aside a realistic amount of time baring in mind their present commitments and the level of proficiency required. They have also to set aside an ideal amount of time, and a minimum amount for a busy week. They have to develop self-awareness, observing their working patterns and identifying their best times for language learning. After they have decided on a time-table they need determination, and stick to it for a reasonable length of time.

Record Keeping
At this stage, when the meeting is nearly completed, the **Language Adviser** can ask the learner how he or she is going to keep a record of the work done. Records are important to give the learner a sense of direction and a sense of achievement. Craver and Dickenson, (1982: 17) argue that "Learners who are responsible for choosing their own units of work and controlling their pace through them must have a record of what they have already covered, and some notion of what they need to work on... Monitoring oneself helps to create an awareness of one's own learning and of the progress of one's learning."
Records can include the topics dealt with, the grammatical and structural contents learnt or practised, the registers used, the levels of difficulty involved, the effort needed to master them and how pleasant or unpleasant the experiences were.

Twinning and Pairing
The learners' experiences will be greatly enhanced if they meet native speakers of the languages they are learning. Learners have to develop an empathy, a curiosity and an understanding towards the countries where the learnt language is spoken. They also have to acquire a socio-linguistic competence. This "refers to acceptability in communicative situations, depending on who talks to whom, about what and in what situation." (Kohonen 1990: 29) Meeting with native speaker, learners will learn about a language, its people and its culture through the use of the foreign language.
There is another need for learners learning by self-direction. "Until recently, it has been teacher's responsibility to motivate the student by giving him a sense of achievement and security, and by providing a strong model of the target language and culture." (Tumposky 1982: 5). Learners forging good relationships with native speakers will see in them this model and receive from them the needed encouragement. It will also help them achieve a communicative competence using the language in a real life situation. The contacts will increase "the *linguistic and cultural proximity* of the TL [target language] . The greater the distance on either count between the TL and learners' L1, the longer it will take learners to feel at home in and find their way around the linguistic and expressive system of the TL." (Tudor 1992: 37)

When learners do part or most of their work on their own, they might want to share their learning experience with a peer, turning their language learning into an interactive

process. They can study together, practise speaking, compare strategies, measure progress, and discuss problems. Additionally, it helps to maintain motivation giving each other support, creating a sense of attachment to their work and helping to improve self-discipline. They have to be flexible about the kind of arrangement they make and firm about its implementation once it is decided.

Planning for Action

It is important that both the **Language Adviser** and the learner are clear on what has been decided. The **Language Adviser** can summarise the points discussed and seek the confirmation from the learner that those are indeed the main decisions. Conversely, the learners can put forward what they think are the main points agreed upon.

Learner Contracts

At this stage, the **Language Adviser** and the learner can agree on a *Learner Contract.* Dickenson (1987: 99) suggests the use of contracts as "a way of providing structure in a self-instruction learning mode". The contract can ask the learner "to decide not only what work he is going to do, but what activities he is going to engage in, what resources he is going to use, and how he is going to demonstrate that he has met the objectives he set himself... A learner contract is an agreement between the learner and the tutor, or between the learner and himself. Since its purpose is to help the learner to give structure to his work, it is essential it is taken seriously by both the learner and the tutor, and that the learner recognises it as binding."

Follow up

The **Language Adviser** and the learners should keep in contact either by arranging subsequent interviews or keep in touch by other means, such as phone, mail or e-mail. The object of the subsequent contacts is to check if the plan has been followed, if it will be continued and if it needs redirecting.

In subsequent meetings the learners will give an account of what they have done. How satisfied the learners are with their learning experience will become transparent through their tone of voice and choice of words. The learners' records should be used to check if the aims and objectives have changed, if the choices of material and strategies were correct, if the learners could keep to time-tables, the way in which they recorded their progress and if they made use of every opportunity to practise and learn the language. This might be a good opportunity to suggest to the learners other strategies and other material to complement and enhance the learning.

Learners can be vague about what they have been doing: 'I've listened to tapes', 'I've watched the news' so it is important for them to analyse what they actually did when they carried out a certain activity. They might say: 'I took notes' 'I repeated after the speaker'. They have to reflect on why they were doing that and what they were trying to achieve. In this way they can evaluate if they were achieving their stated aims. If the activities were relevant to the task, they can continue using them if not they have to change the course of action.

The **Language Adviser** has to be positive and emphasise the achievements. However, if the learner has not progressed sufficiently, it is the **Language Adviser's** duty to point to the learner the level of proficiently he or she needs to achieve the desire aim. Through the advising process the learners are helped to identify what they want to learn and how they are going to achieve it. They will become aware of how and when they learn better and what are the most appropriate approaches to suit their needs and likes. They will be constantly making informed choices about how to proceed.
Some learners like the idea of meeting the **Language Adviser** regularly because they value the advice and support. However, learners will need the **Language Adviser** less as they progress in their learning journey. The **Language Adviser** does not need to feel threaten by this because satisfied customers will send other friends to the service.

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The Preparation of Students for Distance Learning: Two Very Different Approaches from a Wider European Perspective

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Introduction

This paper sets out the reasons why it is important to prepare students who are about to embark on a programme of distance learning; the nature of that preparation, and focuses on and evaluates two very different projects undertaken by the North Region of the Open University, UK, to provide preparation to new students who, because of geographical remoteness, are unable to attend the type of short face-to-face session traditionally offered by the OU in well populated urban areas.

Why prepare?

Students entering on a programme of study by distance learning do so for reasons which are frequently different from those who chose to study by a more traditional route. They are more likely to be mature students who wish either to enhance or change their career or to gain a university qualification which was denied to them earlier. In any event it is very likely that they have not undertaken formal study for many years. In the case of non-British students, it is additionally likely that they are unused to studying at this intensity in English.

The Open University, UK, has long recognised the importance of preparation for study (although sadly in these times of financial constraints it is an area which cannot escape pressure on resources). The retention of new students is crucial in terms of the individuals themselves: there is little point, for example, in attracting students whose confidence in their ability is very low if they withdraw after the first few weeks, confirming their own sense of 'failure'. Politically too it is important to retain students when the UK Higher Education market is becoming increasingly competitive with regard to mature, part-time students and when university funding depends on the numbers of students not just who register for a course but who go on to achieve an award. The evidence suggests[1] that those new 'at risk' students who have undertaken some kind of preparation before the official start of their course are more likely to make progress with their studies.

What is 'preparation'?

But what does 'preparation' mean? In Open University terms, it means providing new students with the opportunity to engage with the discourse of their chosen course; to develop good habits of study; to discover what 'distance learning' is and how to take advantage of the resources available; to practise the skills that will be required of them; to learn something about the Open University system and its complexities; to feel that

[1]More work is needed in evaluating the effectiveness of preparatory provision in relation to student retention.

they belong to the institution (an interesting concept in its own right); to provide some activity between the often long gap between registration and the start of the course, and, equally importantly, excite and motivate the student about what lies ahead.

Preparatory materials are built in to the majority of the OU's Level 1 courses with which new students are able to engage from November onwards.[2] These have tutor support and usually involve an optional assignment. Students beginning their studies on higher level courses, which is now increasingly an option, do not benefit from this opportunity, although it cannot be assumed that they do not need to undertake some kind of preparation. Many regional centres devise optional preparatory programmes which address some, if not all, of the areas referred to above.

Two projects

The North Region of the Open University has had responsibility for the management of students in Continental Western Europe since 1994. Students there are inevitably much more scattered since the density of provision is much lower, and it is less feasible in most cases to offer the same kind of preparatory provision as in, say, Newcastle upon Tyne, where there are sufficient numbers of new students beginning their studies in the same geographical area. Although the Open University is a well-known concept in the UK, it is less so on the continent, especially for non-British students, which means it is even more important for students to know what they are about to take on. This paper will now focus on two very different approaches which have been offered to students in Germany and which take account of the scattered student population.

a) A residential weekend

In 1995 a collaborative agreement was signed between the Open University and the University of Hamburg. The latter is also part of an association which has developed close links with five other universities providing distance education in North-West Germany. The Universities of Lüneburg and Hamburg have run a residential preparatory weekend for their new students at the Europäische Akademie at Bad Bevensen for many years, starting on the Friday evening and finishing at Sunday lunchtime. Colleagues of the three universities agreed to work together to offer the same opportunity for students about to begin their studies with the Open University. Two such weekends have since taken place: in January 1996 and 1997.

It was decided at the outset that the weekend programme would be based on the well established Lüneburg/Hamburg model and adapted as necessary to fulfil the criteria for preparation as stated above. The model involved providing, as far as practicable, a whole year's study experience in one weekend. Students were to experience the writing of and receiving feedback on an assignment (correspondence tuition being the core of the OU's teaching method); the coping with large quantities of paperwork - which is often unexpectedly daunting; attending a tutorial; the opportunity to talk to a counsellor, and to browse in a Resources Area which included IT facilities. In addition there was to be an opportunity to attend one or more Learning Skills Development workshops, which included a session on English language skills for those who were not studying in their first language. Colleagues from Lüneburg and

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[2]OU courses, for the most part, begin in February each year.

Hamburg[3] were closely involved with the OU in both planning and presenting the weekend.

The first evening comprised a series of ice-breaking group exercises, including sharing expectations of the weekend ahead - a lack of confidence is common in mature students, and it is reassuring for them to learn that others have similar apprehensions - identifying criteria for success in their future studies as well as considering potential obstacles. The Saturday involved the participants in choosing what activities they took part in and when - very much as they would in real life. Real life was mirrored in the morning when a 'postman' called to their rooms delivering a package. The students had to decide which materials in this package were important and which needed acting on. For example, a personal letter from their tutor for the weekend was intended to prepare them for a similar letter from their own course tutor which would be following shortly after their return home. A great deal of emphasis is placed on the building of a relationship between the student and tutor over large distances, and the initial introductory letter is considered vital in establishing this relationship.

The students chose which sessions to attend during the Saturday and worked out how they would find the time to write their assignment, the details of which were also included in the package. The fact that several had to request an extension to the 'deadline' of 5 p.m. again reflected reality and provided an opportunity for those students to consider how they were going to manage their time once their course had started and the importance of pacing their studies. A slot on the Sunday morning was arranged to enable students to consider the time-management issue more thoroughly. (This was one of the most highly valued sessions of the weekend.) More students withdraw from their studies because they get behind - despite the built-in flexibilities - and it was felt right to emphasise this as part of the preparation process. Feedback on the marked assignment was also provided in a session on the Sunday morning where the students were encouraged to practise self-reflection on their efforts, another skill that is particularly important to develop in distance learning.

The planning of the weekend not only involved the programme itself, but also an estimate of how far people would be prepared to travel. An initial bid for Euro-funding had not been successful, which meant that the students had to bear the whole cost. The cost to the student was DM230.[4] to which travelling expenses had to be added. On the other hand, it was thought that some might find it worthwhile to travel relatively long distances for a course lasting a weekend. Invitations were therefore issued to all new students in Germany (including those registered through the British Forces, many of whom were based relatively locally) and those in Denmark. Of the nineteen who attended in 1996[5], the majority came from Nordrhein-Westphalen, although one travelled from Baden-Württemberg. Another had applied from as far away as Bayern but was prevented from attending because of illness. This year,

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[3] The weekend course would not have taken place were it not for the work and colleagueliness of Dr Marion Bruhn-Suhr and Mr Michael Ribold respectively of the Universities of Hamburg and Lüneburg .

[4]DM280 for single room occupancy.

[5]Twenty-six students applied in the first year, but seven had to drop out because of a flu epidemic.

however, the majority of the twenty came from Hamburg and Berlin. No students applied either year from Denmark. One did enquire but considered it too complicated a journey from Copenhagen. In the feedback, it was noticeable that distance was far less of a problem in 1997 than it had been the previous year, when three students indicated that it had been 'a considerable problem'.

Despite the time and cost of travel for many of those who attended in both years, every student considered the weekend extremely worthwhile, noting that their confidence had increased as a result of participating. It is significant that the main reason for 90% of those attending was to meet with other students, something that they would not be doing on a regular basis once their specific courses had begun.[6] Other reasons were to find out more about distance learning, how the Open University works, and to improve study skills. A sizeable proportion understandably wanted to find out more about their particular course. This was far easier to achieve in 1996 when all students attending were registered for one of four Level 1 courses. For students entering the University in 1997, the regulations allowed entry at any level which meant that a wider range of courses was represented, and it was not possible for tutors of each to be present. This also reflected reality, because the numbers of students in Germany - as elsewhere on the continent - do not as yet justify the appointment of a 'local' tutor, even on Level 1 courses, and the vast majority are allocated to a tutor either in the UK on elsewhere on the continent. However, it was ensured that course materials for each course were available for consultation during the weekend.

The concern that we would be raising students' expectations about the nature of the support available to them by this intensive face-to-face experience seems not to have been justified. By attending appropriate sessions during the weekend, students came to understand what alternative methods of support would be available to them once their course proper had begun and yet make the most of the face-to-face contact offered during the weekend. In fact, the links established during both weekends have persisted during the academic year, across courses, and this has proved beneficial. It should be noted, too, that for those students whose course involved attending a week-long residential school in the summer, this weekend would be good preparation. The feedback indicated that the expectations of every student were met.

b) Virtual preparatory course

Despite the success of the Bad Bevensen project, it was obvious that it was not open to all new students in Germany, whether because of time or cost or accessibility. A small team in the Newcastle Regional Centre adapted the programme into a version that could be presented in any of the Region's study centres in a single day, and this 'portable' face-to-face version was offered in the autumn of 1996 in various parts of the Region, both in the North of England and elsewhere on the continent. It was during the planning stage of this programme that the decision was taken to offer the preparatory day via a special website on the Internet.

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[6]Students in Continent Western Europe are given the opportunity to release their names and addresses to other students on the same course and, in addition, to other OU students who are attached to the same study centre. The Students' Association, OUSA, is also increasingly involved in setting up social events locally.

Such a project could not have been contemplated were it not for the expertise offered by colleagues in the recently established regional New Technology Research and Implementation Unit.[7] The Virtual Prepday, as it was called, was a pilot project for those students entering the University in 1997.[8]

Clearly the Internet provided an opportunity for those students in Germany who could not or do did not wish to attend the residential weekend - indeed anyone at all who had access to the Internet - to benefit from some preparatory activity. How well did the face-to-face version translate into this medium taking into account the definition of preparation given at the beginning of this paper and what students attending the weekend identified as being important to them? It should be stressed that the time needed in exploiting the potential of the website was considerably underestimated; indeed the whole exercise was a learning experience for us, and part of that learning was discovering what that potential was. Despite the importance of providing new students with the experience of writing and receiving feedback on a short assignment, it was not possible at this stage either to devise appropriate topics to cover potentially the whole range of the OU's course provision or to find tutors to mark them. The valuable experience of having to meet deadlines was therefore not offered to those taking part. Neither was the opportunity to sift through the variety of paperwork. Nonetheless the Internet students were able to choose what 'sessions' they went to.

The face-to-face tutorials were intended to provide a flavour of each student's particular faculty. Those leading these sessions originally had been asked to provide notes which were translated into the new medium, as were various Learning Skills Development workshops, including one on 'How the OU Works'. The OU's teaching materials have always been student-centred and involve frequent interactive exercises. It was soon realised by those involved in delivering the IT version that the potential for interaction via the Internet was far greater and this is an area which is being developed for future offerings. A greater degree of interaction was built into the opening ice-breaker sessions, where students were invited to 'register' for the preparatory day, enter their expectations and suggest their own criteria for and obstacles to success in their studies. It was just as easy for them to see other students' ideas and apprehensions as it was at the real event. Nonetheless, several students commented on the time and consequent telephone costs in participating in these ice-breaker exercises, and it would seem that there is also a place for providing the type of notes on sessions referred to above which can be more economically be downloaded for later use.

There is no doubt that those students who registered for the Virtual Prepday were able to benefit from those aspects which had been identified as important by their fellows attending the residential weekend: to find out about more about distance learning, how the OU works and improve their study skills. However, the feature which was considered by the vast majority on the weekend course to be particularly valuable - the meeting with other students - could not happen. It is beyond the scope of this paper to discuss the computer conferencing facilities open to all students in Continental Western Europe, which are undoubtedly effective in bringing students together. It is unlikely,

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[7] I am particularly indebted to Billy Ward, not just for his expertise, but for his imagination in transferring the academic content on the preparatory day into an exciting, accessible format.

[8] The Internet address for the virtual preparatory day is http://ntriur09.open.ac.uk/prepday5/

however, that the Virtual Prepday students would strike up the same friendships and support networks which originated during the residential weekend, or even during the day workshops held in the UK.

This whole enterprise was a new development for the New Technology Research and Implementation Unit, and in realising the face-to-face preparatory day in this new medium, it was tempting sometimes to show off our expertise for its own sake, maybe to impress our peers, forgetting that a substantial proportion of prospective users had access to the Prepday only on a read-only basis. Graphics and audio facilities, dynamic and conducive to student learning as they might be, could not be essential features of the project at this stage. Similarly, we were interested to track those students who accessed the website for evaluation and research purposes. Some of those who responded to this invitation commented on the time (and cost) of doing so and felt that it was a barrier to them embarking on the workshop proper. On the other hand, it was important to set up something that was worthy of the OU's reputation in distance learning materials. This was very much a regional offering, which was not advertised on the OU's official page on the Internet. As a result of this, some students found it difficult to find.

There is currently much debate as to the nature of distance learning. Even the terminology is being challenged. No matter how good the quality of the teaching materials, however, it is the support offered that so often makes the difference between a student's success and failure. The two case studies discussed in this paper offer two very different approaches to the provision of that support. The Virtual Prepday experience may be viewed as a success; it certainly offered support in an important area to students who would otherwise not be able to attend a workshop in person (potentially those who are geographically remote from a study centre, those whose professional or domestic circumstances prevent them from attending a face-to-face session, or those with a disability). It should not be assumed, however, that distance learning obviates the need for face-to-face support, from both tutors and fellow students. The fact that a group of students in Germany were prepared to spend substantial time and money to attend a residential weekend and clearly found that the meeting with other students the single most important component of that course indicates that we do away with face-to-face support at our peril. To attend such event helped those groups in both years to feel that they belonged to the institution. There are relatively few other opportunities that allow them to do so. New students need a boost at the start of their studies. The residential weekend certainly provided that boost, and its positive effects lasted well into the course itself. In my view, it is not a coincidence that the success rate of the 1996 group was much higher than average.

Canaries in the Mine? Women's Experience and New Learning Technologies

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Introduction

"Canaries in the mine" refers to a practice in which caged canaries were taken down underground mines. More vulnerable to oxygen deprivation than humans, the canary's death served as a warning of a dangerous gas accumulation, giving miners time to get out before the situation was fatal for them as well. In the same way, some sectors of a community or a society may be the first ones affected by a particular situation. Rather than isolating this group's experience as arising from their "unique problems", it can be useful to examine how their response may be an indicator of the potential impact of the situation on many more people. This paper argues that, by examining the impact of new technologies on women distance learners, we may be able to develop some strategies for scrutinizing the effectiveness of new technologies for the whole range of learners we intend to serve. This issue becomes particularly critical as new technologies become more prevalent in both conventional and distance education and promises of their potential are increasingly persuasive.

Defining new learning technologies

Briefly, in this article, "new" learning technologies include the newer electronic technologies that can provide enhanced communication and interaction to support learning. These include:

- communications technologies such as videoconferencing, electronic mail, computer conferencing, and
- technologies that provide access to information, such as the Internet and the World Wide Web.

New learning technologies, like all technologies, are part of a system, as Franklin points out, noting "technology involves organization, procedures, symbols, new words, equations and most of all, a mindset".[1] And although this article refers to some of the newer technologies, it will also consider the organizational dynamics and changes in mindset that are part of the use of any technology, from books and libraries to the Internet.

[1] Ursula Franklin, *The Real World of Technology*, CBC Massey Lectures, Anansi/CBC, Toronto, 1990, p. 12

Two dimensions: practical aspects and quality of learning

New technologies can have implications for the practicalities and the quality of learning; two dimensions that interweave in open and distance education. We can begin by looking at them separately in order to identify specific issues, and then consider how they relate in day to day situations. As a practical approach to practical challenges, distance education is a means of serving those most affected by constraints to educational access. For many women, distance learning represents the only option that enables them to pursue education and accommodate their other commitments to work, family and community. In addition to practical considerations, there is the question of quality and equality of learning. Women have sought to expand the scope of education so that it recognizes their reality and context and accommodates a range of approaches to learning: new technologies should support, rather than constrict, this achievement.

The practical aspects

For learners, two important factors, access and cost, are critical in determining whether or not they can participate in an educational program. In Canada, many institutions offer distance education programs that enable learners to complete their studies without leaving their home community, by using course packages, in some cases supplemented by audioconferenced meetings: these programs provide a reasonable level of accessibility in the face of physical distance and time constraints. In addition, some also make a concerted effort to address social distance (factors such as limited prior education or language skills, lack of a socially supportive context) by inviting increased community support; providing additional counselling and study skills help, or by developing customized programs in partnership with agencies in direct contact with learners.[2] For the most part, these initiatives depend largely on the human side of the system, rather than the technological side, and involve innovative strategies that require rethinking how people do things within an organization.

In countries where there is limited access to telephone service, much less to other technologies, many distance education programs include occasional meetings at a study centre, and support a more group oriented approach to learning, which is particularly workable for programs designed for specific cohorts who share a common context, such as teachers or nurses. While there are certainly practical challenges in providing access and in ensuring that materials and tutorial support are available when needed, the key factors are the human and organizational systems, rather than a given technology.

If we look at the particular situation of a sample learner, we can get an idea of whether new technologies actually improve access for that learner. Suppose that Susan is a Canadian teacher who wants to complete a university degree. Because she works full time and has a family, she can take only one course at a time. Most of the courses in the program are available as independent study packages, so she can work on them whenever she has a chance. She can call her instructor, and has done so when she

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[2] Spronk, B., "Appropriating Learning Technologies: Aboriginal Learners, Needs and Practices", in Roberts, J. and E. Keough, *Why The Information Highway: Lessons from Open and Distance Learning*, (Toronto, 1995), provides a good overview of programs designed to address social access.

needs advice on a project. Some of her courses have also had audioconference meetings, and she has to go to the local college to take part. In some cases there were good discussions among students and instructor: in other situations, the instructor simply lectured for an hour and there was little opportunity for interaction, so she felt it was not worth taking the time and trouble to participate.

Now suppose one of Susan's required courses has a compulsory computer conferencing component. She will now need access to a computer equipped with a modem and communications software. If her family is one of the 16% of Canadian households fortunate enough to have a computer with a modem, she may be fine, if she can negotiate with her spouse and children to use the computer when she needs to. Otherwise, she may be able to use a computer at school, if she can set aside the time. If she is already computer literate, she will probably have to learn new software for the conferencing system, and if not, will have to dedicate even more of her limited study time to learn about the computer itself.[3]

But she also needs to be able to access the university's computer, either directly or through or a local service that can connect her to the university. If there is no local service available, she will have to pay long distance charges to connect to a service provider or the university. And, if she happens to live in a region where there are no private phone lines, she won't be able to take part in the course at all. If the university's computer system is in high demand in the evenings, she may find herself trying to connect at very odd hours, such as 4 a.m. If the conference is structured so that particular topics are addressed within a time frame, such as a week, the pressure will increase to find some way of getting connected and keep up with the course dynamics.

Now suppose the course requires access to the World Wide Web, as some Canadian distance education courses do. How does this affect Susan? Now, she needs access to a computer that has sufficient memory to run software that can find and download material from the Web. She also needs a high speed modem and a phone connection that has sufficient capacity to transmit Web based material. Even if the school has a Web connection, there is no guarantee that the appropriate computers and software will be available, given education funding cutbacks.

