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Volume 9

Jane E. Brindley, Christine Walti &
Olaf Zawacki-Richter

Learner Support in Open, Distance and Online Learning Environments

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Series Editors' Foreword

The editors of the ASF series on distance education found compelling reasons to bring together leading authors and active practitioners to create Volume 9 on *Learner Support in Open, Distance and Online Learning Environments.* There is widespread recognition that learner support in the form of effective teaching, advising and counseling, library, information and technical assistance, and efficient administrative services can make an important positive difference to the distance learning experience. This volume addresses the latest in theory, practice, research and evaluation in the field.

Since the launch of the Master of Distance Education (MDE) program – jointly offered by the University of Maryland University College (UMUC) and Carl von Ossietzky University of Oldenburg in the year 2000 – the ASF Series has published several volumes mainly to accommodate students in core courses of the MDE. Volumes 4, 5, and 6 are recommended in the *Foundations of Distance Education*, Volumes 2 and 7 in the *Management of Distance Education 1: Cost Analysis,* and Volume 8 serves the *Management of Distance Education 2: Leadership in Distance Education* course. With Volume 9 – our latest publication – we have continued this tradition by developing a comprehensive textbook for the course on *Student Support in Distance Education and Training.* However, that being said, Volume 9 will also be of interest beyond the classroom. Practitioners, both novice and experienced, will find it of value.

EDEN, the European Distance and E-Learning Network, entrusted the University of Oldenburg with the hosting of the 3rd EDEN Research Workshop on *Supporting the Learner in Distance Education and E-Learning* in March 2004. Authors of Volume 9 were invited to present the content of their contributions at the Workshop, and many chose to do so. As well, the keynote addresses from the EDEN Research Workshop are included in the DVD that accompanies Volume 9, and three of the keynotes appear in print version in the book.

The topic of the EDEN Research Workshop extends through the 25-year history of the Center for Distance Education at Oldenburg University like a red thread. Supporting students in distance education through advising, educational counseling and tutoring are the core tasks of the Center and inspired the desire for a publication on *Learner Support in Open, Distance and Online Learning Environments*. Volume 9 provides the reader with an excellent overview of the major challenges and approaches to providing effective learner support in the current context of institutional competitiveness, pressure to balance scale with connectedness, scarce resources, technological change and opportunity, and an increasingly heterogeneous student population.

We express our gratitude to the authors and editors who followed our invitation to participate in this exciting endeavor for the occasion of the Center's 25th anniversary. It assembles an impressively large number of chapter contributions from active practitioners in the field of learner support today. They provide a wealth of knowledge, expertise, and experience, as well as a basis to critically reflect what needs to be done in order to support students and learners in open and distance education, and in online learning environments.

Of the many participants our special thanks go to Jane Brindley, Christine Walti and Olaf Zawacki-Richter for their unrestricted willingness to take on the edition of Volume 9. Jane Brindley is a faculty member in the School of Psychology at the University of Windsor and serves as an adjunct faculty member for the University of Oldenburg in the course *Student Support in Distance Education and Training. S*he served as co-chair in the EDEN Research Workshop international program committee and is a distinguished expert in the field of learner support. Christine Walti and Olaf Zawacki-Richter participated in their roles as members of the Center for Distance Education at Oldenburg University. Christine is Oldenburg's faculty for the *Foundations of Distance Education* course and co-teaches *Student Support in Distance Education and Training* with Jane Brindley. Olaf Zawacki-Richter recently earned his doctorate on student and faculty support in online distance education. He now works for the Bankakademie and continues teaching the MDE course on *Learning and Training with Multimedia*. Franziska Vondrlik has again provided her tireless editorial assistance which in the end made this publication possible.

The Series' Editors
August 2004

Acknowledgements

The editors would like to express their sincere appreciation to Ulrich Bernath for initiating the idea for this volume in the ASF Series. He is an inspired leader in distance education and we thank him for the creativity and support that he has generously given to the project. We would also like to thank Franziska Vondrlik who worked tirelessly and enthusiastically on text formatting and copy editing. She was invaluable to the process of producing the book and it was a pleasure working with her.

The 3rd EDEN Research Workshop, *Supporting the Learner in Distance Education and E-Learning*, held in Oldenburg, Germany from March 4-6, 2004 was planned at the same time as this volume, and a number of the chapters evolved from presentations. We are grateful to all of the keynote speakers at this gathering for giving their permission to include the original recordings of their presentations on the accompanying DVD, and we offer a special thanks to Terry Anderson, Nick Allen and Alan Tait who provided us with transcripts so that we could include print versions of their keynote addresses.

Finally, we wish to thank all of our contributing authors who enthusiastically responded to our call. Despite demanding schedules, they took time to share their work and ideas to create a volume that is reflective of the best of practice and research in the field of learner support today. 'Learner Support in Open, Distance and Online Learning Environments', the 9th volume of this series, truly demonstrates the power of collaboration at a distance.

Jane E. Brindley, Christine Walti & Olaf Zawacki-Richter
August 2004

JANE E. BRINDLEY, CHRISTINE WALTI, OLAF ZAWACKI-RICHTER

The Current Context of Learner Support in Open, Distance and Online Learning: An Introduction

1. Introduction

This volume of the ASF Series focuses on learner support, all of those activities and services in education that have been developed to help learners meet their learning objectives and gain the knowledge and skills that they need in order to be successful in their courses. Learner support activities include tutoring and teaching; counselling and advising including such services as orientation, learning and study skills assistance, academic advising, and career and personal counselling; and administrative activities such as admission and registration, library and information systems, and infrastructure support for activities such as peer tutoring and alumni organization. In other words, learner support activities are all those interactive processes that are intended to support and facilitate the learning process.

Teaching, tutoring and other forms of learner support exist to serve the mission of the educational provider, and in this sense, are very much contextually bound, reflecting the provider's values and educational philosophy as well as other factors particular to the setting. That being said, there are certain commonalities across most distance education contexts in terms of the role that learner support is intended to play. Teaching and tutoring are generally seen as encompassing a broad range of instructional and coaching activities that help guide students through a course. Learner support is most often used as a term subsuming all interaction between institutional personnel and students (prospective and registered) intended to assist them in meeting their objectives from point of first inquiry through graduation and beyond, often for a lifetime. Teaching and tutoring are recognized as a form of learner support but are often addressed separately in recognition of the centrality of the teaching function to interactions with learners.

In the distance education literature, the term "student support" is used as frequently as "learner support". Hence, in this volume, the term 'student' is recognized as being equivalent to 'learner' in order to simplify usage. However, it is worth noting that the term 'learner' is becoming more commonly used in the literature because it implies a more active instrumental role in the learning process than the word 'student'. Further, the term "learner" is generic, and can be applied to the wide variety of contexts within which learning takes place (e.g. public and private schools and post-secondary institutions, corporate and public employee training settings).

As distance education has evolved from a teacher-centric to a much more learner-centric model, the roles and activities of instructors and other learner support providers have changed to being more proactive than reactive. The nature of learner support in distance education has been affected by research findings that have illuminated the complexities of the teaching and learning process, learner behaviour, motivation, and factors influencing retention and attrition. These findings have been used to inform and improve practice. A decision by a learner to drop out of a course or a programme is now understood to be dependent upon a wide range of variables, many of which can be influenced by various forms of learner support, in particular, teaching and tutoring. This is important to keep in mind as distance education continues to grow in both scope and complexity so that lessons learned and gains made in one context are applied successfully in others.

New technologies are also having an enormous impact on the way in which learner support is conceptualized and practiced. Through the Internet, learners can instantly be in touch with other learners as well as with a variety of learner support personnel: their instructor, a librarian, a registration clerk, and an academic advisor. Traditionally learner support in distance education has been identified as being a completely different set of activities from those associated with course production. However, with the implementation of online learning, this distinction does not always hold and the line between the two sets of activities has become much more blurred (cf. Thorpe, 2003). An online course may consist of no more than a syllabus and a reading list, with the content being created through interaction between learners and course facilitator. This presents new challenges as well as opportunities for practitioners (cf. Bernath, Kleinschmidt, Walti & Zawacki, 2003).

As a result of demand for access to education and training, and the growing opportunities offered by technologies and the Internet, distance education has rapidly spread to a variety of contexts beyond traditional educational settings. Examples include informal educational projects, for example, those in developing countries that are intended to improve economic or health conditions through the use of home-study materials, corporate and military training that employ web-based or computer-based programming, and individual learning projects that are taken on with the aid of self-help materials offered through computer-based technologies.

New contexts for distance education, and the opportunities for better quality and increased quantity of interaction among and with learners place new demands on learner support practitioners to adapt to new circumstances and develop practices that reflect current views of teaching and learning, address the challenges presented by a particular context, and take advantage of the opportunities offered by new technologies while remaining committed to the values and traditions of social justice upon which learner support in ODL is based. In this volume, we have invited authors from a variety of settings to discuss their approaches to learner support in an attempt to provide both those new to the field and experienced distance educators with a broad view of learner support concepts, practices, and opportunities in open, distance, and online learning today. We start by taking a look at the large picture. The first section of Volume 9 addresses visions and retrospectives, some broad views of the history and future of learner support. In the second section, we turn our attention to a closer examination of practice today by examining different kinds of learner support activities in a variety of contexts, and in the third section, we examine the various aspects of the planning and management of learner support. The final section of Volume 9 consists of three keynote addresses from the 3rd EDEN (European Distance and E-Learning Network) Research Workshop on “Supporting the Learner in Distance Education and E-Learning” held in Oldenburg, Germany from March 4-6, 2004. The DVD which accompanies this book features the original recordings of all of the keynote speeches given at the workshop.

Before providing an overview of the individual chapters of Volume 9, we turn to the challenge of defining terms. Distance education practitioners operate as part of an international community, and it is important that we communicate clearly with one another. Terms such as e-learning, online learning, flexible and distributed learning are frequently used, but not necessarily uniformly and consistently. We have provided some definitions of these terms but recognize that these may vary slightly from author to author even within this volume.

2. Definition of Terms

2.1. Learner Support

As noted above, learner support encompasses all of those interactive activities and services in education intended to support and facilitate the learning process. This includes tutoring and teaching, counselling and advising and related services, and administrative activities in service to learners such as admission and registration. In the context of distance education, learner support has taken on special importance because of the separation between learner and educational provider.

The student support system of the Open University in Great Britain (OUUK), which was founded in 1969, serves as a model for many distance teaching institutions. Alan Tait (1995) of the OUUK, who has written extensively on the topic of learner support, provides the following much quoted definition:

> The term student support means the range of activities which complement the mass-produced materials which make up the most well-known elements in Open and Distance Learning (ODL). It is, of course, true that printed course units, television and radio programmes, computer programmes etc., which replace the lecture as a means of delivery, and offer so much both in terms of social and geographical access, and in terms of cost-effectiveness, support students in central ways. But the elements of ODL which are commonly referred to as student support are made up of tutoring, whether face-to-face, by correspondence, telephone or electronically; counselling; the organisation of study centres; interactive teaching through TV and radio, and other activities. These activities have as key conceptual components the notion of supporting the individual learning of the student whether alone or in groups, while in contrast the mass-produced elements are identical for all learners. (p. 232)

Tait's (1995) definition does not refer explicitly to support for students in online learning, because it was intended for use in the context of systems employing print based pre-prepared study materials (*mass-produced material),* which were predominant in the second generation of distance education (cf. Garrison, 1985; Nipper, 1989) and still are on a global level.

Simpson (2002), also from the OUUK, describes student support in the broadest sense, as all measures extending beyond the production of study materials which support students in the learning process. He differentiates between *academic* (or *tutorial*) and *non-academic support* (i.e. administrative-institutional elements).

> Academic support consists of: defining the course territory; explaining concepts; exploring the course; feedback – both informal and formal assessment; developing learning skills, such as numeracy and literacy; chasing progress, following up students' progress through the course; enrichment: extending the boundaries of the course and sharing the excitement of learning. (p. 7)

According to Simpson, the first points (defining the course territory and explaining the course) are more embedded in the design of the study materials than the duties of the tutor. Simpson, like Tait, appears to refer more to second generation distance education using pre-prepared materials than to some online learning which relies more heavily on interaction to define content and concepts. (In this volume, Som Naidu makes an interesting case for viewing instructional design as a form of learner support. In online learning, the instructional design may only be apparent at the time of delivery as in traditional face-to-face teaching but is no less important than in pre-prepared material.)

Simpson (2002) uses the term *guidance* for activities of *non-academic support*, which he defines as follows:

> Non-academic support consists of: advising: giving information, exploring problems and suggesting directions; assessment: giving feedback to the individual on non-academic aptitudes and skills; action: practical help to promote study; advocacy: making out a case for funding, writing a reference; agitation: promoting changes within the institution to benefit students; administration: organizing student support. (p. 8)

These systems definitions are helpful in defining actual activities within learner support. The functional taxonomy of learner support provided by Tait (2000) is useful in further refining the purpose of these activities:

1. cognitive: supporting and developing learning through the mediation of the standard and uniform elements of course materials and learning resources for individual students;
2. affective: providing an environment which support students, creates commitment and enhances self-esteem;
3. systemic: establishing administrative processes and information management systems which are effective, transparent and overall student-friendly. (p. 289)

Thorpe (2003) takes this a step further by addressing the need to re-define learner support in the online environment. Similar to Tait (2000), she takes a functional approach, defining learner support as “…all those elements capable of responding to a known learner or group of learners, before, during and after the learning process” (p. 201). With this definition, she acknowledges the interactive nature of learner support as well as the blurring of distinctions between learner support and course production in online learning. Rather than trying to define types of support by staff roles, she notes that learners need support in two contexts. The first is in regard to “… institutional systems (such as knowing what is on offer, how to apply, how to claim a refund, make a payment, choose a course, etc.) before, during and after course study” (p. 203) and the second is in the context of “… the course they are studying, such as how best to complete a particular assignment, how to contact and work with other students on the course, how to make sense of something in the course materials, whether their contributions to the course conference are relevant, well conceived or otherwise, and so on" (p. 203). She goes on to note that it is in the latter context particularly that "… CMC and the web are challenging our concept of learner support" (p. 203).

Learner support has always included facilitation of learning communities to the extent that this was possible through learning centres, regional networks, and telephone and other technologies. Use of the Internet for teaching and learning has both underlined the importance of this activity, and greatly facilitated it. Learning communities contribute to a learner's sense of belonging and provide a social support network for learning (affective realm), facilitate acquisition of skills and knowledge through learner to learner contact (cognitive realm), and can help learners negotiate administrative systems (systemic realm).

In the cognitive and affective realm, learner support personnel (e.g. instructional staff, advisors, counsellors) are concerned with activities that are common in any pedagogic practice, that is, advising, supporting, challenging, helping, encouraging, enabling, orienting and skill-building (cf. scaffolding of online learning: McLoughlin, 2002). With the exception of some types of interactions that can be automated such as frequently asked advising questions, these activities are usually carried out by a person or persons (but may be aided by the effective design of any pre-packaged materials, however minimal – cf. Naidu, Chapter 8). The administrative/institutional aspects of support have always had an important pedagogic-didactical dimension, and these activities are also challenged and facilitated by new technologies. The introduction, development, and implementation of online learning require a significant investment in the macrostructural dimension (cf. Zawacki-Richter, Chapter 4) to facilitate teaching and learning.

Hence, we can define learner support as all activities and elements in education that respond to a known learner or group of learners, and which are designed to assist in the cognitive, affective, and systemic realms of the learning process. The main institutional systems involved in learner support are teaching and tutoring, advising and counselling, and information and administrative.

The term "learner support" (as opposed to student support) was chosen for the title of Volume 9 in recognition that support activities are essential to learning regardless of the learning context (e.g. higher education, corporate training, informal learning), and to underline a view of the learner as central and active in the teaching and learning process.

2.2. Four Basic Forms of Media-based Learning and Teaching

The approach taken to define computer-based learning, online learning, e-learning, and distance education in Volume 9 is to view them as a hierarchy of four basic forms of learning imparted through media. Computer-based learning is a subset of online learning, and each of these is a subset of e-learning. The overarching term for media-based learning and teaching is distance education or distance learning.

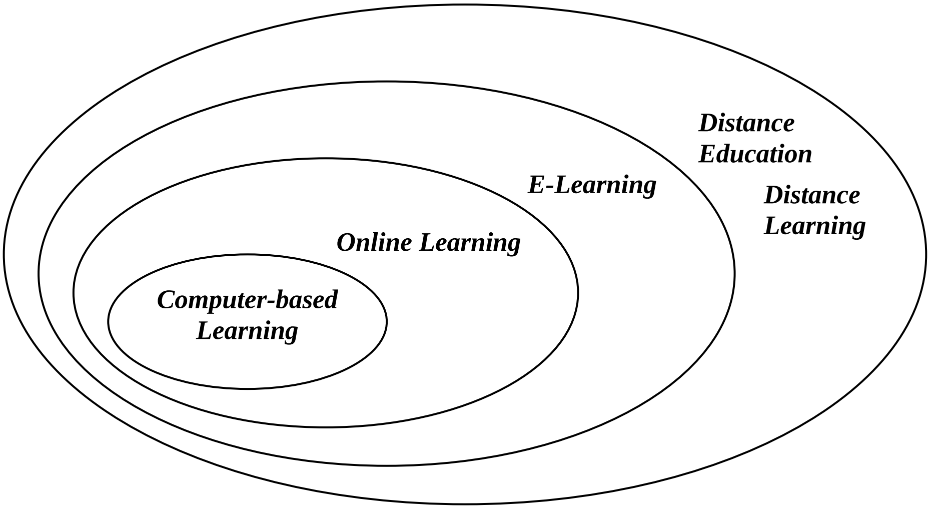

Fig. 1: Subsets of media-based learning and teaching (Zawacki-Richter, 2004, p. 32)

2.3. Distance Education, Distance Learning, Open Learning

Characteristic of distance education is that teachers and learners are separated geographically from one another. Teaching and learning are therefore enabled through media. The central concern of distance teaching pedagogy is how to best bridge the distance:

> Because the distance to students was regarded as a deficit, and proximity as desirable and necessary, the first pedagogic approaches specific to distance education aimed immediately at finding ways by which the spatial distance could be bridged, reduced or even eliminated. (Peters, 2001, p. 18).

Online learning provides enormous possibilities for this.

The hypothesis on which this publication is based is that online learning is a subset or category of distance learning that can therefore benefit from the history, approaches, experiences, strategies and attitudes developed and tested at institutions of distance education. This applies in particular to the development of support systems and in general to the promotion of online learning. For this reason the constitutive elements of distance education will be examined in detail.

The origins of distance education go back to correspondence courses (*correspondence study*). With the development of new media, which were also used for distance teaching (e.g. telephone, fax, radio, video, computer, etc.), the term *correspondence study* became too narrow. In North America the terms *independent study* and *home study* were therefore used as competing designations, until *distance education* finally prevailed. This was formalised in 1982 through the change of name of the International Council for Correspondence Education (ICCE) to the International Council for Distance Education (ICDE), the international association of distance teaching institutions (Holmberg, 1995).

Open learning and distance education are often used as synonyms. However, open learning differs from distance education:

> ... the concept of open learning is different from distance education since it embraces the idea of students being able to take courses or programs without prerequisites and being able to choose to study any subject they wish. Indeed most of the "Open Universities" were founded upon this basic premise. While some distance education programs may involve open learning, most do not. (Moore & Kearsley, 1997, p. 2).

Open learning therefore allows access to study without academic restrictions. Distance education programmes may follow the approach of open learning, that enables as much independence and self-determination as possible. The German FernUniversitat in Hagen i.e. is a "distance teaching university" and not an "open university" because students must fulfil university entrance qualifications to earn a degree.

Keegan (1986) differentiates further between *direct education*, by which he means "traditional face-to-face education", and *indirect* or *mediated education*. Distance learning is demarcated from other forms of *indirect education*. These include *programmed learning* or *computer-aided learning* which is one-way communication. Distance learning makes use of *two-way* communication, which enables interaction between learners and a teacher or tutor as well as among learners. The difference lies in the type of communication.

In the 1960s and 1970s, the founding phase of the open universities, distance education was defined by a number of authors (Dohmen, 1967; Holmberg, 1977; Moore, 1973; Peters, 1973; 1994)). Using these as a basis, Keegan (1980) proposed a definition which was widely accepted. However, Keegan has repeatedly revised his definition and finally referred to five characteristics of distance education which mutually influence one another:

1. the quasi-permanent separation of teacher and learner throughout the length of the learning process distinguishes it from conventional face-to-face education;
2. the influence of an educational organisation both in the planning and preparation of learning materials and also in the provision of student support services distinguishes it from private study and teach-yourself programs;
3. use of technical media – print, audio, video or computer – to unite teacher and learner and carry the content of the course;
4. provision of two-way communication so that the student may benefit from or initiate dialogue distinguishes it from other uses of technology in education;
5. the quasi-permanent absence of the learning group throughout the length of the learning process, so that people are usually taught as individuals and not in groups, with the possibility of occasional meetings for both didactic and socialisation purposes. (Keegan, 1986, p. 49)

In the second half of the 1980s there was a lively discussion on the definition of distance education. Rumble (1989) submitted an analysis of the debate and a five-part definition as well:

> 1. In any distance education process there must be: a teacher; one or more students; a course or curriculum that the teacher is capable of teaching and the student is trying to learn; and a contract, implicit or explicit, between the student and the teacher or the institution employing the teacher, which acknowledges their respective teaching-learning roles.
> 2. Distance education is a method of education in which the learner is physically separate from the teacher. It may be used on its own, or in conjunction with other forms of education, including face-to-face.
> 3. In distance education learners are physically separated from the institution that sponsors the instruction.
> 4. The teaching/learning contract requires that the student be taught, assessed, given guidance and, where appropriate, prepared for examinations that may or may not be conducted by the institution. This must be accomplished by two-way communication. Learning may be undertaken either individually or in groups; in either case it is accomplished in the physical absence of the teacher.
> 5. Where distance teaching materials are provided to learners, they are often structured in ways that facilitate learning at a distance. (p. 18)

Under the first point there is nothing that would not be expected for every form of teaching and learning and there are no indications of the size of the educational institution. However, self-learning programmes without any contact with a teacher or tutor are excluded. This means that isolated learning with a teach-yourself CD-ROM without any support from a tutor does not fall under distance education (*one-way* communication). Study systems which do not provide any communication between learners and teachers as a body or a group (*two-way* communication) are excluded in the fourth point.

The second point opens up the possibility of distance education being carried out in combination with face-to-face sessions (cf. blended learning below in 2.5). However, learners are basically separated geographically from the teaching institution (thirdly).

While learning in groups was not a constitutive element of distance education for Keegan (1980) ("absence of the learning group"), Rumble (1989) refers expressly to this possibility in his fourth point. The development of computer conferences has assisted the breakthrough of collaborative learning with networked computers.

The wording under point five does not demand the use of prepared study materials which were developed specifically for distance learning. This therefore includes courses in which the focus is on communicative and collaborative processes in Internet-based learning environments and standard textbooks or academic papers form the study material.

Hence, we can define distance learning or distance education as a form of learning and teaching in which technical media are used to bridge the distance between the parties involved in the learning process. The capability of media to afford two-way communication for interaction between learners and teachers and among learners is essential in this process.

2.4. E-Learning, Online Learning, Computer-Based Learning

E-learning generally means learning with electronic media, i.e. via the Internet (Intranet or Extranet), but also via television and radio, audio and video tapes and CD-ROM. E-learning is therefore defined more narrowly than distance learning, in which print-based study materials and correspondence communication are also used. E-learning can therefore be regarded as the same as distance learning, but not vice versa (Rosenberg, 2001). Printed materials which are widespread in distance learning are therefore understood as a form of technology as well. The technologies used for teaching and learning are referred to as *educational technologies*. The focus in Volume 9 is not on the technologies; we refer to works by Bates (1995), Collis (1996), Haddad & Draxler (2002) and Heinich, Molenda, Russell & Smaldino (1998), which deal with technologies in detail.

Isolated learning without a network connection, e.g. studying an interactive CD-ROM (internal interactivity), is referred to as *computer-based learning* or *training* (CBT) or *computer-assisted learning* (CAL). CBT is often based on the approach of programmed instruction. There is no provision for communication between learners and teachers, jointly working on problem-based tasks or projects, or in particular for personal support. While learners are able to determine the time, place and pace of learning, with regard to the contents they are restricted to that provided by the learning programs and the stipulated learning steps.

A solution to the problems encountered in CBT and CAL is providing online learning which enables communication and collaboration via computers linked through the Internet (*web-based learning* or *training, WBT*). The advocates of computer-supported cooperative or collaborative learning (CSCL) maintain that the boundaries of computer-supported self-learning programmes can be overcome by including teachers, experts, tutors and other learners (O'Malley, 1994). Online learning is therefore the all encompassing term for learning or training via a computer network, e.g. using the Internet and the World Wide Web.

2.5. Distributed Learning, Flexible Learning, Blended Learning

The extended possibilities for communication and interaction using new media are leading to a convergence of the pedagogic structures of distance learning and campus-based face-to-face learning with regard to support for learners and the practice of teaching and learning (Mills & Tait, 1999; Collis & Moonen, 2001).

Naidu (2003) states that: "The proliferation of information and communications technology (ICT) in conventional campus-based educational settings is clearly blurring the traditional boundaries between distance education and campus-based face-to-face educational practices" (p. 350). An increasing number of universities are offering courses in which phases of face-to-face teaching alternate with guided online study. In this context, terms such as "blended learning" (Sauter & Sauter, 2002), "flexible learning" (Collis & Moonen, 2001) or "distributed learning" (Lea & Nicoll, 2002) are becoming prevalent. A continuum is emerging between the two poles of campus-based and distance learning.

Lea & Nicoll (2002), state that distributed learning is concerned with the following dimensions:

- the fading boundaries between traditional higher education and distance education contexts and the breaking down of distinctions between formal and informal sites of learning,
- the potentials and limitations of new ICTs for learning, especially for social, communicative, and collaborative activities in the learning and teaching process,
- a focus on globalisation, commodification of education, lifelong learning and the spread of English as the global language and main medium in globally offered courses,
- the new literacy demands and expectations on learners and faculty in the light of the "knowledge society" particularly in relation to changing technologies and the opportunities they afford,
- the distribution of knowledge across "communities of practice" and learning in virtual communities.

At many campus-based universities competence centres for e-learning support are being established, institutions which are designated, for example, "Centres for Flexible Learning" (such as at the University of Windsor in Canada which is discussed as a case study in Chapter 3). Some campus-based universities have been very successful in introducing online learning, for example, the University of Pretoria, South Africa's largest residential university (Zawacki, 2002). There, "flexible learning" is defined by Brown (1999) as follows:

> Flexible learning is a macro concept and education philosophy that focuses on student centeredness, learning centeredness and flexibility in terms of learning environments and learning opportunities. The international trend is that successful and effective tertiary education is linked to the creation of student-centred flexible learning environments that provide for flexibility in terms of:
>
> - access to and exit from several learning programmes;
> - accreditation and portability of qualifications;
> - modes in which education takes place;
> - modes in which communication and interaction takes place;
> - programme compilation;
> - study material;
> - evaluation and assessment methods;
> - time and place of study; and
> - pace at which learning takes place.
>
> ...[Flexible learning] refers to a mixed or multimode of education that includes all modes of contact and distance education, as well as all possible combinations thereof. (p. 1)

In blended learning, face-to-face and distance learning phases alternate, and different online and offline media are combined.

Distributed learning, flexible learning, blended learning; all these terms describe a new continuum between traditional distance education and contact education in which pedagogical approaches, methods and technologies are used to enable extended and more autonomous, individualised, and self-directed learning opportunities.

3. Overview of the Chapters

Unit One – Visions and Retrospectives.

Roger Mills, in chapter two, addresses the five elements he considers relevant when reflecting the past and looking into the future of ODL. In doing so, he reveals the strong values base that is present in learner support practice. He emphasizes the need to avoid treating distance education only as a business and instead prompts the reader to focus on the learner and to use the available resources in the best possible way for students. He addresses the factors that influence services and how they are delivered as well as issues of quality assurance, and how these are critical to how DE is regarded. ICT should be used carefully and creatively to improve teaching, learning and assessment and the author reminds us that systems must be such that they do not create barriers for students. Mills places his highest priority on reducing the digital divide to avoid social exclusion and promotes the sharing of resources between rich and developing countries.

Jane Brindley and *Ross Paul,* in chapter three, make the case that campus-based universities can learn from DE educators when contemplating issues of learner support and motivation and the changes deemed necessary for campus-based environments. The plan for implementing cultural change on Windsor campus and the challenges dealt with in ODL (attrition rates, isolation, persistence and success, regional support services, changing role of student support, learner needs, educational ethos of the institution) are introduced and tied together. Learner support can help meet institutional strategic, academic and economic objectives, however the authors concede that institutional change presents challenges for the campus-based institution: time implications for faculty workload, resistance to the idea of learner-centered practice, and meeting the needs of changing student populations. The scenario presented is innovative and interesting for any reader who deals with changes at her/his organizational setting and/or is dealing with performance and output issues.

Olaf Zawacki-Richter, in chapter four, argues that learner and faculty support gain increased importance in the online learning environment compared to the traditional campus-based education. This is due to the complexity of development and implementation of online teaching and learning as well as the new skills that must be acquired by all participants to be successful in this new field of pedagogical activity. The author outlines two dimensions of support and goes on to describe the three key challenges that online learning presents that effective learner and faculty support can address. Similarly to Brindley and Paul, he contends that distance teaching universities are in a favorable position to meet these challenges and that many traditional universities will need to tailor support systems to their particular situations.

Sarah Guri-Rosenblit, in chapter five, discusses the challenges for institutions trying to make the transition to new forms of teaching and learning in the digital age. She provides an interesting analysis of the contradictions between the role of the faculty member in industrial forms of education compared to online learning. The assumptions about interaction between students and instructors are quite different depending upon the model employed. In order to take full advantage of the opportunities for interaction offered by ICT, the role of the instructor must change, necessitating institutional commitment and careful planning, financial investment, a rethinking of learner support required, and support for faculty to make the transition. She concludes that the transition to models of education that make full use of ICT may take longer than originally anticipated, and may not be appropriate for some time in developing countries.

Torstein Rekkedal, in chapter six, provides a comprehensive analysis of the distance education literature that highlights and skilfully weaves together the key principles and elements of learner support into a compelling rationale for building effective support systems into e-learning. The review starts with an examination of definitions, including some helpful critiques of definitions of e-learning, and in doing so, provides a logical argument for the inclusion of student support in e-learning in order to provide a "complete educational experience". The author focuses on ensuring quality systems for the distribution and presentation of content, two-way and many-way communication, individual and group activities and other personal, academic, technical and administrative support services. The pedagogical issues addressed are: teaching and learning philosophies and theories (independence and autonomy, industrialization, teaching-learning conversation, communication, cooperative learning and constructivism, flexibility, accessibility); student support online and the continuity of concern for students; attrition and completion; reasons for drop-out; and the personal tutor/counsellor. Various frameworks for services (the virtual university reference model, NKI system and others) are outlined thus effectively applying existing theory to modern practice.

Terry Anderson, in chapter seven, challenges some of the traditional values and beliefs about the necessity of human intervention for effective learner support. He discusses the affordances (capabilities) of a networked world and how these can be applied in creating new and expanded student services. He defines learning services and goes on to note that technical capabilities are determined partly by perceptions and values in the minds of users and hence, are not absolute. Having set this context, the author describes the elements he sees as central and how they transform the cognitive, affective and systemic functions of student support services in a networked world, resulting in more cost efficiency and less human intervention by professional staff. Research opportunities and challenges are explored and new types of research models are introduced, which are further explored in Anderson's keynote address in Unit four of this volume.

Unit Two – Strategies for Learner Success.

Som Naidu, in chapter eight, also challenges traditional notions, proposing that instructional design is a form of learner support. He discusses the use of instructional design techniques to scaffold learning and thus optimize students' learning experiences. Naidu argues that scaffolding is at the heart of effective and efficient learner support and presents five activities (story-centered learning; problem-based learning; critical incident-based learning; design-based learning; role play-based learning) with which this can be achieved. He goes on to stress the importance of context in which the learning and study strategies take place and suggests that supporting student learning needs to be seen as a proactive process rather than a reaction to problems. Given the blurring of distinction between course design/development and course delivery in online learning, Naidu's chapter is excellent food for thought. Learners and educators will most likely agree with his perspective.

Margaret Johnson, in chapter nine, discusses the study skills learners need when engaging in distance learning. She divides stages of learning development into three categories, and describes the varying methods needed at the different times throughout a learning career. Johnson emphasizes the interest that institutions have in providing an inclusive and student centred learning environment that contributes to student success. Johnson describes the previous and current approaches to study skills assistance at the OUUK and introduces the reader to their dual mode (paper and web-based) ‘toolkits’. She advocates sharing and disseminating good practice in study skills assistance to support the autonomous learner providing resources according to their needs and preferences.

Yoni Ryan, in chapter ten, provides us with the rationale for offering online modes of learner support. She gives us an overview of the frameworks for the development of this approach and focuses on student centered learning, dialogues and interaction. She argues that taking the student lifecycle into account (initial interest, inquiry, academic counseling, study and graduation), and enabling interactions (student-content, student-teacher, student-student and student-learning support specialists) are as important as the form and content of the services offered. She concludes that online student support services can minimize the often argued disadvantages of distance education.

Lisa George and *Ilene Frank*, in chapter eleven, discuss the increased importance of information literacy, critical thinking skills and librarians’ roles in developing these. These services are offered to students and faculty who work at a distance and a number of practical examples that consider resources and modes of instruction are discussed. They note that librarians must market themselves and their services – especially to faculty, who are key in conveying the importance of these resources to their students. Finally, the authors discuss the effect of library-related activities on student performance and conclude that focused library activities can improve retention and academic success in particular courses. Increasingly, library services are considered crucial to learner success, not just for access to resources but for skill development. This chapter considers both of these important roles for the online library.

Ellen Blackmun and *Phyllis Pouyat-Thibodeau*, in chapter twelve, introduce us to the role of learning communities and the challenges and opportunities they present as part of a student support system. A number of definitions and types of learning communities (virtual learning communities, knowledge building communities, communities of practice, etc.) are presented and the role of communication and interaction in learning and student support are discussed. The authors conclude that learning communities can play a vital role in knowledge base sharing, experiential learning, and social interaction, providing a rich form of support for distance learners.

Christine Walti, in chapter thirteen, introduces portfolios and learning journals as forms of learner support throughout a program of study. She argues that these tools, often used for assessment and/or to demonstrate growth also provide forums that enable students to develop meta-cognitive skills, build self-confidence and encourage students to become independent and self directed learners, all essential to successful distance study. The theoretical underpinnings are discussed and the practical challenges, based on the experiences in the online Master of Distance Education Program (MDE), are explored. Walti presents the rationale for and an example of a tutorial, a further element of support, which guides learners in the development of their portfolios and learning journals.

Barbara Spronk, in chapter fourteen, discusses cultural diversity and its implications for the internationalization and globalization of distance education and learner support. She introduces the reader to the various aspects of diversity and the issues that must be contended with when addressing a global audience. In providing a definition of culture as a way of experiencing and acting, she sets the foundation for the examination of the "intersections" between culture and learning. She addresses learner cultures (hierarchy, style, orientation, language); academic cultures and disciplinary subcultures; and media cultures, thus allowing for a clear understanding of the issues that are essential for practitioners to consider. A number of good practice examples and strategies that acknowledge and applaud diversity as a means to social justice are provided to conclude this chapter.

Christine von Prümmer, in chapter fifteen, addresses gender issues in open, online and distance learning environments. She draws on previous experience and research in distance education and explores how this can be carried over to new and emerging learning environments. The author familiarizes the reader with gender issues in general and in online education in particular, puts these in relation to the special characteristics of online learning environments and describes how this distinctly affects women. Two approaches to supporting women students are discussed and complemented with examples of good practice. The author concludes by warning against the assumption that better technology means better service and prompts all to consider gender issues when constructing virtual universities by moving beyond prevailing male dominated, androcentric and political decision making processes.

Linda Smith and *Kristen Drago*, in chapter sixteen, introduce the particular character of and issues in workplace training as compared to other adult education settings. They focus on the goals of workplace training, the profile of the workplace learner and in particular on the challenges and obstacles workplace learners face. The ways in which these needs can be addressed are explored by considering how, when, and where employees work and learn. Concrete examples of various forms and types of support are tied to the ongoing involvement of members in the organization who are responsible for the training programs and for employees. The authors recommend developing a strategic support plan and prioritizing the various support elements by determining the degree to which services and activities can be implemented rather than excluding any particular elements.

Unit Three – Planning and Management of Learner Support.

Chapter seventeen is a reprint of a chapter from by *Alan Tait* from the book, *Planning and Management in Distance Education* (Panda, 2003). In it, Tait addresses both human resource and systems management practices in learner support. He starts by identifying some of the major issues that influence management of support services including the commonalities with the service industry, the nature of delivery of service which is often not seen by those in senior management, the relationship between support services and other systems within ODL, and the rapidly changing context within which management in ODL takes places. Tait concludes that effective management is necessary in order to ensure the continued health of the learner support function within institutions but this must be balanced against creating too much bureaucracy which can undermine service to students.

Gilly Salmon, in chapter eighteen, uses the metaphor of "taming the wilderness" when referring to faculty adaptation to new technologies. She familiarizes the reader with the complexities and contradictions that occur with the introduction of ICT in higher education and contemplates the various functions and roles that are being affected in the different teaching/learning environments. A number of strategies for assisting faculty and the qualities needed to prepare for these changes are discussed. Suggestions for training "e-moderators" are introduced; the need for negotiation of meanings through experience and dialogue and the provision of opportunities to develop and practice skills to ensure success are stressed. Salmon speculates that change in higher education due to ICT will come more slowly than originally anticipated, and concludes that change will be more lasting if systemic change approaches are adopted.

Susan Nalewaja Van Voorhis and *Tina Falkner*, in chapter nineteen, inform us about their experiences of and perspectives on transforming student services to the online mode of delivery. The authors describe the project and process management issues they faced at the University of Minnesota when they decided to automate a large portion of their service and rethink how to use valuable human resources. Concrete and measurable milestones, objectives and outcomes are of as much consequence as guiding questions for the discovery process. They illustrate the significance of adequate resources for both development and maintenance stages and the importance of cross-departmental relationships for success. Issues identified as most likely needing to be addressed are staff retention, recruitment, training, and skills adjustment. This telling case study will interest all readers who are contemplating changing the delivery of their student services.

Thomas Hülsmann, in chapter twenty, looks at cost aspects of supporting learners at a distance and examines how these are affected by ICT. He focuses on efficiency rather than quality and notes that new information and communication technologies are not only having an impact on the traditional separation of course development and student support but costs and cost recovery as well. Means of recovering lost efficiencies are explored in an attempt to deal with the increased pressures that result from increased capabilities of the new applications and the blurring of the lines between course development and new teaching and learning methods.

Mary Thorpe, in chapter twenty-one, examines the reasons why the evaluation of the quality of learner support is important. She does so by discussing the key issues in learner support, defining evaluation and describing methods and approaches used. She argues that the different stages of student support can help target key areas with limited resources. Special attention is given to the impact of electronic media on learner support and the differences this makes for an evaluator. The author then focuses on evaluation as a means of providing persuasive evidence of quality in learner support and concludes that effective evaluation is ‘fit for purpose’ and entails a variety of strategies and tools, and, when regularly practiced is an indicator of a quality system in itself.

Unit Four – Three Keynote Addresses from the 3rd Research Workshop of the European Distance Education Network (EDEN) on Learner Support, 2004.

The DVD which accompanies this book features the original recordings of all keynote speeches given at the 3rd EDEN Research Workshop, *Supporting the Learner in Distance Education and E-Learning*, held in Oldenburg, Germany from March 4-6, 2004 (Bernath & Szűcs, 2004). As well as the three keynote addresses that appear in text version in this volume, the DVD includes Otto Peters on *Visions of Autonomous Learning*; Gilly Salmon on *Islands in the Stream* reflecting on new roles of teachers and tutors and Elsebeth Korsgaard Soerensen on *Developing E-Learning Communities for a Democratic World:*

Building Bridges Through Dialogue and Shared Knowledge Construction. The DVD also encompasses the ‘Welcomes’ and ‘Introductions’ to these keynote speakers and thus provides the possibility to capture the spirit of this workshop in which many of this volume’s authors participated. Readers may want to obtain a copy of the proceedings of the conference

The three keynotes that appear in print in this volume address institutional models and concepts of learner support, history and underlying values that have guided learner support practitioners and the connection between research, theory and practice. Together, these texts provide an excellent overview of the major challenges and approaches to providing effective learner support in the current context of institutional competitiveness, need for balancing scale with connectedness, scarce resources, technological change and opportunity, and an increasingly heterogeneous student population.

Terry Anderson, Professor and Canada Research Chair in Distance Education at Athabasca University addresses the extent to which the practice of student support in open and distance learning is guided by research. He discusses the current challenges related to funding and support for research in e-learning, including an examination of the reasons why educational research is neither valued nor well funded. Anderson provides a strong rationale for conducting research in student support but argues that the current qualitative and quantitative methodological paradigms are unhelpful or do little to directly change or improve practice. Instead he proposes a “design-based” research methodology that is action and interventionist orientated, participant centered and collaborative, and addresses the challenges of undertaking real life research in classroom contexts. A detailed example illustrates this approach and the anticipated advantages of this methodology that uses all research methodologies in a process that follows interventions through from literature and theory research, to multi-mode data collection and the implementation and adoption of studies.

Nicholas Allen, Provost and Chief Academic Officer of the University of Maryland University College (UMUC) presents his institution’s model of online learning, with a focus on how they serve and support their students. He discusses the five key decisions and choices that proved decisive in understanding where the institution currently stands in the world of online learning today. The author then goes on to identify the values that govern the reshaping of the institution as well as the issues that define the way in which services are delivered. He points out that change is continuous and the ability to effectively make transitions is key to institutional survival. The case study that he presents is of particular interest as he reveals that UMUC is poised to change its mission statement and be the open university of the State of Maryland and of the United States with a focus on the educational needs of nontraditional students.

Alan Tait, Dean of the Faculty of Education and Language Studies at the Open University United Kingdom (OUUK) draws on his long experience as an ODL practitioner and writer in addressing the topic of institutional models and concepts of student support. He reminds of the long traditions and strong values upon which learner support in ODL is based. Using three exemplars of practice Tait sets the historical context of student support within ODL. He then describes OUUK’s history including the technologies employed, the pedagogy, and the social and moral values in which the systems for teaching and learning and student support were and are embedded. The historical overview lets the reader understand the profound changes inherent in the most recent changes to student support at the OUUK as it adopts a business model that is based on delivery of customer services at a price and to standards that can be defined. The author reflects on the critical issues associated with this model and concludes that the fundamental basis for interaction with students has changed. Relationships are becoming "lite" and he urges the reader to recognize and address the associated tensions.

4. Concluding Thoughts

This volume was initiated primarily as a textbook for those studying the practice of learner support in ODL. However, we think it will be of interest to both those new to ODL and those with greater experience. Most of the authors are well known in the field of ODL and are at the leading edge of practice. Others might not be as well known but were chosen because of recent accomplishments and knowledge of a speciality area. All have made excellent contributions to what we hope is a well rounded volume on an area of practice that is becoming increasingly recognized as crucial to learner persistence and success, both on and off campus. One of the most important aspects of practice is to continually challenge assumptions. We hope that this book will help you to do that, to help you to reflect on your practice, the reasons for setting certain priorities and providing service and interacting with students in particular ways. We also hope you will be encouraged by the exciting and positive transformations that are taking place in this field and at the same time, that you will question whether all developments represent progress. Hence, it seems fitting that we close *Learner Support in Open, Distance, and Online Learning* with the keynote address from Alan Tait that reminds us of the strong values and traditions of social justice upon which learner support in ODL is based. Learner support is aimed toward helping learners succeed, learners that may have been previously disadvantaged by the educational system, or who might not have had the opportunity to participate in education without the existence of ODL. We dedicate this volume to the learners.

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UNIT ONE: VISIONS AND RETROSPECTIVES

ROGER MILLS:

Looking Back, Looking Forward: What Have We Learned?

Abstract

This chapter reflects on lessons learned over some 30 years working in distance education, and as such, it is personal and anecdotal. What becomes clear from long experience is that trends are cyclical. The OU UK decentralised its admissions and marketing activities to its 13 regions in 1991. In 2004, as a consequence of the introduction of information and communication technology (ICT), and as a result of tighter management leading to more centralist policies, the institution is once more centralising these activities. However, despite these changes, some principles remain constant no matter how they are converted into practice. Some of these principles upon which learner support practice in distance education are based are highlighted in this chapter which ends with a discussion of the critical importance of reducing the digital divide within and between countries.

Introduction

The title of this volume poses huge questions of definition about teaching and learning environments, some of which have been dealt with in other chapters. The title of this chapter poses the even bigger question: who is included in 'we'? The environments within which we work determine to a great extent how we work, and the degrees of separation between developed and developing countries are great and have to be acknowledged.

What follows is a perspective from one relatively rich and well supported institution. Although I have been able to visit and work with many distance educators and institutions across the world, I have no real appreciation of what it is like to be faced with those challenges which the majority of colleagues involved in distance education either as learners or teachers have had to overcome in much less privileged circumstances. The Open University in the United Kingdom (OUUK) is very much at one end of the spectrum of distance learning models, embracing as it does the principles of both mass production and division of labour with a cost structure which has high up-front development costs and student-number related variable costs. It is very clear that the majority of distance education approaches are not like those of the OUUK and it is important to recognise this at the outset and to acknowledge that the very particular circumstances in the UK, notably high population density, a good postal service and telephone network together with a supportive government and a national broadcasting corporation which takes educative television and radio seriously, were instrumental in the design of the Open University's distance education system. Indeed, it is important to recognize that the design of a distance education system is influenced by the geography, the environment, climate, resources, both human and financial, population density, transport systems, postal and telecommunication services as well as by the influence of politicians.