Or perhaps the course has a required videoconferenced component. But there are many fewer videoconference sites than audioconference locations: satellite transmission is costly and broadband phone lines that can carry a videoconference do not yet reach beyond major urban centres.[4] This means that Susan has to travel at least an hour, one way, often in winter conditions, to reach the videoconference location.

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[3] Ross, J.A. et al, Equity of Access to Computer-Mediated Distance Education, *Journal of Distance Education,* Vol. X, No. 2, p 7-32, outlines some of the technical challenges learners faced.

[4] Even in Canada, where phone use is among the highest world wide, it is estimated that it will be 2005 before even 80 to 90% of homes and businesses have this kind of service, and the priority will be to provide it to urban, densely populated areas, rather than the rural areas.

The experience is like audioconferencing with not very clear images on a monitor- sometimes a good discussion, sometimes a lecture with no interaction.

Not only do each of these technologies make access more difficult, they also shift costs to the learners. Many Canadian distance education institutions have had provisions for toll free access to instructors, tutors, and program administrators. But as this is replaced by online communication, it is the learner who picks up the cost- of having a computer, of connecting to a local computer communications service provider, and, in many cases, long distance charges. If a learner has to travel to a videoconference site, the learner has significant transportation costs. These shifts in responsibility for obtaining and paying for access may not just be the outcome of a particular technology, but may represent a fundamental shift in perspective away from the view that the institution's mandate is to provide the link to learners.

In many ways, Susan represents a more fortunate learner, who has some options for access to technologies. If she were not a teacher, or lived in a rural area, or if her first language was not English, new technologies could represent an insurmountable barrier. If this is the situation for a middle class learner in Canada, what would are the chances for a learner where resources and communications systems are much more limited?

Should distance educators be early adopters of technology?
It can be said that the problems outlined above are just the typical challenges to be faced when a technology is first used. The rationale is: "Sooner or later we'll all have access to this new technology and we will know how to use it. Look at how the use of VCRs grew exponentially so that 80% of households had them a decade after they were introduced. We distance educators should be leaders in the use of these technologies." This is certainly a well rehearsed argument. But it begs the question: is it still the purpose of distance education to provide reasonable access to education for those who most need its flexibility? Why is there so much apparent pressure for distance educators to use technologies before they are readily available to learners?

Perhaps some institutions will use technology as a convenient means of excluding more challenging learners. Like the fickle leprechaun in Finian's Rainbow who declares, "When I'm not near the girl I love, I love the girl I'm near", some distance education institutions may choose to redefine their mandate to serve those with technology access and know-how, rather than those who most need the educator to bridge the gap and reach out to them. In that case, it is likely that women learners will be the first to be left out.

Quality of learning
In addition to the practical aspects of accessibility and affordability, there is the question of what is learned and how it is learned. One of distance education's most significant contributions to the field of adult learning is its acknowledgement of the validity of the learners' context as a place to learn and as a source of learning. By making education accessible and enabling learners to incorporate their own reality in their learning, distance education practice has expanded the adult learning principle of valuing the learners' experience. However, this expansiveness is by no means universal, and there have always been opposing viewpoints that maintain that distance education should provide a close replica of the classroom by delivering the same goods to

learners, and help them overcome the perceived disadvantage of distance from the source of knowledge.

Maintaining identity

But as Haughey has observed, distance is not necessarily a negative factor to be overcome, but is simply a reality to be recognized. Haughey notes that distance means "standing apart", and "in standing apart, we also stand *for* something, whether it is our community culture or our individual uniqueness."[5] For women, who have struggled to establish their own identity in the world of education, this "standing apart" is particularly significant. As we consider strategies that can establish linkages and provide for communication among learners, we need to be careful that they are not also eroding the distinctiveness of learners' own context and reality. Just as wonderfully unique communities can lose their special charm once they are "discovered" by tour operators and linked by four lane highways to "major centres", learners' particular experience and context can be overshadowed by words and images delivered from afar. Print, audio and video each carry their own assumptions and authority, but newer technologies, such as Web based materials, imply additional advantages of currency and inclusiveness, without necessarily offering opportunities for genuine scrutiny or critical reflection.

Supporting holistic learning

Over the past decades, feminist educators and learners have argued for more holistic approaches to learning that value social and cooperative learning, inclusion and validation of experience, and a recognition of the importance of process as well as outcomes. At first glance, it would seem that technologies that provide for more interaction among learners would support these approaches. How well do they fulfil this promise?

Issues of technology accessibility and affordability pose one challenge. If some cohorts of learners may be excluded entirely; and others have limited access, it creates inequities that erode the potential for building cooperative relationships. In non formal learning situations, there are examples in which those with access to technology find ways of keeping others in the communications loop, but these arrangements depend on learners' time and goodwill, and should not be presumed in situations where it is the educator's mandate to ensure equitable access.

Situations in which learning includes integration of life experience often raise issues of trust and respect for privacy. As one women's studies instructor noted, participants in an audioconference or videoconference do not know who may be at other sites, making it more difficult to ensure the kind of safe environment that enables learners to speak about personal reflections and experience. People who are not part of the group may drop in unnoticed, perhaps to observe the technology in action, but potentially

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[5] Haughey, M., Distinctions in Distance: Is Distance Education an Obsolete Term? in Roberts, J. and Keough, E., *Why the Information Highway?* p 2-14.

disrupting the group dynamic.[6] Computer conferences can be vulnerable to unauthorized bystanders, if members of a household share one computer account and password.
Some of these situations could be addressed with careful attention to protocols and to process, but they require a commitment on the part of the educational institution to ensure that its systems truly support trustful interaction among learners and instructors. In a climate in which technologies are shifting accountability for access and costs to learners, this commitment seems less likely.

The packaging of knowledge
An even more challenging issue is the extent to which new technologies shape knowledge and give it authority. For those who believe in the cargo cult approach to distance education, using any particular technology to "deliver" knowledge may not be a problem, but for those who regard learning as a dynamic process which includes learners' reflections and reality, technologies that package information have many drawbacks. Gains made by distance educators and feminist educators in enabling more holistic experiential approaches to learning could be threatened if new technologies preclude that which cannot be easily transmitted in a crisp comment in an electronic conference, or presented on a web page. If learners' ability to make their own insightful connections is superseded by premade linkages on a website, what has been gained and what has been lost in terms of development of capability and confidence? And, if women are less likely than men to find their reality reflected in traditional academic literature, is it more likely they will they find it on the Web, where men are still the majority of authors and users?

Conclusions
This article has touched on some of the issues that new learning technologies raise for women. These technologies will only be a benefit for women if they genuinely accommodate practical needs for flexible learning, allow for the inclusion of women's reality, and support women's preferred approaches to learning to the same extent as current distance education strategies. Of course, it is to be hoped that the new technologies will represent an improvement on all counts, but I will leave it to technology's promoters to demonstrate that.

Exploring how women learners are affected by new technologies can help us develop strategies for comparing these technologies with current approaches to serving many other learners who need accessible, affordable and meaningful learning opportunities. On behalf of our learners, we have the right to scrutinize technologies and ask questions, such as:

- How does this technology help provide learning to those whom it is our mandate to serve?
- Are there trade-offs, in terms of access, cost, quality of learning, in using this technology?

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[6] I was told about one case in which someone from outside the class sat in on a conferenced women's studies class unknown to participants at other sites, and made derogatory comments about the discussion to people at his site.

- What are the benefits of this technology, and are these benefits important to our learners?
- Will using this technology redefine the teaching/learning interaction, and is this desirable?
- Does this technology broaden or narrow the possibilities for teaching/learning approaches?
- Is the adoption of technology being used to change organizational assumptions or systems (for example, shifting more costs to the learner, reducing tutorial staff, etc.)?

More general societal questions also come to mind:

- Are new learning technologies being used to reverse gains that have been made in broadening access to education?
- Is technology being used as an excuse to redefine what it means to serve people's educational needs, particularly of those most vulnerable to constraints?
- Who stands to benefit from the increased use of technology in learning?
- How does using new technologies relate to the commercialization of education?
- What does increasing use of educational technologies mean for those countries who have few resources and must serve large numbers of learners?

On the other hand, we could simply abandon the longstanding social mission of distance education to enhance access to quality learning, and seek out more durable canaries.

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The Individual Learner in the "Learning Organisation"

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1. Introduction

Nowadays organizations must set ambitious objectives to meet the challenge of the Information Society through educational and training systems:

- to offer quality lifelong education;
- to meet the ever growing and diversifying needs;
- to reinforce their competitiveness both in European and international markets.

To give a response to this triple challenge, education and training have to be improved at all levels, developing adequate skills to the labour market; investing in human resources, educational tools and technologies; creating new learning models, based mainly in multimedia and telematics; motivating the trainees to self training, through Distance Learning.

These objectives are difficult to reach, because the market is particularly fragmented with heterogeneous types of consumers: individuals, organizations and public institutions are characterised by a variety of sectors: information and communication technologies, publishing and audio-visual.

Modernization of training is a consequence of mutation of knowledge in society and the construction of knowledge at individual level is a key-point of this mutation. The modern vocational systems must be ready to respond in a global and integrated way, because every individual has surely to change his profession four or five times during his life.

Individualized training emerges as the most adequate learning alternative. Since the behaviouristic theories of the 50´s and 60`s till the most up-to-date technologies - hypertext / hypermedia and virtual reality, experts defend this type of training based upon apparently different educational theses, but that have something in common - Educational Technology - Education by Objectives - Training Engineering - Total Quality Training and Self-Training - the enhancement of the individual, which implies a great investment in human resources.

Educational multimedia contributes to facilitate the individualization and flexibility of learning.

Since the 60´s, large organisations have made great use of educational multimedia for the vocational training of staff through computer-asssisted training although the software industry has not developed at the same pace.

With the advances of telematics and the fall in the cost of telecommunications some of these organisations decided in the 90´s to adopt distance learning in order to reduce the costs of training of their personnel.
In what concerns SMEs they allocate relatively few resources to training in general, because they are limited by financial constraints and they have particular organizational structures.

Evolution of Training Concepts between the 70´s and the 90´s

DATE	TRAINING TYPE	TRAINEES´FEATURES
70´s Closed economy, about to open	**Humanistic training**	**Trainees as elements of a social whole**
80 / 85 Crisis period	**Technicist training**	**Trainees very little motivated**
85 / 90 Training integrated in the global strategy of organizations	**Training as investment**	**Trend to specialization and controle**
90´s	**Training as a compromise among the training department / the organization / the trainee**	**Trainees responsible their own training for self - training**

2. The New Learning Models

New demands, new skills and new challenges are intimately connected with training in the 90´s, what necessarily affects the learning process within the organization.
In the past thirty years there has been a significant expansion in the availability of a wide range of technologies with the potential to improve the quality of training and learning in a wide variety of contexts.

In recent times computer communications networks such as "The Internet "or" The Information Super Highway" have contributed significantly through opportunities for interactivity and access to instuctional resources.
These facts imply the need for new strategies of individualized learning and the emergence of new roles for the trainers.

The Tayloristic approach for production organization will then be replaced by new forms of planning and developing the human resources,enhancing creativity, the process for taking decisions and responsibility.

Individualized learning is vital in this new context in which the stategy, the structure and the culture of the organization must lead to a system of lifelong learning.
However we do not defend the type of "stand-alone" training which most of the times means unsuccess, but a modular telematized system that enables "just-in-time training" with great interactive potentialities.

The ideas and practice of "student-centred learning" appeared in the 70's and they are intimately connected with self-development, starting in 1976 with Pedler's - "A Guide to Self-Development".

Self-managed learning, in contrast to systematic training, is seen as one of the more promising ways of being able to create and maintain this "learning habit"
Qualitative improvements in training are both possible and desirable but to reach this aim an appropriate organizational development strategy is required. Thereein lies the challenge to the leaders and managers of education and training institutions.

To avoid the technology trap, Foks (1995, p.10) recommended that decision makers establish the following basic parameters:

- basic information on technology options;
- the basis for appropriate technological standards and protocols;
- key criteria for technology related decision making;
- the processes for taking decisions;
- the processes for implementing decisions
- the need and the potential for partnerships

Most investments in educational technologies constitute important risks for decision makers so they must make a judicious use of them. Special attention has to focus on the following issues:

- targeting of the new methodologies / technologies
- didactic questions
- functionality
- guidance and support for study
- costs.

The evolution towards open learning has been supported mainly by strong partnerships based on existing suppliers of distance education and training or on new industrial partnership involving for instance telecom operators.

3. "The Learning Organisation " Main Features

"Learning is the key word of survival for companies in the 90's."

Mike Pedler

The terms "Learning Company " or "Learning Organization" are relatively recent but the idea has been around for a long time.

The recent interest in the "Learning Organization" perhaps begins with Argiris and Schon's "Organizational Learning". The idea was also developed by Peters and Waterman when they said: "The excellent companies are learning organizations".

However it was Peter-Senge the first to give a definition for "learning organization" in his book "The Fifth Discipline"- "it is a place where people can continuously expand

their capacity to create the results that they really want, where people are permanently learning how to learn together".

The concept of the "learning organization" is based upon the following key elements: stategy, structure and culture.

The "Learning Organization"

Organisation

STRATEGY + **STRUCTURE** + **CULTURE** =

= **LEARNING SYSTEM**

So learning and training are the main aspects of the organizational culture, where the obsolescence of skills and professions is an hard reality.

The "learning organization" is not just a company that runs a lot of courses or which offers all sorts of opportunities for its people to learn; it is one which has the capability of self-transformation.

Most of the organizations are not structured to implement this learning process. Company policy and strategy together with implementation, evaluation and improvement are very important factors, in order that all members of the organization may have a chance to take part, to discuss and contribute to major policy decisions.

The features of a "learning organization" are the following:

- the learning approach to strategy - As we mentioned before.
- participative policy-making - It deals with the involvement in the policy - and strategy forming processes.
- informating - Information technology used to inform and empower people rather than disempower them.
- formative accounting and control - It ensures that systems of accounting, budgeting and reporting are structured to assist learning.
- internal exchange - It involves all internal units and departments seeing themselves as customers and suppliers. Collaboration rather than competition.
- reward flexibility - Money need not to be the only reward because for many people many things might be considered "rewarding". This is probably the most difficult of all the characteristics.
- enabling structures - These structures create opportunities for individual and business development. New forms of stuctures must be experimented.
- boundary workers as environmental scanners - In a "learning organization" the scanning is carried out by all members. They deliver goods and services,

receive supplies and orders and systematically collect and carry back information.
- inter-company learning - It takes place in several ways: joint training, sharing in investment, in research and development, job exchanges. "Benchmarking" can also be here applied.
- learning climate - Managers see their main task as facilitating members' experimentation and learning from experience.
- self-development opportunities for all - Resources and facilities for self-development are made available to all members of the organization.

We can conclude that to create a "learning organization" is very complex. The key word is "transformation" what implies a radical change .

Face-to-face Training

Self/Development/ Learning

"Learning Organisation"

4. The Changing Roles of the Trainee, Trainer and Organisation

"New individualized training technologies exist today but seem to be only available tomorrow". This statement may seem a paradox, however it is not.
So most training departments still remain indifferent and sometimes the educational world presents a feeling of frustration.

Although the quality of the educational products is always improving they are not yet very much used in the training area.There must be some reasons for it.
Later in this chapter we will analyze this situation.

We notice a global change in the training domain that includes: the objectives, subjects, methods and techniques.

In what concerns the roles of the "actors" of training they are always changing.

The trainee - he is the very core of learning and he finds himself before a new training situation : individualized and interactive.

He can use the Information Technologies in three different ways: to process information (the computers are used exclusively to make the treatment of text, numbers, images and sound); to interact (to establish a dialogue with the computer) and to communicate (computer mediated conference that enables communication among many people at the same time).

Trainees must be trained to learn how to use these new technologies and they have to be reliable, accessible and easy to use. The products / programmes will be produced with a main aim: to give an adequate answer to the trainee's needs.
Some of the obstacles the trainee has to surpass deal with the myth of easy learning, instruments that sometimes are not very friendly and the illusion of total freedom.
We can say that the trainee will be successful if he attains his own objectives, taking into account the constraints of time, place and knowledge level.

The trainer - the changes in training in search of the trainee's autonomy implies that the trainer plays different roles what necessarily involves a cultural change too. So the mutation of the trainer's function appears as a key-question in direct relation with the training of trainers on the use of these learning resources and their integration in training practices.
Priority must be given to procedures for developing tutors / trainers, to enhance their competence in the design and implementation of learning environments and technologies, which will support the activities of individual learners.
New skills are requested to the trainer: screen design, good technical and educational knowledge, in order that he may choose the most adequate media to a specific situation and manage the project. These skills can not be implemented in an isolated way but in the middle of a multidisciplinary team.

Very often the trainers ask themselves whether their profession is about to disappear "Will trainers still exist after modernization ?" However they must be sure that individualized learning still needs their skills and that the future of multimedia training lies in their hands.

Nowadays they are called to become media designers and tutors with different profiles.To the first they are asked to accomplish the following tasks:

- to identify the training needs
- to define the objectives
- to create the adequate pedagogical environment.
- to take part in the production of programmes.
- to take part in the evaluation process.
- to help in the marketing of the programmes.
- to train the trainees to use the programmes.
- to the second they are asked to accomplish the following tasks:
- to help in the definition of the learning strategy.
- to help the trainee in his progress.
- to support and encourage the trainee.

The trainer will have success with individualized learning if he does not feel menaced by new technologies and is a key "actor" in the organization and validation of training.

The organization - it must adopt individualized training whenever the following needs are felt: different and multiple training needs; different pedagogical strategies, according with the specific trainee's features; different geographical location of the trainees; individual progress pace; trainee's free time to study and need to have a dialogue and an immediate feedback.

However some constraints emerge very often due to several kinds of factors: organizational, economical, technical and human.

The organization will be successful whenever the new technologies enable it to attain the objectives that were defined within the frame of its training policy, generally at the lowest cost and with the highest level of effectiveness.

All these changes that we have mentioned require a total reorganization of the training system because the problem is no longer the methods or techniques, but the very aims of training.

The Trainee/Trainer /Organisation

"ACTORS" INVOLVED	BENEFITS	LIMITS
TRAINEE	**Individual pace.** **Flexibility.** **Availability.** **Self - assessment.**	**Isolation / Absence of trainer and other trainees**
TRAINER	**Deeper knowledge of the trainees.** **Availability for non repetitive task.** **Enables a more rigorous evaluation.** **Follows trainee's individual progress.** **Facility in up-dating the programmes.**	**Lack of adequate programmes.** **The design of programmes takes much time.** **Some subjects are difficult to transmit.**
ORGANIZATION	**Reduction of costs with trainers and trainees.** **Hardware and software at accessible costs.** **Low maintenance costs.** **Homogeneous and standardized training.** **Decentralization of training.** **Introduction of rapid changes.** **Personnel retraining.**	**High implantation costs.** **Expensive programme production.** **High cost with the production team**

5. The Problems of Isolation and Motivation of Individualised Learning

Isolation exists as a matter of location and also psychologically speaking. How can we avoid it?

It has two dimensions: a physiological one (distance in place, being alone) and a psychological one (distance in thoughts, feeling alone).

The individual learner is sitting all alone most of the times in front of a computer having no chance to communicate face-to-face, with his trainer and his peers too.

Isolation and its emotional consequences have direct effects on motivation.

Each learner is dependent on the situational mood and on the stimulation the programme or media provide.

Motivation is directly related to behaviour, through six factors: attitudes, needs, stimulation, affect, competence and reinforcement. Each of them must be taken into

account by the tutor respectively: creating a positive self-concept for learning,; making time for an informal discussion after the lesson with the entire group (videoconferencing or computer conference); making variation in the presentation and style; ask the question how the instruction was experienced; using informative instead of controlling feedback.
These recommendations concerning the individual / distance learner can contribute to maintain him motivated and anticipate some problems that generally may occur.
To sum up modern technologies supply efficient solutions, such as: e-mail, videoconferencing and computer conference to surpass those obstacles.

6. New Technologies for New Skills

"The world is about to become completely digitized"
Bill Gates in "Multimedia Planet".

During the the last three decades, advances in digital technology were largely responsible for the growth of large-scale computer systems.So there is a change going on in multimedia education and training. Digital multimedia emerged as the natural evolution of the technology supporting interactive learning, offering new opportunities for developing the learning environment, due to its networking capability, greater flexibility, and increased capacity for audio, video, graphics, animation and simulations.

Benefits for multimedia education include: interactivity, flexibility and cost-effectiveness.
The most recent educational concepts consider instruction self-driven, self-scheduled,and self-paced.

Limitations for digital multimedia technology focus on the compression / decompression problem, because combining many digital media requires huge storage capacity for the computer and large bandwiths for transmission media.

However we have witnessed a complete change in technology for individualized learning. First the computers and interactive courseware, based on CBT and now multimedia. It has enhanced the dialogue possibilities enabling interactivity in distance education - spontaneous dialogue, syncron or asyncron, based on computerconferencing.

Computer-mediated communications is a telecommunication technology that employs the computer as an "intermediary" to facilitate communications. It involves the exchange of electronic mail (it provides a fast and easy way to dialogue) and the participation in computer conferencing (it offers the same advantages for group exchanges of information). "Virtual" classrooms are appearing, offering courses "online" in "cyberspace".

Electronic publishing is another new technology that consists of electronic journals and books, replacing with advantage paper-based publications, because they provide learners with cheaper and easier alternatives.

Intelligent tutoring systems are software programmes that use artificial intelligence tehniques to help people learn through a process of questions and answers to infer about the understanding of a learner and then adjusting automatically the instructional material to the level of the learner's comprehension. This technique will help trainees learn a much wider range of subjects.

Groupware is a relatively new type of software that enables groups of people to work more effectively together, sharing data and communicating easily over long distances.

Multimedia introduced new ways to exchange information between man / machine, including sound, graphics, animation and full-motion video, increasing both the quality and quantity of the exchanged information.

Videoconferencing emerges as a quite simple technology to transmit and receive live video from one computer to another. So educational programmes can be directly delivered into learners'homes or other distant sites.

Video-on-demand is another interactive technology that enables learners to select, play or pause a training video stored at a remote place. It will also play an important role as a complement to classroom discussions and training.

Virtual reality is the most recent educational technology that creates a computer-generated interactive world for the learners "immersed" in it, giving the illusion of reality. Live-action video and computer graphics contribute to simulate dangerous and expensive training sessions.

We can conclude that all the above mentioned new digital technologies have great potentialities for an effective approach to education and training.

7. Conclusions

All the Information technologies we analyzed contribute to create intelligent multimedia virtual classrooms and to individualized learning, carrying important benefits in what concerns: money, resources, and time.

However we can not be convinced they will be "the promised land", leaving completely behind traditional / face-to-face education. It is true that the use of digital multimedia in education is having a great impact on the way students learn, enabling the individualized learner to receive, process, and act upon a tremendous amount of information.
The future of individualized learning looks very bright. It has become a priority in the developing world. Both political changes and the advances of information and telecommunications technologies are the basis for this rapid development. b "Just-in-time" courses tailored to specific customers and much shorter planning and production periods for materials production are now within reach.

Networking and digital courseware require new qualifications and skills, in order that training systems may provide learners with realistic situations and a high degree of interactivity.

Difficulties such as:

- the lack of user-friendly multimedia equipment and software;
- insufficient quantity of equipment, sometimes obsolete;
- insufficient quantity and quality of educational software adapted to the needs of users;
- the integration of educational multimedia into trainers'practice;
- the lack of tutors'training and information;

must be surpassed.