A further introductory point is that it may no longer be useful to talk about distance education as if it is something totally different from other forms of education. Information and Communication Technologies (ICTs) have led to the convergence of systems and the development of new approaches sometime referred to as blended learning. For a fuller discussion of this issue cf. Mills (1999).

In this chapter, I put five key issues forward for consideration. These are based first on looking back over the years of experience in distance education and then on looking forward to what lies ahead. These issues are all prefaced by one essential point: that we should not forget for a moment the historic role of distance education in widening participation and the underpinning role of learner support in meeting this objective.

The five issues are as follows:

1. Avoid the temptation to treat distance education solely as a business;
2. Be on the side of the student;
3. Use resources in the best possible way for students;
4. Use ICT in a careful and creative way for improving teaching, learning, and assessment;
5. Give absolute priority to reducing the digital divide.

Looking Back

There are enough histories of distance education describing milestones in the development of the genre to be quite confident about omitting a further history in this chapter. In particular, Alan Tait's (2003) editorial in the International Review of Research in Open and Distance Education is a brief but cogent and challenging account of some of the main events of the last 30 years. Hence, this chapter will focus on five key issues for discussion, drawing on the past and looking to the future.

1. Avoid the Temptation to Treat Distance Education Solely as a Business

The late 19th century and first half of the 20th century saw an enormous growth in correspondence education both in the UK and the developed world. It is worth noting that during the first two thirds of the 20th century, some correspondence schools brought discredit to the notion of teaching at a distance by their sharp commercial practices (it was more commercially viable to have high drop-out rates once students had paid their fees) and others were subject to interference from governments for propaganda and political purposes. It is worth looking at this issue again in the context of today's vast growth of on-line distance education in both private and public institutions. As pressures grow to break even financially, the opportunities for commercial and pedagogic malpractice may never have been greater. Simon Midgely (2003), in an article in the Guardian, quoted Professor Stephen Heppel, Director of Anglia Polytechnic University's Ultralab (claimed to be the biggest centre of research into e-learning in Europe) as stating that "*… there are probably more scoundrels in e learning than there are in used car sales at the moment*" (p. 42). Issues of quality assurance of e-learning are critical for the way in which distance learning is regarded in the future and must continue to be addressed in the most stringent manner.

2. Be on the Side of the Student

In 1982, the International Council for Correspondence Education (ICCE) changed its title to ‘Distance Education’ (ICDE), reflecting the major evolutionary change in both the use of technologies and in institutional approaches which had taken place over the previous decade. Teaching and learning in richer countries moved through a whole range of media from print, correspondence, television, radio, face-to-face and telephone, various graphic transmission systems to on-line teaching and learning and back again to mobile phone and text messaging. However, whatever medium is used for distributing learning materials or for interactions between teachers and learners, the core of what we have learned about effective distance learning is that the systems have to be in place to ensure learners get what they need, when they need it, in a context of knowing that the institution and its staff are on their side and are not creating barriers or hurdles to be jumped over. Too often, across the whole of higher education, one comes across notions of elitism, with those who have ‘made it’ somehow believing that learning has to be made as difficult as possible for those who are still on the learning ladder. Distance education institutions have been at the forefront in breaking down these attitudes. Perhaps this was because it was understood from the outset that studying at a distance was inherently difficult. Walter Perry, the founding Vice-Chancellor of the OUUK, said that *‘… studying at a distance was the most difficult way to study yet invented’* (personal communication, 1971). It followed that distance education institutions and their staff took particular concern to support students.

More than ever before, especially in the context of widening participation in education, the institution and its staff must be on the learner’s side. There are pragmatic as well as moral reasons for this. Institutional budgets with public funding elements increasingly have a requirement in relation to reporting retention rates rather than simply enrolment rates. There is an argument which suggests that the medium of delivery and the quality of the content, whilst important, is less important than the way in which a student is treated by an institution and its staff. Many people deride the notion of *customer* when applied to education (cf. for example Van Voorhis and Falkner on this subject in this volume), and certainly students have reciprocal responsibilities to the institution. For example, they must do the assignments and complete examination papers, comply with rules, and maintain standards but it is helpful to think of students as customers when it comes to the way we provide support services for them. It is also important in this context to constantly survey what students want from the institution. Some of the following stories illustrate how easy it is for an institution to think solely of the provision they make rather than the way in which they interact with and support students in their learning:

A professor at a Northern University in the UK vowed in the 1960s to make her department the best in the country. In order to do this she said, she would not award a first class honours degree for 10 years.

A professor in a European country boasted to his colleagues that his courses were of the highest quality in the institution as he had a 90% failure rate.

A Northern UK University in the 1970’s had an admissions policy which saw it take in far more students in the first year than it had places for in the second and subsequent *years. It simply removed 1/3rd of its first year students at the end of the year regardless of the quality of the bottom 1/3rd of the students.*

On the other hand, there are examples from the other end of the spectrum. While most of post compulsory education still takes place in off-putting school-like buildings, it is interesting to note that *Learndirect*, the UK national sub-degree on-line learning system, has made great efforts to move its learning centres out of conventional educational institutions to places like railway stations, football grounds and community centres in order to attract a wider audience to its courses.

Institutional empathy can be demonstrated in many ways. Perhaps the most important is in the balance between the flexibility of systems and their role in ensuring equality of support and provision. Clearly there have to be rules and procedures. However, institutions dealing with adult and younger students must ensure that procedures can be waived in individual cases. Dealing with such ‘exceptions’ costs money but may well be a major element in reducing avoidable student withdrawal. Personal contact is also important. Gaskell and Simpson (2000) suggest that a friendly and empathetic tutor is far more influential in student success than the formal commenting on scripts or excellent course materials. For a fuller discussion of the issue of institutional empathy, cf. Paul (1990) and Mills and Paul (1993).

3. Use Resources in the Best Possible Way for the Students

Despite increasing awareness of the need to support students, institutional priorities in the past and present have rarely reflected the needs of students as individuals in resource allocation. Perhaps because much distance education is predicated on a cost model which requires a large up-front investment and relatively low running costs, institutional managers have always seen the production of learning materials as a wealth generating activity and student support as a cost (Mills, 2002). Various attempts have been made over the years to argue the case for giving higher priority to advice and guidance to students but in the end generic study skills work, careers advice and personal educational counselling and support have always taken second place to the materials, to correspondence and face-to-face teaching or other forms of direct course/subject related support from a subject expert.

Looking back at the history of student support in the Open University, it feels sometimes as if those of us involved did not make the case sufficiently well in economic terms. Simpson (2003) has demonstrated that activities leading to the retention of students can be just as economically beneficial to an institution as the production of high quality course materials. Just as it has been argued that ICT has led to the convergence of distance with other forms of more traditional education systems (Mills, 1999), it is interesting to reflect on how ICT is influencing the cost structures of distance education institutions and the balances between course production and student support. This is discussed under point 4 below. The development of work-based and work related learning is another contributing factor to the increasing emphasis on teaching and student support rather than materials production.

One very effective use of new technology is to track student progress in order to help ensure that appropriate support interventions are made at critical times for the student. Simpson (2003a) has shown that proactive student support can reduce withdrawal by about

4.5% if accurately targeted and sympathetically handled (p. 129). Customer Relationship Management systems have a critical part to play in the future for ensuring students feel part of large systems but in the end we have to recognise that it is the personal contact and understanding which is critical to student support and student success.

4. Use ICT in a Careful and Creative Way for Improving Teaching, Learning and Assessment

It can readily be argued that ICT is a major force in breaking down barriers between those who produce learning materials, those who support and tutor students and indeed between the teacher and the learners. This is having the effect of breaking down the division of labour and opening the way for individual academics to engage directly with students. This in turn is influencing the role of the part-time Associate Lecturers (and tutors) who sometime may feel that their role might be reduced to one of correspondence. If ICT can help to remove the separation of course writers from learners, so much the better. However, it will probably always be the case that in high volume contexts, staff who produce learning materials will not be involved in supporting and assessing students.

It is generally accepted that cost of production of high quality web-based learning materials is significantly higher than that of print although providing greater pedagogic opportunities for teachers and learners. This might suggest that we are on an inflationary track with the costs of production of materials ever increasing as more and more opportunities become available for more and more elaborate ways of teaching. There are three points to make in rejecting this suggestion.

The first is that some institutions are beginning to share the development costs of web-based materials through open source movements and the development of reusable learning objects. Secondly it is clear that the role of teacher has changed from one of information provider and explainer to resource manager and selector of information and learning opportunities from the Web or from other sources. This should reduce the time spent by academic staff in simply preparing and transmitting information though the lecture mode and enable them to spend more time working with individual students or in small groups, thus providing a greater level of student support for the same cost. This might also help to avoid the temptation of academics producing materials aimed more at impressing their peers than at supporting their students. The availability of resources on the Web changes the whole dynamic of teaching and learning. A student’s ability to sift and assess the vast quantities of information and opinion on the Web is an increasingly significant and important skill to develop as part of the educational process. Thirdly the use of ICT enables, somewhat paradoxically, a more personal approach to teaching.

At Empire State College, New York, individuals (or more usually and better for quality assurance, pairs of academics) write ‘courses’ which guide students in the learning from the Web and from a range of other sources. These learning materials are sent to relatively small groups of students (approximately 20) who then ‘meet’ with the academic and each other on-line to discuss issues arising from the course. The whole process (materials preparation, academic marks, comments on students’ assignments) is simpler than the model of the OUUK where there is a division of labour among these tasks, at least on large population courses.

The impact of ICT on assessment is significant in a number of ways. In the first place it enables efficiency in submitting assignments electronically to tutors, thus reducing the amount of paper used, of time between dispatch of assignments and receipt of comments/ grades, and easing the processes of quality assurance of the tutor's work. Secondly, learning and assessment can be integrated in new ways. In a very interesting paper, Jordan, Butcher and Ross (2003) describe the development of a Web-based assessment system by which remote students take a credit-bearing test online at the end of a Maths for Science course. During the test, students receive immediate, targeted feedback on their answers and are awarded a mark which reflects the amount of help they have been given by the computer system in arriving at their answers. Clearly, as such systems are developed, the costs of assessment will be reduced and at the same time, students will get more feedback on their performance. Such assessment systems might not have universal application in all disciplines, but the development of an electronically submitted assignment system has huge potential in that it reduces costs for students and the institution and speeds up the return of comments from the tutor to the student.

Use of both synchronous and asynchronous computer conferencing opens many possibilities for the reduction of the isolation felt by many students and tutors who work in distance education systems. The OUUK now has a huge number of student conferences, some official, some run by the Students' Association and some completely unofficial. What is clear is that many students do use such systems and benefit from them greatly. What is also clear is that the downloading of course materials to students is unlikely to replace the printed word in the foreseeable future except in a small number of courses where the medium is linked to the content (e.g. in distance education courses).

Each application of technology should be examined carefully for impact on students, both positive and negative.

Looking Forward

So what of the future? There is no doubt that the use of a range of powerful systems, of on-line and mobile communications, is already having a significant impact on the provision of learning opportunities at a distance as noted above. When looking to the future, there are so many issues to consider but only space to address one. It is not difficult to identify one overriding issue, and that is the digital divide.

5. Give Absolute Priority to Reducing the Digital Divide

Used thoughtfully and as part of an overall package of blended learning, there is no doubt that the Internet and ICT more generally provide a very real and exciting new generation of opportunities to teach, assess, and support students. As such, it is easy to succumb to the lure of ICTs, to aspire to an on-line approach to all communications with learners. However, it is important to remember that access is still a barrier for many learners. Although, this is changing, with the rapid introduction of broadband, we must avoid the temptation to do what is easiest for the teacher and the institution regardless of the implications for learners. We constantly try to guard against a producer-led curriculum and we must also guard against a producer-led mode of delivery.

In rich and particularly in poorer countries, there remain many people who do not have access to the world wide web in their own homes or local communities. Many are still unable to afford the price of a computer and telephone line charges. A current research project, jointly managed by the Open University in the East of England and the National Institute for Adult Continuing Education is looking at the impact of ICT on social exclusion in the East of England (Open University, 2003). The findings are not a foregone conclusion, but the hypothesis is that ICT will help people to be less socially excluded. One possibility for increasing access for those who are unable to have home-based access is through Internet cafes or in community centres.

In poorer countries, where there is a very limited system of land-based connectivity, the mobile phone is being used increasingly for student support. Gaskell and Mills (2004) consider whether the telephone has become a neglected technology in distance education and Brown (2004), in a very powerful paper, describes how the use of the mobile phone is rapidly developing in Africa with some 100 million phones expected to be in use by 2006. He notes that 1750 students at the University of Pretoria receive support via mobile phones from their tutors. Despite concerns about access, there is absolutely no doubt that ICT provides a range of great opportunities to develop systems to support and teach students in the future. If we keep a check on those who see opportunities for financial gain and exploitation of students and we remember that in the end that it is people and not materials, systems or gadgets that ultimately make a distance education system successful, the student experience will be greatly enhanced by the increasing use of current technologies and by those as yet unimagined.

Finally, one area that we have not yet successfully addressed is how those institutions in rich countries can provide learning resources for use by those in poorer countries. This is not the place to go into detail about some of the related issues but it does seem very important to stop distance teaching institutions reinventing the wheel in content production in print and on-line. It is very expensive to produce good learning materials, and resources could be applied more effectively to serve more learners, particularly in poorer countries. We are still relatively inexperienced in the process of adapting materials and producing reusable learning objects. However, work is being done in both of these areas and progress is being made. We should all follow MIT's lead in this respect and make our materials open source and developing the notions of reusable learning objects. The Commonwealth of Learning is doing an excellent job in trying to enable materials produced in one part of the Commonwealth to be used more widely. If such work can be developed further, Distance Education could be the most powerful tool for the global, trans-national improvement of education at all levels. Institutions could then shift the balance of their work from course production to learner support.

A recent Guardian (2003) newspaper editorial comments as follows on the draft declaration of the world summit on the information society which opened in Geneva on 10th December 2003:

> The problem is translating good intentions in to action. Nowhere is action more important than in bridging the digital divide between those with instant access to the internet's treasure trove and those who do not. While the digital divide is narrowing within richer countries-about half of all households in the UK now have access – it is widening between the industrialised and developing worlds mainly because of the slow pace of change in the latter. About 90% of global internet users come from industrialised countries even though they have less than 20% of the world's population. Africa, which makes up 19% of the world

> population is home to only 1% of internet users. The possibility of satellite and wireless links offers Africa the prospect of leapfrogging over a whole generation of fixed-link telecommunication infrastructure – but little progress seems to have been made despite ambitious plans (¶ 1).

What better way of ending a chapter about looking to the future than to reflect on the power of distance learning, partly through the internet, to start to bridge the gap between the rich and the poor, between those desperate for educational opportunities and those who regard them as a right to be used or not as they choose. The Guardian (2003) editorial continues:

> That is why the role of the UN is so important. A mission to diffuse technology is different from so many other highly charged situations the UN inherits. In this case it starts with a clean sheet and oceans of goodwill. This will not be much of a help without enhanced resources – but at least richer countries have an incentive to help since they manufacture most of the hardware and software that will be purchased. There are few more noble returns on capital than using western money to speed the information revolution in developing countries – at an affordable price. But the consequences of failure could be disastrous (¶ 3).

The use of distance education to support universal primary education, equality, reduction in child mortality and to address the other UN Millennium goals is the greatest challenge to distance educators in the next 30 years.

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JANE E. BRINDLEY & ROSS H. PAUL:

The Role of Learner Support in Institutional Transformation – A Case Study in the Making

Abstract

The central argument in this chapter is that traditional, campus-based universities have much to learn from open and distance learning (ODL) institutions in the provision of integrated learner support services. The latter have paid increasing attention to learner support in recent years as they have faced such overt challenges as high attrition rates and student demand for more personalised support. This has led to the creation of a significant body of literature and experience in devising, evaluating and integrating learner support not only into course delivery but into course design itself. With the rapid growth of university participation rates in recent decades, campus-based institutions are serving a much broader student base. Given the increasing importance of university credentials to individual success, higher tuition fees, and larger classes in most jurisdictions, students are demanding more services and support and institutions are facing unprecedented pressures to take more responsibility for student success. The chapter provides an overview of recent literature on student support in ODL, and then, using the case study of a campus-based institution with a major focus on "learner-centredness", derives some lessons that might be broadly applicable to any institution endeavouring to improve student retention and success through development of a more comprehensive and effective approach to learner support.

1. Introduction

With the democratisation of higher education in recent decades has come increased accountability for the performance of universities and a greater focus on their outputs. Students are much more demanding of services and support, and governments and taxpayers want more demonstrable benefits to their investments.

An important component of this democratisation has been the rapid growth of distance teaching and open learning institutions around the world. While the issues of student motivation and support are common to all educational institutions, the challenges are perhaps more stark where learners are overtly separated by time and space. From this perspective, campus-based universities have a lot to learn from the experience of distance educators.

A particularly interesting facet of distance learning is the development of a comprehensive and integrated approach to learner support, the term used in open and distance learning (ODL) to describe a full range of activities developed to help students meet their learning objectives and gain the knowledge requisite to course and career success. Learner support includes all those interactive processes intended to support and facilitate the learning process from the student's first point of contact with the institution, including tutoring, teaching, counselling, advising, orientation, administrative services and even peer tutoring and alumni support.

While earlier models of distance education assumed independent and self-actualised adult learners, experience proved otherwise – retention rates were often extremely low, especially where isolated students were left to fend for themselves, and it was soon clear that open learning institutions could not merely coast on the backs of an elite group of highly motivated adult learners. Now, with 30 or more years of experience behind them, most open learning institutions have developed comprehensive and sophisticated systems of learner support that are based on a strong value system of access to fair opportunity. These can serve as models for campus-based institutions that have long assumed superiority in this area.

Using a case study of a traditional, campus-based university in transition, Canada's University of Windsor, this paper explores some of the lessons learned from the development of learner support in ODL and outlines current efforts to take them into account in the strategic vision for the University's development over the next five years.

2. The Challenge of Establishing a "Learner'Centred" University

In all western jurisdictions, the most selective and research intensive universities have the highest status and prestige. There is a strong correlation between entering academic averages and reputation, and long-established universities in particular have capitalised effectively on such status. This magnifies the challenge of enhancing the profile and reputation of an institution like Windsor, with its more open approach to admissions and wider range of academic programmes, both driven by the desire to offer enhanced opportunity to students in the local region.

Capitalising on the success of its strategic plan for 1999-2004, which completely reversed previous downward enrolment trends, reallocated resources to areas of strength and potential, identified pinnacle areas and developed a stronger culture for research, and significantly internationalised the institution, the University of Windsor recently adopted a new plan for 2004-2009 (University of Windsor, 2003).

The hallmark of this plan was to give operational meaning to the notion of a "learner-centred" university, one widely recognised for its stimulating and supportive campus climate and the demonstrable qualities of its graduates. While, at first glance, aspiring to be a "learner-centred" university may seem a tautology, a common criticism of modern universities has been the relative lack of attention given to issues of teaching and learning.

The essence of the changes envisioned for Windsor is to focus on difficult-to-measure "outputs" rather than the more common indicators of success, the "inputs" of entering student averages and demand for student places. A closely related characteristic of the University's strategic plan is its emphasis on "the degree that works" in its broadest interpretation, reflected in careful monitoring of alumni success in graduate school and employment. These initiatives are in addition to the standard goals of improving the institution's support for research, community service and internationalisation.

This emphasis on learner support and graduate attributes lends itself well to increased pressures for accountability from government, taxpayers and students, but it also raises major internal challenges for a university. Before discussing the University of Windsor case, it is useful to explore the evolution of learner support in institutions of open and distance learning.

3. What Can Be Learned from the Experience of Learner Support in Open and Distance Learning?

Early notions of the "industrial model" of distance education (cf., for example, Peters, 1983) were concerned more with access and availability of learning opportunities than the individual experience of the learner. The underlying assumption was that working through well designed packaged materials, whether print-based or offered through other technologies, in itself constituted "a learning experience". Evidence quickly debunked this notion as isolated, unsupported and/or ill-prepared learners struggled to cope with the learning materials with little or no assistance from the institution. With the increased access that open distance institutions offered, enrolments were high, but with so little support for learners, attrition rates were as well (Keegan, 1983), particularly for first-time learners.

Concern about attrition and academic credibility spurred efforts to find ways to promote persistence, mainly through the development of learner support services. At first, these were mainly limited to contact with a tutor or faculty member over course content. However, other forms of support quickly followed. O'Donnell and Daniel (1979) proposed one of the earliest models for student development in a distance education setting, arguing that it could not be assumed that adult students have all the skills necessary to "plan their lives, career and education, set realistic goals and study effectively" (p. 1). In gradual response to such challenges, effective support in the form of academic advising and counselling, regional offices with a variety of administrative services, summer schools, and group tutorials was developed.

The irony is that there has probably been more progress in the provision and evaluation of the impact of learner support in ODL institutions than on mainstream campuses in recent years, perhaps because learner difficulties are more overt when students are more obviously separated in time and place from their institutions. Researchers and practitioners in the field of ODL, whether faculty immersed in their own discipline, counsellors, administrators, or other learner support personnel have had a lively and continuous dialogue about how to help learners overcome these barriers. As such, there is a rich history and literature in learner support in ODL to draw upon. Many of the same issues of isolation and lack of support have long prevailed on university campuses but they have been far less evident or acknowledged until recently.

Sewart (1993) describes mass higher education at campus-based institutions, noting that there is an attempt to address the shortfall between a one-to-one teaching and learning process and the depersonalised system of the generalised lecture with "…an assembly line method in which all the parts are fitted to the whole by a series of specialists" (p. 4). He refers to content tutors such as graduate teaching assistants, career counsellors, academic advisors, and other support personnel. Rumble (2000) discusses the response of large campus-based institutions to a rising consumer orientation of students and the decline of the central role that post-secondary education once played in their lives, observing a tendency for such institutions to become more bureaucratic and, paradoxically, more depersonalised for individual students. He compares this to the practice of student support in ODL, and notes that

> …distance educators have already had to think through some of the issues raised, and in many ways are ahead of the game…We have always had to think through our support services, trying to find the best delivery mechanism for students who will never come on campus because the campus, in the traditional sense, does not exist. (Rumble concludes that)…the distance education community seems to be more driven by concern for planning customer care and support than the traditional universities. (p. 218)

In ODL, learner support has been a central issue of interest to distance educators for the past two decades as practitioners and researchers have tried better to understand the experience of the distance learner, what holds learners back, and what contributes to persistence and success in the learning process. Hence, the development of learner support in ODL has paralleled and reflected the change in conceptualisation of education as transmission of pre-packaged knowledge to that of a dynamic transformative process, focusing on developmental constructivist models of teaching and learning and findings ways to engage the learner as an active and central participant in the learning process.

Sweet (1993) focused on the implications for a changing role of learner support as distance education evolved from the more passive industrial model to new, more interactive forms of learning. He envisioned a closer alignment between traditionally distinct advising and tutoring tasks in distance education to promote more interaction between students and instructors through either mediated or face-to-face means (p. 1). A central figure in the development and management of the decentralised learner support model at the UKOU, Sewart (1993) emphasised the importance of context in the development of learner support services, taking account of such diverse variables as student needs, the educational ethos of the institution and region, the dispersal of and generic differences within the student body, and relative levels of resource.

Brindley (1995) built on these notions to recommend building a service model based on the particular mission and goals of the institution and informed by research findings. Its goals should be to develop learner support services that are more responsive to learner needs, contribute to learner persistence and success and, of particular interest to this paper, to play a key role in the strategic positioning of an institution or distance education service (p. 118).

Tait (2000) identified three primary functions for learner support in ODL – “cognitive”, “affective” and “systemic”, all of which are crucial to student success. Cognitive support facilitates learning through the mediation of the standard and uniform elements of course materials and learning resources for individual students; affective services provide an environment which supports students, creates communities and enhances self-esteem; and systemic support services establish administrative processes and information management systems which are effective, transparent and student-friendly (p. 289). Tait emphasises the essential and interdependent nature of these functions that work together to create “… an environment where students feel at home, where they feel valued, and which they find manageable” (p. 290).

Simpson (2002) moves away from a systems approach, instead providing a typology of learner support categorised by activity (e.g. advising, advocacy) rather than by specific personnel or department. Thorpe (2003) takes the crossover in functions a step further in addressing the need to rethink learner support in the context of the online environment.

She defines learner support as "...all those elements capable of responding to a known learner or group of learners, before, during and after the learning process" (p. 201). This definition appropriately blurs the distinction between learner support and course production in traditional distance education. In online learning, course materials may consist only of a syllabus and a list of required readings, with the content being created through interaction among learners and between learners and instructor. Thorpe's conceptualisation recognises this important evolution and describes the cross-functional, interactive, responsive, and individualised nature of learner support.

Anderson (2003) notes that pressures for access and availability of net-based telecommunications are both forcing and offering the opportunity to re-examine the most effective use of finite and valuable faculty time. He stresses the need for evaluating all types of interaction (learner-learner; learner-instructor; learner-content) by their contribution to the learning process. This premise can be extended to other learner support professionals (cf. Anderson's chapter 7 in this volume regarding the challenges of learner support and scalability). Kvavik and Handberg (2000), in describing the transformation of student services at the University of Minnesota, discuss the need to reconceptualize the role of student service professionals as "…generalists who serve as facilitators and navigators in an information-rich environment that is shared by provider and client alike" (p. 31). These writers illustrate efforts to use learning support resources (human and technological) strategically to promote desired learning outcomes within the context of institutional mission.

It is apparent from the literature (e.g. Granger & Benke, 1998) that practitioners and researchers in ODL have become increasingly clear about the role of learner support in helping students become more independent, collaborative and effective learners. Administrative systems are designed to be transparent and give students maximum opportunity for control and self-help (Kvavik & Handberg, 2000). Interactions with teaching staff are intended not only to help students master content but to build the skills needed for independent and collaborative learning (McLoughlin & Marshall, 2000). Librarians go beyond information access and retrieval to helping students become information literate – to develop research questions, think critically, and navigate and evaluate the reliability, validity, and usefulness of the overwhelming amount of information available to them (Canadian Library Association, 2000; cf. also Frank & George in this volume). Advisors and counsellors help students to acquire the skills necessary to engage in self-assessment, plan, make sound decisions, study effectively, and to overcome barriers to academic and career success (Potter, 1998). Interfunctional collaboration provides a transparent and seamless system where learners can get the type of support they need easily and when required.

As technology has allowed, ODL learner support has become increasingly sophisticated with the introduction of online classes with both synchronous and asynchronous communication, online registration and advising and library services, e-mail support, chatrooms and bulletin boards, interactive web-based counselling, and around-the-clock help desks (Krauth & Carbajal, 2000, provide a comprehensive guide to good practice in online learner support). Kvavik and Handberg (2000) discuss the transformation of learner support services from a "…public utility role to strategic contributors to the management and growth of university instructional programs" (p. 30), and note that learner support can play a central role in meeting the institution's strategic academic and economic objectives.

Robinson (1995), in a review of learner support research in ODL, points out that more theory building and systematic studies that build on existing knowledge are needed. She also notes the difficulty of reconciling the needs to address pressing local issues with a broader research agenda for the field of learner support, and acknowledges that small contextually based studies (characteristic of the ODL literature on learner support) form valuable contributions to our knowledge base. Other writers have pointed to the need for more evaluative studies so that the positive impact of learner support can be clearly demonstrated and investment justified (cf. Anderson's keynote address to EDEN in the final section of this volume). Mills (2003) states, "We need to demonstrate the added value of student support if we are going to convince the managers of institutions that it is worthwhile allocating resources to this aspect of distance learning" (p. 111). At the same time, Mills, a long time leader in the field of ODL, quite clearly believes in the "added value" of learner support. In the same piece, he argues that "…by planning learner support as an integral part of a teaching and learning programme, rather than an afterthought which can be excised when times get difficult, institutions can demonstrate a recognition of the link between income generation and learner support" (p.104).

Although not all institutional budget allocations may reflect it, learner support is now seen as not only a legitimate, but a very necessary part of distance education practice regardless of the mode of interaction with students. As such, it requires sustained research and evaluation activity in order to continually test assumptions and theories, and to measure the effectiveness of practice. Although there is no recent comprehensive review of research on learner support, one might suspect that the state of the field has improved since the publication of Robinson's article. A major factor in this is technology, and the very positive impact it has had on our ability to gather data and share it. There is the potential to have much better student record systems, analyse data more easily, and gain access to sources of research such as online journals. For a number of years, there have been peer reviewed journals reporting research results and addressing issues of practice and evaluation in ODL. Applied research units within ODL institutions such as the UKOU Institute of Educational Technology are engaged in investigating the nature of learning at a distance, and how to increase retention and provide more effective learning environments. As Ryan (2001) notes:

> In institutions with a distance education mission, learner support has involved systematic investigation and research into how student can learn in a non-classroom environment, how best to substitute for the informal and incidental learning that occurs on campus and the vast range of what Rumble (2000) calls 'consumptive service benefits'. Guidelines have evolved. The Commonwealth of Learning, for example, has published a toolkit, "Learner Support in Open and Distance Learning" (see www.col.org/newpub.htm) (p. 74).

In summary, for institutions that take learner support seriously, there is vast literature, a wealth of expertise, and a rich history to draw upon. Learner support can be a central part of the academic mission to offer access and opportunity – not just to a place in the educational system, but to a supportive learning environment that offers the best opportunity for academic success. Effective learner support in ODL is characterised by the following essential elements:

a) **Responsiveness:** It personalises the learning process so as to be responsive to different individuals and groups (rather than relying on fixed elements such as a course syllabus).

b) **Interactivity***:* It encourages and facilitates interaction among and between student(s), faculty, tutor, institutional support persons and academic content.

c) **Context Specificity:** It exists to further the goals of a particular institution and serves the needs of its learners within its specific context.

d) **Learner Development:** It both facilitates learning within courses and addresses broader issues of student skill and personal development.

e) **Openness to Change:** Learner support systems evolve continuously to accommodate new learner populations, educational developments, economic conditions, technological advances, and findings from research and evaluation.

f) **Integration:** Effective learner support involves a high level of inter-functional collaboration and is seamless to the learner. Perhaps most fundamentally, the previous separation of cognitive, affective and systemic learner services in distance education has increasingly been replaced by the recognition that an integrated approach to all three is critical to learner and, therefore, institutional success.

While it has always been assumed that there was much more integration of such services in a traditional university where students lived right on campus, it is postulated here that many of the same separations have long prevailed but have received less attention until very recently because they were less evident and less recognised. The University of Windsor is a useful case study in pursuing this assertion.

4. How the Windsor Plan Addresses the Major Issues of Learner Support

While the Windsor plan addresses a number of key areas for development, its central tenet is to give real meaning and impact to the notion of a "learner-centred" campus. The relevant components of this initiative are the following:

1. **Emphasis on Learning Outcomes:** This envisions a major process whereby each faculty specifies the attributes expected for each of its graduates, and outlines how these will be achieved, measured and evaluated.
2. **Teaching and Learning Initiatives:** Building on a recent *White Paper on Teaching and Learning* (University of Windsor, 2001), the plan supports 30 specific initiatives across a wide range of issues designed to improve the quality of teaching and learning on campus.
3. **Library Services:** The rapid evolution of high speed electronic technologies has transformed library services with Windsor and other Ontario universities leading the way. The impact has not only been to equalise accessibility to materials and journals across all institutions but to provide for stronger leadership from the Library in helping students to develop their research and analytical skills.
4. **Campus Community***:* The plan places an important emphasis on the development of a vibrant and supportive campus culture, one that encourages much better integration of programmes and services and the academic and social sides of university life.

5. **Faculty and Staff Training:** This recognises the need for an integrated approach to faculty and staff training and support to encourage better cross-campus communications and a common sense of mission in the process.
6. **Flexible Learning:** The plan emphasises enhanced support for different styles of learning, instructional design and distance education, as informed by independent reviews of Windsor by two notable ODL practitioners, Ian Mugridge and Tony Bates.
7. **Faculty Reward System:** The importance of more encouragement and support for faculty initiatives in teaching and learning is central to this initiative and builds on a previous task force's recommendations for changes to this end.
8. **Co-operative Education and Internships:** Work experience, voluntary internship programmes and other activities designed to assist students to integrate theory and practice across a wide range of disciplines is integral to the University's emphasis on "the degree that works" and learner outcomes, building on what is already one of the largest per capita co-op programmes in Canada.
9. **International Focus and Diversity:** A key to a learner-centred campus is an emphasis on diversity and exposure to many different ways of looking at the world. This is a central objective of the University's extremely successful international recruitment programme which has resulted in a campus that has more than 10% of its students coming from overseas, notably South Asia, very high by Canadian standards.
10. **Celebrating Success*:*** The plan emphasises celebrating faculty, staff and student success to encourage the highest standards of achievement and the development of genuine campus pride, both central to the enhancement of the University's profile and reputation.

Through these measures in particular, the Windsor plan addresses all of the elements from the above review of the ODL literature on learner outcomes:

a) **Responsiveness:** By requiring each academic programme to specify the learner attributes it expects for its graduates and build corresponding learner support, it is responsive to the needs of individual groups of learners.

b) **Interactivity:** It envisions the integration of all aspects of teaching, learning and student support in ways which encourage dynamic interactivity among them.

c) **Context Specificity*:*** The plan is based on environmental scans which identify its learners, current context, and key challenges and opportunities for the future.

d) **Learner Development:** All initiatives are driven by the primary goal of reaching prescribed graduate outcomes, making learner development the central orientation of the University.

e) **Openness to Change:** Each initiative is tied to clear objectives and efforts to measure and evaluate outcomes, with services and programmes being adjusted regularly on the basis of such research.

f) **Integration:** Central to the plan is the recognition that all levels of learner support are essential to student and institutional success.

4.1 The Challenge of Implementing Cultural Change on Campus

While the Windsor plan goes well beyond most campus-based universities in its emphasis on graduate outcomes and learner support, the challenges of implementing the plan are significant if it is to have real impact on the activities and success of the institution.

While there is widespread support for the initiatives in principle, there is considerable concern about the pressures of time and the implications of the exercise for faculty workload. When resources are fewer, demands greater and technology has increased the pace of our lives, faculty and staff are understandably resistant to new obligations, especially if unsupported by additional resources.

In response to widespread recognition that faculty reward systems are overwhelmingly research driven, most universities have significantly increased their recognition of and encouragement for good teaching. However, there is so much pressure on new faculty to establish their research, obtain external grants and publish in appropriate journals that it is very difficult for them to give the requisite attention to innovative teaching and strong learner support, at least until tenure has been attained.

Resistance is even greater among faculty for whom such initiatives pose major philosophical or cultural issues. Academics have resisted such terms as “customer” with its implication that the student is always right and some find it insulting that it would even be necessary to speak of a “learner centred” approach in an university, worrying that it implies spoon-feeding or pampering students too much. As well, few professors are trained for teaching and learning, most taking their cues from the way they were taught in university in a kind of apprenticeship system.

The majority of faculty are products of an earlier era of university where a much smaller percentage of the population had access and where significant dropout rates were seen not as a mark of failure but as indicators of high standards and intellectual rigour. Today’s students represent a much broader base of the population and many see higher learning as a right rather than a privilege. This creates an atmosphere where students are much more demanding for service and support and exhibit an unprecedented sense of entitlement.

The difficulties of implementation notwithstanding, there is growing recognition that our universities need to be more responsive, more adaptable and more comprehensive in their approach to teaching and learning, that faculty cannot merely replicate the way they were taught, and that a separation of the cognitive from the affective and systemic is both artificial and counterproductive (cf. Zawacki-Richter in this volume for a discussion of the importance of faculty support). The irrefutable evidence of the value of post-secondary education, both to the individual and to the society, has placed a strong onus on all stakeholders to ensure that our institutions of higher learning are very responsive to the diverse needs of different groups of learners.

4.2 Assessing the Impact of the Windsor Plan

It will obviously take some time to assess the effectiveness of the new Windsor plan. Its immediate priority is to mobilise faculty and staff to develop clear graduate outcomes for each programme. While this may be more readily realised by professional programmes such as Engineering, Nursing, Education and Law, it may be even more important for broader academic areas like the liberal Arts and Sciences, if only to make more apparent what is already known – for instance, that their graduates have just as high employment and salary rates as alumni of programmes more overtly oriented to employment preparation.

Once these graduate outcomes have been identified and catalogued, a second level of assessment is to determine their impact on alumni success in employment and in graduate school. Finally, there is the much longer term issue of the impact of these changes on the profile and reputation of the University. The most ambitious part of this planning exercise is the determination to differentiate and build the profile of the institution on the basis of its commitment to learner support and graduate outcomes, especially at a time when all universities are promoting themselves as learner-centred.

Perhaps the most encouraging outcome of all these deliberations is their very existence and intensity. Western universities have long been accused of smugness, resistance to change and even arrogance. Times are changing quickly and "academic management" is no longer an oxymoron. Strategic planning is central to every institution's development and effective university leaders are openly embracing enhanced learner support, aspiring to much greater heights, and welcoming transparency and accountability.

Fifteen years ago, Paul (1988) decried the tendency of ODL institutions to cut back vital student services in difficult times, but the same institutions today offer much more comprehensive and integrated learner support than ever before, with demonstrable impacts on their success. Campus-based institutions have much to learn from their pioneer work and their leaders are well advised to pay more attention to the ODL literature. From this perspective, Windsor should prove a fascinating case study!

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OLAF ZAWACKI-RICHTER

The Growing Importance of Support for Learners and Faculty in Online Distance Education

Abstract

Due to the complexity of the development and implementation of online distance learning and its pedagogical opportunities and challenges, the support for learners and faculty gains added importance. A difference is made between support measures in the framework of the teaching/ learning process and on an administrative-institutional level. Special emphasis is placed on the higher education context. Often a fundamental change to the service culture and to faculty's conceptions of themselves is necessary in the development of online education. In contrast to traditional classroom education it will be shown in this chapter that the importance of support is increased in three ways.

1. Introduction

Online learning is in many ways a new phenomenon and its pedagogical, organizational and technical structure is currently developing. A new field of pedagogical activity is being created which is determined by underlying theoretical, technological, economic and social conditions.

There is hardly a single education institution, whether in the public or the private sector that is not thinking about the introduction of "e-learning", i.e. flexible learning with new media. The focus of this paper is placed on the higher education context. In general, online teaching and learning is currently developing in three different areas:

1. At distance teaching or open universities, which have always been engaged in media-based learning;
2. At traditional campus universities, where new media are used to enrich face-to-face teaching, increase flexibility, to offer online degree courses, particularly courses and programs for the purpose of continuing education, and hence, to reach more (paying) students;
3. In the field of corporate training, in which e-learning is often regarded as an attractive and low-cost model for flexible "just-in-time" learning.

Because of the similarity of distance education with online learning, the former can provide valuable strategies, approaches and practical experiences with regard to the conception and organization of this new form of learning. Distance education can look back on over 150 years of experience with media-based teaching and learning: "Today's virtual instruction has its roots in correspondence schools" (Gladieux & Swail, 1999, p. 9). Distance teaching universities are therefore at a clear advantage in the development of online degree courses and "virtual" universities (cf. Peters, 2003; Schulmeister, 2001; Zawacki, 2001).

The experience of distance education shows that support for students is of decisive importance for successful distance study. *Student support systems* have existed in traditional distance education for decades. Distance universities are therefore also known as "helping organizations" (Delling, 1971). Information and communication technologies open up new paths for the support for students. What is new and important is that with the introduction of complex technologies, and therefore of new pedagogical opportunities, faculty themselves require special support in the development of online teaching (Brindley, Zawacki & Roberts, 2003).

However, although many stress the significance of support, aspects of support are not sufficiently acknowledged in the literature on distance education research. Robinson (1995) names four possible reasons for this:

> ... learner support may be perceived as a less glamorous activity than some others in open and distance education (support staff often have less power, status and pay); it is often regarded peripheral to the 'real business' of developing materials; it is an element particularly vulnerable to financial cuts; or it may largely be a pragmatic activity rooted in the lessons of experience. (p. 221)

Recently, Moore & Anderson (2003) published the ‘Handbook of Distance Education’, which has over one thousand pages and a great number of articles. It is remarkable that the term "support" is not found in the index of this book. This is particularly critical, because, in comparison with traditional distance education, support in online education is of even greater importance, as will be shown in the following sections.

2. Two Dimensions of Support

It should be stressed here that, against the background of the complex pedagogical, organizational, technical and economic requirements of online education, an extended understanding of support is required, one that goes beyond pedagogical intervention on the microstructural level of action in the teaching and learning process.

In pedagogical practice, support measures have traditionally always been woven together with teaching and learning (support, welfare, counselling). Pedagogical activities in this microstructural sense are, for example:

- definition, substantiation and transparent presentation of learning goals,
- taking prior knowledge into consideration and linking this knowledge with learning objectives,
- consideration of teaching methods based on the specific needs of the learning group,
- rousing, exciting and strengthening students' attention and interest,
- presenting and working out the teaching contents in a suitable scope and in a logical sequence to simplify comprehension,
- clear presentation of complex learning matters,
- flexible reaction to questions and contributions,
- motivating students through positive feedback and constructive criticism,
- giving advice on working towards the learning matter,
- help and guidance through enabling processes (*scaffolding*) and fostering autonomous learning,
- support through tutors,

- support on the application of what was learned, and the transfer to other contexts,
- taking into account feedback from students,
- checking learning success with subsequent corrections,
- learning assistance, e.g. counselling for overcoming learning difficulties,
- advising on organizational questions, e.g. degree course advice for beginners and special groups (e.g. foreign students, the disabled).

This list does not claim to be complete and further pedagogical activities could no doubt be added. While these measures were provided in relative isolation in traditional universities, the digitalization of learning and teaching creates a new field of pedagogic-didactic activity, in which several of these activities and new forms of support are related to each other and bundled.

What is new, in particular for campus universities (especially in the central-European context), is the need to develop systematic strategies for online learning and teaching, similar to the principles of the division of labour and specialization (instructional design process), as they have been practiced for many years in distance education systems. Support systems are initially enabled through processes of the division of labour, because staff can be specialized to professionally support students and faculty (the differentiation between "academic" and "academic support staff").

A favourable administrative-institutional framework for promoting and developing online distance learning is required (change management), e.g. through incentives for faculty members to participate in online education, and the availability of the technological infrastructure with the appropriate technical support. The organizational, administrative and infrastructural aspects are not mere preconditions, but are interpreted as elements of support. Faculty support in particular is an important element.

Whereas measures in traditional pedagogic and didactic practice were typically linked to a person, in this extended understanding of support they are also defined and provided by the teaching institution (the macrostructural level of action).

3. The Importance of Support in Online Education

There are three main reasons why support for students and faculty in online education takes on added importance and these will be described in the following sections:

1. In contrast to face-to-face teaching, distance education in general puts more responsibility on the learners to manage their own learning (section 3.1).
2. Online learning requires more competencies (e.g. media literacy) and skills from learners and these need to be developed (section 3.2).
3. It is especially important to provide faculty support structures to promote, develop and implement online distance learning and teaching (section 3.3).

3.1. Empirically Verifiable Effects of Support in Distance Learning

In distance education, care and support are conventionally more important than in traditional education: "… the distance education community seems to be more driven by concern for planning customer care and support than the traditional universities"

(Rumble, 2000, p. 218). The need for support always played a more important role than in traditional universities:

> While students will have more freedom and opportunity, they must also assume more responsibility for managing their own learning, in terms of when they will study, how much they want to learn, and seeking out information and resources. Some students may be unwilling or inadequately trained to accept this responsibility and will need help in making the necessary adjustments in their study habits. (Moore & Kearsley, 1996, p. 16)

Distance education research has concerned itself in numerous studies with the subject of student support in the context of student drop-out levels. A special issue of Open Learning on attrition and retention was recently edited by Graham Gibbs (Vol. 19, No. 1, February 2004). Tallman's quantitative study (1994) on the connection between support and student satisfaction comes to the following conclusion: "Satisfaction with correspondence education is a complex matter. Isolating specific variables that will guarantee student satisfaction may not be possible.... High quality support services will encourage student satisfaction" (p. 52).

Ryan (2001, p. 75) correlates the quality of support with student drop-out levels by compiling data from different authors who have reported on the drop-out levels in larger distance teaching universities. The span ranges from values over 90% at the Asian *mega-universities* (Daniel, 1996) to 25-50 % at the Open University UK. The differences are explained with the different quality of support for students. In comparison with the drop-out levels quoted above for distance teaching universities Ryan gives an average drop-out level of 17% for all British campus universities. In the latest drop-out study by the Universities Information System ("HIS"), Heublein, Schmelzer, Sommer and Spangenberg (2002) calculate a level of 27% for first-degree students at universities and 22% at universities of applied sciences in Germany.

Most authors are in agreement that drop-out levels at distance universities are higher than those at campus universities. However, the comparability is restricted and must be interpreted with great caution (Peters, 1992).[1]

Different starting conditions and socio-economic characteristics of distance students must be considered. Distance students are usually mature adults, who have (more) life and vocational experience, and various occupational and family obligations to fulfil (cf. Peters, 2001; Rowntree, 2000; Thompson, 1998). Distance students also often pursue career defined goals and their learning is frequently problem oriented and less towards a final examination. However, more and more younger traditional baccalaureate age students are choosing online education to be independent from time and space:

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[1] Dropping out is first of all a matter of definition. The mere quotient from students starting their first year and certificates or degrees awarded does not do justice to reality. Based on the experiences of the FernUniversität Hagen, Fritsch (1988) breaks the numbers down more exactly into *non-starters* (students who register but do not start studying), *draw-backs* (students who drop out at a very early stage), *drop-outs* (students who are not admitted to examinations) and *failures* (students who fail their examinations in the end). However, the various forms are treated differently in research and the statistics provided. Most drop-outs are found at the start of courses. The Open University UK has an *introductory* or *trial period*, in which all student applicants must take part. Registration is not complete until participants confirm their intention to study at the end of this period (Holmberg, 1995). This means that *non-starters*, and many *draw-backs*, are not included in the OUUK's drop-out statistics. Rumble (as cited in Peters, 1992) indicates a drop-out level of 55% for the Open University UK, whereby *non-starters* and *draw-backs* are not counted - if they were, the level would rise to 68.5%. This example illustrates quite clearly the difficulties when evaluating and comparing the data provided.