The availability of broadband networks at affordable prices towards the end of this century will contribute to the growth of new educational multimedia services, provided European industry ensures the availability of user-friendly and affordable telematics applications to individual learners.

Finally advanced educational multimedia applications should be validated in real life situations to meet the needs of organizations, trainers and learners.

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Teacher's Environment for Individualised Learning

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Introduction

According to the report of one group of experts in distance and open education ([THA 95]), a teacher needs a lot of different competencies. Between these competencies there are: (1) Organisation and presentation of subject knowledge; (2) Organisation of learning materials; (3) Identifying students' knowledge and objectives; (3) Prescribing curriculum; (4) Adaptive assessment.

As student approaches each new lesson in his course he needs to be oriented towards the important ideas. Equally the student needs some information about the learning materials that will be used. To be well prepared and to get the most out of the lesson, the student needs to know ([LAU 93], [BAR 94]):

- Why this topic is important and interesting.
- Its relation to other topics in the course.
- What they need to know already.
- The learning objectives in view.
- How to approach it.

Distance and open education is individual-centered in the sense that it gives the student a great deal of control over the time, place and pace of study. Also, it has to be individualised. The subject matter, the learning materials and the sequencing of study have to be adapted to the student ([MIL 92]).

In this context, we propose curriculum design environment which helps teacher in some of these activities. The features of this environment are:

(i) representation and organisation of subject knowledge;
(ii) representation of learning materials;
(iii) formalisation of curriculum structure in terms of lesson features;
(iv) managing of student profile and individual curriculum.

This environment is designed for a purpose of a postrgraduated course in multimedia, the DESS "Sytstèmes d'information multimedias" ([WEI 97]). The participants of this course are graduated students and computer technology engineers. They have different initial competencies and also various objectives. One other characteristic of the DESS course is use of both theoretical and practical knowledge based on numerous different pedagogical materials and activities.

In the first chapter we expose a functional description of our tools while in the second chapter we describe two models used in implementation.

I. Functional description

There are significant benefits to be gained for individualised learning from promoting extensive use of different learning supports (software tools, papers, video, face-to-face meetings) and up-to-date research opportunities (Internet, CD-ROM). This approach introduces a large amount of different learning materials. This abundance requires significant preparation and organisation time, but trade-off may be in the quality of the materials. A presentation of one concept through different media may facilitate development of deeper understanding. Using different materials which provide interactivity increases learning effectiveness considerably.

This disposition of numerous learning materials causes that the effectiveness of the teaching process and its individualisation is particularly dependent on planning and organisation. The teacher has to manage many information related to learning material, subject knowledge, but also to time and cost constraints. The individualisation of teaching takes also into consideration goals and background experience of each student. Therefore we propose to the teacher to use the four modules organised as follows:

1. Representing subject knowledge concepts and organising the subject knowledge concepts according to their contexts of application;
2. Representing learning materials and connecting the learning materials with the subject knowledge concepts;
3. Specifying the curriculum structure in terms of lessons and lesson relations;
4. Representing student's knowledge and objectives, and specifying individualised curriculum.

A. Representation of subject knowledge

The representation of subject knowledge is a human based design process that can be partially supported by intelligent computer environment. Subject knowledge can be considered at two levels: *instance level* and *category level* ([YUM 96]). The instance level contains concepts of subject knowledge which are in fact factual knowledge, while the category level contains kinds of knowledge - subject categories, introduced by the teacher. For example *conceptual knowledge*, *procedural knowledge*, and so on. It is impossible to define subject categories arbitrary. They are compatible with the nature of the subject and with teacher's viewpoint on the subject.

On this basis, this module allows the teacher to introduce his own categories and to define certain rules for them. Also, this module permits to create the concepts of subject knowledge. Each concept belongs to one of the existing categories. On the other hand, these concepts are linked one to other by different relationships.

According to Yum and Richards ([YUM 96]), one concept may consist of many top level ideas. Each idea may be refined into many second level ideas and so on. These ideas depend on certain perspectives from which the subject matter is "viewed". So, this decomposition creates a tree-network representation of subject knowledge.

Then this representation of subject knowledge is enriched with two kinds of prerequisite links which permit to specify that:

(i) one concept has to be learned before another one;
(ii) one concept has to be mastered before another one.

We have built editor that helps in creating subject categories, concepts of subject knowledge and their relations. It visualises the concepts in a tree-form display. Each concept in the tree can be displayed as one unit or as a subtree of its own subconcepts.

A. Representation of learning materials

This module permits to describe the available learning materials specifying their attributes and selecting their categories. The categories of learning materials are introduced explicitly by the teacher.

For example, one teacher can specify two categories: *hypertext* and *simulation*, while one other teacher, for the same materials, may specify other categories : *passive material* and *active material*.

Then, this module guides the teacher to answer to the following two questions :

- Which concepts of subject knowledge are concerned by this learning materials?
- By means of what is taught this concept?

The answer to the first question is relationship between learning material and concepts of subject knowledge. The learning materials can be grouped. So created group is linked with the concerned concepts specifying that the combination of the learning material teaches the concept.

The answer to the second question is relationship between concept and learning materials. The relationship expresses that the concept is taught by one or more learning materials.

A. Curriculum design

This module permits to the teacher to create some typical curriculum. So created curriculum can be used as a starting point in the creation of individualised curriculum. The curriculum is composed of four parts.

The first part describes preconditions of the curriculum. These preconditions can be expressed as initial student's knowledge, as well as equipment, time, and so on.

The second part gives objectives achieved by the curriculum. These objectives are done whether in terms of concepts of subject knowledge or as a simple description.

The third part consists of lessons and learning materials which are designed to be studied. The lesson is created by certain attributes and by selection of one or more concepts of subject knowledge. The lesson is followed by some learning materials.

These learning materials are chosen from the set of the learning materials attached to the concepts related to this lesson. It is enabled to the teacher to specify certain strategies (preferences) which will lead him in the selection of learning materials. For example, *procedural knowledge* → {*text*, *video*, *simulation*}, gives the preferred categories of learning materials for the lesson related to procedural knowledge concepts.

The last part of curriculum permits to review weak and strong points of the curriculum. These viewpoints are done as description and/or as student's profiles which has been attached to the curriculum.

A. Student's profile and curriculum prescription

Student's knowledge and objectives are described in this module. The initial knowledge and the acquired knowledge are represented as concepts of subject knowledge described earlier. The student's objectives can be represented in the same way or as a simple description. In this way the teacher creates and initialises a student's profile. The student's profile is a starting point for creation of the individualised curriculum.

Curriculum prescription is human-based design process, specifying what is important to learn and which material is adequate to use. We enable the teacher to create student's curriculum in his own way, using the concepts of subject knowledge, but we also offer to him some facilities. These facilities cause advises which may be accepted or completely ignored by the teacher.

Starting with the initial knowledge and considering the learning objectives, the teacher selects a typical curriculum (see 2.4.) or creates an individual curriculum for the student. In the first case certain lessons can be chosen while in the second case it is necessary to create lessons by choosing the concepts of subject knowledge.

Some preferences and constraints of curriculum can be specified by the teacher. For example:

- prescribing rather the concepts of *practical knowledge* category than the concepts of *theoretical knowledge* category;
- verifying if the needed student's time is not greater than x hours.

Initially, all lessons contained in the curriculum are declared as *"mastery is unknown"* and the lessons whose prerequisites are satisfied, are declared *"teachable"* and they are proposed to the student. After certain assessments of the student realised by the teacher, the lessons can have one out of three values: *"is mastered"*, *"is not mastered"* and *"mastery is unknown"*. The lessons which are *"is not mastered"* or *"mastery is unknown"* and whose prerequisites are satisfied, are declared *"teachable"*.

If the teacher estimates that the student is not advancing as planned, he can carry out some changes of the curriculum. In this case the acquired knowledge is taken into consideration.

I. Implementation

Our work is based on layered curriculum structure proposed by Lesgold ([LES 88]) and on granularity hierarchy used in student modelling and adaptive assessment ([MCC 94], [COL 96]).

According to Lesgold ([LES 88], [WEN 87]), curriculum structure has three layers of knowledge. The bottommost is the *knowledge layer* that contains the representation of the knowledge that the system is trying to reach. The middle is the *goal lattice layer* that contains the *"learning goals"* which describe various kinds of learning associated with the *knowledge layer*. The topmost layer is the *metaissue layer*, which contains a number of *"viewpoints"* grouping together various learning goals to form a lessons. We have adapted this structure adding one layer which reflects the fact that the learning materials take an important place in open and distance learning. So, the *material layer* contains the representation of the available learning material. The *goal lattice layer* and the *metaissue layer* are associated directly or indirectly with the *knowledge layer* and the *material layer*. Lesgold's layers are interconnected explicitly by the developers, while in our system the interconnections are created by the teacher.

We have taken knowledge representation scheme used by McCalla in student modelling, known by the name of granularity hierarchy. This hierarchy contains three basic types of objects: *S-objects*, *cluster* and *observers*. *S-objects* and the relations between them are the key components of the hierarchy. *S-objects* represent the domain models known by the system. These objects are linked together with two orthogonal pairs of relations, namely aggregation relationships and prerequisite relationships. The aggregation links allow higher-level concepts to be broken down into subcomponents. The prerequisite relationships represent dependence of one concept through the other concepts. *Clusters* allow us to represent two or more different views of the same concept. *Clusters* are used for implementation of subject categories and categories of learning materials. *Observers* are the interface between the environment and the *S-objects* in the hierarchy. In opposition with ([MCC 94], [COL 96]), where *observers* enable recognition of *S-objects* in an appropriate context, we use them for representation of *S-objects*. In that way, learning materials are modelled within a granularity hierarchy as *observers*: the leaves of the hierarchy.

I. Conclusion

This paper has presented a teacher environment suitable for open and distance education.
The followings are primary contributions of this environment:

- supporting of human-oriented design;
- separation the often confused conceptions of curriculum design and
- content knowledge representation;
- allowing the classification of knowledge;
- integration of the learning materials into the knowledge representation
- and curriculum;

enabling to use some teacher strategies.

Integration of learning activities, whose dynamic nature is not easy to be supported, is one of the important subjects for the further research.

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The Good Distance Language Learner: A Comparative Evaluation of Learner Experience and Success Strategies in a Higher Education Open Distance Learning Context and the Conventional Classroom-based Context

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1. The UK Open University - the concept of supported Open Learning

The UKOU's system of supported open learning for undergraduate students is based on a mixed mode open learning system combining distance methods with face-to-face contact. A typical course will involve:

- Specially written learning materials, produced to high quality publishing standards, including basic texts, course guides and other set books and materials, in print and/or CD ROM
- Allocation to a tutor for the course, who provides a core programme of face-to-face and correspondence teaching (see below)
- Tutor marked assignments (TMAs) - comprehensively commented on by tutors as well as forming part of the formal assessment system
- Computer marked assignments (CMAs) for some courses
- Television and radio broadcasts and/or video- and audio-cassettes
- Group tutorials at a local or regional study centre, usually in the evenings and/or on
  Saturdays
- For some courses, a residential school, ranging in length from two days to one week.
- For some courses in recent years, computer conferencing as a means of tuition or for
  mutual student support
- For most courses a final examination, usually of 3 hours
- Provision of educational advice, guidance and counselling to all students

2. Open distance language courses in the UKOU

In 1995, the UKOU's Centre for Modern Languages presented its first, nine-month, course: a 30 point Level 1 (first year equivalent) French course called 'Ouverture: a fresh start in French', known by the course number L120. This was followed in successive years by two Level 2 French courses; German and (from 1999) Spanish courses are being launched on a similar pattern.

Course level

L120 'Ouverture' is the first of a sequence of 3 courses leading to a Diploma in French and also conferring credit towards a degree. It is not intended for complete beginners. The notional entry level of proficiency in French is just post the General Certificate in Secondary Education, the qualification awarded to school students in England and Wales by the end of compulsory education at age 16 on the basis of successful performance in assessment in each of the school subjects they have submitted themselves for.

In practice, adult students who have opted to study on the Open University's languages programme have a wide spread of prior experience in French Language learning, ranging form none at all to one or more year's of formal study of the language at conventional universities; a small number have experience of living in or frequently visiting a French-speaking country and/or having native speaker partners or friends. The open access policy of the Open University means that students make their own judgements (helped by a diagnostic test) of whether a course is suitable for them. As a result, the intake on L120 'Ouverture' is of very mixed ability, both in proficiency and experience, language skills and study skills generally.

Course content and structure

The course materials, soon to be available also on CD-ROM, comprise 8 course books, video and audio tapes with transcripts, a Study Guide and two assignment booklets. A personal tutor gives academic support throughout the year by telephone or correspondence and marks four of the student's eight assignments (the other four are computer-marked). Face-to-face tuition sessions are available at roughly four-week intervals over the teaching/learning year from February to October; attendance by students is optional.

The classroom-based provision takes two forms: two-hour evening tutorials, normally the student's personal tutor, and four-hour intensive Saturday dayschools, at which a small number of tutors will be supplemented by one or two French native-speaker assistants, to enable students to work in very small groups developing their interactive oral skills. The tutors themselves may be either native or non-native speakers of French. Tutor-student allocation is initially 1:25; an approximately 20% reduction in student numbers over the first two months is usual.

Tutor-marked assignments contain tests of the four skills of reading, listening, writing and speaking. The tutor corrects and grades them and gives written and tape-recorded feedback on the student's performance. Marked scripts are sampled at random and sent to independent monitors. These function as a check for reliability in the grading and also as a support for tutors to give them feedback on their work, thus serving both to assess and to enhance quality. The course has a final examination under

conventional conditions, which also tests all four skills. The weighting of continuous assessment to examination on this course is 40:60.

It can thus be seen that there are many similarities between these open distance language learning courses and the more conventionally classroom-based language courses. The main differences will be found in:

- the form in which students receive feedback on their work
- the frequency and form of contacts with tutors
- the amount of spoken language input provided in a course
- the opportunities for live interaction in the target language with tutors and other students and for witness learning
- the structure and intensity of learning support provided in the course materials and by the academic support systems, and
- the need to maximise all opportunities for learning in the student's own environment.

3. The Survey - Background and Objectives

The language learning context

Research in the area of second or foreign language learning, comprehensively termed second language acquisition, or SLA, in applied linguistics, the field in which such research is usually located, has traditionally focused largely on language learning in the formal educational setting of classroom-based instruction. Since the 1960s, research interest has widened to include the investigation of language learning in a natural setting, generally the learning of immigrants, refugees or migrant workers in countries where the target language is the main or national language. Over roughly the same period, the researchers have also become increasingly interested in bilingual child development, including the acquisition of two languages. Over all, SLA research has tended to concentrate across all the possible learning contexts far on more the learning of children rather than that of adults; it has also focused largely on the conventional classroom setting.

One area of second and foreign language learning which to date has received relatively little attention is that of open and distance language learning (ODLL). A major focus of this research project is to investigate the extent to which the factors which SLA research indicates as being critical to language learning success in contexts other than ODLL also apply to the adult language learner in a supported open and distance learning context, and to explore how far successful language learning strategies in the two contexts diverge or converge.

The crucial success features

After several decades of SLA research, there is a large measure of agreement on the main aspects of successful language learning. As summarised by Ellis (1994) they are:

1. concern for language form,
2. concern for communication and functional practice
3. an active task approach
4. awareness of the learning process (at least in the earlier stages before proceduralization) and
5. capacity to use strategies flexibly in accordance with task requirements

Aspects 1 and 2 combine in the good language learner; the attention to the formal properties of language, the monitoring of one's own and others' speech, the concern to learn from one's errors is paralleled by attention to meaning. As has been reported in more recent studies, (e.g. Reiss 1985, Lennon 1989), good language learners search for meaning in the language data they are exposed to and use every opportunity to engage in real communication and natural language use. The ability and readiness to switch to and fro between attending to meaning and to form may well be a crucial feature of successful language learning. Aspects 3 to 5 are, of course, generally recognised as critical factors in all learning, in any context.

In the case of language learning at a distance, all of these aspects have special significance in that learners are thrown back to a much greater degree on their own resources than is the case with the classroom-based learners who have been the subjects of most investigations of language learning success. Good ODLL programmes will provide learners with extensive support and guidance on useful approaches and strategies, and will have a balanced focus on form and meaning. However, distance learners will very largely have to bring to the programme or rapidly develop for themselves, without outside input, the features that make for successful language learning. It may therefore be reasonably assumed that the characteristics of cognition and personality most often associated in the theoretical and empirical literature with the effective learning of second or foreign languages in classroom and natural settings will be even more important for open and distance languages learners.

The main features of the individual language learner to have been investigated in second language acquisition research are:

- Age
- Aptitude
- Affective state
- Beliefs about language
- Personality
- Cognitive development
- Learning style
- Motivation
- Strategic competence

It is the last three of these that are the main areas of exploration of the current study.

4. The London Survey - Methodology

A survey was undertaken of the 286 students in the London Region active on L120 in April 1996, two months after the start of the course. This survey (due for completion in summer 1997) looks at the learning strategies adopted by students in relation to the course requirements and materials, at their contact with their tutor and other students, attendance at tutorials and day schools for the course, use of other sources of learning, and their assessment scores; and considers the relationship between these factors, the implications for language teaching in the UKOU, and the insights gained for language teaching and learning in general.

The main vehicles for conducting the research were a written questionnaire (which will be referred to in this paper as Questionnaire 1), sent to all 286 active students in April; and a telephone interview (based on an outline questionnaire, which will be referred to as Questionnaire 2) with 48 students selected from the 144 who responded to Questionnaire 1.

The Questionnaire 1 asked questions in 3 broad areas:

- Tutorial and day school attendance, contact with tutors and other students
- Use of preparatory and course materials
- Other learning opportunities and support

Three final questions ascertained the student's previous qualifications in French, their own view of their development in confidence and ability since the start of the course, and their willingness to participate in a telephone interview.

The telephone interviews (Questionnaire 2) were carried out by 4 project assistants, all experienced UKOU language tutors. No tutor interviewed any of her own students. The 48 students were selected according to the following criteria:

They had all expressed their willingness in Questionnaire 1.

- None of them had declared a formal qualification in French above the equivalent of the standard lower school leaving certificate (the entry level recommended for the course).
- Based on Questionnaire 1, a balance between students who had attended both, one and neither of the tutorials offered so far
- A gender balance to reflect that of the overall London L120 population
- Equal representation from all 16 London tutorial groups

A small number of students found themselves unable to match our interviewing timetable and reserves were included; this slightly modified the balance above under the last 3 criteria.

The telephone interviews took place from June 24 - July 6 1996. They followed many of the points made in Questionnaire 1, but focused particularly on learning strategies.

The subjects' course results were recorded and correlative analysis was done of results and a range of learner features, including learning strategies.

This paper will report on the outcomes of the telephone interviews and initial results analysis.

5. Summary of Telephone Interview Findings (Questionnaire 2)

A major purpose in the evaluation and analysis of interview responses was to identify language learning strategies and specific techniques. These included both strategies and techniques recommended in the course itself, and those which students had either brought to their language learning from experience elsewhere or had explored and developed while following L120. As used here, the term 'strategies' refers to both behaviours and mental processes, although the nature of the study - self-report plus probing - means that the main focus is necessarily on conscious strategies, employed intentionally by the learner.

The present study was designed to elicit accounts of both indirect and direct strategies. In this, we have followed the distinctions drawn by Oxford (1990) in relation to conventional language learning settings, who classifies direct strategies as those that 'directly involve the target language', whereas indirect strategies 'provide indirect support for language learning through focusing, planning, evaluating, seeking opportunities, controlling anxiety, increasing co-operation and empathy and other means'. The former comprise memory strategies, cognitive strategies and compensation strategies; the latter analyses out into metacognitive strategies (planning, managing, monitoring and evaluating one's learning and performance), affective strategies and social strategies. Again, given the design of the study, it is perhaps unsurprising that indirect strategies were more fully reported on than were direct strategies, although probing by the interviewers revealed that a number of respondents were indeed using a variety of direct strategies.

All responses were evaluated under whichever of the six thematic headings was or were applicable. More detailed analysis focused on the most salient features of the interviews. We shall report here on those findings which appear most promising in terms of their significance as predictors of language learning success, looking first at indirect strategies.

Responses to questions exploring students' approach to the language learning task set them by the course range from the entirely passive, such as 'I do no more than I have to' to the extremely active, in which the students seek out and exploit a multiplicity of learning environments and resources and opportunities for practice . The active approach was also evidenced by students who reported using their own initiative to identify and deal with their individual language learning problems. A further potential success factor is the degree of creativity shown by students in the use they make of all available opportunities to enhance their language learning, both within and outside the course. The responses to these areas of questioning correspond closely to those

reported by Naiman et al (1978) in their exploratory study of the task approaches of adult language learners in a range of learning settings.

Questionnaire 2 was designed to contain both directed and semi-directed questions, and provided prompts for the interviewers to use to encourage the interviewees to expand on their responses and reflect on certain aspects of their language learning experiences. Interviewers were also instructed to pick up on interviewees' responses to items on Questionnaire 1 and probe these further in relation to specific questions of Questionnaire 2.

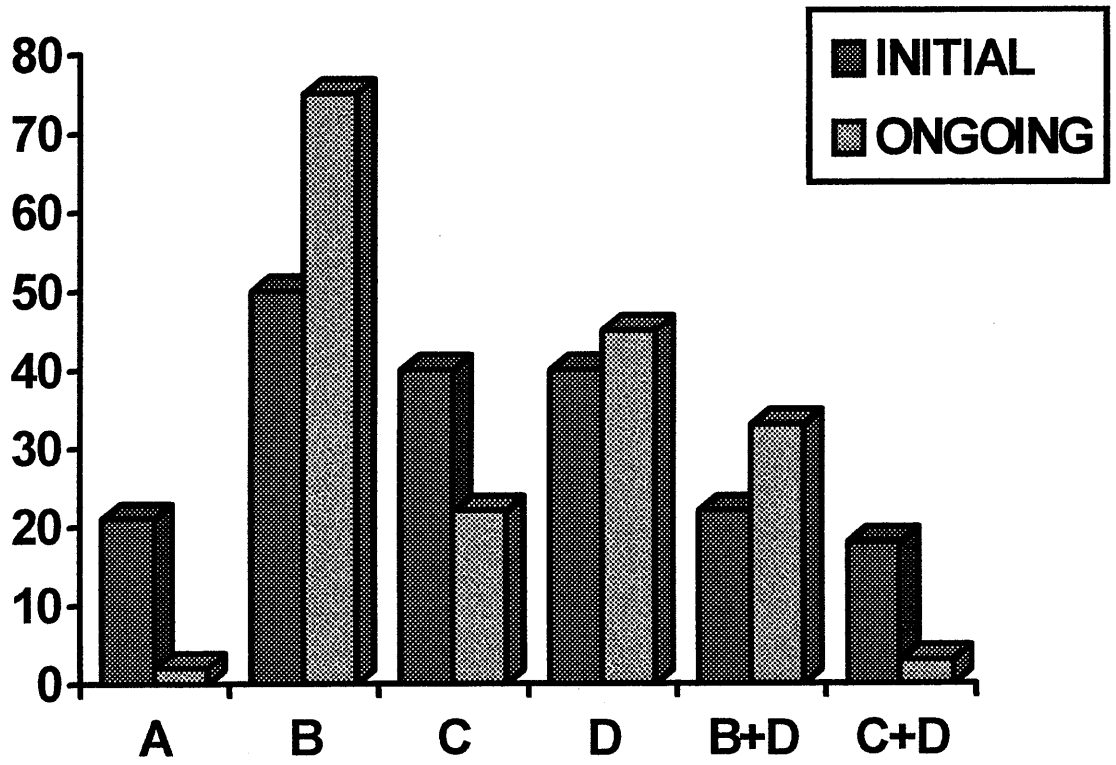
Questionnaire 2 was divided into six sections, with 40 questions in all, sequenced to produce as smooth a progression as possible from personal background information through details of the course itself and on to the more reflective consideration of students' own language learning strategies. The sections were:

I Student open learning and language background (Q1-6)
II Use of course media and materials (Q7-15)
III Use of course delivery modes (Q16-28)
IV Language learning strategies and resources not covered elsewhere (Q29-35)
V Use of extraneous learning resources (Q36-38)
VI Concluding questions (Q39-40)

Many of the language learning features to be investigated were reported on by respondents under more than one question of the questionnaire. For example, Q20, which investigated what use respondents made of the feedback received from their tutor on their assignments, consisted of an open, semi-directed question followed by directed prompts. However, subsequent questions where respondents were invited to amplify freely on their approach to different aspects of their language learning provided further information on the topic of Q20. For evaluation and analysis purposes it was decided to treat the respondent data under six major thematic headings. These themes cut across the sections into which the telephone interview questionnaire was organised. The results will be presented in summary and separately for each of these six thematic categories. For the purposes of this paper, only thematic category 4, language learning strategies, will be considered in any detail.