> Our student body is quite diverse. In age the biggest segment, is from 25 to 44; but increasingly the age group under 25 is growing. These are usually traditional students who go to residential campuses. However, in the United States, those campuses are becoming more and more expensive, and many students have to work and go to school part-time. So increasingly they come to us. (Allen, 2004, p. 274 in this volume)

However, these younger students need special support that prepares them for distance study since they may have even fewer independent learning skills than their older counterparts.

Peters (1992) quotes a study by Bartels, v. Prümmer and Rossié (1988) that contains a list of reasons for dropping out from the FernUniversität Hagen. The first five reasons have nothing to do with the actual teaching and learning process in distance education: 1. *Change of job, Job stress* (59.3%), 2. *Too much time required for studying* (49.4 %), 3. *Restrictions on private life too great* (34.8%), 4. *The course would have lasted too long* (34.2%) and 5. *Too much stress from family, household, children* (33.2%). It is only in sixth place that a point is named which directly concerns studying at the FernUniversität: *Would rather study at a campus university* (31.4%). Only 9.6% named too difficult content and comprehensive difficulties as reasons for dropping out (cf. Rekkedal's chapter in this volume for a more elaborated discussion on models of attrition).

In view of the difficult conditions for studying support for distance students is of greatest importance. The key to success is high-quality support for students:

> On the basis of my many years of experience I dare claim that the most favourable factor paving the way for motivated students' success and preventing dropout is empathy between the learning and teaching parties, availability of immediate support and advice when difficulties crop up, ease in consulting tutors and other subject specialists and general feelings of rapport. (Holmberg, 2001, p. 74)

3.2. Competencies for Online Learning

Given the current ‘half life’ of knowledge, the knowledge that exists at the end of schooling, or on completion of a university degree, quickly becomes obsolete (Dohmen, 1996). This development demands a continuous updating and supplementing of knowledge and skills from people in work process throughout their lifetime (Schäfer, 2002). Terms such as *lifelong learning* or *learning-on-demand* indicate this trend:

> Lifelong learning is any purposeful learning that an individual engages in throughout the life span; it is an activity engaged in to gain greater individual self-fulfilment and to improve the quality of life for the individual and the emerging society. The knowledge explosion requires professionals to engage in lifelong learning if they intend to stay current – let alone evolve, advance, and remain competitive – in their profession. (Dunlap, 1999, p. 41)

A teaching and learning culture based on a constructivist approach is demanded in order to meet the requirements of an information or knowledge society:

> With the knowledge society as a vision the university needs more than optimal technical equipment. It needs a new learning culture, which builds on the idea of lifelong learning and supports the activity and constructivism of learning as well as self-control and cooperation. (Mandl & Reinmann-Rothmeier, 1998, p. 197)

However, lifelong learning presupposes a great amount of self-control and cooperation in order to develop skills and competencies that are needed throughout the lifespan. The advantages of online learning enable defined methods and forms of support that facilitate more self-determination and autonomy for students, but demand them as well.

In the professional world of the future, university graduates, as *knowledge workers*, must have different, or differently weighted qualifications than those of the industrial society with which we are familiar (Klauder, 1992). Competencies and intelligent strategies for using the new information and communication technologies are required when dealing with information and knowledge. However, the media competency that many demand must go beyond the mere handling of tools and systems (digital literacy) and include dealing with information critically (media literacy).

Against the background of this social transformation Reinmann-Rothmeier & Mandl (1997) derive a number of competencies that are of great importance in the knowledge society – the following concern online learning in the narrower sense:

- Technical competence in handling the new information and communication technologies will become a basic qualification (digital literacy).
- Competencies for knowledge management are seen as a very promising response to the flood of information and explosion of knowledge, and a central, basic qualification for the future (cf. Astleitner & Schinagl, 2000). Information must be critically reflected (media literacy), reconfigured and integrated in a personal context, in order to construct individual knowledge from information.
- Social competence is necessary to deal with the complexity of knowledge and the high level of specialization in our society and requires cooperation on all levels. The willingness and ability to work in a team and to cooperate with others are essential and refers in particular to communication and cooperation in the process of online learning.

This means that learners must be willing and have the ability to recognize the current demand for further training and individual learning goals on the basis of the requirements of their own lives and work, to plan their learning autonomously and to absorb and organize it largely independently of instructors. Given the flood of information and databases available on the Internet, the greatest and most difficult challenge is probably the ability to search for, find, select and assess the information against the background of the pursued learning targets and the application context. Routinely handling different tools in the online learning environment is a fundamental precondition here. Social competencies are of special importance particularly in collaborative learning arrangements, in which the focus is on articulation and communication in study groups.

The high level of autonomy that this form of learning requires therefore puts great demands on learners' metacognitive skills (*metacognition*) and their *self-directedness* (Dunlap, 1999). According to Ridley, Schultz, Glanz and Weinstein (1992) the following metacognitive competences are required for lifelong learning: the ability to detect gaps in knowledge, to set targets, to plan and organize the learning process; to activate relevant prior knowledge to achieve the learning target; to assess ones own progress and to evaluate the selected information and materials; to keep track of the learning steps which are required and are still outstanding; to make good use of time and resources, and finally, where this is necessary, to modify the learning strategy in the course of the learning process. Knowles (1975) defined self-determined learning accordingly:

> In its broadest meaning, 'self-directed learning' describes the process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing learning strategies, and evaluating learning outcomes. (p. 18)

The development of the qualifications and abilities referred to here are very important in traditional campus-based universities, but they are crucial to success in the online learning environment. In the online environment, unlike campus settings, face to face support from peers, instructors, and other support personnel are not readily available.

For the support of students, who are responsible for their own learning processes, this means a change in the learning and teaching behaviour from expository teaching and receptive learning to advisory and tutorial support for students learning independently. A study by Smith (2000) examined the learning behaviour of 1252 students in the field of vocational education and training (VET) in flexible learning environments. The findings show that the abilities for autonomous learning especially for online learning still have to be developed. Students are often not prepared for taking on the responsibility for their own learning process: "The current investigation has concluded that VET learners are not typically well-equipped for flexible delivery. They exhibit a low preference for self-directed learning." (p. 43).

Therefore, intensive support for students in online learning is of great importance. The expression "*scaffolding*" illustrates the goal of student support very well: scaffolding is placed around the students which supports them in the development towards independent and autonomous learning and thus enables problems to be solved which would not have been achieved without this support. McLoughlin (2002) describes nine categories of scaffolding across different teaching contexts: orientation (communication of expectation), coaching, eliciting articulation, task support, expert regulation, conceptual scaffolding, metacognitive scaffolding, procedural scaffolding, and strategic scaffolding.

3.3. Faculty Support

The pedagogical opportunities that new media offer can only be developed and exploited if they are well accepted by motivated faculty members, thus allowing educational innovation. The development and implementation of high-quality and innovative online courses depends mainly on them: "Presidents may dream visions, and vice presidents may design plans, and deans and department heads may try to implement them, but without the support of faculty members nothing will change." (Bates, 2000, p. 95).

Advising and supporting faculty in pedagogical and technical questions in online learning will become more important, because the development and implementation of online courses, or of complete online degree courses, is a very complex task, which individual instructors or single departments will be unable to manage themselves in an ‘lone-ranger’ approach (Bates, 2000). The lack of support and training for teachers and tutors is a limiting factor in the development of online teaching: "Any significant initiative aimed at changing teaching methods or the introduction of technology into teaching and learning should include effective e-moderator support and training, otherwise its outcomes are likely to be meagre and unsuccessful." (Salmon, 2000, p. 55).

Technical support is certainly important. Hara and Kling’s study (1999) shows that the frequency of experiencing frustration and drop-out rates increase if faculty are practically unable to help directly with simple technical problems and must refer students to the technical support service. Instructors must also be able to display a certain level of command and routine in dealing with the media. However, simple technical training will not lead to success. Against the background of the pedagogical and didactic developments of online learning there will have to be a major change in faculty’s conceptions of themselves, in their teaching behaviour and methods, right through to counselling and tutorial support. Along with the technical questions of online support pedagogical counselling and training will be an even more important structural aspect in faculty support. For faculty without online experience it is helpful at the beginning to be protected from dealing with technical details so they can concentrate on the instructional design of their online courses. In spite of this, the aim must be to make them as independent as possible of technical support.

Although it is not disputed that faculty support is necessary for the introduction of online learning and teaching, many universities find it difficult to create the organizational structures and incentives for faculty that are necessary for education innovation. The effective support and promotion of online teaching requires organizational structures in the university such as competence centres for e-learning support in order to support faculty members (who are responsible for content) to work with a team who can help them with instructional design and other pedagogical issues in order that they can develop the necessary skills to teach online.

Three areas of faculty support can basically be differentiated: course development and teaching support, management of online materials and resources, and technical support (Brindley, Zawacki & Roberts, 2003). University support infrastructures are a precondition for creating an environment in which problems and obstacles upon the introduction of online learning and teaching can be overcome. The development and promotion of online teaching and learning can only be realized by a support strategy that takes effect both from the top and from the bottom (cf. Zawacki-Richter, 2004):

a) The necessary institutional framework can be created through a consistent top-down approach. These include:
   - strategic planning with the goal of introducing online teaching and learning and with binding agreements on targets for all the departments in the university,
   - the provision, permanent guarantee and maintenance of the necessary technical infrastructures,
   - organizational structures for the support system's service institutions and media competence centres,
   - the introduction of incentive systems for participation in online teaching, and finally,
   - the financial and personnel resources.

b) A slow change to the general service culture and to faculties' concepts of themselves can only be achieved by means of a cautious bottom-up strategy. The following measures contribute to this:
   - learning from examples of colleagues with good practical experience (peer to peer learning),
   - informal personal pedagogical and media-technology advice and support from competent online learning experts (educational consultants),
   - formal measures for professional development and training,
   - support through teamwork and professional project management oriented towards the principles of instructional design, and
   - safeguarding control over contents and study materials through faculty (intellectual property and copyright issues).

4. Concluding Remarks

All learners need support. The form and extent of the support depends on the individual students: on their learning styles, their prior knowledge, their occupational background, their goals and their social obligations. However, in contrast to traditional campus universities support in online education gains increased importance:

a) Learning which is imparted through media enables, but also demands, more self-determination and autonomy from learners. Support, for example, from online tutors, that facilitates independent learning, takes up a central position in online education. In addition, mature, employed students who put in great efforts to complete their studies, and also less experienced younger students need special support in online learning.

b) In addition to the competencies for autonomous learning further skills need to be developed and supported for learning in an online environment: skills in handling new media and the targeted search for and evaluation of information and knowledge (media literacy and knowledge management). Social competence is of great importance for communication and cooperation in the online environment.

c) Finally, online education strongly depends on the faculty, who need advice and support in the pedagogical and technical questions of on-line learning because of the complexity of media projects. Providing suitable institutional conditions and organizational structures to support online teaching is in itself an element of support, because only in this way can faculty be enabled to make effective use of the new technologies in supporting their students.

Support affects both the pedagogical aspects of online teaching and learning (academic support in the narrower sense), and the organizational, economic and technical framework conditions and preconditions on the administrative-institutional level (support in the wider sense). It can only partially be aligned with traditional support measures; however, it can be more easily developed in support systems such as those that evolved in distance education institutions.

At present, online support systems are most advanced at distance teaching universities, which have specialized in the support and professional guidance of students who study at a distance (cf. Brigham, 2001; Phillips, 2003). However, campus universities are increasingly introducing 'flexible learning' in order to reach new target groups and to provide additional and more flexible support for their on-campus students (cf. Zawacki, 2002). A support system must always be tailored individually to the requirements of students and teachers, to the institutional, cultural and national context and, finally, against the background of the specialized goals of a course or programme. For this reason there can be no generally valid, ideal model for support systems.

Experts advocate using a constructivist approach to meet the requirements of lifelong learning. However, the pedagogical paradigm shift demands a changed understanding of media, students and teachers. The media should not be used as one-way presentation media, but as information, exploration and communication *tools*, which are part of the constructivist learning and teaching environment. A new image and a new understanding of students and faculty come to the fore: from expository teaching and receptive learning to advising and facilitation of autonomous learning, whereby the indissoluble connection between independence and support for learning becomes clear. Support is needed to facilitate this process of educational innovation.

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SARAH GURI-ROSENBLIT

Distance Education Teachers in the Digital Age: New Roles and Contradictory Demands

Abstract

The digital technologies challenge profoundly the organization of academic life both within campus-based and distance teaching universities. The implementation of the new technologies poses some critical dilemmas for policy makers offering distance teaching programs at university level, particularly within the framework of the large-scale distance teaching universities. This chapter contrasts the role of distance education teachers within the framework of the industrial model as compared to the premises of the digital age, and analyzes the new roles and contradictory demands posed upon the different ranks of teachers in distance teaching institutions in the face of the incorporation of the new technologies. The paper concludes with outlining some leading future trends of distance teaching in diverse higher education settings, with an emphasis on the new types of support systems needed for both students and teachers in distance teaching institutions in the digital age.

Introduction

Many of the distance teaching universities that have been established since the early 1970s were forerunners in redefining and reshaping the roles of their academic staff to match their unique learning/teaching environments. Distance teaching requires academics to devote far more time to the preparation of study materials than they would for a face-to-face classroom preparation. In many distance teaching universities the academic staff work in the framework of teams in the process of developing the self-study courses, which restricts in several aspects their academic freedom (Perry, 1977; Daniel, 1996). An additional important pattern of many distance education institutions has been the breaking up of the teaching responsibility between many actors. The question of: ‘Who is the teacher in a distance teaching university?’ often generates quite contradictory answers, and is perceived differently by the heads of distance education institutions, the senior academic faculty, course coordinators, counselors, tutors and students.

The new information and communication technologies (ICT) challenge profoundly the organization of academic life both within classical and distance teaching universities. The ICT are irreversibly transforming the ways we learn, teach, generate knowledge and conduct research, and academics are expected to adjust to the future changes of their traditional roles (AFT, 2001; Bates, 2001; Evans & Nation, 2000; Guri-Rosenblit, 2001, 2003; Van der Molen, 2001). The new teaching and learning environments require the academic staff in both conventional and distance teaching universities to assume new responsibilities and to develop a range of new skills and talents. The ICT pose some critical dilemmas for policy makers in distance teaching universities and challenge some of the underlying premises of the industrial model upon which the large scale distance teaching universities have been operating in the last three decades. The induction of distance education teachers into the new forms of delivery necessitates the establishment of new professional support services, and a total overhaul of the whole course development procedures and the teaching and counseling apparatus of the distance teaching universities.

This chapter contrasts the roles of distance education teachers within the framework of the industrial model as compared to the premises of the digital age, and analyzes the contradictory demands and new roles posed upon the different ranks of teachers in a distance teaching institution in face of the incorporation of the new technologies. The paper concludes with outlining some leading future trends of distance education at university level, with an emphasis on the new types of support systems needed for students and teachers in distance teaching institutions in the digital age.

Distance Education Teachers in the Framework of the Industrial Model

Most of the mega distance teaching universities that teach dozens of thousands of students followed the model of the British Open University that was established in 1969. They were a product of governmental planning set to fulfill national missions, mainly – to absorb large numbers of students at a lower cost as compared to traditional campus universities (Daniel, 1996; Guri-Rosenblit, 1999). This goal has been achieved through an industrial model of operation (Peters, 1994, 2001).

The division of the academic teaching responsibility into two separate phases constitutes the essence of the industrial model of distance education. The first phase is devoted to the development of high quality self-study materials by teams of experts. In most distance teaching universities the academic staff work together in a team that can include colleagues, tutors, editors, instructional designers, television producers, computer experts, and graphic production personnel, to develop and write the courses. In the course team framework, the faculty's academic freedom in teaching is clearly reduced when compared with their counterparts at campus-based universities (Perry, 1977; Guri-Rosenblit, 1999). The main responsibility of course team faculty is vested in writing and composing self-study courses, and their skills as teachers are relegated aside.

Most of the course developers do not participate in the second phase of the actual learning/ teaching process. The underlying assumption at this phase is that large numbers of students study the pre-developed courses through the didactic apparatus integrated into the self-study materials, and as the number of students increases, the cost per student decreases. The sheer size of distance teaching universities disconnects most of their senior academic staff from the essential interaction of learning. The teaching responsibilities are distributed between senior academic staff and other actors that participate in the teaching of the academic courses. Distance teaching universities were bound to require categories of staff which have no counterpart elsewhere.

Most of the distance teaching universities have recognized the need for general support services and devoted many resources to set them up. If the early 1970s were taken up with the quest for effective modes of course design, interest in the 1980s shifted to the design of student support environments (Mills & Tait, 1996). The distance teaching universities show, without the slightest doubt, that to deal effectively with large numbers of students from widely different backgrounds, it is indispensable to reinforce teaching and learning by efficient interactivity between students and tutors, and to provide efficient support services by a battery of professional staff. Since the late 1980s, a growing literature has developed which criticized the one-way linear industrial model and stressed the importance of social interaction with both peers and teachers/tutors/ counselors (Hamilton, 1990; Rumble, 1992; Evans & Nation, 1993; Paul & Brindley, 1996). In many countries initiatives have been taken to increase the number of active study centers where social exchange and interactive learning can take place (Mills & Tait, 1996). Student support services are costly. To some extent they go counter to the drive for cost effectiveness in distance teaching (Guri-Rosenblit, 1999). The new technologies provide feasible solutions to enhance student support and interactivity in distance teaching settings, as discussed further on.

An important question which emerges from the issue of the distributed teaching responsibility between many actors is: Who are perceived as teachers or instructors by students? Are they the lecturers who planned and developed the self-study materials with an appropriate didactic apparatus? Are they the course coordinators or the maintenance course team personnel (wherever they are other than the course developers themselves), responsible for monitoring the whole process of teaching, setting and checking exams and assignments whilst being available for students' queries and questions? Or are they the tutors or personal tutors who are in close and frequent contact with the students throughout the learning process? This question is neither trivial, nor simple to answer.

From the point of view of a distance teaching university as an organization, self-study materials replace the lecture in conventional universities (Holmberg, 1995; Keegan, 1986, 1993; Moore & Kearsley, 1996). Those in the professional and lower academic ranks who participate in the development and teaching stages are seen as support staff, but by no means are they regarded as substitutes for lecturers. The venia legendi, the right to teach at a university, is vested in the written materials. But students, as well as the teaching and professional staff in distance teaching universities, have been socialized within conventional settings, where the person who is in direct contact and dialogue with the students is perceived as the teacher, and all other means, such as books and additional media, are looked upon as auxiliary devices. This basic and profound socialization which evolves from early childhood through the adulthood gives rise to an interesting paradox in distance teaching universities which offer their students ample opportunities for interaction with tutors and other academic staff in regular face-to-face tutorials and seminars or in virtual settings. The more interaction that takes place between students and with tutors, counselors and course coordinators, the less obvious is the responsibility of senior academic faculty in the real phase of teaching and learning. This paradox becomes more acute in the digital age.

Distance Education Teachers in the Digital Age

The new ICT are most attractive for distance teaching. They have the potential to overcome three major problems of traditional distance education: to rescue the isolated students from their loneliness by providing interaction with teachers, tutors and counselors, as well as with their peers, throughout the study process (cf. also Salmon in this volume); to provide easy access to libraries and other information resources, which was nearly impossible in the past (cf. also Frank & George in this volume); and to update self-study materials on an ongoing basis. But the application of the ICT by large distance teaching institutions requires a major restructuring of their whole operation, and an immense investment in setting up a totally new infrastructure for developing and delivering their courses. Distance education as provided by the large distance teaching universities and e-learning are based on two different teaching/learning paradigms. While the industrial model of distance education is based on teaching large numbers of students by a handful of professors, most of whom do not communicate with the students at all, efficient e-learning encourages the direct interaction between a small number of students with expert teacher/s (Collis & Moonen, 2001; Littleton & Light, 1999).

In theory, the possibility of enhanced communication in distance education between the senior academic faculty and students is enabled by the new technologies, but its actualization is much more complicated to achieve. Small numbers of faculty are unable to communicate with thousands or even hundreds of students. Most, if not all, large distance teaching universities cannot afford to hire many more academics in order to facilitate student-professor interaction (Guri-Rosenblit, 2003). A much more elaborated teaching network has to be established which will enable ongoing interaction between senior academic faculty and course coordinators and/or tutors, and between tutors and students in the actual study process of any given course.

Developing countries, in particular, do not possess the appropriate resources and technology to make e-learning available on a wide scale. Bates, who was asked by the 'International Institute for Educational Planning' of UNESCO to recommend national strategies for implementing e-learning in post-secondary education in various parts of the world, concluded that: "Those countries that are not yet ready for the knowledge-based economy are probably not yet ready for e-learning" (Bates, 2001, p. 111), and he suggested that those countries with large numbers of students unable to access later years of secondary or higher education should adopt the industrial model of distance education, that provides the best route for mass education, rather than engage in designing e-learning systems.

Also in the domain of information access, the mega distance teaching universities encounter more difficulties as compared to their conventional counterparts (cf. also Zawacki-Richter in this volume). Their egalitarian philosophy that requires them to provide equality of opportunity to all of their students and their large numbers of students, many of whom lack the ability or opportunity to reach Internet facilities and information resources, hinder them from substituting part of their courses, or parts of any given course, by online materials, and by a built-in reference mechanism in the pre-prepared textbooks. This accounts for the duplication phenomenon. Many distance teaching universities currently develop both printed and online versions of courses, and enable their students to choose their preferred mode of study. Such a policy adds on substantial costs to the already very expensive process of developing self-study materials (cf. also Hülsmann in this volume).

The new technologies enable updating study materials with relative ease, but at the same time they challenge the overall infrastructure of the large distance teaching universities. At campus-based universities, the individual lecturer or tutor in any classroom may alter and redefine reading lists, set assignments and study tasks in the light of teaching dynamic. Teaching faculty in most distance teaching universities do not have the latitude whatsoever to make such alterations. The principles of sameness and uniformity apply to assignments and exams as they do to content. In order to employ flexible update mechanisms, the distance teaching universities have to redefine and restructure their overall teaching mechanisms.

It seems that in spite of the apparent advantages and merits of the new ICT for distance education, many of the distance teaching universities lack the appropriate infrastructure and necessary conditions, as well as the human capital, to utilize the full potential of the new technologies. To integrate the electronic media more fully and efficiently into their learning/teaching processes, a whole restructuring of their teaching and counseling operation is required, taking into account the contradictory demands put on their academics.

Torn Between Contradictory Demands

Policy makers and academic faculty in distance teaching universities are currently torn between contradictory demands. The quest for appropriate technologies, to improve the quality of distance teaching, lies at the heart of the development of distance education in general, and distance teaching universities in particular. The distance teaching universities feel an urge to lead the ICT integration in academic environments, but at the same time they are forced to acknowledge that such integration bears tremendously high costs, and requires a redefinition of their operation. The senior academic faculty are still required to devote most of their efforts to develop self-study courses, but nowadays they are also expected to be involved more in the actual teaching process. Course coordinators, tutors and counselors are torn between their obligation to stick to the content and didactic apparatus of the self-study materials, and their need to be flexible and attentive to differential students' needs in the ongoing interactive communication in the teaching/learning process. The principles of sameness and equity to all their students hinder many distance teaching universities from offering highly sophisticated technological developments that might be used by only part of their students. And the students' need for social interaction with both teachers and other students requires finding a most delicate balance between the functions of physical study centers and electronic communication.

A crucial question is who will be responsible for the ongoing update of the study materials – the developers of the initial course or the course coordinators of the course? And to what extent will the course coordinator and/or the tutors be granted degrees of freedom to update the course materials in the actual study process, and respond immediately to student queries and questions? From a variety of studies, it is clear that most students are expecting the person who directly interacts with them through the electronic media to respond to their queries within a short span of time (Collis & Moonen, 2001; Guri-Rosenblit, 2003; Sarid, 2003). Given that most tutors in distance teaching universities are part-timers, and have neither the knowledge nor the expertise of a full-time lecturer, it is of crucial importance to establish special communication and support systems that enable them to interact with other tutors and with the course developers. There is also a need to provide tutors with continuous in-service professional training and counseling support. In a large study conducted at the Open University of Israel it was found that the tutors are key persons in shaping students' attitudes towards the integration of the new technologies into the study process (Sarid, 2003).

Another crucial task facing the policy makers of distance teaching universities is how to reconcile between the traditional role of distance education to provide economies of scale with setting efficient e-learning study environments. In other words, how to find low cost/high outcome approaches. For many decades, distance education has prided itself for providing economies of scale as compared to campus-based universities, while well designed e-learning environments turn out quite frequently to cost more than comparable face-to-face encounters (Bates, 2001; Guri-Rosenblit, 2001, 2003; Ryan, 2002; Hülsmann in this volume). Such a crucial dilemma requires the heads of distance teaching universities to set new priorities, and redefine the whole organization of the materials' development and teaching.

Furthermore, the evolution of the new technologies and their integration into learning and teaching have considerably transformed earlier roles of study centers and support systems of many distance teaching universities. Class teaching at study centers has shifted to different forms of interaction. Many functions of counseling can nowadays be performed by direct interaction between students and counselors through the electronic media. Nevertheless, students still need social meetings with tutors and other students in spite of electronic media. A balanced mix of various support modalities, suitable to the national setting in which each distance teaching university operates, is of crucial importance.

Concluding Remarks

The complexity of the ICT and the high costs associated with their implementation require a top-down macro level strategy for their effective utilization. Any serious shift of the existing learning infrastructures in any institution requires an overall institutional commitment, a gradual induction of both students and academic faculty to the new ICT uses, the planning of appropriate support services, and clear financial prospects. Distance teaching universities are obliged to alter their organizational infrastructure and overhaul the management of headquarters, local and regional centers. They are challenged currently to develop teaching and learning systems that are flexible in nature, and respond quickly to changes in subject matter, technology and student clienteles.

Distance education at university level will grow in the coming years and will attract new student clienteles. It will be provided more and more by mixed-mode institutions and consortia in addition to stand-alone distance teaching institutions. It seems that in spite of the growing competition between distance education providers, the status of the mega distance teaching universities will remain strong, and their main mandate will continue to be to widen access to higher education by reaching out to students who cannot attend or gain access to conventional universities for a variety of reasons.

The expansion of higher education implies the inclusion of less privileged students within its circles. Unprepared students from disadvantaged backgrounds will most assuredly need sophisticated and elaborate assistance in the study process. Many distance teaching universities have developed throughout the years first rate tutorial and counseling services, personal tutors, tutors, tutor counselors, intensive tutorials, seminar settings, summer and residential schools, and campus-like environments (Mills & Tait, 1996). The nature of student support systems will change in the future and will utilize the wide range capabilities of the new technologies. Not only students in distance teaching universities, but also the academic faculty of all ranks need ongoing professional and social support in the adaptation process of the new technologies.

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TORSTEIN REKKEDAL

Internet Based E-learning, Pedagogy and Support Systems

Abstract

The author's main aim is to identify and discuss the areas of Internet based e-learning that are important in describing the state of the art, specifically related to the need for systems and actions for student support. As a basis for defining the necessary support systems the article presents different theoretical approaches to distance teaching and learning such as student independence and autonomy, industrialization of teaching, guided didactic conversation, continuity of concern for students and cooperative learning and constructivism. The article further discusses the conflict of interest between students who prefer cooperative learning methods and students who both prefer and need a high degree of flexibility to be able to enrol and succeed in e-learning programmes. The article also discusses different models explaining drop out from distance education. High quality distance education systems have traditionally emphasised student support and continuous concern for students from enrolment to completion. It is the author's view that theory and practices from distance education are valid for e-learning and should be implemented into e-learning practice. Finally, the author presents a theoretical framework for student support services in online distance education with his own institution, NKI, as an example.

Introduction

This article is based on analyses to build a theoretical foundation of the EU Socrates Minerva project, Student Support Services in E-Learning. The project deals specifically defining and integrating student support services into Internet based e-learning solutions to produce online distance education that can offer complete educational experiences for individual students and groups of students. To transform an e-learning programme into a complete educational experience, one needs high quality systems for distribution and presentation of content, for two-way and many-way communication, for individual and group based student activities and all kinds of personal, academic, technical and administrative student support services.

The article intends to identify and discuss the areas of e-learning that are important in describing the state of the art, specifically related to the need for systems and actions supporting the learner and helping him/her to succeed and reach learning goals, whether these learning goals are set by the institution, employer and/or the learner. The main background for this discussion is the challenge of changing a "traditional" distance teaching institution into a professional high quality organisation for Internet-based education and training. In our view, theories and practices from the distance education field with high emphasis on continuous student support, are still valid and should be given focal attention when developing Internet-based e-learning for the future. High quality e-learning on the Internet will be possible only if support systems and structures developed in distance education are taken into account and are further developed in the light of the new possibilities that are opened as a result of technological advance.

Definitions of Online Education and E-learning

Online Education: There are many terms for online education. Some of them are: virtual education, Internet-based education, web-based education, and education via computer-mediated communication.

Our definition of online education is developed from the definition of Keegan (1996):

> Distance education is a form of education characterized by:
>
> - the quasi-permanent separation of teacher and learner throughout the length of the learning process (this distinguishes it from conventional face-to-face education);
> - the influence of an educational organization both in the planning and preparation of learning materials and in the provision of student support services (this distinguishes it from private study and teach yourself programmes);
> - the use of technical media – print, audio, video or computer – to unite teacher and learner and carry the content of the course;
> - the provision of two-way communication so that the student may benefit from or even initiate dialogue (this distinguishes it from other uses of technology in education); and
> - the quasi-permanent absence of the learning group throughout the length of the learning process so that people are usually taught as individuals rather than in groups, with the possibility of occasional meetings, either face-to-face or by electronic means, for both didactic and socialization purposes. (p. 50)

If we accept that online education represents a subset of distance education we may define online education by accepting Keegan’s definition and changing the third and fourth points to the following:

- the use of *computers and computer networks* to unite teacher and learner*s* and carry the content of the course;
- the provision of two-way communication *via computer* networks so that the student may benefit from or even initiate dialogue (this distinguishes it from other uses of technology in education).

Most proponents of online education would exclude Keegan’s 'quasi-permanent absence' of the learning group, since collaborative learning, where students may communicate throughout the length of the learning process is seen as one of the greatest advantages of online learning relative to previous “generations” of distance education (McConnell, 2000). On the other hand, there is good reason to stress that most adult students need to organise their studies according to demands of work, social life and family responsibilities. These needs must be balanced against a possible didactic ideal of collaborative and/or co-operative learning. Thus, the flexibility of the institution in adapting course requirements so that students may organise their learning independent of a study group is a key quality aspect for many online students (Rekkedal, 1999). This does not at all exclude learning methods exploiting the advantages of being part of a group or learning community.

‘Distance education’ and *‘distance learning’* as defined by Keegan (1996) are well-established concepts. The *‘distance learner’* is a person who, for some reason, will not or cannot take part in educational programmes that require presence at certain times or places. Terms such as *‘e-learning’* and also *‘m-learning’* have entered the scene more recently. To us, learning is an activity or process and shown as a change in a person’s perceptions, attitudes or cognitive or physical skills. It cannot be *‘electronic’* (if that is what e-learning is supposed to stand for). The terms e-learning and d-learning deserve to be analysed. For instance, the term, e-learning, seems often to be used to convince users that some supernatural things happen with your brain when you place yourself in front of a computer screen, and you learn easily and efficiently. However, in the real world this miracle is very unlikely to happen, as learning is mainly hard work. Most examples of e-learning programmes seem to be extremely costly to develop and most often cover low-level knowledge and facts based on a simplistic view of what learning is (cf. Dichanz, 2001).

However, as the term seems to have become part of accepted terminology (also cf. Brindley, Walti & Zawacki in this volume), it is imperative for educational researchers and serious providers to define it and assign meaning that is in accordance with our views on teaching and learning. Seen from a university perspective, Dichanz (2001), professor of education at the German FernUniversität ends his critical analysis of the term e-learning with the following definition:

> E-learning is the collection of teaching – and information packages – in further education which are available at any time and any place and are delivered to learners electronically. They contain units of information, self-testing batteries and tests, which allow a quick self-evaluation for quick placement. E-learning offers more lower level learning goals. Higher order goals like understanding, reasoning and (moral) judging are more difficult to achieve. They require an individualised interactive discourse and can hardly be planned. (slide 6)

Even though we do not totally agree with Dichanz that higher level learning goals cannot be planned, we agree that such goals are much more difficult to plan, and that most so-called e-learning programmes do not demonstrate attention to higher level learning objectives.

For our purposes here *e-learning is defined as interactive learning in which the learning content is available online and provides automatic feedback to the student’s learning activities.* Online communication with real people may or may not be included, but the focus of e-learning is usually more on the learning content than on communication between learners and tutors.

Unfortunately, the term e-learning is often used as a more generic term and as a synonym for online education. Kaplan-Leiserson (n.d.) has developed an online e-learning glossary, which provides this definition:

> Term covering a wide set of applications and processes, such as Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audio- and videotape, satellite broadcast, interactive TV, and CD-ROM, and more.

In the glossary of *elearningeuropa.info* (n.d.) e-learning is defined as:

> The use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration.

The term e-learning is, as one can see, not very precise, and it should be pointed out that learning is just one element of education. So, the term online education should cover a much broader range of services than the term e-learning. One may also claim that e-learning companies often focus on course content, while *online education institutions cover the whole range of educational services of which student support most often is given major emphasis*.

During the last 10 years a great many institutions worldwide have embarked on developing and offering online distance education. Institutions with a historical background from traditional on-campus education often seem to transfer teaching/learning philosophies, theories, concepts and metaphors from this environment. Keegan (2000) argues:

> ... that web based education is best regarded as a subset of distance education and that the skills, literature and practical management decisions that have been developed in the form of educational provision known as 'distance education' will be applicable mutatis mutandis to web based education. It also follows that the literature of the field of educational research known as distance education, is of value for those embarking on training on the web. (p. 18)

We agree with Keegan’s position that the skills, research literature, and management solutions developed in the field of distance education is of specific value when developing online distance education systems of high quality. The great emphasis on student support measures developed by leading distance education institutions should be acknowledged when developing the student support systems of future web based e-learning in Europe.

Pedagogical Issues

Teaching and Learning Philosophy and Theories of Teaching and Learning

It is our firm belief that our perception of teaching and learning has important implications for how we will look at organization models, administration and student support systems for online education.

Keegan (1996) categorizes distance education theories into three groupings:

1. Theories of autonomy and independence
2. Theory of industrialization
3. Theories of interaction and communication

It should be noted that until the 90’s the theories of interaction and communication mainly treated communication between the tutor/helping organisation and the individual student, while recently theories involving collaborative learning, group interaction and social constructivism emphasising learning as a process and result of a collective experience of the learning group have received much attention.

Independence and Autonomy

Moore is specifically known for his development and refinement of the theory of distance education as independent learning. His work was clearly based in a tradition of autonomy and independence of adult learners advocated by scholars such as R. Manfred Delling in Thübingen, Germany and Charles A. Wedemeyer in Wisconsin, USA. Moore's theory was developed over more than 10 years. The main dimensions are '*transactional distance'* and '*learner autonomy'*. It is clear that in his earlier writings Moore put more emphasis on autonomy – as distance teaching programmes by their nature require more autonomous behaviour by the learner. To succeed in such programmes, the learner must be able to act independently and autonomously. (In this connection it can be questioned whether this should be seen to be a necessary condition for enrolment, or that the institution must take responsibility for preparing their students and train them to become autonomous learners, which again would be one important aspect of student support services in e-learning.)

According to Moore (1991) "It is the physical separation that leads to a psychological and communication gap, a space of potential misunderstanding between the inputs of instructor and those of the learner and this is transactional distance." (p. 2-3).

Transactional distance is not the same as physical distance but built up of the two qualitative and continuous variables labelled '*dialogue'* and *'structure'*. The dialogue describes the transactions between teacher and learner, but is not used synonymously with interactions, as dialogue is described as interactions having positive qualities (Moore, 1993). The structure of a programme is determined by the nature of the media being applied and by the teaching philosophies of designers and constraints imposed by the educational institutions. Structure describes to which degree the programme is able to be responsive to individual student's needs. According to Moore the transactional distance of a programme increases when level and quality of dialogue decrease and structure increases. Programmes with low transactional distance have high dialogue and low structure.

For an overview of the theory of 'transactional distance' see Mueller (1997) and ERIC document annotations (1992).

The Industrialization of Teaching and Distance Teaching in the Post-industrial Society

Otto Peters (1973) was one of the first theorists within the field of distance education. His theory of distance education as a new form of industrialized technology-based education has received considerable attention. His viewpoint has often been misunderstood and often criticised (cf. Peters, 1989). Critics have perceived Peters to look at industrialization of teaching through distance education as a positive development and thus being critical to traditional forms of education. This is not at all the case; as we understand Peters, his concepts were applied for the purpose of analysing the didactical structure and did not imply any kind of value judgements. Since Peters' early writings, large societal changes have taken place, and modern online education takes place in a societal context often referred to as *'post-industrial'*. In analysing distance education in light of the post-industrial society, Peters (1993) draws the following conclusions:

> In a postindustrial society the traditional industrial model of distance teaching will no longer satisfy the new needs of new types of students with their particular expectations and values which, seemingly, not only differ from those of the students in the industrial society but are in many cases even the exact opposites of them.

> This situation calls for the design of new models of distance education. They will probably be combinations of intensified and sustained group work – highly sophisticated ways of acquiring the necessary information of self-study and increased telecommunications between participants. They will have different sets of goals and objectives. And they will have to rely on self-directing and self-controlling – that is, on students becoming autonomous. (p. 57)

There seems to be no doubt that when theorists of distance teaching and learning revisit their own writings when relating to the new developments of online teaching and learning, they agree that new technology changes the concepts, but that the main ideas still apply.

Guided Didactic Conversation – Teaching-Learning Conversation

Long before the term *distance education* had been established and the terms for this concept were correspondence education, home study and independent learning, Börje Holmberg (1960) argued in favour of a conversational approach to course development, and later followed this up by attempts to formulate what can be called a theory of distance education in which empathy between the learner and the teaching organisation was assumed to favour learning. In his earlier writings, Holmberg used to denote his theory of distance education as *'guided didactic conversation'*. Now he prefers the term *'teaching-learning conversation'* (Holmberg, 2001).

In recent writings Holmberg (2001) summarises his basic theory concerning learning, teaching and organisation/administration, as follows:

> Distance learning is guided and supported by non-contiguous means, primarily pre-produced course materials and mediated communication between students and a supporting organisation (university, school etc.) responsible for course development, instructional student-tutor interaction, counselling and administration of the teaching/learning process inclusive of arrangements for student-student interaction. Distance education is open to behaviourist, cognitive, constructivist and other modes of learning…
>
> Feelings of empathy and belonging promote students' motivation to learn and influence the learning favourably. Such feelings are conveyed by lucid, problem-oriented, conversation-like presentations of learning matter expounding and supplementing course literature, by friendly mediated interaction between students, tutors, counsellors and other staff in the supporting organisation as well as by liberal organisational-administrative structures and processes. These include short turn-round times for assignments and other communications between students and the supporting organisation, suitable frequency of assignment submissions and the constant availability of tutors and advisers. (pp. 3-4)

When analysing the teacher-learner conversation, Holmberg stresses that the conversation includes both non-contiguous conversation between the live teacher and student and also learning activities, such as thinking, processing information and other cognitive processes taking place when the student interacts with the pre-prepared learning materials including its *'built-in tutor'*. He specifically refers to the educational institution as the *supporting organisation.*

Holmberg agrees with Keegan that modern developments, including online learning, have not changed the content of the theory, although he clearly values that the use of new computer technology that provides the basis for great improvements of teaching-learning effectiveness. Communication on the net with its great possibilities for spontaneous interaction underlines the importance of the empathy approach and the conversational style. Holmberg (2001) finds that the relevance of the theory is now greater than when it was first developed.

Immediate and Individualised Communication – Educational Transaction and Control

Garrison (1985, 1989; 1993) argues that technology and distance education are inseparable and that theory and practice in distance education have evolved based on increasing sophistication of instructional technology. He argues that distance education has developed through *three generations of technology*, correspondence education, teleconferencing and computer-based learning.

The new developments in technology make a paradigm shift in the theory of distance education not only possible, but also necessary. Garrison (1989) holds the position that previous theories of distance education were based upon the ideal of increasing access and looking at student independence as the ultimate educational goal. He argues that if distance education is to continue to develop as a field of study, one has to develop a theoretical framework that recognizes the differences between the old paradigm and the new and emerging paradigm. The old paradigm was, according to Garrison, based on looking at pre-produced and pre-packaged materials as the primary source of information and learning for the independent and autonomous student, and two-way communication between teacher and student as 'add-ons'. When learning materials are pre-packaged with prescribed objectives with the purpose of stimulating independent self-instruction, the approach reflects a behavioural perspective. Further, according to Garrison the new paradigm represents a cognitive/constructionist approach, which encourages the construction of new knowledge structures. This type of learning must take place in a highly interactive environment with feedback from teacher and fellow learners. The theory emphasises that education is a process, which is characterized as an interaction between a teacher and a learner and includes a mutually respectful relationship. It is a complex transaction for the purpose of transmitting and transforming societal knowledge.

Instead of what Garrison (1989) sees as an excessive emphasis on independence and freedom to study when and where the student wishes, the concept of *'control'* is proposed as more inclusive to account for the complexity of the educational transaction. Control is defined as *'the opportunity to influence educational decisions'* (p. 27), and is achieved in a complex and dynamic interaction between *teacher, student and content/ curricula* at the macro level and between *proficiency, support and independence* on the micro level. According to Garrison, control cannot be possessed only by the teacher or the student, but should be shared in an inherently collaborative process. Control is seen as an inclusive concept where both teacher and student roles and responsibilities are considered within a context of continuous communication. If any of the parties of the educational transaction possesses an inordinate or inappropriate amount of control, the communication and possibilities for meaningful learning and personal construction of understanding is seriously diminished. It is assumed in the theory that interaction is necessary for higher order cognitive learning.

The emerging paradigm is seen as reflecting a convergence between distance education and the general field of education and brings distance education into the educational mainstream.

With the new technologies, distance education can to a large degree simulate or approach conventional face-to-face education. It seems to be inherent in Garrison's (1989) view that high quality distance education is best organised within a traditional university or teaching institution.

In our view, Garrison's (1989) concept of distance education is far from most conceptions of e-learning. Courses and programmes based on *'third generation'* distance education put less emphasis on pre-produced electronic learning materials and high emphasis on student-student and student-teacher interaction. In Moore's (1993) terminology the courses would be *high on dialogue* and *low on structure*, and probably student support will depend to a large degree on the teacher and fellow students, as described by Thorpe (2001) and discussed later in this paper.

Cooperative Learning and Constructivism

McConnell (2000) gives an introduction to computer-supported cooperative learning. Cooperation in learning is not new. Students have formally and informally cooperated in learning processes, however, as a way of thinking about and conducting learning processes, *'cooperative learning'* is a fairly new concept. Planning and conducting cooperative learning means formalising what happens informally in many settings. According to Argyle (1991) there are three possible reasons for cooperating:

1. For external rewards – in education, e. g. achieve better grades, diplomas and degrees
2. To share activities
3. To form and further relationships

Often the educational system can bee seen as one which encourages competition and not cooperation. Often students are required to do the same work, and results are compared and often also a limited number of high grades are granted. The students compete on a zero-sum basis. Whatever one person wins, others lose.

In cooperative learning the theory is that everyone wins and no one loses. The learning process is not seen as an individual pursuit concerned with accumulating knowledge, but as part of a social process where students help each other to develop understanding in an enjoyable and stimulating context. The learning is process driven and learners must be involved in the social process and pay attention to this process to achieve their desired goals. The outcomes are not only academic, but involve increased competence in working with others, self-understanding and self-confidence. The learning activities may end up in group products, which would not be achievable if learners worked individually, or the process may consist of learners helping and supporting each other in achieving individual learning goals.

The developments of online learning have spurred interest for computer-supported cooperative learning. Computer-supported cooperative learning is based in socially oriented learning theories, such as *'constructivism'* or *'social constructivism'*. Emerging from the work of Piaget and followers, the role of peer interaction in cognitive development has been influential for our concept of learning. Learning is seen as a construction of meaning in interaction with others (teacher and fellow students). Knowledge is constructed in social groups.

A meta-study by Johnson & Johnson (as cited in McConnell, 2000) concludes that cooperative methods lead to higher achievement than competitive or individualistic methods:

1. Students in cooperative learning environments perform better
2. Students in cooperative groups solve problems faster
3. Students in cooperative work use elaboration techniques and meta-cognitive strategies more often than those working in competitive and individualistic situations
4. Higher level reasoning is promoted by cooperative learning
5. Students in cooperative groups discover and use more higher-level strategy methods
6. New ideas and solutions are generated in cooperative learning groups that are not generated when people are working on their own
7. When individuals have worked in cooperative groups, their learning is transferred to situations where they have to work on their own.

Flexibility

In online education, there is a conflict of interest between many students who prefer individual flexibility and educators who promote collaborative learning. Many students choose to study online because they want or need individual flexibility. They have full-time jobs and family responsibilities, and many are reluctant to participate if it means relinquishing high quality family life and job achievements. They need flexible education: education that allows them to combine job, family, and education in a manageable way.

Figure 1 illustrates six dimensions of flexibility that many individual students want. Many institutions (among them NKI) have put major emphasis on designing online courses to be flexible concerning time and schedules. It is a great challenge to develop online learning environments that support this individual freedom as well as collaborative learning. This challenge is discussed in the theory of cooperative freedom (Paulsen, 1993, 2003). There is no doubt that design and administration of student services is related to how the teaching learning model emphasizes individual freedom in learning relative to collaborative learning.