5.1 Student motivation.

Motivation to study the course L120 'Ouverture' was analysed in four categories: A. instrumental (professional, enhancement of qualifications), B. intellectual (love of learning, including language learning for intellectual satisfaction, desire to preserve skills acquired in the past), C. integrative (practical, survival skills on visiting/living in France, desire to communicate with French-speaking friends and family members) and D. social reasons, not related specifically to French (enjoyment of OU study community, contacts with other students). In more conventional language learning settings instrumental and integrative motivations have been widely shown to predominate. Clearly, a student may have more than one type of motivation; and motivation may change during a course. This study looked at initial and mid-point motivation, including why students chose the course, how they maintained motivation and what aspects of their learning experience kept them going.



Initial versus ongoing motivation for study of L120 - percentages

Key: A = Instumental factors
B = Intellectual and cultural interests
C = Practical and survival skills
D - Social study factors

Initially, instrumental motivation (A) - perhaps unsurprisingly for this group of independent adult learners - was relatively low, reported by 20.8% of respondents. 50% gave intellectual reasons (B). Integrative motivation (C) was declared by 39.6%, which ties up with the 56.25% of respondents who had French speakers as friends or in the family. General social, context of study, reasons (D) were also cited by 39.6% of respondents.

Interestingly, the picture alters significantly when students reported on their current motivation, midway through the course. Instrumental motivation (A) was reported by only one student, 2.1%; intellectual motivation (B) had risen sharply to 75%; integrative motivation (C) was now only cited by 22.9%, while general social study community reasons (D) were given by 45.8%. Interpretation of these changes is not straightforward, but one factor seems to be emerging here. The more pragmatic reasons for choosing to study French with the OU are being gradually overtaken by the intellectual enjoyment and social satisfaction of the learning experience and

environment. This finding, and its implications for course designers and the provision of academic support, clearly merits further investigation.

5.2 Previous language learning experience and previous residence outside the UK.

The notional entry level of the course, a lower intermediate level of proficiency in French, was assumed to be the baseline target language competence of all respondents. Since one of the factors for good language learning identified in much of the research literature (c.f. Ellis 1994) is an interest in and aptitude for language acquisition, the telephone interview also explored the respondents' previous experience of learning languages other than French and of residence outside the UK.

34 (70.8%) of the respondents had formally studied a language other than French, with 25% having studied two or more. The first language of most students, and the medium through which they were educated, was English (87.5%). 6 (12.5%) had spoken a language other than English in their childhood home, of whom 5 had also been educated through a language other than English. 29 respondents (60.4%) had lived outside the UK for one month or more, sometimes for years. It is likely that this experience differs significantly from that of other OU students.

The Good Distance Language Learner
Questionnaire 2 - main findings

Area 2: Previous experience of language learning and residence abroad

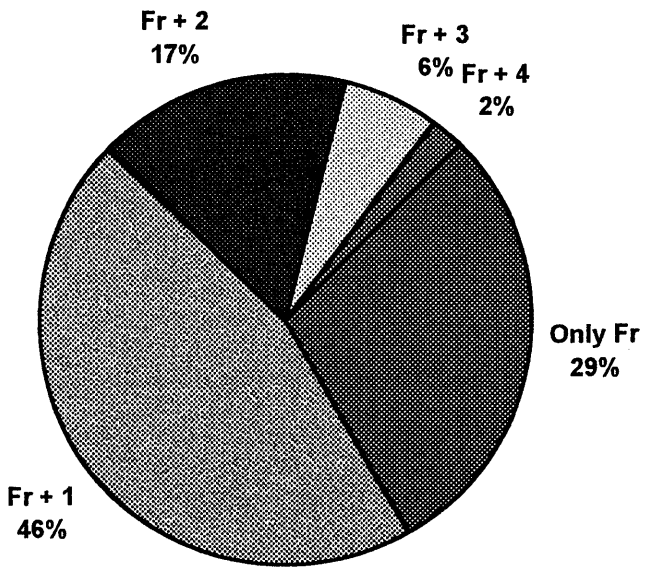
- **Previous second language learning (SLL)**
- ***70. 8% had SLL experience in addition to French***
- ***25 % had studied 2 or more SLs***

Residence outside UK:

- ***60.4 % had lived abroad for periods > 1 month***
- ***41.6 % had lived in non-English, non-French-speaking countries (33.3% for > 1 year)***
- ***12.5 % had lived in French-speaking countries***

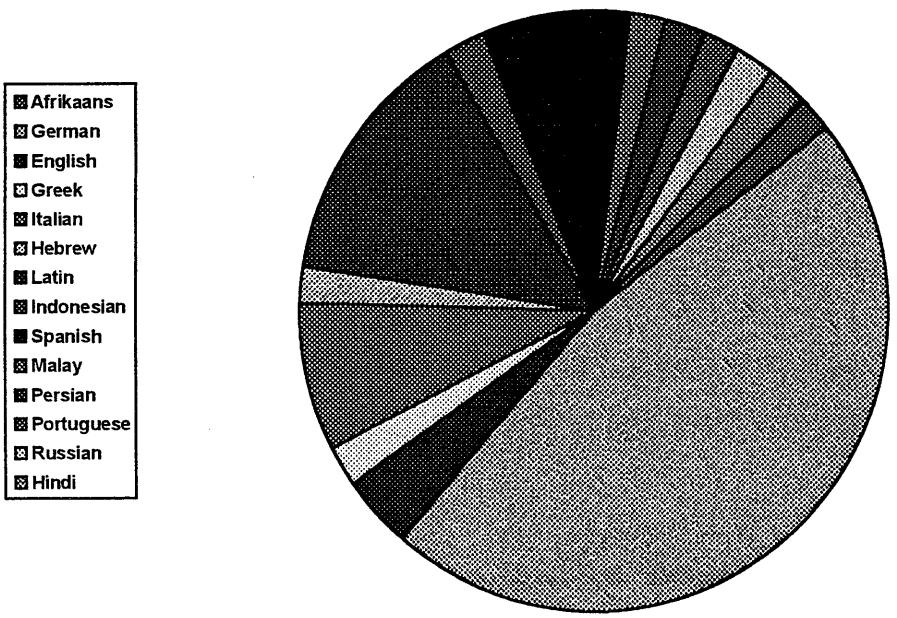
On both factors DLL students not typical of Open University students as a whole

Only Fr	Fr + 1	Fr + 2	Fr + 3	Fr + 4
29.2	45.8	16.7	6.3	2.1



Comparative previous language learning experience

21.9	1.6	35.9	3.1	1.6	6.2	1.6	10.9	1.6	6.2	1.6	1.6	1.6
No	Afr	Ger	Eng	Gr	Ital	Heb	Lat	Indo	Sp	Mal	Per	Port



Languages studied other than French

5.3 Rate of attendance at face-to-face tuition sessions.
At the time of responding to Questionnaire 1, students had had two opportunities to attend tutorials. The telephone interview sample had equal numbers of students who had attended both, one of the two and none.

Between Questionnaire 1 and 2 (telephone interview), there were 2 four-hour intensive group dayschools. 43.75% of respondents had attended both, 31.25% had attended one and 25% had attended none. Respondents were clearly aware of the importance of this opportunity, since non- and partial attenders generally were at pains to mention what had prevented them from attending. Attendance is one of the factors which will be compared with continuous assessment scores and examination results in the second phase of the project.

5.4 Language learning strategies.
Learner strategies are increasingly being recognised as a major factor in language learning success. The consensus appears to be not so much that certain strategies are linked to success, but that successful learners have a wide range of strategies, thus enabling them to choose the most appropriate tools for the task in hand (c.f. O'Malley and Chamot, 1990). This ability will tend to be even more important in a distance language learning context, in view of the infrequency of face-to-face contact with a tutor and the high level of autonomy that the distance learner needs to develop.

a. Use of the telephone and correspondence.
One striking factor to emerge from questions on use of course delivery modes and media is the very limited use students make of their tutors as a language learning resource. Only 8 students, 16.66%, had phoned their tutor to discuss language learning problems. Even more striking was the infrequent use of such contacts for support when producing assignments. Only 3 students, 6.25%, had called before submission. The same figure exactly applies to student contact with tutors after receipt of their marked assignments. Such a finding calls into question the assumption of most providers of supported distance education that open learners of language will make full use of their access to a tutor, and requires detailed further investigation.

The infrequency of students' use of telephone contact to their tutor is matched by the infrequency with which tutors initiate contact with their students specifically over language learning issues. Only 6 students, 12.5%, had been contacted in this way. No criticism was offered by respondents about such lack of contact. Obviously, the language students have only limited perceptions of tutor contact as being an important part of their language learning strategies. It also emerges clearly that tutors tend not to see use of the telephone as an essential part of their approach to language teaching or learner support.

b. Use of tutors' feedback on assignments
The detailed marking of students' assignments at two-monthly intervals throughout the eight months of the course, coupled with in-depth feedback on the students' performance with suggestions for remediation and development, is a central plank in the teaching strategy on all OU courses. L120 being a skills-based course, marking

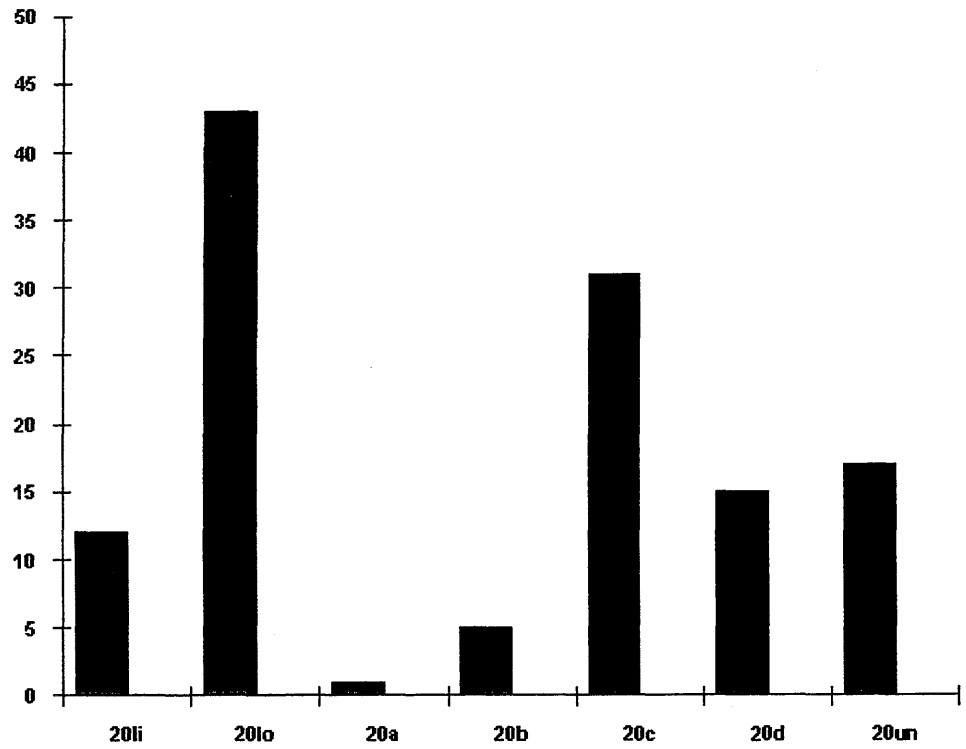
and feedback is done for each of the four skills of reading, listening, writing and speaking in each assignment. The open-ended tasks of writing and speaking tests (the latter being recorded on cassette tape) require careful processing by the tutor. Feedback on the speaking tasks is both written (general comment) and recorded on the student's cassette (more detailed correction and the giving of models for practice).

In studies of students' language learning strategies as applied to the processing of teacher feedback on their work in classroom-based settings (cf Cavalcanti and Cohen 1987) the most widely used strategy is to go straight back to the teacher to ask for explanations. Since written and recorded feedback is such an integral part of the OU course provision, it was interesting to see what use students make of this feedback and whether this more formal input from their tutors was seen as an essential resource. Question 20 a - e explored precisely what students do with the marked and corrected assignments and their tutors' personal feedback on them. The responses were highly illuminating, not least of areas where students needed much more support to develop successful distance language learning strategies.

To the initial question of what students do when they get their corrected and commented assignments back, 24 (50%) reported that they merely went through it again, checked it, or read it again. Initially, this suggests parallels with the findings of Reiss (1985), who identified such minimal learning strategies with lower grade students, which would be a most disappointing finding. However, when students were invited to expand on their approach in this context, the range of strategies deployed was seen to be somewhat larger. In all, 34 respondents, (70.8%) had at some stage followed up their tutor's feedback in at least one respect, in addition to 'going over it again'. 12 respondents, or 25%, had used the most obvious of the prompt strategies, namely, looking up their mistakes in the coursebooks or their grammar, but had not deployed any other strategy. Of the four follow-up activities suggested in the prompting, 14 respondents (29%) had used none, 19 (39.6%) had used just one; 12 (25%) had used two of the four, and 3 (6.25%) had tried three of the suggested techniques and none had used all four. When invited to amplify, a number of respondents mention follow-up activities not included in the prompts. These included 'filing the assignment for easy reference next time', copying phrases into their dossier, and checking the corrections with French friends. However, 13 (27.1%) do not use any strategies at all.

The picture is even less promising in the case of students' specific follow-up to feedback on their recorded speaking activities. Tutors give feedback both in writing and by recording comments and models on the students' tapes. Only one student had thought to rerecord her monologue taking into account the tutor's corrections and suggestions. Five more had practised repeating corrected pronunciation or intonation or vocalised corrected sentences or phrases. The remainder (87.5%) had listened to the tape on its return but made no active response to the feedback. Receiving correction done orally on tape by the tutor is of course quite novel for most students. Nevertheless, the level of activity reported for both writing and speaking assignments does not suggest that students are adopting the active, self-critical and reflective approach to distance learning of languages that tutors and course materials attempt to foster and which evidence from good language learner studies done in more

conventional learning settings would indicate to be a crucial success factor (c.f. Cohen 1987, Chamot 1987, Lightbown and Spada 1993).



Number of respondents using each type of strategy in processing TMA feedback

Key:

Q20 Strategies
20li = listen again
20lo = look through again
20a = rerecord with corrections
20b = rewrite with corrections
20c = look up errors
20d = use in example sentences
20un = unprompted strategies

The Good Distance Language Learner
Questionnaire 2

Area 4: Language Learning Strategies

Two main types of strategy investigated:

1. **Use made of tutors' feedback on assignments**
2. **Use of vocabulary and grammar learning strategies**

Summary of findings:

Use made of tutors' feedback on assignments

- ***22.92% adopt no active strategies for learning form tutor feedback on their work***
- ***35.42% had devised own active strategies to use instead of or in addition to those recommended in course materials***
- ***39.58% used just one active strategy recommended in course***
- ***31.25% use two or three recommended active strategies***
- ***Most popular active strategy is the most conventional***
- ***Little evidence that strategies are devised for learning from sources specific to the DLL context, e.g. the distance tutor***

c. Use of grammar and vocabulary learning strategies.
Strategies for the learning of new grammar and vocabulary were also investigated. Here the pattern is rather different. Only 9 (18.75%) of respondents had no positive strategies or techniques for learning new grammar. 31.25% mentioned memorising techniques as the most important device here; 29.2% used their dossiers for writing notes of explanation, a strategy adapted to their own needs from the course Study Guide.

Vocabulary learning strategies included oral activities such as recording new words on tape, analysing notes made from radio broadcasts and guessing meanings from contextual clues on the videotape; total respondents using oral strategies: 10.4%. Exposure to passive learning from various French language sources was used by 14.6% of respondents. Using new words in writing was favoured by 18.75%, while 39.6% had employed self-testing techniques. Only 3 (6.25%) had not used any specific techniques to help them expand their lexical repertoire.

The Good Distance Language Learner
Questionnaire 2

Area 4: Language Learning Strategies

Use of vocabulary and grammar learning strategies

- *No strategies reported: 18.75%*
- *Mainly memorising techniques: 31.25%*
- *Creating grammar dossiers (recommended strategy): 29.2%*
- *Oral vocabulary learning strategies: 10.4%*
- *Using new vocabulary in writing: 18.75%*
- *Self-testing techniques: 39.6%*

Somewhat greater frequency of strategy use here. Heavy reliance on familiar memory-based techniques; listing and rote learning. Limited repertoire.

d. Learning strategy and the open distance language learning context.
There would appear to be a major discrepancy between the range and frequency of the use of strategies - or, more precisely, techniques - in the learning of discrete elements of the language (here: grammar and vocabulary) on the one hand and in the learning from tutor feedback on one's performance on the other. The approaches to learning new vocabulary and grammar are largely the familiar ones that most students will have encountered many years ago in the more conventional setting of their secondary or high school language classroom. They rely heavily on memory-based approaches. The same limited repertoire is applied to many aspects of learning on this course.

In the absence of the high-frequency direct input and feedback from a teacher in the conventional classroom setting, the development of self-instructional strategies appears essential. Where the learning context is new to them and the situation novel, as in open distance language learning, students do not seem overall to have consciously devised individual strategies for learning from those sources which are specific to this context and situation, foremost among these being the distance tutor. This suggests the advisability of training students in alternative strategies and ways of exploiting the context-specific resources.

5.5 Study planning and management
Three of the forty questions on questionnaire 2 related to students' use of non-language-specific, i.e. general, study strategies. Initial findings are that the study skills advice and support offered to all OU students is appreciated and well used by those studying L120. However, many students reported having time management problems. 56.25% were taking longer than the recommended 6 to 7 hours per week over their language studies, and many reported having difficulty setting aside regular periods of the quiet time necessary for video and audio listening activities. Whereas on content-based courses distance students may be able to keep up by studying for just one long weekend a month, this approach is likely to fail on a skills-based course, where regular and frequent practice is essential.

5.6 Evaluation and use made of the course materials and course resources provided, including face-to-face tuition.

In part 5.4 we discussed the strategies and techniques developed and used by the students to enhance their distance language learning. It was established that, in the ODL context, students were to a much larger extent themselves responsible for creating and maximising their own learning opportunities. Our findings to date indicate that many students' repertoire in this area is deficient.

Under the sixth thematic heading, an evaluation was made of how those materials and learning opportunities (other than the feedback on work) which are provided explicitly by the course are being used by students. The findings, in short, are that, while the elements of the course provision which are more traditional and familiar (course books, printed study guide and audio-tapes) are fully exploited, those elements which require a greater conceptual effort on the part of students if they are to be optimally exploited are underused. This applies in particular to the videotapes, which many students report finding interesting 'but not obviously teaching me anything'.

Rather surprisingly, it also applies to the opportunities for face-to-face tuition and speaking practice. A majority of students found interactive oral work in small groups very useful, but there are very few responses relating to other uses that students have made - or suggested to their tutors - of the tutorial and dayschool provision, and the presence at the latter of foreign language, French native-speaker, assistants. Once students enter the classroom, it seems, the autonomy and independent learning skills acquired by distance language learners drop away and the students revert to a more passive approach to learning.

6. Project Completion

The final stage of the project, due for completion by the autumn of this year, involves the correlation analysis of students' scores on assignments and in the examination with the factors described above. This may help to identify successful learning strategies in terms of their association with good course results.

One early finding is of particular interest: although students value the role of their tutors highly as a source of support, guidance and feedback on their progress, and as facilitators of group tutorials and study groups, they do not appear to have strategies for exploiting them as a direct language learning resource. However, surveys of classroom based language learning courses suggest that students are more successful if they do use tutors in this way.

The question remains: are open and distance learning courses different? Do students on these courses require different learning strategies? Do they substitute different direct language learning resources for the tutor? If so, which of these lead to success? The final stage of the project should shed light on these questions.

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Notes from the Margins: Library Experiences of Postgraduate Students Studying in the Distance Learning Mode

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Introduction

This paper reports the findings of a 12 month diary study of the use of libraries by postgraduate distance learning students following courses delivered by conventional universities in the UK. It also presents a composite account of the experiences of a fictional student, Alice, drawing on the evidence from the diaries.

The diary study, which was part of a larger research project funded by the British Library[1], confirms several of the findings from a prior large scale questionnaire survey, and dramatises the battle with time, institutions and resources, which many distance learning students face. The study illustrates the currently clandestine nature of distance learning students' library use, while confirming the value which students place on making personal visits to libraries in order to browse books on shelves. In addition, the study suggests that the burden of arrangement for library provision is not currently being fully met by providing institutions, with other universities, public libraries and specialist libraries fulfilling many student needs. With the growth of distance learning in the conventional university sector, this study raises questions about the traditional assumptions about ease of reciprocal access, as well as the widespread availability or desirability of electronic options.

The diary study involved 47 postgraduate distance learning students in keeping records of their library use for periods varying between 3 and 12 months from January to December 1995. The students' homes were widely spread across the UK. They were following courses, delivered by 12 dual-mode universities, in a range of subject areas. Between them, the diarists returned 830 records of library use.

Volunteer participants were invited through a larger questionnaire survey. They were sent a short Personal Details questionnaire and a series of Library Log sheets, with guidance for completion after every occasion of library contact or use, including telephone, postal and electronic contact as well as personal visits. The manner of each contact was recorded, along with a open-ended comments by the student. In their open-ended comments participants were invited to record anything which might have a bearing on library use for students such as themselves. The diaries were submitted at the end of each three month period, at which point continuation was encouraged if appropriate or feasible. Inevitably there was a gradual reduction in number due to courses ending or studies being suspended. Because the participants were volunteers, many were also enthusiasts for libraries and therefore may not be representative of the whole range of distance learning library users. However untypical they may be, they

[1]The research project was conducted at the University of Sheffield from 1994 to 1996 and was directed by Lorna Unwin and Neil Bolton. Findings of other aspects of the research are reported in Unwin, Bolton and Stephens (1996).

present a picture of what happens when enthusiastic library users try to meet the requirements of their courses.

While surveys have been conducted in Australia and North America (see Stephens, 1996, for a summary of the literature) the larger research project of which this diary study is a part represents the first attempt to map distance learning library use across the UK university sector.

The Sample

Of the 47 students who agreed to participate for at least 3 months, 35 continued for 6 months, 22 for 9 months and 9 completed diaries for a full year.