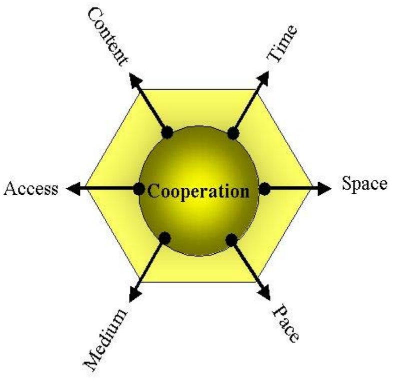

Figure 1. The hexagon of cooperative freedom (Paulsen, 1993, 2003)

The CISAER project, which aims to provide a comprehensive, state-of-the-art survey of course provision on the web (Paulsen, 2000, ¶23-25) concluded that:

> Both enrolment and progress can be more or less flexible. However, the two main models found in the interviews are group enrolment and progress and individual enrolment and progress. These models represent two different strategies that have important consequences for marketing strategies, administrative systems, and pedagogical approaches.
>
> The interviews testify that group based enrolment and progression is far more used than individual enrolment and progression. The analysis identified 46 institutions that used the group model and 12 that followed the individual model. In addition, 11 institutions offered both models.
>
> The preponderance of the group model could come from conventional thinking that sustain the semester and term system in traditional educational systems. Another possible reason is that the institutions have a well-considered perception that teamwork and collaborative learning is hard to achieve with individual enrolment and progress. One can, however, argue that many students will prefer individual flexibility and that many institutions lack systems, structures, and competence on individual enrolments and progression. If so, one may hypothesize that open universities and distance teaching institutions should be more disposed of individual flexibility than traditional universities and colleges. However, the analysis has not found evidence to support this hypothesis.

Accessibility

There is a growing interest of accessibility to web content, which focuses on how to make web content more accessible to people with disabilities. Two good resources for more information about this are:

- W3C's Web Accessibility Initiative (W3C, 2004)
- Introduction to Web Accessibility (Bohman, 2003)

One may expect that more e-learning providers will utilize the result from the accessibility initiatives in the future. Increasing accessibility is also one aspect of student support in e-learning.

Teaching and Learning Philosophy, Teaching Models and Organisational Models for Online Education

There is hardly a doubt that our view on teaching and learning will influence our choice of methods, organisational models and (perhaps also) learning management systems for online teaching. It will also to a large degree influence how we perceive the need for student support systems and how we design, organise and operate student support services in the system.

It also seems that some learning models are better suited to one type of organisation than another. Thus, one will find that traditional institutions offering online education to on-campus students and/or distance students and specialised distance teaching institutions tend to choose different models for their online courses.

Student Support in Online Distance Education – "Continuity of Concern for Students"

Generally and historically, distance educators have basically had two different approaches to student support. The first is support relying on the teaching and guiding through learning materials and non-contiguous communication by correspondence, telephone, telemedia – and in our situation – computer-based communication. The second approach is to include face-to-face contacts – regular local meetings or teaching sessions, summer courses, meetings at local study centres etc. Some proponents of distance education maintain that some elements of face-to-face interaction are necessary to secure satisfactory quality in distance and online learning, a position not supported by the author. Although we know that direct teaching may increase experienced quality by some online learners, face-to-face requirements exclude many learners from taking advantage of the course.

Support services within the system of 'pure' distance online study is seen as two different areas, one being support structures built into the materials (course development subsystem) and the other area being activities carried out to support the individual student during his/her studies (the teaching/learning process sub-system). When we here talk about *'student support services in e-learning'*, we are primarily stressing the need for support measures in addition to those built into the pre-produced e-learning package (Thorpe, 2001).

Most institutions offering distance education or online courses have understood that student support is necessary to secure quality of learning and student satisfaction, and to reduce attrition rates. Student support applies both to counselling and advice on all aspects of distance study as well as to teaching and guidance within the specific course.

Attrition and Completion in Distance and Online Study

Drop out has been a focal point of research in distance education. On some occasions distance educators have been criticized for being too occupied with drop out and associated problems for students and institutions. Generally, we believe that we are in agreement with most online distance educators that reducing drop out is a major challenge in the field of distance and online education (cf. e.g. Peters, 1992). This fact must not be taken as a support of the view that drop-out is a larger problem in distance education than in other types of part time education. There is really no clear evidence supporting such an assumption.

For the institution, drop out may be a considerable financial problem. Through economic analyses Keegan (1996) indicates that the viability of an educational institution depends very directly on the number of drop-outs in the system. A McKinsey report on an American institution "...focused on student attrition as a deficit-producing trend that threatened the very future of this distance institution" (Bajtelsmit, 1988, p.3). From an individual student's point of view, Bajtelsmit holds the position that *"the negative effects of dropout are obvious: loss of opportunity for personal and career advancement, lowered self- esteem, and increased likelihood of future disengagement"* (p. 2).

During the preceding years research on drop out in conventional higher education has largely applied a model often referred to as '*Tinto's (1975, 1986) model or theory'*. The theory explains the persistence/withdrawal process, which depends on how well the student becomes involved in the social and academic processes of the academic institution. The model describes the concepts and four sets of variables in a causal sequence:

1. Background characteristics and their influence on pre study commitment to the institution and to the goal of study.
2. Academic and social integration during study.
3. Subsequent commitment to the institution and to complete successfully.
4. Voluntary decisions on continued study or withdrawal.

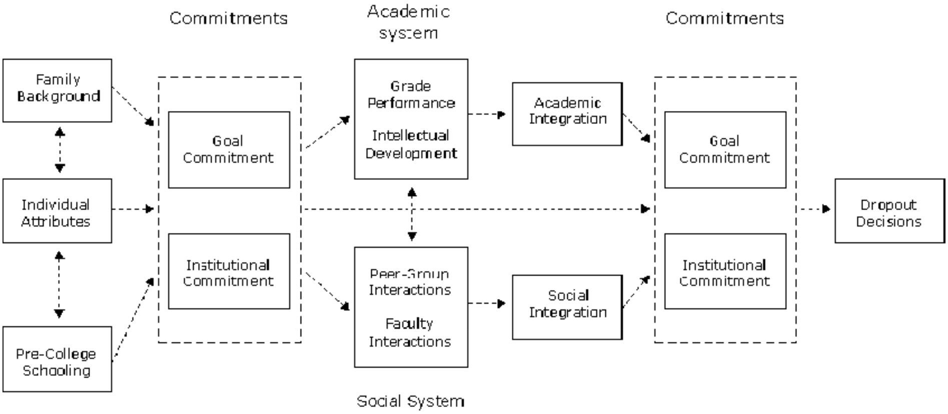
Commitments
Academic system
Commitments
Family Background
Individual Attributes
Pre-College Schooling
Goal Commitment
Institutional Commitment
Grade Performance
Intellectual Development
Peer-Group Interactions
Faculty Interactions
Academic Integration
Social Integration
Goal Commitment
Institutional Commitment
Dropout Decisions
Social System

Figure 2. Tinto's (1975) model for drop out from college

The student enters the academic institution with a social and personal background that influences which commitments he/she will have to the institution to complete the studies. These background characteristics and initial commitments will influence how the student will perform and get involved in the academic and social systems. The experiences of academic and social nature during the studies will interact with the background variables and subsequently influence the student's later academic and goal commitments. According to Tinto, it is the student’s integration into the social and academic systems of the institution that most directly relates to continuance/withdrawal.

The model has mainly been applied in research on attrition in full-time education, but it has also been referred to and/or applied in studies on distance education (cf. e.g. Sweet 1986, Taylor et al., 1986, Kember, 1995). It seems clear that Tinto’s (1975) model for attrition applied to online distance education would direct support services toward integrating the student into the social-academic environment, and put less emphasis on support measures related to the student’s situation outside the study environment, such as the family, work and local social environment.

Bajtelsmit (1988) has questioned whether Tinto’s (1975) theoretical model is appropriate for use with non-traditional students, such as part time distance students. He proposes a model for explaining and predicting drop out in distance education that puts more emphasis on the influence of the external environment, specifically the student’s occupation and family, while the concept of social integration in the institution is given a less prominent role. Bajtelsmit does not devalue the importance of academic support in the distance study setting, but shifts the primary focus “...from the socialization process of previous models to the congruencies and compensatory relationships between the educational (academic) and external (occupational) subsystems” (p. 13).

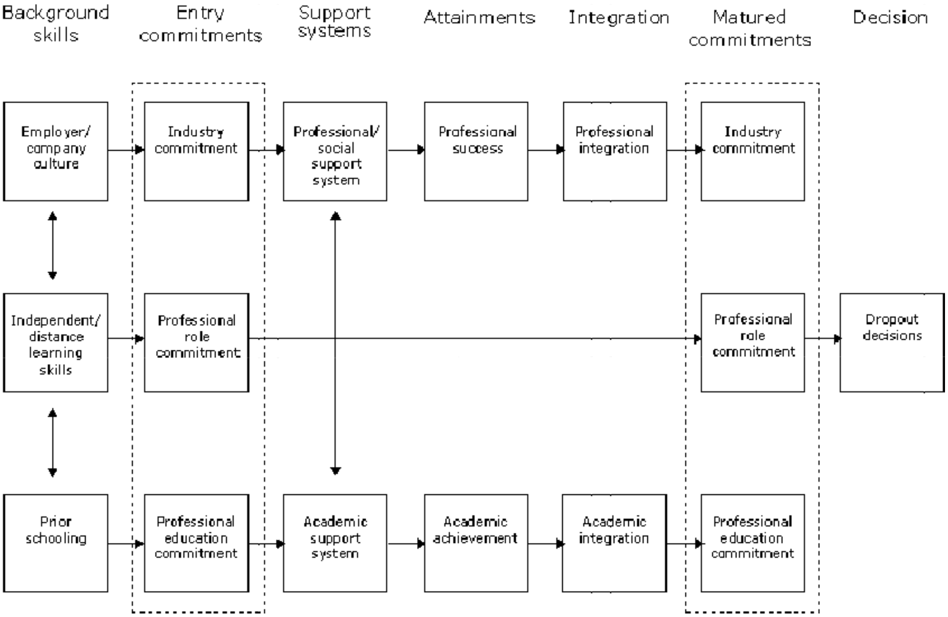
Background skills
Entry commitments
Support systems
Attainments
Integration
Matured commitments
Decision
Employer/ company culture
Industry commitment
Professional/ social support system
Professional success
Professional integration
Industry commitment
Independent/ distance learning skills
Professional role commitment
Professional role commitment
Dropout decisions
Prior schooling
Professional education commitment
Academic support system
Academic achievement
Academic integration
Professional education commitment

Figure 3. Bajtelsmit's (1988) model of drop out from distance education

Kember (1995) argues that Tinto’s (1975) model is also suited for analyzing completion and attrition problems in distance education and has developed *‘a model for student progress’* based on Tinto.

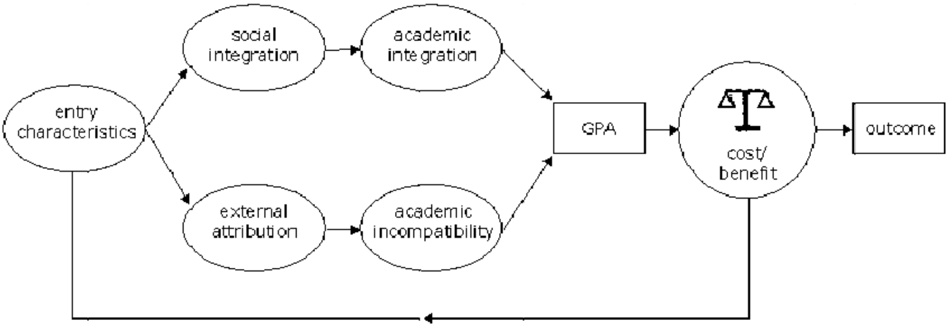
social integration
academic integration
entry characteristics
GPA
cost/ benefit
outcome
external attribution
academic incompatibility

Figure 4. Kember’s (1995) model of drop out from distance education

Kember’s (1995) model is based on thorough research and illustrates well how theory and research may influence practice. Kember assumes that the students’ previous experiences direct them towards one of two possible ‘paths’ in their studies. Those with a favorable background (expectations, motivation, previous experiences etc.) tend to proceed on the positive track integrating socially and academically with the institution, course and tutor. Students taking the negative track have difficulties in their social and academic integration. Students on the positive track have a much higher chance of satisfactory achievement in the course. The model incorporates a cost/benefit decision step that determines whether the student will continue study or not – and the cycle is repeated if the student decides to continue. The cost/benefit analysis may be taken more or less consciously and at any point of study. According to Kember, departure from study may be taken before really starting to study, early or later in the first unit, when deciding to embark on the second unit, the next course etc., until final graduation.

Kember (1995) discusses implications of the model based on a large body of theory and questionnaires/interviews in different settings and cultures. He suggests that the positive integration factor contains subscales, such as *'deep approach'* to learning and *'intrinsic motivation'*, while the negative track contains *'surface approach'* and *'extrinsic motivation'* subscales (cf. Marton, Hounsell, & Entwistle, 1997; Morgan, 1993).

The assumptions imply that courses should be developed to stimulate intrinsic motivation and help students to apply a deep level approach to their study. The model also tries to identify possible difficulties students are expected to meet. Thus it can by used as a guide for information, counselling and guidance and support activities at critical points.

Reasons for Drop Out

Rekkedal (1972a) carried out one of the early drop out studies in distance education. The reasons students gave (deliberately when writing to the institution to cancel their contract) in this study were the following (from higher to lower frequency):

Shortage of time, job required too much time
Financial reasons
Major change of plans for the future
Illness
Private commitments
Unsatisfactory living/study conditions
Drafted into the military
Personal/private reasons
Marriage
Course found too difficult

Less frequent reasons were connected with practical arrangements of enrolling, reading difficulties, lost interest in the studies, distance study methods did not suit me etc. It seems clear that the majority of reasons stated by the students concerned problems and difficulties outside the study situation. There is no reason to believe that the situation is much different for online (or Internet/web based) distance students. This means that student support measures should be directed towards helping students on a wide scale to cope with their learning situation as one part of their personal and social life.

While many research studies point to pre-entry characteristics correlated with drop out, Kember (1995) states from his search of the literature that: *"It is quite comforting that entry characteristics are such poor predictors of success. ... The faculty and college do have a role to play in determining the success or otherwise of their students."* (p. 32).

It also seems that most studies indicate that there is clearly not a single explanation or cure for drop out. A study at the FernUniversität (Bartels, Helms, Rossié, & Schormann, 1988) led to these findings concerning reasons for drop out (from higher to lower frequencies):

Change of job, job stress
Too much time required for studying
Restrictions on private life to great
It would have taken too long to complete the whole course
Would rather study at a campus university
Missed social contact with other students
Physical and mental stress too great
Could not find a working style suited to the institution
Expected more support from the institution (highlighted here)
Used distance study to prepare for possible campus study
Not enough success
Not sufficient support from family for distance studies
Have reached my goal with the course
Course too difficult
Studying was not at all important for me
Had a different idea of what distance learning was
Studying was too expensive

Student Support

The Personal Tutor/Counsellor

Questions concerning student support are central in the theory of Holmberg (1960) on the *'teaching-learning conversation'*. In discussing research to support his thinking, Holmberg sometimes refers to *The Personal Tutor/Counsellor Project* (Rekkedal, 1985, 1991) carried out at NKI Distance Education. Peters (1992) also refers to this project as supporting the views of educators in favour of concerted supportive measures when discussing drop out and possible solutions for reducing drop out at the FernUniversität.

During the planning stage of the *personal tutor/counsellor project*, NKI carried out some intensive group interviews with several newly enrolled students. These interviews confirmed that the students seemed to be generally satisfied with their experiences in distance study.

The students reported, however, one common difficulty: They were reluctant to contact the administration, the counsellors or their tutors when they met problems, and they were uncertain about whom to contact in order to seek advice on different problems. Hence, an experimental study was designed to measure the effect of intensifying and personalizing student support services including academic, social and administrative services and follow-up schemes. Although this study is some years old, it pointed to the results from a number of research studies on drop out and student support and hypothesized that personalizing and individualising support activities, specifically in the first phases of study, was important for student success and satisfaction. The results are seen to be specifically valid for teaching and support also in online education.

The experimental role of the tutor is described below. The experiment covered 10 different aspects of the tutors work – all related different aspects of student support.

Aspect	Experimental group	Control group
1. Tutor	Same tutor during the first 3-11 courses	Different tutors in different courses
2. Employment	Permanently employed full office time	Part time employment at home, paid per assignment
3. Tutoring/ counselling	Same person responsible for all student communication	Responsible for written assignments only, other persons for general counselling
4. Turn-around time	Assignments returned the same day from the school	Assignments sent via the tutor's home address
5. Study technique	Same tutor teaches study techniques	Specific part time tutor in study techniques
6. Follow up of new students	Tutor takes contact with all new students via mail or phone	Automatic routines with form letters
7. General follow up	Tutor takes contact with all inactive students via mail or phone	Automatic sequence of form letters
8. Telephone tutoring	Students may phone the tutor. Tutor calls when needed	No systematic use of telephone tutoring
9. Tutor presentation	Personal presentation with photo and phone numbers enclosed with the study material	Presentation of each tutor enclosed with first assignment returned from the tutor in each separate course
10. Preproduced tutor comments	Developed for all courses. Applied when needed	May have been used by some tutors

Figure 5. Aspects included in the "personal tutor/counsellor experiment" (Rekkedal 1985)

Continuity of Concern for Students

Sewart (1978) has worked with central and local support services at the UK Open University since 1973. His theoretical approach to teaching at a distance can be summed up as a *'continuity of concern for students studying at a distance'*. He discusses the dilemma between the efforts of some course developers to produce the *'hypothetically perfect teaching package'* or put more resources into the support system for students during study. He finds the perfect package to be unrealisable, and however perfect the pre-produced material is, the teacher, tutor or tutor-counsellor as well as student advisors are necessary as intermediaries between the learning material and the individual student.

It is this author's impression from Sewart's numerous articles and papers on support and counselling that he to a large degree relates the success of the Open University to its emphasis on student support services.

What Does 'Student Support' Mean?

In everyday language it means really every aspect of the institution's provision from the enquiry desk, through quality of learning material and all aspects of interpersonal relations between the institution's staff and its students. It also includes efforts to help students with special needs. Thorpe (2001) defines *'learner support'* as *"all those elements capable of responding to a known learner or group of learners, before, during and after the learning process*" (p. 15). This means that Thorpe stresses the personal relationship between an institution, its representatives and the learners/students/customers. In this view the pre-produced learning materials are not part of the support system. Sewart (1993) defines learner support as the means through which individuals are enabled to make use of the institutionalised provision. The learner supporters are *'intermediaries'* able to talk the language of the learner and help learners to interpret materials and procedures. Learner support activities are produced and consumed simultaneously in a process where both the learner/consumer and the tutor/counsellor must participate actively.

Sewart (2001) relates distance and online learning to the service industry, stressing that education must not be seen as a manufacturing industry selling a product, but as an activity where customer focus needs a continuous broad supporting environment. He presents the aims and goals of the OUUK to adapt the total teaching organisation to provide support and guidance to distance students matching the use of the new technologies of online learning, use of e-mail and the WWW.

Thorpe (2001) focuses specifically on how we conceptualise learner support in online teaching and learning and discusses differences between online learning and previous distance learning solutions concerning what student support means. While course development and learner support in the earlier types of distance education could be seen as two different sub-systems, it is not necessarily so in online teaching and learning. Some online courses contain little pre-developed learning materials. Students may be expected to find materials on the web. Some courses are constructed while they are 'presented' or studied. Thorpe contrasts two teaching models:

Second Generation ODL – Learner Support Model
and
Online ODL – Learner Support Model – Web-based.

It is evident that these two models put very different demands on student support within the course. The first model emphasises the student's interaction primarily with the learning materials and secondly with the tutor, with less emphasis on the student group. The second model stresses the interaction with the student group as the primary source for learning, where pre-produced materials may be non-existent or of peripheral importance. One of Thorpe's (2001) conclusions is that the use of online interactive technologies increase the range of learning outcomes that can be achieved, for instance collaborative learning and communication skills, and specifically that *"A large element of the course is in effect what would be called 'learner support' under second generation terminology"* (p. 19).

Phillips, Phillips, & Christmas (2001) discuss how to organise practical student support at the institutional level. The authors concentrate on student support and guidance in connection with course choice and study planning. The paper illustrates how the OUUK works to develop an integrated approach to the provision of services to students applying ICT. The "aim is to develop a coherent service, which includes the provision of information, educational advice and support for learning and also offers opportunities to carry out business transactions on the Web" (p. 24).

Framework for Student Support Services in Online Distance Education

Aoki and Pogroszewski (1998) have presented a model, *The Virtual University Reference Model*:

> Planning and designing a virtual university or a virtual campus is a complex task involving many different aspects of higher education administration and instructional delivery. In the early days of online courses, just putting course syllabi on the Web is worthy of attracting some attention. Nowadays many

> online courses are offered using a combination of asynchronous and synchronous computer conferencing, slide presentation on the Web, and file transfer systems. Though course delivery is an important component of virtual university, it is not the only component. In order to create a successful academic environment for a distance learner, various support services to students and faculty members have to be included in the plan as integral part of a virtual university. (¶ 10)

The outer ring illustrates how the virtual university is broken down to four major components: administrative services, student services, resource services, and faculty services. Each component has a different purpose and provides students with different services to support the student's learning. As described by Aoki and Pogroszewski (1998) the second outer ring in the model shows the types of services a student receives from each of the four component areas. The inner three rings represent (from the innermost): 1) the student and his or her relationship to each of these four areas; 2) transmission systems with which the services can be accessed by students; and 3) applications and tools to be used in offering the service elements in the outer ring. The students are placed in the centre of the model to point out the importance that all the service components and elements are depicted in relation to the students.