The table below represents the characteristics of the diary sample:

Subjects:	***Education***	***Management***	***Library and Info. Science***	***Law***	***Medical***
	15	12	15	3	2
Residence:	***Scotland***	***Wales***	***Northern Ireland***	***England***	
	5	3	2	37	
Age:	***Youngest***	***Oldest***	***Average***		
	26	51	39		
Gender:	***Female***	***Male***			
	30	17			
Occupation:	***Unemployed***	***Teachers***	***Educational Managers***	***Librarians***	
	1	13	2	9	
	Medical	***Other tech./man.***			
	5	15			

The number of years participants had spent in higher education prior to the current course varied from none to 10, with 3 being the most common response. Professional experience averaged 15 years, with a range from 4 to 30.

Previous years HE:	***Least***	***Modal response***	***Greatest***
	0	3	10
Years professional experience:	***Least***	***Average***	***Greatest***
	4	15	30

Training previously received

Training in library use varied from having never received any at all, to very extensive for a participant holding a senior position in an academic library. The table below shows the numbers indicating various aspects of previous training for current and previous courses.

	Current Course	Previous Course(s)
received information pack	25	21
guided tour	15	28
talk by library staff	18	23
library task	4	9
hands-on database search	11	13
introduction to JANET	3	2
course unit or part of unit	3	8
other	2	1

In all, 6 participants relied totally on previous experience in earlier courses, having received training in none of the above categories as part of the current course. A further 13 had received no training as part of their current course other than an information pack about the library.

How libraries were contacted

Overall, 830 records of library use were returned over the 12 month period. For each record of library use, participants were asked to indicate the manner in which they had made contact with the library - whether by visiting in person, or through another person, telephoning, using the post, or making contact via a networked computer from home or work. They were also asked to indicate how much time had been spent in the process.

The table below indicates how many times each of the above ways of contacting the library were reported:

	Number of times library used	% (of diary entries)
by visiting in person	585	70.5
by telephone	142	17.1
by post	72	8.7
through another person	21	2.5
by on-line sessions	28	3.4
Total	848*	

(*This figure is greater than the number of diary returns because in some cases the same return was given more than one code.)

The table shows that by far the most common way of making use of the library was by personal visits, which account for the vast majority of the diary records. The next most common mode of contact was by telephone, with postal and on-line contacts representing only a very small proportion of the records.

For 741 of the diary entries, a time was given for the period of use. Overall, the diarists recorded 666 hours and 25 minutes of library use. The average recorded length of use was approximately 54 minutes, with the longest record being 7 hours. Out of

563 personal visits, a total of 614 hours and 10 minutes was recorded, with an average time for personal visits of approximately 65 minutes. The table below gives times in minutes for all the recorded modes of contact:

	No. Records	%	total time (mins.)	average (mins.)	maximum (mins.)
Personal visits	563	73.6	36,850	65.45	420
Telephone	136	17.8	1,745	12.8	180
Post	23	3	195	8.48	60
Another person	18	2.4	320	17.7	120
On-line	25	3.3	995	39.8	180

In each case the smallest time recorded was 5 minutes or less.

Personal visits
Overwhelmingly, these students are making use of libraries by visiting them in person. A number of themes arise from the comments they make regarding these visits. These themes are elaborated under the headings below.

Telephone contact
Use of the telephone was the second most frequently recorded means of contact. Its use was described for a variety of purposes, including enquiries about opening times, renewal of books on loan, requests for photocopies or books to be sent by post and requests for literature searches. Comments varied between the delighted and the frustrated:

> *(The librarian) is always so obliging and is able to answer queries. She always tries to get what you order and never appears to get tired of requests. (She gets a lot from me.)*

> *The lady who answered was very abrupt and told me she hadn't time to answer the phone and take details as she was busy - so ring next term when the students were back or better still call in next term and use the library myself. I was very angry.....*

By post
Only 3% of diary entries recorded use of postal services. Those who did use such services sometimes described great pleasure in receiving much wanted books by post.

> *At last. Just when I really needed it. I have until 20 July but I will be finished with it by then - great.*

However, problems were noted connected with the receipt of books by post.

> *...the book delivered was for last term's assignment. I feel I ought to read it to justify the cost.*

Unfortunately, only one of the three books I received was really useful. Postal borrowing is an expensive way to browse.

None of this postal borrowing is cheap - I paid £3.80 today in postage in order to return material.....

Visits by other people

Reliance on other people to gain access to books arose as a strategy by some of the respondents to the questionnaire survey, was highlighted for Australian DL students by Winter and Cameron (1983). Of our diarists, 15 made comments at one time or other which related to getting material through visits to libraries by other people. For example:

My daughter is a student at ..... and so she said she would look for a book for me . Unfortunately the library stock was very limited.

Only open Mon- Fri 9-5 during summer, not very useful for those who work. Have sympathy for my wife's enforced day trip.

On-line access

Access to library services via a networked computer from home or work, accounted for a similarly small proportion of library contacts (3.3%). Of the comments relating to on-line contact, the majority concerned the use of electronic mail. This confirms the finding of Ladner and Tillman (1992) that even for specialist librarians, the most frequent use of networked computers is for electronic mail.

E-mail to librarian re library search she is conducting on my behalf.

I now have e-mail on laptop at home so can communicate with librarian whenever the urge takes me.

Sent list of 6 books/articles to house librarian via e-mail.

The following comments, all from the same person, concern difficulties in gaining on-line access for other purposes:

Access gained to ..... but couldn't get access to other libraries from there. Disappointing and time consuming and probably expensive. Will discuss with computer staff during summer school.

I originally thought that I would be able to access various journal databases and do searches of contemporary material. However, so far it appears that although I can get into various library catalogues for books, I cannot get any journal databases. This is a large disappointment because it appears I'm going to have to continue to wear out shoe leather and beg physical access to local universities and pretend to be a real student so I can use Cdrom services.

This is where I get frustrated. I don't think I know enough about the technology to make full use of it and the longer I'm using the connection the more concerned I become about the cost.

Use of the various types of library

Diarists were asked to indicate the library to which their comments related. The following table shows the number and percent of comments relating to the various types of library used.

		%
Host university	122	14.8
Other university	290	35.2
Specialist library	200	24.3
Public library	137	16.6
Further education	73	8.9
Other	2	0.2
Total	823	

Clearly, these diarist are making extensive use of libraries of universities other than those which deliver their courses. The second largest frequency concerns specialist libraries of various kinds. Frequently, these are libraries run by professional organisations or services.

Public libraries

While the diary group seemed to make proportionately less use of the public library service compared to the student questionnaire sample as a whole, nevertheless the public library seems frequently to be regarded as a good place to study and a valuable source of material, as the following comments reveal:

Used reference library for quiet study in preparation for exams.

This is a very small branch library, but it's always worth checking just in case. I did get one book which is relevant.

Actually had all I requested, to my surprise.

No suitable finance or banking books - but OK for social sciences.....I'm surprised by the number of suitable books a small public library ...holds.. It's also a pleasant place to work and the staff are generally helpful.

One diarist expressed her frustration with borrowing restrictions:

....decided to see if the lending library was any good. Again same OPAC and some of the titles I need are available. Looks more hopeful. Also did author search and found one or two not on my lists but potentially interesting and useful. Good. Joined up and proceeded to locate 5 books - 3 of them on my list. Then came the crunch - because I live and work outside the city boundary (only 11/4 miles away) I can only have 3 books at a time. If I worked or lived in the city I could borrow 12 at a time. How phenomenally frustrating! The staff were generally pleasant but when I asked to see the Chief Librarian or

someone with whom I could explain my needs.....the shutters came down. Rules are rules, we can't make exceptions.....why not try writing - all these and other equally frustrating remarks. Not the most relaxing way of spending several hours of a much needed 3 day half term, especially when I had hoped to get some serious reading done.

But apart from situations like this, several comments suggested a high regard for the public library service, and indicate the manner in which its use can be a family affair which is integrated with other aspects of life:

The library at the end of our road stays open until 7.00pm every Tuesday. So, most Tuesday evenings after tea the whole family pops down. While the children browse through the books I look over the fiction and non-fiction, perhaps read one of the local papers, occasionally order a book from another (county) library.

This is probably off the point but is word in favour of my wonderful local library. I had reserved a book for my daughter' school work which was found to be out of print and difficult to obtain. In 2 weeks it was located for me.....and was waiting for me to collect. This service was provided free of charge and with courtesy and a smile. If a little library can go to that effort for a six year old, I think it is an excellent service. .....I may follow up the possibility of them finding texts for me, as I walk past this library every day on my way home.

Host university library

While the host university library seems to have been used a little less than public libraries, several entries were made regarding its use during residential periods or special visits:

This was during the residential weekend. A request had been made for the library to be open for longer than the 2 hours on the Saturday afternoon as on previous occasions - so we got 3 hours. I didn't find it easy to find the documents I had tried to request the previous day - in fact only 2 of the 5 as other people were wanting them as well - had to queue for a ticket to use the photocopier and then the queue for the photocopier was long so gave up and went in search of other material. I never used my ticket so wasted my money.

One student pointed out that the study school may not be the best time to select material:

I decided given past experience, not to borrow any items. The idea of library time is to get some ideas for the second year project. I felt unable to do this however, preferring to do some work on the modules before making a decision.

During the study school I really felt no pressing need to use the library - excellent though it is. It is not until I actually start working through the modules that I need library services.

After then deciding to spend time at the library en bloc (the only way of carrying out a preliminary literature search) I then decided to commute for at least 3 days to .....

Having made this decision, the same student experienced difficulties:

I did not realise it was the end of term, the library is packed with students desperately trying to complete assignments. I couldn't get near a PC to carry out my search. (I should have thought about the timing of the visit, I had spoken to people at the university but no mention was made of difficulties accessing services at this time of the term.)

Is the library now closed on Saturdays? This is not very helpful for DL students. The term might have finished but our work is continuous until October and has to be fitted in around full time jobs. There seems to be an utter disregard of our needs. Now I am going to have to pay fines on the books as well.

Complaining of difficulties regarding loan periods for DL students:

I was told this system is geared to the full time students and could not be changed. (So much for equality.)

In the absence of any postal service, one diarist said this:

...how can a DL student use a specialised library which is 108 miles away from her home (2 hours drive each way) and only borrow books in person - yet have to complete assignments where one of the criteria for marking is for evidence of further research beyond the set books.

Libraries of other universities

Over one third of the records returned concerned visits to university libraries other than the host library. These records confirm many of the issues which arose from the questionnaire survey.

There can be problems gaining legitimate access in the first place. One student relied on her friend to get her inside a library which has introduced restricted access:

My friend is studying at .....They have introduced ID cards so there is limited access therefore she came along to ensure I could use the library.

Another student described at length the problems she had in renewing a reader's ticket and the response she received to a request to extend borrowing rights:

I arrived today with the final book ready to discuss my case with the most senior person available if my card was still trapped. It was cleared as soon as the book went in. I asked about the date of expiry on my card and was told that it was up. The librarian offered to extend my card until August 1995, but

once again warned me that the external readers cards were 'under review'. I heard this phrase on the first day I received the card, which I believe was in June 1993. I questioned her further today about why this was continually under review and was told that the library's first priority was to their under and postgraduate students. If too many demands were made from outside sources the students would suffer and the library would be failing to meet their needs. I asked for both an extension to the number of books I could borrow at one time and the time for which I could keep them. There was no leeway on either. The levels had been agreed by the sub librarians of each campus and were inflexible. I was also informed that may people were refused cards. Think yourself lucky....!

Sometimes access to short loan collections is completely denied to the external reader, as is access to computerises databases:

Unfortunately as an external reader I was not allowed to use the computer index at all. This was quite galling as there were about 12 PCs and only 2 were ever in use during the time that I was there.

As with previous visits to this library, most of the books I would like to borrow are in the popular loan category and not allowed to external readers during term time. Makes you angry when some of them haven't been loaned for 12-18 months. Obviously the staff do not review these very often.

While problems with insufficient loan periods for normal stock books were mentioned, some people clearly experience little difficulty in this area, relying on good relations with library staff:

Had a letter from the librarian at the weekend to say that my books were overdue.....I almost always have my books overdue and take little notice of dates. The librarian also never seems to mind as long as he knows who you are and that you are reasonably responsible.

...I went in to make my apologies and renew the books. This can be done over the phone but I always prefer to go in person and speak to the librarian as I feel it maintains a good relationship. I chatted about my work (which is a few weeks behind schedule at the present) and was on my way. the librarian knows me well enough by now and was not at all cross with me.

Use of personal connections can be a strategy used in order to get access:

My daughter is a student at.....and so she said she would look for book for me. Unfortunately the library stock was very limited. There were a few books dealing with the broader aspects of the subject which she knew I'd already got or had access to and little else.

I visited the library with my wife who is a postgraduate student at.....Many of the books I was unable to obtain from .....were available and using my wife's card I borrowed four books.

This diarist couldn't help being angry at poor communication, despite professional sympathies and feeling guilty about lack of entitlement to access:

> *Returned very angry. (The library) was being completely revamped. When I arrived, I found the system was down and there was no access to bookstock. I asked at the counter and the assistant was very pleasant and said that there had been notices up for some time warning about this. Unfortunately as I don't go that frequently I had no way of knowing. So a long journey specifically to get items to use over the vacation was semi-wasted. Why couldn't I have been warned of this when I rang earlier in the week? Fortunately I could do some photocopying, but when my card ran out, they refused to give me change. I know this is a policy (we do the same) but it was quiet, just before Christmas - what about a little goodwill? Too annoyed to complain (also that feeling of not really being entitled to access)*

This final extracts sums up some of the issues and points to a possible solution:

> *Quiet -vacation period - very pleasant. Read many articles and photocopied some. Re-read conclusions on masters thesis on.....had difficulties in obtaining it this time as external readers not allowed to book out theses for reference purposes in the library. Someone has been abusing the privilege. However I was allowed to read it and left my library card at the desk - they knew I was a librarian. The whole question of facilities for distance learners needs looking into. Most DL postgrad courses attract fairly hefty fees. Perhaps a proportion of this could be make available on a mutual agreement between student/university/designated library(s) for full use and access by the distance student. Because I am a) a librarian and b) a former undergraduate of...I have been allowed to use the library as an external user, free of charge. However, privileges are being withdrawn from external users e.g. thesis use, and in any case I have been informed that from October 1995, there will be a charge of £70. This I feel should be paid from the fees for the degree. In addition, most libraries charge external borrowers for on-line and interlibrary loan services, putting an extra financial burden on distance students. I obtain my ILL free from my own library but not all students are in this happy position.*

Specialist libraries

Almost a quarter of the records returned concerned use of specialist libraries, including professional and workplace libraries. Limited though such collections may be, students seem relieved to discover their potential, sometimes after frustrating experiences with university libraries:

> *My organisation (a social work training agency) has a small in-house library. There are now few recent books but there is a reasonable collection of reports, journals and newspapers. We also have a daily press cuttings service. Through the librarian I have access to the British Library Lending Service which is my life line!*

The same diarist commented:

> *I have never used work library before my course - now it is a place of refuge.*

After several entries recording use of this library, she reported:

> *Have just heard that as part of a cuts package required by government., the library is to be closed - probably at the end of March. From a selfish point of view I wonder how I am going to complete my degree. From a professional point of view I cannot believe that an organisation with a statutory responsibility for education and training should be expected to manage without a library. Couldn't establish what is really going to happen. Is the library closing? Is the librarian to be transferred? What will happen to the British Library subscription?...I wonder how many libraries have suffered a similar fate in recent years.*

Other work places also have their resource centres which some have found useful:

> *I was on an internal banking course but had time to visit the resource centre which has a good range of management and banking books and journals. It is useful as books and journals can be borrowed for free and returned via the bank's internal mail system.*

> *This is one of the most helpful librarians and libraries I have come across.....Really good service .....Although small and pretty selective and restrictive in their choice of journals it feels good for a library of its size.*

The value of browsing

A clear message from the diaries is that students value the opportunity to visit libraries in order to browse the shelves and keep up to date with journals. The importance of this activity in getting a feel for relevant material when specified titles are not available, and for enlarging the reader's thinking outside given categories is emphasised in several of the comments.

> *I returned all the books I borrowed and spent about an hour browsing through the school science book shelves. Normally I would use the LIBERTAS computer index to search for books. In this case I was happy to just skim through books and choose the most appropriate.*

> *This library is 25 miles away. I would have liked to visit in person and find out what new books were now available.*

> *This is the reality of DL. As soon as assignments arrive I order books as they take time to arrive. I order books that look interesting/relevant before reading the course material which means I might be wrong. I miss the chance to browse among library shelves.*

> *Decided to have a quick scan along the shelves of my area of interest. Picked up two 1995 publications. It is exciting and stimulating to use a library which*

is purchasing books in one's area of study. I get great pleasure from my library visits. I only wish I could spend more time there. However, limited time has its advantages in making me think more methodically and more precisely what exactly I am looking for. With more time I would get distracted and 'waste time' on all the things I see and think - 'that looks interesting'.

Found browsing of journals quite fruitful and photocopied a number of articles for consultation later.

Check subject index and browse shelves and find a few interesting and useful background documents. Great believer in browsing.

Eureka! It's amazing what you can find on the shelves if you really look.

Having discovered that a couple of titles I was mildly interested in were unlikely to be returned in time to be of use, went into Reference Library an found a 1995 book on shelves.

On the way back to the front desk I was just scanning the title as I walked past and noticed a title with a key word in it for my next essay. I stopped and found two books which looked to be very suited to my needs. So much for all the referencing, cross-referencing, searching by title, author and subject. I left with three books - none of which I discovered on the databases. Am I using it inefficiently?

Just pottered through library related subjects and browsed shelving and catalogues getting rough ideas for dissertation topic.

A smaller number of comments referred to the inadequacies of browsing.

Browsed the shelves of the staff collection..... and picked up a few books ....that subsequently proved to be of limited value.

Library use as a clandestine activity

A distinctive feature of distance learning students' library use is that they operate around the margins of normal institutional services and practices. Library use does not, for most such students occupy its own rightful space, but instead runs in parallel with whatever other life demands permit, or is slotted into the spaces which are left after the demands of daily and work life are met, and institutions have fulfilled their functions regarding normal students.

This is evident from the questionnaire responses which indicate that some students do not consider themselves 'real students' and would like to be treated 'normally'
From the diaries there is evidence that libraries are used in the nooks and crannies of space that are left between the demands of family and professional life.

At its best this jigsaw puzzle of demands results in an integrated picture of apparently harmonised reading opportunities. One diarist, from whose comments the 3 next extracts are taken, presented an account of visits to libraries in which professional

demands, his children's development, his own personal reading and the demands of his course are all neatly dovetailed together:

> *Tuesday is the only evening when the library is open after 5pm. I occasionally accompany my boys who borrow reading books or research information required for homework. I suppose I am encouraging them to follow in my footsteps.*
>
> *As usual, the whole family visited the library which is about 100 metres from my home. Normally I browse through the books on the shelves or look through the microfiches. Today my son put out a search for any Dr Who books in the region.*
>
> *I visited the college to observe a student taking my course. I went to the library to find out more about educational research techniques.*

Another diarist seems to see herself as operating at the edges of legitimacy by taking her daughter to a university library:

> *I had my twelve year old daughter with me who was going to do her homework while I carried out my own business. She felt uncomfortable as there were notices prohibiting school pupils from suing the library as a study area. This was presumable due to lack of space but I was prepared to make a request for her to stay if we were challenged -we were not.*

The experience of operating at the edges of what is acceptable is also evident in the following extract where borrowing books comes across in part as an act of theft, rather than a wholly legitimate affair:

> *Now it is the school holidays. I had two little girls with me (the baby is in nursery full time so he is no problem) I sat them in a corner with some scrap paper, pens and scissors and told them to be as quiet as mice! In these circumstances, I have to find what looks promising as quickly as I can and then I can review it properly at home in my own time.*

In the following two comments the pressure of other commitments, and the sense of using the library furtively, as if under cover of darkness comes across!

> *A very quick visit to the library en route to parents' evening - I would rather be in the library! Many of the visits to the library are quick ones in the evening after work. It would be a delight to spend time during the day just browsing.*

In the following comment library use seems as pleasurably clandestine:

> *Children went back to school today so I sneaked a little time off work to do an hour on my current assignment. I could have done this at home or in my office but there is something about library atmosphere which is settling and enjoyable.*

I found myself with an unexpected afternoon off and it is the last day of school term so I indulged myself in simply sitting and writing. I have always found the library a helpful place to write since being an undergraduate and spending days in libraries. Today I did it with a sense of indulgence and really enjoyed myself.

The librarian's advantage?

While professional librarians who follow distance learning courses might seem to be at a great advantage, one commented that he pays for services just as other students would:

This is one of the libraries I manage. I ...pay the same fee as our students. This my home site library and also I used to be the librarian here. I decided to pay for ILLs mainly because I am aware of the real cost to the service.

Another described the difficulty of telephoning for services from colleagues:

Day off so ring work to check if they've got a couple of titles in stock in the Staff Library. To my utter chagrin phone answered by my boss, who sounded none too pleased at having to do such mundane task for a junior! If only on of the others had been around - just my luck.

While a further librarian diarist complained that her own attempts to study incognito are interrupted by students:

Microfiche reader in reference room - constant interruptions from students needing help using CD-ROM etc. - recognisable as member of library staff (Saturday PM has only skeleton staffing)

Librarians are as susceptible to the feeling of operating in a grey area as are other students:

A rare use of the enquiry desk. As a librarian I feel I should be able to work most things out for myself. Also I still have a guilty feeling that I'm not really supposed to be using the library. A more formal arrangement would assuage this guilt.

The pressure of time

Confirming the findings of the larger scale questionnaire survey (Bolton, Unwin and Stephens, forthcoming), in the diaries time emerged as the single most pressing concern for these students. Almost 10% of the diary entries made some reference to time constraints and this emerged as the most frequently mentioned theme. Among these were repeated complaints about university library opening times:

I was resident a the university 24-28 July in order to work on my dissertation. Horror! Only the Education library was open - others....were all closed for stocktaking.

Three hours passed very quickly and I walked away with a fair heap of material. Unfortunately I felt rushed all the way through the visit and feel I could have benefited from a longer visit. However, with a full time job and only a few days in London long visits to libraries are rarely possible.

No time (or energy) to do their other library which holds more useful material. At 8pm on a winter's evening one loses enthusiasm!

Pressure of work meant that I hadn't completed my project therefore needed books longer.

...when you also work, time is precious, and one resents being given conflicting information and being made to feel unreasonable.....On the theme of time being precious - I don't do what I have told students to do in the past i.e. don't just stick to reading lists. Virtually all last year, apart from project work, I stuck to what was on lists. Time has to be used carefully, and I never really felt up to spending time browsing the shelves - it was very much straight in and straight out. I don't know if this was partly due to the feeling that I was using the library under false pretences.

I could take another 21/2 years to write the dissertation, but getting the degree this year improves the renegotiation of my contract of employment, which is why I embarked on the course. I will still take 2 years after that to become chartered - I'm already 42 how old do I want to be when I'm finally qualified.

A distance learning student's day (or *Alice's other story*)

The Follet Report (HEFCE, 1993) on university libraries offered an imagined electronic future in the form of a sketch of a day in the life of a university undergraduate. Briefly 'Alice' is pictured working from her study bedroom and communicating with her tutors and the library via a networked computer, with access to a campus textbook server and electronic journals, which she pays by credit card to download. This is the nearest which that the report came to a treatment of the issues surrounding library use for distance learning students.

Below is an account of another fictional Alice, but one which is grounded in the current realities of distance learning. The story attempts to give a composite account of the experiences recorded in the diaries.

Half way through the course Alice discovered the need for a library. The course provided self-study materials along with a good deal of supplementary reading, but still there were points to clarify, and one or two things she would like to follow up out of personal interest. Already ideas were beginning to form for the dissertation, for which some wider reading would be necessary.

Hadn't much of a notion of what was available at the host university library. There had been vague talk at the introductory residential of registering with the library, but time had not been allocated for this and by the time they left on Sunday she could see that the building was already closed. Perhaps it wasn't open at weekends at all!

She had a vague idea that the public library should be fulfilling some kind of a need here, and although she used her local library regularly for leisure reading, for the children and consulting Which reports, she was sure that the stock would have little to offer for the specialist nature of the course. Went nevertheless to see what was available. The librarian on the enquires desk was interested in her situation, having once enrolled for a distance learning course herself. They found a useful basic text on the shelf, ordered a couple more references from the county library via the local computerised regional catalogue, and processed 3 interlibrary loans requests. It was difficult choosing the titles to order with so far limited knowledge of the field and not being able to browse. Pleasantly surprised how cheap it was, but held back before ordering another five titles for the next assignment. On the way back home, thinking about how long the librarian said it might take, she regretted this. Hoped that the librarian would do as she had said and try to hurry things up in view of her situation. But didn't really know how much influence the librarian would have on this, and wondered whether everyone could expect this special treatment.

At home, she decided to take a bit more initiative and give the local university a ring. Explained her situation fully to the person answering the phone, that she was studying at another university by distance learning. Got a rather unsympathetic hearing. The librarian said, "We have enough on looking after our own students without catering for the semi-detached variety." It felt like a major setback, but she decided not to give up and planned a visit to her old university, 25 miles away, but a lot nearer than the one running her present course.

It was nice to be in a familiar place, but she crept around rather guiltily not sure if she had any right to be there. Last time she came here it had been rather a quiet place, and she remembered straining her eyes on the microfiche, and having to consult the card catalogue for references earlier than a certain date. Now students were queuing to use computer terminals which she supposed accessed the on-line catalogue, which she hadn't a clue how to use. It would be hard to spend a long time learning with that queue getting longer behind, and she didn't know if you needed some kind of password to get in.

She decided this time to chicken out on the catalogue and go straight to the shelves. She could have done with some direction in finding the right class numbers, but didn't like to ask for help in case she was asked to justify her presence. Browsing the shelves turned out to be more useful than she had expected. She didn't find any of the titles on her list, but found a later reference by one of the same authors, and spent a useful hour scanning some other related titles. She also found the current journals section and got side-tracked reading a completely unrelated article about something her daughter was studying. She considered photocopying it, but was put off by the queues and decided to leave it for another day. Whenever that might be. She had to go anyway, but made a mental note that the library closed at lunch time on a Saturday.

She went home excited by the experience and determined to give her next visit priority, perhaps even over reading the course materials.

It was another 3 months before she felt she could afford the time for another visit. This time she had a few hours owing at work, and decided to leave early in the afternoon and hope to make an evening of it. The traffic on the motorway was worse than usual and she arrived later than she had expected, about 4 o'clock. She was dismayed to see that the library closed at 5! Surely last time she had noted this as a day for late evening opening. Reading the notice with some care, she saw the words "In term time" and the dates showing that this was still, astonishingly, the vacation.

She planned to at least make the best of the hour she had. But something had changed. The porter on the entrance desk, had been replaced with an entry barrier with a sign reading "Insert Card Here". This she had not expected. Students were fumbling in bags for membership cards and gingerly passing through as if the barrier had only recently been installed. Her plans to make furtive use of the library were completely scotched. No option but to announce her presence and find out what the proper rules were for using the library.

She knocked at the door marked "Private" adjacent to the barrier. She introduced herself a bit more carefully this time than she had when approaching the other place. She said she was a graduate of this university and understood that she could make use of it as a former student in order to pursue some research of her own. The response wasn't quite so warm as that at the public library, but she felt that the librarian was basically sympathetic, and rather apologetic that the rules were a bit tighter than they had once been. She gestured through the glass partition towards the queues at various points in the library and explained that an external reader's ticket could be offered at a reduced rate due to her former student status, but this would only allow borrowing a small number of books and for short periods. The short loan collection would be unavailable and interlibrary loans would have to be paid for "at cost".

It seemed like a lot of money, but she decided that this year's holiday fund could stand it. Once the forms were filled in and the cheque written, the library was about to close. This time she took a wad of information leaflets, including a guide to opening times and one about CDROMs available for student use. The librarian told her that a good time to come for a bit of peace and quiet was after the exams had started and before the summer courses began. There would be a window of a couple of weeks there, and it was still officially term time so the late evening opening would still stand.

When she made it the next time, it was like the library she remembered. No queues and somewhere to park your things while you went off to browse. She just sat for a while gathering her thoughts about the direction she would like to take in her dissertation.

First stop this time would be a database search. She had no experience of using computerised databases, but the subject librarian was happy enough to spend half an hour starting her off. It took her a further hour and a half to download and print something that looked like a respectable search. What if she had missed something? She wasn't confident that she had defined her terms well enough and knew that she would still have to rely on other ways of trailing the key material.

The search showed her the limitations of the library she had just paid to join. Hardly anything of relevance turned up in the OPAC. Her first reaction was to feel she had been cheated. Remembering her experience on the first visit, she went back to the shelves and found one or two relevant titles and a collection of papers by a relevant author which had not turned up in the search. From a quick flick through a periodical she had not heard of before, she found two papers that she could see were immediately relevant to her study. At least the journey was not wasted, but there was one key reference from the reading list, which was referred to in some of the material she had found, and which she knew she must read in order to see how present approaches to the field had come about. She knew now that the next stop would have to be her own university.

From home, she made one or two telephone calls and finally spoke to the subject librarian at her own university who was prepared to admit that, yes, distance learning students have a problem, and, yes, as a special concession to her she would personally photocopy a couple of references and send them, along with a key monograph, by post, as long as she was able to pay the return postage. She was sympathetic to the problems and was concerned about students sticking too closely to a narrow range of material.

The librarian also said that, with the expansion of courses like hers, the university was considering ways of improving services, but this would depend on additional staffing. Existing staff were pressed enough as it is. She looked forward to the day when distance learning students could search databases from home and make e-mail requests for material to be sent by post. She said that the university had an experimental project looking at just this.

Alice wondered whether this would increase the demand to come and look at books, rather than reduce it. She was beginning to think of her guilty and unannounced presence in her old university library more as the exercise of a freedom browse. She was thinking of her own success in extending the boundaries of a reading list and a computer search by defining relevance for herself. She was beginning to remember that this was one of the things you were supposed to learn at university.

Conclusions

The age and experience profile of the diarists in this study seems to be fairly representative of distance learning students in general. A range of geographical areas and disciplines are represented. Despite a weighting towards library professionals and,

no doubt library enthusiasts, there is a characteristic gap regarding training in modern library resources.

The returns suggest that there remains a heavy weighting towards using libraries by making personal visits to them, despite forecasts of the imminent demise of the library as a physical place.

The most frequently used library resource is the libraries of other universities than the host. Problems of access include entrance barriers, restricted external borrower status, limited loan periods, difficulty associated with short loan collections, unfamiliarity with local systems, lack of information about systems and practices and absence of relevant stock. Better access is sometimes gained through personal connections, and concessions regarding the rules can sometimes be gained by keeping the librarian sweet through personal contact.

Specialist, including professional and workplace libraries form the second most commonly used for this group. Despite sometimes limited collections, their use can be associated with a sense of relief after the battle for access to universities. The existence of such libraries is sometimes under threat from institutional reorganisation.

For this group, public libraries were third in order of frequency of use. There is a commonly expressed view that the middle classes have abandoned the public borrowing in favour of buying books for personal collections. This study provides some evidence for the esteem and affection in which the public library service is held by the adult learner. It seems to remain an important source of academic material, and for some its use is integrated with family activities, such as children's reading and shopping. The role of the public library service needs better recognition and support.

The host university library was less frequently used that the other three groups. Problems in the use of the host university library include both distance and inconvenient opening times when students do visit either for organised residential courses, or by their own arrangement. Breakdown in communication regarding when facilities will be available sometimes occur, with libraries typically geared to the demands of the timetable of undergraduates.

Postal services are valued where they exist, although the cost and the waste involved in ordering material which turns out not to be useful or relevant can be seen as problems.

Getting information and things organised by telephone varies in success. The pleasure and relief at saving unnecessary and wasted journeys through use of the phone is mirrored by the extreme frustration experienced when the telephone response is unhelpful.

Several mentions were made of the use of networked computers in order to obtain library services. Where this group used such facilities it was most frequently for electronic mail. One student described the disappointment she felt at being unable to access databases through an internet connection with her host university library.

The need to browse books on shelves came across strongly from these diaries. In addition to a concern with time pressure, which mirrors the findings of our questionnaire survey, this study has revealed a clandestine aspect to library use for distance learning students. The diaries suggest that library use for these students has an air of illegitimacy. Students see themselves as operating outside the normal expectations of academic and student life, and hanker after a legitimisation of their study needs. It may be that in part this sense of illegitimacy can be partly alleviated through better communication and training.

Students want the opportunity to browse for extended periods before deciding what to take home and read in depth. Access to nearby libraries can be expensive and limited in the services which are offered. But even if these difficulties can be overcome, the stock of a local institution may not reflect the reading demands of a particular course. Despite this, extensive use is being made by this group of local university libraries, in excess of the use made of the host university library.

It seems that students would benefit from a library service which integrated some measure of local university access with some measure of special arrangements by the host institution, ensuring that access is available to the specialist material that a course may require. With the increasing participation of the conventional university sector in distance education, and the overall increase of postgraduate level students studying in this mode, there is a pressing need for more formal arrangements. While ideas about electronic collections and remote access to databases have the captured the imagination of many, the daily realities and needs of distance learning students suggest the inadequacy of this vision. In the short term at least, remote access to computerised catalogues and databases, where this is available to the student, seems only likely to increase the appetite for access to material only currently available by visiting libraries in person.

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The Convergence of Distance and Conventional Education: Some Implications for Social Policy

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This paper begins with the acknowledgement that conventional educational insititutions have begun substantially to use open and distance learning (ODL): that is to say the array of educational approaches and technologies that revolve around the provision of resources that permit the learner to learn to a substantial degree away from the teacher's physical presence have been adopted in many post-secondary environments. It is in this sense that convergence is for the most part taking place. In more detail:

- the scaling up of learning opportunities to achieve mass higher education looks to ODL methods at least in part to deliver these policy objectives;

- the broader context of lifelong learning looks to ODL and the new technologies to provide the necessary flexibility to permit learning to support work more intensively;

- ODL methods are also thought to be capable of delivering financial economies, both absolutely and of scale, in the context of the generalised downturn in governmental spending, and on the related increased intensity of pressure on profitability in private enterprise;

- the increased range of technologies, in particular those supported and delivered by computer mediated communications, are accelerating the convergence process fast;

- the increasing international commodification of education sees ODL as particularly suited to reinforce the conceiving of education as a range of saleable products and services.

The secret garden of open and distance learning has become public, and many institutions are moving from single conventional mode activity to dual mode activity, that is to say offering a range of modes of study from the full/part-time and conventional/distance spectrum. The process was first made explicit in the UK in 1990 at a National Extension College conference with the title 'Open Learning: Moving into the Mainstream', (National Extension College 1990), and since then the Open University's hold on the market of part-time adult undergraduate students has been challenged by the substantial interest in the adult learner cohort as a whole, and in geographical areas where the OU has had a hitherto monopoly of supply, by the new entrepreneurial franchising arrangements

between further and higher education institutions which has meant that the reach of those higher education institutions has been extended (Rumble 1992; Mills and Tait 1997). Further, the Open Polytechnic (now Open Learning Foundation), established in 1990 to develop distance learning collaborative approaches amongst conventional British universities, has made substantial impact in some vocational and professional development fields. Over and above national development, we have seen major policy statements and programmes of action from the EU (Tait 1996), Unesco (Unesco 1997), and the World Bank, all recognizing and seeking further to promote the potential of open and distance learning methods to expand educational opportunity on a widespread basis, with economic objectives central in importance.

The implications of this move are manifold, and include:

- the construction of a larger than ever proportion of the population as lifelong learners, driven by policies for increased access to support economic growth;
- the need for conventional institutions to retool and retrain with ODL methodologies and the concomitant threat to the market of distance teaching institutions;
- the identity of distance educators (and the role of their professional associations) who have hitherto, through necessity but to some extent choice, defined themselves as a separate sub-group.

All these are significant issues. One has not however hitherto been discussed, and that is the future for that part of the distance education tradition which has defined itself as operating in the interstices of social policy, and on the margins of societies, providing educational opportunity which the state and and private institutions chose not to prioritize. In other words, if distance education through convergence has at last become a major avenue for what can be broadly termed governmental policy, as well as for employers private and public- its methods, language and to some extent personnel made respectable and adopted into larger structures - what sort of loss accompanies at the same time what is rightly seen as a victory?

Who will work in the margins?

The danger identified here relates to the possibility that the balance of power in the world of social policy has shifted even further into the hands of established structures through the incorporation of the powerful mechanisms of open and distance learning, which were borne out of the necessity to challenge them. Issues of social justice, while on one hand ameliorated by the wider opportunities which convergence brings, are at the same time paradoxically themselves marginalised, as distance education gives up its sometimes dissident role within societies and becomes the servant of the very market and the social and economic structures for which it originally came into being to compensate. Has convergence meant that along with the expansion of opportunity the long debate of issues of access, as it is known n the UK context, meaning that nexus of issues around participation, life opportunity and social justice, mediated primarily through the social geography of class, gender, and ethnicity, been silenced? Has the tradition of oppositional discussion of education and society that took place in different ways in the U.K. in the

work of Charles Dickens, Thomas Hardy, D.H Lawrence, Raymond Williams, Stuart Hall and the Centre for Contemporary Studies, Birmingham, and finally the practice of OU UK itself (Sargeant 1996) been insidiously stifled by its incorporation? Have other traditions in other countries experienced a similar process? The very convergence and mainstreaming process itself, it is to be feared, has sanitised and de-radicalised ODL, so that it becomes a new product from the emergent colleges-cum-companies that reinforces the educational and social structures it once challenged. What evidence is there for such a series of concerns?

ODL and the broader canvas of convergence

It has been observed before that ODL has a habit of living an isolated life, accepting its own rhetoric as an adequate account of its social function (Tait 1994; Klees, cited in Perraton, 1997). The convergence of ODL and conventional education represents only one part of a wider range of shifts, other larger convergences and alterations of pattern, and these should be identified so that a fuller understanding of the changes taking place can be arrived at. These convergences can be further examined along two main dimensions:

- social institutions and businesses
- the compulsory nature of lifelong learning

ODL, educational institutions and businesses

Colleges, universities and indeed schools are not alone in finding their identities defined away from social institutions of a different type towards business organizations for whom profitability, or at least survival, in a competitive environment becomes the prime purpose. Over the last 20 years in the UK this trend has additionally moved, at least to some extent, into health care, community care and social work, and the public media (viz the BBC). This trend is not of course an objective natural force but the result of purposeful activity by those who espouse such a view, and in the UK at least over the last 20 years, explicit public policy. In the broadest canvas the demise of the former social democratic social contract in Western Europe (which was drawn up and maintained by parties of the right as well as the left), which protected some significant parts of society from the full logic of capitalism (including to some extent employment), together with the collapse of the communist-governed countries, which protected all parts of society from the greater part of the logic of capitalism, including paid employment for all (if not real work), have created both a reality and an ideology that there is no alternative to liberal globalising economies and societies essentially organized to serve them. Organizations that take moral objectives as their primary purpose are limited to churches and other religious organizations, political parties and to voluntary non-governmental organizations, all existing in the Western world on the margins of society and diminished in number and participants, their vision of reality unable to compete with 'the real world' of the bottom line i.e. profitability. Clubs and societies, local democratic fora and organizations, all find their numbers diminished. Leisure has to a considerable extent, although no by no means entirely, been constructed as a commoditised pursuit. There are exceptions, such as the

growth in environmental pressure groups which are significant actors on the social stage, but this example does not, I suggest alter but throws into relief the predominant trends, while at the same time revealing the still-contested nature of social development which ensures its discussion remains worthwhile. However, non-commoditised relations, which are not subject to the imperatives of profitability and the associated instrumental rationalities of managerialism, have retreated to these declining organizations, and to the very limited environments of family and friendships, themselves often damaged and diminished by the social currents in which they attempt to sustain themselves.

It is within this broad picture of society, a challenging and difficult one rather than a vision of world-wide economic prosperity and well-being, that this writer sees ODL playing an increasing important role, accelerating the change of educational institutions into businesses.

The compulsory nature of lifelong learning

As businesses increasingly become the predominate social world on which life centres itself, so personal identity is increasingly melded to serve the new superordinate life task for the employed, which is paid work. As has often been observed, identity is increasingly defined not by who we are but by what we do at work. Both the volume and pace of work for individuals increase to meet ever tighter demands for profitability, squeezing out other activities and absorbing greater and greater proportions of available personal energy. Lifelong education, which began its days as a series of policies predicated on remedying past educational exclusion, has turned predominantly into the construction at the individual level of a series of policies and practices which support individuals in maintaining themselves employable, and at the organisational level in maintaining and increasing competitiveness and profitability. Learning throughout life is constructed more and more as a necessity and less and less as an option, for those who want to stand a chance of being employed. What used to be termed post-compulsory education by its very nature i.e. that which took place as a voluntary activity after the age when the state insisted on attendance, is now taking on both formal necessity, as for example with certain professions who must undertake some elements of continuing education in order to remain registered, as well as more widely, and more importantly, an informal necessity for those who want to remain attractive in the labour market. It would now be seen as an act of rebellion or resistance (depending on one's point of view) to refuse training on the grounds that one had other things to do with one's life! ODL serves to reinforce this trend of the non-voluntary nature of post-secondary education and training, offering flexible solutions which shift the burden of study for employment into the individual's private time. At the same time ODL assists in the internalization of the legitimacy of such demands with terms like 'independent learning' , 'flexible learning' and indeed 'open learning', which seek to persuade the individual through language that now owes more to marketing than educational theory that he or she should seek to transform themselves into the sorts of infinitely accommodating and flexible individuals wanted in contemporary organizations. ODL serves as an increasingly important agent in the disciplining of the population into these new regimes: a disciplining process which demands that more and more study is dedicated to servicing and managing employment, and that more and more

of private life is dedicated to it through the exploiting of hitherto 'private' time, i.e. the extension through convergence of learning into the home.

'The other': redefining the excluded

On this broader canvas of convergences, within which ODL is only one, albeit important, contributory factor, new articulations of 'the other' come into being. The use of this term is from Said (Said 1995), with references to its application in adult education contexts both in India (Steel and Taylor 1995) and domestically in the UK (Stuart and Thomson 1995). By the term 'the other' is intended those who are seen as different from 'us', not integrated within 'our' culture nor included in 'our' society, and who therefore need development or deserve exclusion or punishment. The term in the adult education context derives from analysis of the disputes under the British Raj in the development of adult education in India, between attempts to anglicize Indians through British educational norms and practices, or alternatively recognition of their legitimate alternative idea and value systems. Needless to say the former, which constructed Indian culture as 'other', was dominant. However, as has been pointed out, construction of 'the other' has worked systemically on a domestic basis also:

> Within the new European nation states cultural and political elites established their own ways of being in and knowing the world as the norm...and constructed the different peoples of their own countries as inferior and ignorant.
>
> Stuart and Thomson 1995:4

The importance of this analysis for analyzing policies of educational access is clear, and particularly at this juncture for the convergence of ODL approaches with so-called conventional education. For while ODL in the mainstream opens access to many (and this essay does not seek to belittle that commitment and achievement, while attempting to insist on the addition to the analysis of personal opportunity within the larger social and economic context which it is deemed to serve) , at the same time ODL in the mainstream constructs new 'others', new categories of the excluded whose non-incorporation into the purposes of contemporary economic life is legitimized through their failure or resistance to adopt the necessities of lifelong learning and the new technologies which make it so powerful. Those who are not participants in converged lifelong learning systems are becoming as 'strange' as the 'Orientals' whose identity Said revealed was constructed through the process of Western imperialism. They are the newly categorized or re-categorised 'inferior and ignorant', to use Stuart and Thomson's phrase. They thus become responsible for their own exclusion from employment and accommodation, and are punished for acts of rebellion (the greatly increased rates of incarceration in the 'North' also form part of current social trends, and make this a literal as well as a metaphorical comment). It is in the identification and support of those newly excluded by the convergence of powerful learning technologies and the mainstreaming of ODL that this essay turns next.

Who will be marginalised by convergence?
As this essay has sought to demonstrate, the convergence of ODL and conventional education is only one part of a broader pattern of economic and social policy development which convergence serves to reinforce and accelerate. The new marginalised are therefore broadly those who cannot be accommodated by the wider economic and social changes which have broken the back of both socialist and to a considerable extent social democratic social visions. A number of dimensions are immediately apparent.

Firstly, the vocationalisation of education for the post-secondary sectors significantly diminishes the life opportunities of those who are without work, as well as the retired. With the present figure of some 18 million unemployed in the European Union, and higher rates in other newly marketised economies in the post-communist countries, as well as increasing cohorts of the non-working retired, this is no insignificant issue.

Secondly, the increasingly important development of market approaches to education serves to exclude those without the means to pay as well as those with inadequate home bases in which to study (homelessness and overcrowding having much increased in the last 18 years in many countries of the 'North'). This impacts again on the unemployed, but also on the low-paid, and generally those living in poverty (now as high as 11 million people according to recent research in the UK, having increased by 50% in the last decade) (Independent Newspaper 1997). Within the framework of the articulation of exclusion, these disadvantages are likely to continue to express themselves with further acuteness on women and ethnic minorities.

Thirdly, the increased necessity for home-based computers, as convergence accelerates, for the delivery of both content and process through CMC, will represent a concrete example of very firm barriers to those who do not possess hardware or have access in the workplace (it is worth indicating in passing that the OU UK's new undergraduate Science and Technology foundation courses need £1500 of domestically or workplace located equipment to be able to participate, as does the Undergraduate course 'Computing: an object oriented approach', which serves as an introduction to an area of highly paid work).

Lastly, the cultural capital needed to study 'independently', 'flexibly', and 'at a distance', is not likely to be evenly distributed throughout the population, but skewed in its distribution. Not to be overlooked in this context is the seriousness of literacy problems in developed countries, and as more and more educational opportunity through convergence demands both functional literacy and associated cultural capital, those without are going to see educational opportunity made even more remote and the fences which create marginalisation more solidly built. 'The other' will find their exclusion reinforced.

Refocusing ODL's tradition of access
This essay concludes with some proposals for refocusing the tradition of access to education which ODL brings to the convergence process, and which it has been argued is being overlooked.

Firstly, we need at a broad level to be aware of the social policy dimension which the excitement of seeing ODL methods accepted may lead us to forget. The most important work carried out in this field, has been in Australia where recent work by Evans and Nation (1997), Jakupec (1997), and Campion (1997) amongst others has provided a series of sharp and critical examinations of the series of major governmental interventions into the Higher Distance Education scene. Work in this area has been begun in Canada (Roberts and Keogh1995; Haughey and Roberts 1997), and I have also contributed a study of European Union policy for ODL (Tait 1995). However, more needs to be done as consideration of convergence at only the micro level will permit the larger social implications of such developments to go unnoticed.

Secondly, in order to maintain and build the traditions of access and educational opportunity we need to raise within discussions of new policies of convergence at international, national and institutional levels, the issue of how exclusion is reasserting itself. Amongst the questions which need to be debated are:

- What are the implications of new market-related fees policies? How can financial exclusion be diminished? How can the new hierarchies which a market system brings be identified and opposed, e.g. the funneling of less well-off students to the lower quality provision, or their exclusion altogether, and their allocation to the less attractive life opportunities?

- What are the effects of convergence on the already educationally disadvantaged? What educational support is there so that independent and flexible learning strategies do not provide a rationale for continuing to exclude cohorts starting, at least educationally speaking, from further back?

- How is the heterogeneity of learner populations with more varied cultural backgrounds than ever before to be accounted for in the creation of new converging learning systems, with assumptions of the possession of cultural capital that are not in fact universally shared? How will the risk be diminished that the already disadvantaged and minorities will find their continued exclusion legitimised?

- How will the availability of technologies be addressed as convergence brings its use into more and more delivery of educational opportunity? Will there be social availability of hardware through institutional or civic facilities (e.g. local cyber centres), rather than systems dependent on their domestic ownership which will marginalise the less well-off?

Through the construction of a series of questions such as these (and it is hoped they may be further elaborated during discussion at the conference), those committed to the access

element in the ODL tradition can find appropriate ways of impacting on the convergence discussion, and on educational and social development as a whole.

Conclusion

This essay is not intended as a polemic against convergence, or indeed against ODL. The major contribution to educational access which flexibility of learning strategies allows is acknowledged, as well as the excellence both of structured curriculum and learner support which well-designed ODL systems provide. The potential of the new technologies in reinforcing and indeed expanding opportunity in large education systems has been acknowledged in other places.

However, the essay does represent an attempt to problematize convergence, to point out that educational disadvantage and marginalisation will be re-articulated by the economic and social currents which the convergence of conventional and ODL systems themselves accelerate. Some important elements of the ODL tradition which are being brought to the marriage are concerned with access and social equity, and need to be re-asserted in the light of the increase over the recent period in unemployment, homelessness, poverty and illiteracy. This requires a unifying consideration of both policy and practice as convergence takes hold, and the maintenance of a dissident, oppositional and critical approach to power and social opportunity which is so significantly mediated and reinforced by education.

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From Marginal to Mainstream: Critical Issues in the Adoption of Information Technologies (IT) for Tertiary Teaching and Learning

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To speak of technology is to speak of complexity for 'technology' is a multi-faceted entity, far more than its individual components. As Franklin (1990, pp14-15) wrote:

> It [technology] includes activities as well as a body of knowledge, structures as well as the act of structuring. Our language itself is poorly suited to describe the complexity of technological interactions. The interconnectedness of many of those processes, the fact that they are so complexly interrelated, defies our normal push-me-pull-you, cause-and-consequence metaphors. How does one speak about something that is both fish and water, means as well as end?

Hence it is with due recognition of, and regard for, the complexities entailed, that this paper attempts to address some of the critical issues when new technologies at the margins are brought towards the centre. As technologies advance so rapidly and offer potential in so many areas, we struggle to use them effectively and responsibly and to make well grounded decisions about their viability. Effective use of such new 'cutting-edge' technologies requires new synergies in working relations and much re-thinking as they are integrated into the fabric of tertiary life, impacting on teaching, research and administration. As Stoll (1995, p200) wrote, to say something "is poised on the cutting-edge of technology ... sounds painful, doesn't it?" To take something beyond the cutting-edge involves a complex and often confused and confusing set of interrelated matrices. It sounds painful because it can be painful but, as this paper suggests, where one is situated and one's attitude are highly influential in how such experiences are interpreted.

Whenever there is a perceived and shared need for something to happen and that something does not, in fact, occur, lack of resources almost inevitably gets blamed. Generally this is reduced to money - "We can't afford it". Occasionally the human as well as fiscal costs get mentioned.

Is money THE critical issue in this debate? I am inclined to think not. There **is** money in the tertiary sector and money **is** being spent on information technologies. As just one example, in 1996 it was claimed that over a million dollars for each US college and university ($3-4 billion in all) was spent on academic computing alone (Geoghegan, 1996). Then there is the much less readily quantified expenditure on the necessary supporting components, from administrative and institutional overheads to apportioning opportunity costs.

And there is a further twist to the resource issue. As put bluntly in a recent Australian report to the relevant Government body (University of NSW, 1997, p ix): "The universities which get IT right will attract resources; those that get it wrong will not". The issue is not bringing technologies to higher education - print has assumed 'mainstream' status for generations of students and computer-based technologies are becoming increasingly pervasive. This issue is which technologies will make the transition from the experimental, the 'marginal', to be widely used by a broad sector of the tertiary institution. Elsewhere (see, eg. Holt and Thompson 1995), I have referred to the 'imperative' of the use of IT in the tertiary sector. It seems axiomatic that information technologies will be highly significant in the delivery of teaching and learning and the debate is over the issues of 'which sort' with 'when', 'where' and 'why' being key underpinnings. To get it 'right' such questions have to be correctly answered.

The critical issue in leveraging the University community to adapt a particular technology - or suite of technologies - is persuading and convincing the multiple decision makers that such a move is prudent and, indeed, essential. Beyond that there is a need to mobilise the academics, and to a far lesser extent the students at this stage in this process, to implement the 'vision'.

The convergence of technologies seems, in one sense at least, to make the situation clearcut and deny the very premise just put forward. There is an implication of total inclusiveness - of all and everything. Apparently discrete uses of technology (such as desktop videoconferencing) now are digitally driven through the Internet. There seems nothing - including print publishing - that is not computer generated. A computer sits on nearly every academic's desk, many do not travel without their 'laptop' and there is an increasing expectation that all students have access to computers, ideally with CD-ROM and modems.

Yet, when one looks more deeply into computer-based teaching and learning applications the reality is not what one would expect and it is fascinating to consider the reasons for what is commonly termed the gap (or chasm) between the rhetoric and the reality. As a way of conceptualising this issue I decided to use the term 'Enthusiasts' for those who are actively involved in the emergent stages and the 'Adopters' (following Rogers, 1995) for those who take on what is regarded as 'innovative' and bring it, with greater and lesser success, into the mainstream of teaching/learning for an individual curriculum at the micro level and as a part of a cultural change within the University at a macro level. I appreciate that this binary distinction simplifies the gradations of adoption from early to late participants and from small groups to large cohorts, but consider it a useful way of foregrounding issues.

1. The different worlds of the Enthusiast and the Adopter

The so-called 'true believers' in IT tend to be the Enthusiasts. Their world is, indeed, a rarefied one in that they tend to work in an environment with access to top-end equipment and with solid support at the innovative and experimental stage. When your own computer runs at 200 MHz and is connected to a highly robust and permanently accessible network it is difficult to envisage the situation for others when they struggle to download networked data and only have dial-up access to the Internet. The gulf between these worlds is well exemplified when demonstrators, who are intimately involved with the process and work in a context where much is intuitive and taken-for-granted knowledge based on considerable experience, attempt to 'show' a product to neophytes. Often, and sadly, the more developed and sophisticated the product the less effective the presentation will be, as what is demonstrated seems so remote from the real-world experience of the tertiary educator. It is understandable that in such demonstrations it is the product that dominates. Yet, of critical importance in the evolution of that product has been the process, and the separation of the two inhibits acceptance because much of the rationale has been clouded. The likely success stories here are those where academics - also of the 'Enthusiast' variety - have been closely involved with all stages of the development and where they can identify more closely with the teaching sector and are more sensitive to such concerns.

If a technological 'solution' is going to be mainstreamed it is essential that it is presented in such a way that it seems useful. One of the strong inhibitors to a wider take up of many apparently superb innovations is the 'add-on' factor. The Enthusiasts (both technical and academic staff) often have the early period of development as a core function of their work. For the average teaching member of staff, the would-be Adopter, the new development is cumulative and can be perceived as oppressive. 'Value-adding' is important and there are justifiable concerns regarding equity and access, but the reality is very often that the innovation is set alongside what is in place and so the demand on the academic staff is increased - at least in the vital early stages where decisions are being made to persevere or not. Not only is such redundancy in delivery extremely costly in monetary terms but the human effort is often insurmountable. While there may be acceptance, for instance, that computer conferencing is a 'good thing' in and of itself, in the final analysis it is not taken up widely because staff are not so convinced of its usefulness for them as teachers that they will let other things go for they have made a judgement that the time cost is too high. As well, it is often difficult to convince such people that investment of their time in learning to use new technologies effectively will provide long term gains, most especially in the current tertiary climate of competing priorities and demanding deadlines.

Moreover, for the Enthusiast, the development process may be an end in itself: even if the final product does not function as intended, a considerable amount is gained from the experience itself. This is in direct contrast to the Adopter, who generally wants a working system almost solely for what it can provide.

Further, while the Enthusiast is likely to be tolerant of failure, to enjoy the whole risk-taking process, the Adopter wants any technology to be failure-proof and non-disruptive. Academics quite rightly hesitate to expose students to cutting-edge technologies and, for this reason, much of the early development is separated from the teaching/learning experience. When it is delivered for the first time there is a strong likelihood of problems - of things not going quite as desired. Where the development is supported by formative evaluation and the experience strongly supported, there is a reasonable likelihood that the knowledge gained will be reworked into a better product. This is especially the case if all concerned (including the students) are fully informed about the status of the new approach and feel a sense of involvement in the process. If the experience is seriously flawed, however, it is unlikely that further involvement will be welcomed.

2. Infrastructure

For IT to be mainstreamed the infrastructure must be there to support it. By 'infrastructure' I am referring to more than the conventional variant of an Information Technology Service provider, important though that this. My definition includes management and professional development.

In the conventional service context, in the early stages infrastructure is less important mainly because, if and when there are failures, not only is the Enthusiast likely to be more understanding and forgiving, but the effect of such failure is likely to minimal. For instance, a server failure that is a minor irritant to the developer can be highly problematic for the students who are doing a computer generated and assessed examination that way. Moreover, it only takes one such experience for the academic community to become very wary. The Enthusiast is likely to be very aware of the infrastructure; the Adopter's awareness is likely to be tied to problems such as when the network is 'down'. The crisis in IT support is well documented (see, eg, McClure et al, 1997) and while 'help desks' fail to give timely assistance and responses are unhelpful in the current climate where so much is expected of the working week, it is seductive to give in and resort to well known and less time demanding and often less frustrating avenues of teaching. Again the gulf is wide as the Enthusiast is likely to be able to solve the sort of technical problems that the Adopter seeks help for, and finds it difficult to appreciate that what are often small areas of misunderstanding are not trivial, as perceived by the Enthusiast, but significant hurdles to the Adopter.

If the management infrastructure is fragile, then it is highly unlikely that the necessary steps will be taken at the right times to mainstream technologies. Dolence and Norris (1995) have their own response to Franklin's 'push-pull' metaphor as they advocate a fusion of learning vision 'pull' with the 'push' of technology application. If transformation towards the mainstream is to be accelerated then, as they argue, strategic thinking must precede strategic planning with academic programs and resource allocations closely aligned with institutional strategies. Where, as so often is the case, the focus is on specific technology products, the very success of these can place enormous pressure on support agencies (most especially technical) and, when they cannot cope with what is sometimes

unexpected as well as burgeoning demand, their failure reverses the trend towards the mainstream, sometimes irrevocably.

Seeding grants for the development of cutting-edge technologies are welcomed by management because they bring external funding and often prestige to the institution. Sometimes they raise expectations of use beyond the funded trial period and, where management is weak, the Enthusiasts are left in isolated positions. This is generally because they do not have the support necessary to involve others. Where management decides not to use University resources once the project period ends there is sometimes a failure to communicate this to the Enthusiast and, quite often, innovations are left to wither over time with attendant frustration. For good reasons some technological developments will remain marginal and the Enthusiast has a role in keeping such innovations alive but, where the expectation is for possible mainstreaming, it is clear that the Enthusiast, alone, is not is a position to achieve this.

Even where strong management decisions are made to mainstream, they tend to be ineffectual unless and until they are supported by effective professional development. Where the sense is one of technologies imposed on the university community with minimal sensitivity to the academic sector they are to serve and the reality of that world, the response is likely to be that of resistance. As constituent elements of professional development, opportunities must be provided not only for training in the technologies but for debating and discussing the pedagogical implications of their use. Showing what can be done by a given technology - with all its complexity as well as its promise - is inadequate. For the technological innovation to be mainstreamed the process must be owned, at least in part, by those who are to implement it - the Adopters. The intricacy and elegance of the technology are likely to be compulsive motivations for the Enthusiast but are likely to be irrelevant to the Adopter who is seeking straightforward and non-threatening technologies that do not demand a steep learning curve over a considerable period. As argued above, sharing the development process is valuable, but for those Adopters who have had not had this opportunity, they must be able to be active contributors to how the technology is applied in their own curriculum.

3. The student factor

Most institutions can point to at least some occasions where technologies have been developed well ahead of possible general adoption for students. Early CD-ROMs are a useful illustration. The rationale has generally been that such expensive prototypes have value at the margins for specific uses and users and much will learned from the exercise. As a second illustration, the present comparative rarity of desktop in any university (let alone workplace or home) makes its movement into mainstream distance education in the next few years highly improbable.

It is not many years ago that it was the 'PC' stance to take that it was wrong to assume that students would have computer access and, consequently, any aspect of a course that was delivered in so-called 'non-traditional ways' had also to be delivered traditionally

(usually face-to-face for on-campus students or print for off-campus students). Not surprisingly, students responded to this duplication by resisting investments in computers until they could be convinced that they were necessary and would contribute in a unique way to their learning. There was a huge tension here. On the one hand, IT Enthusiasts argued that the gains from using a particular technology were substantive and pointed to the uniquely defining characteristics: for instance, of facilitating peer as well as mentor interaction by computer conferencing with its written record of the exchanges. On the other hand, until such learning outcomes could be integrated into the fabric of the curriculum they were destined to remain peripheral. Yet they could only be integrated when it was assumed that all students had access to such base equipment. Increasingly this is the case. While internal surveys at the University where I work have shown access above 90% for the whole of this decade, the most recent data released from the Australian Bureau of Statistics show that 41% of all households have computers with the popularity of CD-ROM drives and modems growing quickly (*Australian*, 1.7.97). Such access is a necessary underpinning of mainstreaming.

Student response to new technologies can be influential as they move from small pilot groups to larger cohorts. In this regard the product and the infrastructure must be strong for student acceptance. An excellent web-site that cannot be readily downloaded by modem from a lower-end machine will not be used. A fine conferencing system where the academic concerned rarely checks the folders and more rarely contributes is likely to die unless the students, themselves - as does happen - are convinced of its usefulness. Further, students need assurance that the technology is adding value to the study and is not there for its own sake or for reasons that do not clearly relate to the currriculum. In this regard specialist instructional design that integrates technology and pedagogy is likely to achieve the desired learning outcomes and is an important element. Professional development should have a role in sensitising academics to instructional design issues but is not a replacement for professional assistance.

Conclusion

Information technologies are having a major impact on tertiary institutions. Perhaps this is most clearly seen in the administrative sector where already there is compelling evidence of huge investments in IT and changing work practices for staff. However, we are not yet at the stage where the rhetoric of the virtual university is our shared reality in terms of teaching and learning.

The Chair of the Higher Education Council of Australia, Prof Gordon Stanley, was quoted recently (28.5.97) in the Higher Education supplement of the *Australian* as saying:

> Universities must move away from experimenting with information technology and begin to use it to make their programs more efficient and effective if they are to function competitively.

The exhortation to function competitively is not new to academics, nor is it without its difficulties for those involved in this cultural change. The interest in this comment here is the causal connection between success (as judged in competitive terms) and the use of IT, interpreted as integrated into the curriculum and delivery of higher education. While this directive through Government adds its own force to the issue of mainstreaming, it is of concern that according to this edict 'experimentation' is to be shunned. Fundamentally, the basis of implementation is experimentation and innovation is a tenet of the academy. Further, it is doubtful that much of the 'new media and information technologies' referred to in the article are readily integrated to the extent envisaged as necessary, and needed immediately.

I have noted a tendency in the literature for experimental work to be reported as if it were integrated and systemic, when, in fact, on follow-up investigation it has been revealed to have touched a very small percentage of the University's staff and student population. Further, at a Research in Distance Education Conference (see Thompson, 1994) there was compelling evidence from representatives from a wide sector of Australian tertiary institutions of the difficulty of reporting 'failure' and even problems in this context, with much emphasis being on situating one's institution in a perceived most favourable light. Hence problems tend to be buried and Government agencies and University management often do not have the necessary information from 'sanitised' reports on which to base decisions.

Hence, I conclude that, as far as cutting-edge technologies are concerned, the transition from Enthusiast to Adopter is often difficult to accomplish. Much is still with the Enthusiast who often has a narrow focus and needs strong institutional support if such experimental work is to be strategically aligned and implemented. As Geoghegan (1996) advised, we should nurture the innovators as they are the source of much creativity and they can provide models for mainstream adoption.

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Building Tools for Flexibility: Designing Interactive Multimedia at the Open University of Hong Kong

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Introduction

The Open University of Hong Kong (OUHK) has quickly established a reputation as a leading Asian distance education institution. The University is now eight years old. Until this past May, we were in fact the Open Learning Institute of Hong Kong, or the OLI. After a series of accreditation procedures, and a nervous period wondering if sufficient time remained in the Hong Kong Legislative Council's schedule to consider an 'Open University Ordinance', the Institute did indeed become the OUHK.

Even in this time of celebration, however, the OUHK also faces the same challenges tertiary institutions around the world are facing: scarce funding, technological changes, and increased competition. For the OUHK, and for institutions around the world, the issue of 'convergence', therefore, is inextricably tied to these challenges.

I will not try to address them all here, an impossible task. Instead, I will focus on one challenge facing the OUHK: dealing with new technologies. I will briefly introduce some of the challenges facing distance education with respect to new technologies; outline details of non-print media development at the OUHK; and finally focus on a particular project, a CD-ROM on the History of Hong Kong. (This program will be demonstrated if appropriate.)

Technology and convergence

The claim that fundamental forces of change are at work in the educational community in general, and distance education in particular, is now a commonplace. Equally true is that many of the forces are focused on uses of technology. Among the important changes listed by the International Council for Distance Education (ICDE) Task Force on the Educational Paradigm Shift was 'the shift to technologically mediated processes of communication and learning' (ICDE 1996, p. 4). Also of interest was the discussion of both 'drivers of educational change' and the perceived 'barriers and blockages to the educational paradigm shift'. The drivers are:

the explosion of information;
information technology;
the changing nature of work; and
the changing student population. (ICDE 1996, pp. 8, 9)

Concerning the opposite forces, the report noted a general resistance to change, along with the following specific barriers:

- resistance to new learning theory and practice;
- rigidity of organizational structures;
- the tyranny of time;
- traditional faculty roles and rewards;
- assumptions about learning content;
- constraints of regulatory and accrediting practices; and
- traditional funding formulas. (ICDE 1996, p. 10)

Distance teaching institutions would appear to have a head start in harnessing the drivers, overcoming the barriers and applying new technologies, largely because of their lack of historical commitment to traditional classroom technologies. They do not customarily have physical classrooms, but have groups of learners linked to tutors and teachers through learning materials and a variety of forms of interaction, whether it be by television, mail, the telephone, the computer or other means. The institutions have developed sophisticated procedures and practices for providing courses and support remotely to their students. Their course materials, even if print based, most usually exist in digital form. Conventional institutions have had to scramble to catch up in many of these areas (Murphy et al. 1996).

This apparent advantage would apply equally to both the institutions and to distance education students themselves. The students are accustomed to receiving and discussing their courses remotely, and so their ties to face-to-face education are not usually as strong as their mainstream counterparts.

But the picture is not entirely rosy. Distance teaching institutions face challenges from both newer institutions, and, ironically, from older ones. For example, several first-rank American universities (including Michigan, Chicago, Duke and Dartmouth) are offering very profitable degrees (MBAs) in Europe and Asia using Internet-based education, therefore simply bypassing the 'traditional' channels of distance education altogether. It would be bitter indeed if conventional universities responded more constructively to new technologies than the supposed experts in distance learning because, as Tony Bates (1996) points out, traditional universities' agrarian/medieval structure is actually more nimble and adaptable than the modern/industrial distance education university.

New technologies are thus placing pressures on institutions to make decisions about how distance education is to function in the future and, if those pressures are not faced successfully, a new generation of distance teaching institutions will emerge. Decisions to be taken are thus fundamental to the survival of existing institutions:

> ... distance educators cannot afford to wait until this evolving situation is fully understood and some standardized plan for innovation can be constructed .... Backward-looking metaphors focus on what we can automate—how we can use

> new channels to send conventional forms of content more efficiently—but miss the true innovation: redefining how we communicate and educate by effectively using new types of messages and experiences. (Dede 1996, pp. 5-6)

All universities, distance or not, need to become more flexible and responsive to change, whether technological, political, economic or demographic. A more flexibly organized university is a university better equipped to deal with change, period. The new distance education university would feature:

> ... a high degree of decentralization, but overall leadership and direction in terms of broad but clear goals ... customized products and services, alliances with key partners that provide complementary services ... and highly networked and flexible communications systems linking them with their clients. (Bates 1996, p. 15)

A new vision of the distance education university might also include more space for producing new knowledge, as well as for new ways to pass conventional knowledge on to students.

The Open University Response

Although the OUHK was originally envisaged as part of a consortium to be supported by the other local conventional universities, that vision was never realized (Hong Kong 1989). This failure closed off many possible paths for cooperation, and hence convergence, with conventional tertiary institutions in Hong Kong.

In the nine years of its existence, then, the OUHK has relied primarily on print-based course materials. Many of these courses were in fact bought in or adapted from Open University of the UK materials, and new courses developed at OUHK have followed the basic OUUK style and philosophy of course development and presentation.

The OLI/OUHK has also managed, with occasional government help, to become self supporting. It therefore cannot afford to spend vast resources on technology developments. It has relied upon well-established technologies, such as broadcast television, to supplement its primarily print-based course materials. Audio tapes are also used, along with a few computer applications. In addition, there is limited use of an electronic bulletin board service.

The combination of these factors—the need for the OUHK to develop expertise in the sue of newer forms of non-print media, and its relative isolation and self-funding status—has limited the scope of the projects we have undertaken. We have not been able to pursue a 'grand plan' of technological innovation, since we simply can't afford to. In this I'm sure the OUHK is not unique. We have responded, therefore, by taking a more opportunistic approach to using new technologies. Given the recent criticisms of highly bureaucratic distance teaching institutions' abilities to respond rapidly to change, this may not be a bad thing.

The development model that the OLI has adopted combines existing design capacity with outside expertise in the technical aspects of programming and production. Overall, this makes effective use of limited resources, and doesn't commit the OLI to a particular technology.

Current developments include two management information systems, to enhance OUHK's administration. One is the development of Interactive Voice Response Systems for students for selection of tutorial groups, course registration, loan applications, transcription applications and the checking of mailing dates for course materials. The other enhancement is the development of a document imaging system to store, view, print and scan documents.

The OUHK also intends to gradually change its computer network towards up-to-date networking technologies, using standards such as data link, physical layer protocols and network wiring standards. Optical fibres will be used to implement the wiring backbone, and the network will be upgraded to support applications such as client-server, imaging, multimedia and for video-conferencing. An 'electronic library' with a CD-ROM network is now under construction, to allow staff and students to access CD-ROM databases for learning and for research and development.

The OUHK is also setting up electronic bulletin board services and will provide Internet services to all students, both at the OUHK campus and through remote dial-up. Client stations in PC laboratories in the OUHK's new home have been upgraded to more powerful computers in order that these new network facilities can be accessed.

Finally, the OUHK has committed its staff and funds to two interactive multimedia programs delivered on CD-ROMs. One is a Hong Kong History program that I will discuss below in detail, and the other is a program for teaching Mandarin Chinese to Cantonese speakers currently under development.

The OUHK is thus making a number of strategic decisions with respect to the new technologies. These decisions are based on both local and global factors, including:

- local conditions;
- the present and future operation of the Internet;
- the needs of Hong Kong learners;
- the availability of the technologies;
- resource constraints, both on the Institute and its students; and
- the desired teaching and learning approaches.

To further assist in this decision making, the Institute funds a number of research and development projects. Each project is a small-scale example of the application of new technologies. A good example is the project that is the principal focus of the rest of this paper.

The History of Hong Kong

Choosing to produce the program

An internal OUHK survey carried out in 1994 showed that only 13 of our courses had a computing component, and—much more telling—that all of these computing software packages were externally produced. We decided that making a leap into the fray of multimedia development would be worthwhile, since we had a likely candidate, our newly-developed history of Hong Kong course, *AW213 A History of Hong Kong 1842-1984*. An interactive multimedia program seemed the best way to integrate *AW213* course materials and visual and audio resources easily obtained from Hong Kong's Government archives and museums.

The program was developed under the auspices of a research project headed by Ross Vermeer, a Course Designer, and Linda Chung, an Educational Technologist, both members of the OUHK's Educational Technology and Publishing Unit. The project has also enjoyed the collaboration of the original course writer, Dr David Faure of the University of Oxford, who added his expertise by writing additional explanatory text and guiding the selection of visual materials.

We chose a history course as a starting point for several reasons: this was a project of manageable dimensions. It could be served by a fairly straightforward interface design. Much raw visual material was already sourced via our development of the history course. And the course provided text that could be adapted.

Designing the program

We decided to produce an IM program that comprised only part of a course, but that could also stand alone as an independent supplement. Such a program would be designed to be accessible to both students taking the course and anyone else who wanted to learn about Hong Kong history.

The OUHK has no staff with the necessary programming and interface design experience, so we had to look outside for an external producer. After an open tendering process involving bids from both educational institutions and commercial producers, the project was awarded to a team of specialists in multimedia development from the Centre for Applied Learning Systems (CALS) at the Adelaide Institute of Technical and Further Education in Adelaide, South Australia. This international cooperative effort gave the project a unique perspective, but also caused some difficulties, to be discussed below.

Work proceeded on a simple, flexible development model based on a commercial model designed by Roy Strauss and published in *New Media* magazine. This model comprises four basic stages: research, design, production and testing. The OUHK researchers—Mr Vermeer and Ms Chung—researched and acquired resources from local Government sources (Ms Chung); managed the project as whole (Mr Vermeer), and contributing to the general program design (both). Staff from CALS provided additional project management, graphic and interface design, and coding.

We pursued the following general project objectives:

1 To develop an interactive multimedia program delivered via CD-ROM disks to s supplement the course content for *AW213*.

2 To evaluate the interactive multimedia program produced.

3 To develop ETPU staff expertise for future non-print media projects.

4 To prepare a program that helps OUHK students deal with modern technologies essential in an information-driven society such as Hong Kong.

5 To develop institutional experience in delivering sophisticated non-print instructional material.

Project results

The finished program features text articles, photographs and video footage. These elements are arranged and accessed through what has turned out to be a quite elegant interface. The program's visual design is perhaps its highlight; it is of a high standard, comparable to commercial products costing many times the budget for this project.

In its final design, the program comprises four main sections:

1 A timeline showing both key events in Hong Kong history, as well as a pictorial history of the development of Hong Kong's famous harbour and skyline. The print-based course materials begin by helping students learn to put historical events into order, and into context so that they have a framework for understanding trends and themes. This section of the CD-ROM should enhance those activities. The timeline is designed as a dragon; the events or years are marked as scales on the dragon's back.

2 A very large section on historical themes, comprising articles, photographs and video clips covering Hong Kong's economic, industrial and political development, as well at the Territory's experiences in World War II. This part of the program contains most of its resources. This wide range of topics is covered in depth, with hundreds of photos and about 20 video clips accompanying well over 100 text articles. The design of this section is perhaps closest to what one

sees in many data-heavy CD-ROM programs, as well as on many Web pages: the organization is hierarchical, and links are mainly up and down that hierarchy. Text is broken up into small chunks on consecutive screens, allowing for a fairly large pitch size for the text, enhancing readability.

3 A map-driven section on certain towns and districts in the Territory. This section depicts the changes in Central, Kowloon, Shatin, and other locations around Hong Kong over the years. Users gain access to the various places by clicking on a map-menu, then read articles about the place they clicked on, or view an 'interactive slide show' of photos of that location in the historical era they choose.

4 An comprehensive look at the 'Life of the People' of Hong Kong. This section focuses on the way the majority of people in the territory have lived their lives, rather than on the minutia of colonial administrations that so many of Hong Kong's historians have addressed. Text, photos and video clips are closely aligned in this section, which depicts the lives of the poor, the wealthy, and the great majority of Hong Kong's people, the working and middle classes. Particular attention is paid to details of ordinary Hong Kong life: housing, leisure activities, and day-to-day tasks.

Altogether, the program contains several hundred text articles, several hundred photographs and other graphical images, and over 30 minutes of video footage. A word search facility is also provided; this engine gives users immediate access to any part of the program that appears as a search result.

So has this project met this list of objectives? So far we think it has, and we hope it will continue to do so. The primary objectives—developing a useful learning tool for our students, using a new technology, and gaining experience in such projects—have been achieved. The researchers have gained the experience they were looking for, given the amount of time they had to devote to the project. The Institute now has a project under its belt, and perhaps can better look forward to continuing to develop its commitment to multimedia development.

The work of David Faure, as Subject Matter Expert, has particularly benefited this project. Since Dr Faure also developed the original course *AW213*, his work on this project has built a seamless connection between printed material and CD-ROM content. It should be very easy to integrate this CD-ROM into the *AW213* course work. This fulfilled another of our goals; we have no way of knowing, of course, but we believe that choosing a commercial producer might have jeopardized this aspect of the program's content, particularly if the producer were determined to make the program more 'marketable'. Working with another academic institution precluded this possible conflict of intentions.

On the whole, then, the project has gone as planned, save for the timing. Particularly, the project has been completed well within its designated resource limits. We have proved that

collaborative multimedia work across international boundaries can be done, and done well, given a reasonable budget (about USD90,000 was enough for this project) and a sufficient time frame (over two years overall; and about 15 months after contracting CALS).

Putting the program into use

This project will continue to evolve and bear fruit as we track the actual use of the new CD-ROM in *AW213* course presentations. The first presentation is currently underway; the program was made available to April 1997 semester *AW213* students. The AW213 course team has focused on integrating the use of the CD-ROM into the extant printed course materials. We are doing our best to avoid asking students to simply wander about the program trying to absorb useful knowledge from its hypertext environment (Laurillard 1994): activities and assessment included in the printed course materials have been developed to guide students' use of the program, and to focus their 'reading' of this electronic text while maintaining their freedom to browse and follow links that interest them.

There is great possibility for further development of the program itself. Although copies, once pressed, are permanent, the program itself is easily updated and expanded. If the OUHK decides to make a commitment to in-house multimedia development, this program can easily be kept up to date.

The CD-ROM on Hong Kong History provides a useful tool for all of the Special Administrative Region's tertiary history students, and will be of general interest to most Hong Kong people. We hope, therefore, that developing such teaching tools will help raise the OUHK's profile in the local tertiary community, and serve as the catalyst for future collaboration, and convergence, if you will, on similar projects.

Conclusion

Our first complete CD-ROM project has served as a very useful introduction to multimedia development. It has also, however, been rather time-consuming and expensive. The future of effective multimedia development includes CD-ROM delivery, but the field is expanding rapidly into networked services, especially those transmitted via the Internet. CD-ROM delivered programs can still better handle complex and visually detailed material, but that too is changing as transmission technologies improve. The OUHK is pleased with its first foray into multimedia development, but should also be ready to continue its commitment to continuous and systematic research into new teaching technologies.

In a sense, the OLI/OUHK was 'set aside' years ago to develop alone as a distance education provider, clearly separate from the rest of Hong Kong's tertiary sector. It would be somewhat surprising, however, if technological developments and the resultant changes in educational practice at all kinds of tertiary institutions allowed this gap to remain intact for much longer.

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Valuing Diversity: Prior Learning Assessment and Open Learning

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Introduction:
Public expectations of education in the last decade have been shaped by falling job expectations on a global scale and a general longing for something better. Most universities in Canada are facing sharp cutbacks in government support, dwindling resources, growing public scrutiny, and student consumerism. Prior learning assessment (or PLA) is one of the many changes proposed for post-secondary education that has the potential of benefiting both adult learners who are in the workforce or re-entering the workforce as well as learners from the conventional age group of recent high school graduates.

The growing demand for colleges and universities to implement PLA systems is a reflection of the desire of adults to obtain recognition for learning that has been achieved beyond the confines of the classroom. This recognition is sought for the purpose of obtaining entrance into and advanced placement in various post-secondary education and training programs. This is a phenomenon that is not limited to Canada. Here in the United Kingdom, it is known APEL (Assessment of Prior Experiential Learning); in Australia and New Zealand, it is called RPL (Recognition of Prior Learning).

In Canada, the Canadian Labour Force Development Board has, in the past year, advocated the use of the term Prior Learning Assessment and Recognition (PLAR). PLAR is defined as "a process of identifying, assessing, and recognizing what a person knows and can do"; as a process, PLAR can "take various forms and the outcomes can be used for a large number of purposes relevant to the goals of the individuals, the labour market partners, and society at large." The Board sponsored the first national forum on PLA in the fall of 1995 and will be sponsoring a second forum in October 1997. Some adult educators (including the author) have some reservations about the proposed acronym PLAR, anticipating that the "R" (recognition) component may dilute the empowerment potential of the process – PLA is a valuable self-assessment tool for the individual, regardless of whether (credit) recognition is granted.

The concept and the processes of PLA present to the higher education community many familiar issues about learner access and support in a somewhat unfamiliar form. This paper will attempt to summarize the concept and process of PLA and identify some of the common aspirations and challenges shared by the prior learning assessment and open learning movements.

PLA as a concept and process

Prior Learning Assessment, when applied to post-secondary education, is a systematic process to evaluate and accredit learning gained outside formal educational institutions, by assessing relevant learning against the standards required by post-secondary courses and programs. The process enables students and potential students to obtain recognition for learning which they have achieved through both formal and non-formal learning, including learning achieved via work experiences and other life experiences such as self-directed learning, artistic and cultural pursuits, volunteer community activities or travel study.

The term "experiential learning" is often used in conjunction with the non-formal learning that adult learners achieve via concrete experience. Experiential learning has been prevalent in Europe since the dawn of Christianity. The most dominant modes included apprenticeship training by craft guilds, "chivalry training" held in courts, and private learning in monasteries and abbeys. These modes were slowly replaced by more formal systems as industrialism developed and modern occupations took the place of crafts. In the 1930s in North America, Dewey (1938) emphasized the need for experiential learning or "discovery learning" in the natural sciences. It was the returning veterans from World War II who put pressure on the formal education system in the United States to recognize alternative sources of learning. This pressure resulted in the development of standardized examinations to facilitate admission into higher education programs, namely, the College Level Examination Program. Following the recommendations of the 1971 Commission to Study Non-Traditional Education, a small number of universities and colleges in the north-eastern United States co-operated with the Educational Testing Service in Princeton, N.J. to investigate a variety of means for the valid and reliable assessment of experiential learning (Keeton, 1979; Rose, 1989).

It is now commonly agreed that prior learning achievement includes all those things individuals know or can do at the point where they decide they wish to obtain recognition, that is, to become formally qualified in an academic or professional area through a credential awarded by a recognized post-secondary educational institution. The prior learning that is presented to the institution for evaluation can be categorized into two major forms of learning – formal learning and non-formal learning. The distinction between formal and non-formal learning lies primarily in the source of control and the degree to which the learners and community stakeholders are allowed to influence the production and transmission of knowledge. In formal university study, faculty traditionally evaluate learning on the basis of learning experiences they design and control.

Institutions which offer PLA services usually make use of three types of assessment methods. The three types can be summarized as:

Examinations:	standardized challenge
Equivalencies	course program

Portfolio-assisted PLA:

Documentation and demonstration of achievement via a portfolio, which can be supplemented by: interviews
oral and/or written tests
demonstrations

The first two types, examinations and equivalencies, have been used in post-secondary education for many years. They have been applied for the purpose of admission into a course or program, obtaining transfer credit from one program to another, or for gaining advanced standing in a program. The third type, portfolio-assisted PLA, is increasingly used to assess non-formal learning from work and/or life experiences. Compared to examinations and portfolios, course or program equivalencies do not provide for assessment of individual learners. It is the instruction in the previous course or program that is being evaluated or recognized. In Canada, there is increasing awareness that the recognition of foreign credentials is vital to the socio-economic integration of immigrants, especially those who have acquired post-secondary level education and professional training. Several provinces have set up foreign credential assessment services.

Portfolios are especially useful for documenting non-formal learning achieved in uncredentialled contexts. A completed portfolio indicates the learner's ability to reflect on and analyze learning experiences, to apply learning from specific experiences to new contexts, and to identify the relationships between the experiential learning and the formal courses. The process of writing and organizing a portfolio is developmental; it can lead to a deeper understanding of personal strengths and weaknesses and assist the learner in prioritizing personal and academic goals (Wong, 1995).

Different institutions may vary in their guidelines for portfolio development, but learners are usually expected to go through the following steps:

- Reflect on significant life events and activities that have been influential (e.g. personal experiences, work experiences, community service, artistic or cultural pursuits);
- Summarize these achievements in a written "autobiographical narrative";
- Prepare a statement of educational, career and personal goals;
- Identify learning outcomes from the autobiographic narrative and cluster them into areas of competencies;
- Review institutional calendars and course outlines for comparable expected learning outcomes and competencies;
- Match personal learning to a specific course or program;
- Describe or "delineate" each cluster of learning, summarizing what knowledge, skills and values have been acquired and how they have been acquired;
- Collect and assemble the materials that will be used as evidence of learning, including direct evidence (e.g. samples of work done) and indirect evidence (e.g. letters of reference; certificates of completion);

- Compile all of the above items in a binder (two or more copies may be required by the institution);
- Submit the portfolio to the designated institutional representative.

Many universities and colleges in the United States, particularly those that were created to serve adult learners, offer portfolio development courses for learners. Such courses are also offered by some Canadian institutions, on a more limited scale. Participants usually spend several weeks and sometimes a whole semester preparing and organizing a portfolio before submitting it for evaluation by one or more faculty assessors. Portfolio development courses can be of great assistance to those students who lack a knowledge of university writing conventions. By using the vehicle of the personal learning portfolio, individual learners can receive an orientation to different fields of study, as well as develop skills such as defining problems and synthesizing material into coherent, critically-interactive arguments.

Universities and PLA: challenges and opportunities

In Canada, the college sector has been much more active than the university sector in the implementation of PLA. This could be attributed partially to the fact that many college programs have a vocational focus and are structured with reference to competency-based standards. On the other hand, university programs are traditionally structured according to the overall architecture of the major disciplines, such as the humanities, the life sciences, and the social sciences. Curriculum development begins with a focus on what faculty ought to teach in terms of the major concepts, principles and methodologies of the academic area and the discipline. Many university faculty abhor competency-based standards, believing that true learning is holistic, not segmented into discrete facts and skills applicable only to specific tasks. Liberal arts education is, after all, they argue, premised on giving students a comprehensive foundation for lifelong learning upon which they can build the knowledge and expertise they may not, even at this point, know that they may need.

Supporters of PLA believe, however, that university faculty can re-consider existing curriculum content without compromising this underlying philosophy of a liberal education. Course and program structures and processes can be reconfigured to match the intent and spirit of PLA – that is, to recognize that adult learners can achieve academically relevant learning from several sources, from both formal study and the active use of relevant work and life experiences. For example, faculty can review issues such as:

- Are there alternative routes through the program other than the currently prescribed sequence?
- Are a subject's content and processes absolutely dependent on the prerequisites stated or are they merely a continuation of tradition?
- Are the courses described in terms of expected learning outcomes and are there clearly stated criteria for assessing levels of achievement?
- What options are there for students who successfully demonstrate mastery of skills commonly taught in advanced courses but do not have the theoretical underpinnings?

A major task facing faculty who participate in PLA is to achieve balance – a balance between respecting the applicants' adult experiences and aspirations and effectively guiding them in their formal learning in a constructively critical way that maintains the standards of university education.

Examples of Canadian Initiatives

Several Canadian universities have initiated programs which respond to the adult learner demand for programs that are accessible and flexible with regard to location and scheduling, and programs that integrate a system of prior learning assessment. Various groups of learners have been attracted by the potential to achieve time and cost savings through verification and recognition of their knowledge and skills. Time savings can be achieved when these individuals are exempted from taking specified courses which offer similar content, thereby shortening the time required to obtain a degree or other credential. The potential for cost savings depends largely on the fee charged by the institution for the assessment service and the exemptions or advanced standing granted.

In Vancouver, British Columbia, Simon Fraser University has developed a new Integrated Studies program within their Bachelor of General Studies degree program. It is a highly structured cohort-based program to meet the specific needs of specific student groups. In 1996, the participants included employees sponsored by CP (Canadian Pacific) Rail and BC Hydro. By building on varying levels of previous post-secondary education and related workplace-based learning, the program facilitates the completion of the degree program in less than the normal 120 credit hours. A strength of this program is the opportunity for institution-industry collaboration that could integrate the goals of learners, employers and institutions.

A consortium of western Canadian universities, including the universities of Manitoba, Saskatchewan, Alberta and Victoria jointly developed a distance-delivered program called the Certificate in Adult and Continuing Education (CACE). Portfolio-assisted PLA is an option open to the participants, many of whom already have a degree but are now making a change into careers that are related to the facilitation of adult learning. Individual learners may choose to go through a portfolio-assisted assessment and receive prior learning credits toward the elective block of the program. At the University of Saskatchewan, where over 80% of the CACE participants live at a considerable distance from the university, PLA candidates receive an Application Guide which explains the process and provides guidelines and examples. Candidates are encouraged to attend a one-day weekend workshop which provides further demonstrations and small group practice. Individual coaching is provided at a distance until the candidate is ready to submit a portfolio. At the University of New Brunswick where a PLA option is provided for students in a Bachelor of Adult Education program, follow-up coaching is provided via group audioconferencing.

In the province of Ontario, ten schools of nursing jointly offer the Nurse Practitioner program, a post-baccalaureate certificate program. The ten schools began their

collaboration based on their common need for quality assurance and improving access to continuing professional education, but were also motivated by the government's financial support for PLA. Portfolio-assisted PLA is an option available to nurses whose formal training matches 60 percent or more of the curriculum. Assessors of the portfolios are drawn from stakeholder groups in the community and must go through four days of assessor training. Each participating school is represented by one individual on the coordinating committee but the assessment process is centralized at the University of Ottawa.

PLA and open learning: common aspirations

The PLA and open learning movements share common aspirations in their efforts to persuade the higher education community to focus on the needs of learners as the pivotal point for planning student services. Supporters of PLA recognize that prior learning usually involves a blurring of the boundaries between formal and non-formal learning. Adult learners who request PLA will likely have acquired academically relevant learning from several sources. PLA is premised on the recognition of learning arising from both formal study and the active use of relevant life and work learning experiences. The focus of the assessment is on the *quality* and *level* of the learning, not *how* and *where* it was initially acquired.

Open learning is premised on providing a range of choices for learners – choices in terms of access:
- where they learn (place),
- when they learn (time),
- how quickly they learn (pace);

and in the curriculum:
- what they learn (content),
- how they learn (methods),
- how their learning is evaluated (assessment)

Both PLA and open learning recognize learner freedoms in terms of access to learning. Supporters in both movements hope to make higher education available to new groups of learners who may not otherwise consider entering post-secondary educational institutions. In Saskatchewan, these potential learners include aboriginal (First Nations) students, who make up the fastest-growing group within our schools. At the same time, both PLA and open learning aim to provide more flexible pathways to learning for both potential and existing learners. The latter group includes increasing numbers of conventional-age students who are taking fewer courses per academic year in order to work part-time to support themselves.

Practitioners in PLA and open learning share a common challenge – both movements need large numbers of faculty and staff who understand the concept and the processes and are personally committed to first, participate in professional development activities, and then, to contribute their expertise and experience in enabling the adoption of innovations. It is fair to say that Canadian universities are far from achieving a critical mass of faculty and staff who are knowledgeable and supportive of PLA. Faculty and staff development workshops in PLA are beginning to be a feature in instructional development programs at

some Canadian universities. While most faculty agree that academic structures that create flexible learning pathways for students is a laudable goal, in reality, the mindset of "if you didn't learn it from me, you never learned it!" is still strong. One strategy that has been quite successfully is to get the members of an academic department to reflect on and discuss a set of questions related to their own learning and the assessment practices in their subject areas (Wong, 1996). For example:

- How did you learn what you need to know to teach the subject you are teaching now?
- How did you learn what you need to know to fulfil your other academic roles such as research, professional practice, administration, and public service?
- What do you notice about the balance between formal and informal learning?
- In your subject area, what are the relationships among the formal curriculum document, the usual teaching/learning practices, and the current assessment practices?

Even as progress is being made in getting more faculty and staff on side, an equally important challenge is to get learners to commit themselves to preparing and submitting a portfolio of prior learning for assessment. While many learners are attracted by the potential of getting recognition for prior learning achieved elsewhere, relatively few complete the rigorous steps of portfolio preparation. Many students choose to take additional courses rather than to go through the process. Likewise, where open learning is available, many students find it easier to attend traditional lectures than to make decisions about what, when, and how they learn.

Conclusion

PLA share with open learning the potential of simultaneously addressing a whole range of issues, including access for diverse groups of learners, course and program content and structures, modes of teaching and learning, modes of program delivery, assessment procedures, and the nature of evidence of learning.

PLA, when applied to post-secondary education, places emphasis on the reliable and valid assessment of learning as a prelude to giving recognition. The energies of faculty are directed to finding ways of assessing what has been learned outside the educational institution and making judgements on whether the learning is relevant and equivalent to the content and processes that students are expected to learn in specific courses and programs. In making decisions about giving recognition for prior learning, faculty assessors are concerned about issues such as:

- What is the nature of the learning?
- What evidence of learning is available?
- What strategies are appropriate to evaluate the learning?
- What criteria should be used to judge the quality and level of the learning?
- How much credit should be awarded?
- What is the relationship of the award to the degree requirements?
- How should this decision be recorded?

When faculty and administrators systematically and sincerely respond to these questions, they are more likely to shift away from traditional modes of practice and service provision. The exercise of drafting an institutional policy on PLA can provide the impetus for a review of program delivery and administrative systems that are more learner-centred. This is a potential outcome that will, in the long term, strengthen the acceptance of open learning systems.

In Canada, where distances between large (and small) population centres are vast, distance education is a more familiar term than open learning. Educators generally understand distance education to refer to the methods, technologies, and support services used to deliver education to students who for various reasons cannot attend classes on-campus. Current PLA services such as portfolio-development courses stand to gain grassroots support if the methods and technologies of distance education were used to make the services more accessible. Audioconferencing and computer-mediated communication are both widely accessible among Canadian institutions, but the latter is hampered by the lack of a common platform used by materials development teams.

PLA is receiving increasing attention from both the federal and provincial governments because of its potential impact on workforce development. Several provincial governments have drafted or are in the process of drafting policies on PLA. However, the limited number of university pilot projects to date indicate that the post-secondary system as a whole needs to be much more flexible or "open" in order to facilitate large-scale implementation of PLA. In the U. K., the open learning movement appears to have gained strong support over the last two decades. It may be timely for supporters of the PLA movement in Canada to learn from the U. K. open learning experience strategies for recruiting allies and champions.

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