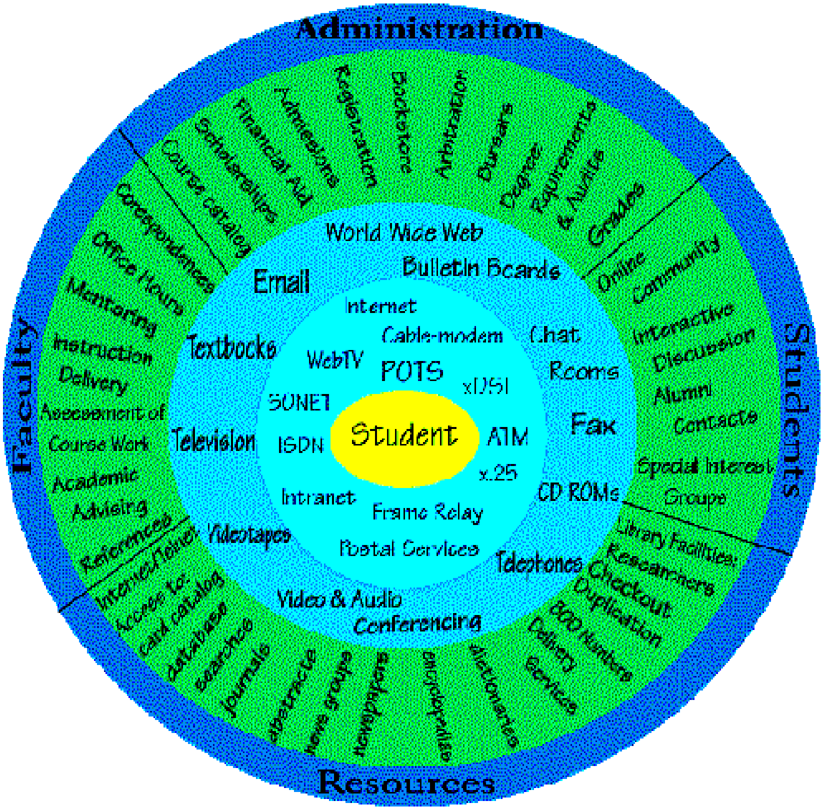
Administration
Course catalog
Scholarships
Financial Aid
Admissions
Registration
Bookstore
Arbitration
Bursars
Degree Requirements & Audits
Grades
Students
Online Community
Interactive Discussion
Alumni Contacts
Special Interest Groups
Library Facilities
Researchers
Checkout
Duplication
800 Numbers
Delivery Services
Resources
dictionaries
encyclopedias
newspapers
news groups
abstracts
journals
searches
database
card catalog
Access to
Internet/Telnet
Faculty
Correspondences
Office Hours
Mentoring
Instruction Delivery
Assessment of Course Work
Academic Advising
References
World Wide Web
Email
Bulletin Boards
Textbooks
Chat Rooms
Fax
Television
CD ROMs
Videotapes
Telephones
Video & Audio Conferencing
Internet
Cable-modem
WebTV
POTS
xDSL
SONET
ISDN
ATM
x.25
Intranet
Frame Relay
Postal Services
Student

Figure 6. The Virtual University Reference Model (Aoki & Pogroszewski, 1998)

In connection with the project *'Student support services in e-learning'*, student needs and support services were analysed during the different phases of study from first contact to after graduation in the NKI system (Figure 7):

Time	**Support needs**	**Component responsible**	**Tools/applications**
Prospective phase	Information about courses	Administration	Print, WWW, print/ broadcast media etc.
	Guidance concerning choice of courses and programmes	Administration	Phone, e-mail
	Financial questions, loans, grants	Administration	Print, phone, e-mail
	Guidance on practical matters	Administration	Print, phone, e-mail
Start-up phase	Dispatch of printed and other physical learning materials	Administration	Surface mail
	Registration/information/user identity, passwords etc.	Administration	e-mail
	Introduction to online learning techniques	Administration Faculty	Phone, e-mail Phone, e-mail
	Initial follow-up	Administration Faculty	Phone, e-mail Phone, e-mail
	Technical support	Administration	Phone, e-mail
Learning phase	Teaching/tutoring	Faculty	Phone, e-mail, Forum, WWW
	Academic support	Faculty	Phone, e-mail, Forum
	Organisation of learning	Faculty	Phone, e-mail, Forum
	Social support	Faculty	Phone, e-mail, Forum
	Assessment	Faculty	Phone, e-mail, Forum
	Practical support, economy etc.	Administration	Phone, e-mail, Forum
	Follow-up	Administration	Phone, e-mail, surface mail
	Technical support	Administration	Phone, e-mail, Forum
	Resources/library	Administration	Print, WWW
	Learning group support	Fellow online students	Phone, e-mail, Forum
	Local learning support	Local faculty Classmates	Face-to-face
	Local administrative support	Local administration	Face-to-face, phone, print
	Local technical support	Local faculty Local administration	Face-to-face
	Local social/practical support	Employer Family	Face-to-face
Graduation	Diploma/accreditation	Administration	Print, face-to-face
After graduation	Counselling on further study	Administration	Print, e-mail, WWW
	Counselling on job opportunities	Administration	WWW, Forum
	Alumni services	Administration	e-mail, WWW, Forum

Figure 7. Framework of support services for online distance students (NKI)

In table 7 we have included the following components of the system:

Administration:

- Marketing and sales staff, course coordinators, counsellors, advisors, office staff
- Local administration (study organisation, employer, local office)

Faculty:

- Senior faculty and internal academic staff, external and internal tutors
- Local teachers

Fellow students:

- Students in same course, in other courses and classmates in local learning groups

Employer, family and colleagues:

- Not usually included in analyses of educational systems, but may be seen as (the most) important support system for online distance students (e.g. Bajtelsmith, 1988)

The pre-produced course materials (Thorpe, 2001) are not considered to be part of the student support services. Thus, they are not included among the support components as in the Aoki & Pogroszewski (1998) model.

From our own survey, experimental and evaluation research during over 30 years we would conclude that the main message of adult educators (e.g. Knowles, 1970) that adult students are independent and should be treated as *'autonomous learners'* is confirmed. Moore's (1991; 1993) theory for distance education is based on these principles. Still, it seems to be a common understanding that *'continuous concern'* for students, support and following-up systems are of central importance for student success in distance learning (Rekkedal 1972b; 1985; Sewart, 1978). There is all reason to believe that there is no less need for support and follow-up systems for online learners than for learners in earlier forms of distance education. John Bååth (personal communication, September 28, 1997) expressed this great and difficult challenge:

> We have four categories of students; there are
>
> - students who need student support services but don't want them
> - students who need student support services and want them
> - students who don't need student support services but want them
> - students who neither need nor want student support services.

A pedagogical correct model of Internet based e-learning must, as high quality distance education, be designed and organised to satisfy the support needs of a large variety of students. These support measures are handled by different categories of personnel and different media and technologies; they may be general for all or specific according to individual needs; they may be automatic or dependent on human decision; they may be based on personal contact and personal service or delivered electronically without human intervention.

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TERRY ANDERSON

Student Services in a Networked World

Abstract

The development of a global digital network fundamentally changes the ways and means by which all aspects of education is provided – including that most personal component – the provision of student services. This chapter examines the ever increasing 'affordance' of the Web and then applies these capabilities to the cognitive, social, and systemic categories of learner support. It provocatively argues that increasingly students will look for and receive the services they need, not from tutors or dedicated university staff, but from machines.

Student Services in a Networked World

Oracle Corporation's famous axiom that the "Net changes everything" is becoming ever more apparent in both formal and informal education provision. The Net's invasive impact is apparent even within those components of the distance education system associated most directly with the human interactions that currently constitute much of what is referred to as 'student services'. In this chapter, I discuss the affordances of a ubiquitous networked world and apply affordances to the creation of new and expanded student services, the end result of which is to create new types of services that rely more on learner-machine interactions to reduce cost and increase access and flexibility to students.

The most common means of reducing costs and increasing or maintaining access and service has, since the beginning of the industrial revolution, been to substitute the labour and services of machines for those formally supplied by human beings. This substitution process continues in the Information Age and is currently focused on efforts to decrease costs in the service sector, including those services associated with provision of education and training. Unlike critical authors who see such automation as "mindless deformation, degradation, and delimitation of institutions presumably dedicated to the life of the mind" (Noble, 2002), I see the application of these technologies as means to continue the evolution and democratization of education from an exclusive resource of the rich and privileged to one that is open to all.

It has often been noted that technology changes social conditions, often having negative as well as positive effects on the lives of its users (Franklin, 1990). Thus, there is danger in assuming that all human interactions can be substituted by interactions with machines. This is especially true in domains such as student support services that can have components that are based on high degrees of affective interaction between and among students, teachers and professional staff. However, there is an equal danger that public education systems will ignore potential ways and means to significantly improve quality, cost effectiveness and access to these critical services by assuming that direct human interaction is always both desired and required for effective student service provision. The chapter provides examples of support, based upon Tait's (2003) taxonomy of student services, that are fundamentally altered through extensive use of networked and especially automated services. In some cases, these services augment or extend those provided by humans but in many others nonhuman support are serving instead of those that were previously provided by human support and professional staff. The chapter argues that through examination of existing practice and deployments of intervention designs that make ever increasing use of 'intelligence' and accessible networked services, distance education providers can and are enhancing their services to students.

Defining Learning Services

While completing a review of a recent book by Tait and Mills (2003) that focuses on the rethinking learner services, I was struck by the inclusiveness of the types of functions defined as "learner support services" by the international practitioners who authored various chapters in the book. I was left wondering if there is any component of the distance education system that is NOT considered by at least one author to be a "learner support service". This diversity inspired a search for a clear definition of learner support with two very different results. A perhaps typical definition from a distance education perspective is provided by Thorpe (2001) who defines learner support services "as *all those elements capable of responding to a known learner or group of learners, before, during and after the learning process"* (p.4). By this very inclusive definition all assistive interactions, activities and resources, including those associated with formal teaching and learning within a course or program, are described as learner services. A more typically North American and campus-based definition such as that provided by Louisiana State University, restricts learner services to apply to resources that "contribute to the student's emotional and physical well-being and to his or her intellectual, cultural, and social development outside the context of the formal instruction program" (Louisiana State University, 2002). Thus, the provision of cognitive, academic support, usually by teachers or tutors, is often excluded from campus based discussions of student support. However, for the purposes of this chapter I expand the definition to include academic learning assistance provided by distance education tutors and teachers.

Before discussing the ways in which networked services are being used to supply student services, I first discuss the general objection that some have to the provision of unique student services by machines. Thorpe (2001) discounts the capacity of machines to provide student services and argues that since a machine cannot react uniquely to individual "known" learners, these services must be provided by humans. However, continuing work on learner models in education is aimed clearly at doing just this – creating unique models of identifiable individuals and groups of students. In fact this type of work that allows for customization of response and presentation is a dominant research theme in research associated with artificial intelligence in education and a major subset of a research domain referred to as adaptive hypermedia (Brusilovsky, 1966). Not only are machines learning to adapt differently depending upon the individual known learner behaviour but researchers are also struggling with ways to make this representation of the learner model accessible and manageable by learner, teacher, support systems and content (Zapta-Rivera & Greer, 2001). Further, work on adaptive systems and specifications (cf. the IMS Learner Information Package IMS Global Learning Consortium, 2004) is designed to allow the web-based learning context to adapt to the unique display of cognitive needs of individual students. This adaptability is at the root of my contention that much of the interaction currently undertaken to support distance learners can be (and will increasingly be) provided by machines. I have argued that interaction is a necessary component of formal education and informal learning, but that various forms of interaction (learner-learner; learner-teacher; learner-content) can be substituted for each other depending upon cost, time, amount of use, content and context of learning. Further, I contend that learners in the future will be more comfortable and have higher expectations for the immediacy of service available “anywhere/anytime” that realistically can only be provided cost effectively by machines. To expand the basis for these contentions I next look at the capacity or affordances of the global internet to provide these forms of student support.

Affordances of the Net

Every new technology brings with it new capabilities that have been referred to as the affordances of that technology. Gibson (1977) first noted that these affordances are not solely a function of the technology but are also determined by the perceptions of and value of these functions in the minds of users and the competencies of these users to effectively use the capabilities of the technology (Norman, 1999). Thus, the affordances associated with the Net are not absolute in at least three senses. First, the affordances have consistently been changing as technical capacity and ingenuity of applications have increased since the Net’s early beginnings about 20 years ago. Second, access to the Net is very unequally distributed across geographic and socio-economic boundaries – thus an affordance for some group may be completely unavailable, unknown or undesired for another. Third, these affordances are dependent upon a host of personal, educational, social and motivational factors producing considerable individual differences. Nonetheless, I discuss these affordances below because, in combination, they provide hitherto unavailable resources and capacity for the provision of student services in formats that are largely unaffected by geographic and temporal distances – the major constraints to which distance education provision has always been addressed.

Access to information: Perhaps the most obvious affordance of the Net is the exponential increase in both general and very specific information sources available to distance learners. These resources include access to books, research journals, preprints, corporate and government reports and other documents that were formally available only in printed format and often at much higher costs than current web costs. Thus, students access to resources is not limited to a preselected list of readings, but expands to a high percentage of materials produced in all disciplines. To these are added a host of real time information provided through access to databases storing such things as student records, school calendars and schedules; current readings from web cams and other web enabled senders such as weather, market, or biological data. This information is formatted as video, audio and graphic materials of all imagined (and some very hard to imagine) types and content.

This information is available in such quantity so as to overwhelm many consumers and to give rise to descriptions of the Net as being like the world’s largest library – with all the books scattered on the floor. However, there is tremendous effort being expended on sorting, cataloguing and tagging these information resources not just so they can take a single correct place on a virtual bookshelf, but so that they can be connected in a host of ontological linkages to other information resources (Aldea, Banares-Alcantara, Bocio, Gramajo, Isern, Kokossis, Jiménez, Moreno & Riano, 2003). These linkages will be made not only upon the large granulations of meaning associated with library shelving conventions such as the Library of Congress or the Dewey Decimal system, but rather linkages will be created based upon both personal and professional semantic categories that link diverse information resources and communities of learners.

Support for multiple modes of human interaction: The second major affordance of the net is the capacity to enhance provision for human communications. Human interaction has always been a critical component of education – both that which is delivered on campus and at a distance (Anderson, 2003b). The affordance of asynchronous text-based communications has been exploited by distance educators such that email and computer conferencing are now the dominant modes of student-teacher interaction in many distance education systems. Studies of these interactions have shown capability to support the critical components of social, cognitive and teaching presence necessary to create a distributed community of inquiry (Garrison & Anderson, 2003). The current deployment of high-speed networks creates opportunities for synchronous educational interaction using voice, video and application sharing systems that have been exploited by educational systems in many areas of the world (King & Montgomerie, 2003). Recent work that automatically captures and disseminates educational interactions (Abowd, 1999) provides capability to selectively shift human interaction between real and stored time modes allowing for flexibility, time shifting and archiving of educational interaction at very low cost. Other developments in mobile learning or m-learning are illustrating capacity to communicate and access information in the context of use rather than only in a virtual or campus-based educational context (Savill-Smith & Kent, 2003; Keegan, 2002). Finally, developments of wearable computers and cyborg type computer implants will facilitate even more ubiquitous communications in multiple modes amongst humans (Mann & Niedzviecki, 2001).

Computational Affordance: The final major type of affordance of the Net is its capacity to add computational and inferential capacity to both human and non-human interaction. This is illustrated by the type of networked mindtools that provide intelligent searching, simulations and information processing applied to a variety of educational uses (Jonassen, 2000). But perhaps more exciting is the capacity of the net to support interaction, transaction, inferential decision-making and search and retrieval not only by humans but by autonomous agents. An agent is a computer code that acts with relative autonomy, over a distributed network in order to perform “information gathering, information filtering, and/or mediation on behalf of a person or entity” (Thaiupathump, Bourne, & Campbell, 1999). Although primarily used for search engines, e-business and other commercial applications there is a growing list of applications in which agents are used to assist either students, teachers or both (Thomas & Watt, 2002; Beer & Whately, 2002; Dowling, 2002; Johnson, Rickel, & Lester, 2000; Shaw, Johnson, & Ganeshan, 1999). The capacity of agents to act upon, navigate and make inferences and decisions based upon network resources is limited by a variety of technical and social constraints beginning with the current presentation based design of the original WWW (Bosak & Bray, 1999). The ambitious goal of the new generation, Semantic Web is to create a globally linked set of resources that can be is directly useable by both humans and machines (Vila, 2002; Berners-Lee, Hendler, & Lassila, 2001).

Of course, each affordance or new capability of a technology also comes with associated negative repercussions (Roszak, 1986; Franklin, 1990). The challenge for educators and providers of educational services is to discern and then implement those services which provide compelling pedagogical or economic advantages while minimizing potential negative effects. Unfortunately, such decision making is too often done from the perspective of administrative, faculty or tutor interest, rather than balancing these interests of the academy with the important interest and desires of not only current, but future learners who will access these educational services. I next overview these major student services and concentrate on the ways in which positive affordances of the network can be applied to enhance theses services while minimizing negative consequences.

Functions of Student Support Transformed in a Networked World

Tait (2000) has provided a taxonomy of student services in distance education that differentiates three basic types of services – these being cognitive, affective and systemic services.

Cognitive Services

Cognitive services are those that are provided by the institution to assist the student in mastering the formal educational objectives associated with the program of study. In a traditional, independent study distance education context a course consists of a number of educational resources (often textbooks, that may be augmented with various autographic materials). Usually a study guide is included that is written in a personal style to support what Holmberg (1989) referred to as “guided didactic interaction”, a form of vicarious interaction through which the course author guides the student through a series of activities, readings and assessments. Obviously, this same form of course design can be distributed on the net with student printing or reading online and email and IP telephony replacing mail, telephone or face-to-face tutorials. But such a “horseless carriage” migration of print-based independent study to the Net fails to apply the affordance of this technology with much originality or pedagogical effect.

A more powerful vision of the independent study course is to view the course as a portal providing supported access into a domain of knowledge. The portal will, in the first instance, be created by the same academic expert(s) and development team, but unlike its print predecessor, it will never be finished as it undergoes constant revision, update and augmentation by all members of the learning community who engage with it. The portal will of course contain information resources. These may include digital textbooks, articles, case studies and other familiar learning resources. These print resources are augmented by a host of multimedia presentations, simulations designed for active exploration, evergreen content enriched by current events and real time data collection, collaborative and independent study activities, games designed to engage learners in extended exploration, presentations and products of current and past students and visiting experts. Each of these resources will be tagged as learning objects for re-use and adaptation (Wiley, 2001).

Teachers and tutors will design pathways through the portal that are designed to maximize student learning while providing opportunities for multiple forms of assessment and feedback provided automatically by agents and more personally by tutors. Advanced forms of tracking will be used not only to follow and assess learning activity in the portals but will also be used by learning objects to document their own use and revision. Pathways that result in high levels of learning outcome will be noted and subsequent users follow those same successful pathways, while allowing unproductive paths to grow over. Student experiences and contextualization of the learning will be actively gathered, filtered and sequenced so that common problems, opportunities and demonstrations of learning are captured and re-used.

New information resources will constantly be added to the portal not only by the original course creator but by students, tutors and autonomous agents programmed to be constantly monitoring the web for useful resources. Activities supported in the portal will be available for both individuals and for groups learning in synchronous and paced asynchronous collaboration. A variety of learning activities will include access to simulations and virtual laboratories as well to remote laboratories in which students engage with “real lab” facilities from a distance (Cooper, Donnelly, & Ferriera, 2002). Assessment activities likewise will be multifaceted and realized in multimedia formats. These will include self, tutor and machine marked reports, quizzes observations and a greater emphasis on portfolios that documents a students achievement of learning outcomes (Barrett, 2000).

Affective Services

Although notoriously difficult to define and consistently measure, it has been argued that emotion has an important role in learning, and that this is especially apparent when studying online (Thissen, 2000). In a small study, O’Regan (2003) identified emotions of frustration, fear, shame, enthusiasm and pride as having been experienced by online learners. Identifying and working effectively to reduce the magnitude of negative learner emotions, and developing of systems to support positive ones is the role of learner support services. But can these types of emotionally laden learning experiences only be successful if undertaken between learners and professional staff or among learners?

Perhaps the most common form of affective support provided to the online learner is that available in an online community and especially one specifically designed to support learning within the context of a class or program. Thorpe (2001) provides a model for this ‘third generation’ distance learning which adds the online learning group as a fourth component of the model of learner services augmenting the tutor, student and content interaction of the second generation. Most practitioners seem convinced that creation of affective support and communication is critical in reducing drop out rates and “social integration” is one of the major components of Tinto’s (1975) much cited model of student retention. Tait (2003) has argued that “…‘conversation and community' seem to be important in most educational contexts and there is therefore no reason to assume that for most learners they will not be important in ODL, even though delivering them is more difficult”. There is considerable evidence to suggest that online collaboration and creation of online learning communities is both possible and practical, and that it enhances participation, learning and completion (Tu & Corry, 2002; Conrad, 2002; Brown, 2001; Wilson, 2001) (Cf. also Blackmun & Pouyat-Thibodeau in this volume.)

However, the creation and sustenance of online communities is not without its cost. First and most critically, formal education courses are most often created by designers in a linear fashion such that learners proceed through the materials in roughly the same learning sequence. In cohort based systems or independent systems in which start and completion dates are not flexible, such linear progression is enhanced with time-based constraints that allow or require students to work at a common pace. The cohort provides opportunity for students to work collaboratively but at the same time, it constrains learners to progress at the same rate as other members of their cohort. The creation of an online learning community is certainly possible, and can be used to meet many of the affective and identification needs of students. However, it cannot be assumed that creation of such a cohort group is either necessary or desirable for all distance learners working in all domains. Models that allow for social support in unpaced, independent study models of online learning are needed in addition to those based on paced learning cohorts. Finally, we need to differentiate the type of human communication that is necessary for effective learning. The net allows for conversation to be digitized, stored and replayed as needed. This type of persistence can be used to create interactions amongst students that not only span geographic but temporal space as well. Thus, it may be possible for students to learn from, rekindle and contribute to conversations that are spread across many months or even years of time.

Distance educators are beginning to understand the time and social commitments required when building learning activities or designs based upon the communication affordance of the Net. Our own work in analysis of text-based course transcripts reveals the need for development and sustenance of three necessary presences – social, cognitive and teaching, for higher level learning to emerge (Garrison & Anderson, 2003). But does social presence imply active moderation by the teacher? A 2003 case study (Postle, Sturman, Mangubhai, Cronk, Carmichael, McDonald, Reushle, Richardson & Vickery, 2003) from an Australian Faculty of Education moving to an online delivery reported major problems with the highly communicative course design that is a major feature of many models of higher education delivery using online learning techniques (Harasim, 2002). Postle et al. (2003) report that "students have questioned whether their flexibility is being violated by ‘forced’ communications and a predominance of text and staff were unsure if the quantity of interaction was sustainable”(xiv).

Communication is clearly a vital and necessary part of the formal educational experience. What is unclear is if heavy communications is always required for online learning and if there are some types of combination of student-student; student-content and student-teacher interaction that is best for the particular content and quantity of learning aspired to in the courses learning objectives. In short, we must “get the mix right” (Daniel & Marquis, 1979; Anderson, 2003a). Answers to this question are emerging. Postle et al. (2003) suggest that "content heavy courses are more suited to independent learners” (p. 61). They also noted that "there were the beginnings of informal protocols emerging that controlled the extent of interaction that a lecturer was prepared to manage”(p. 80). Teachers will learn to use this affordance effectively and efficiently, but this learning itself requires the active participation in research and knowledge building that is discussed briefly at the end of this chapter.

Besides course-based communities, a number of distance education organizations have attempted to develop net-based social environments in which institutional affiliation is used to create affective bonds among students. In its guide to developing online student support services, the Western Cooperative for Educational Telecommunications (1999) provides links to four such projects – a site to support a distance education student government, a chat site, a student newspaper and a text based virtual community. Since that time, graphical virtual environments, virtual conferences aimed at students, a variety of online communities and other student portals have been developed both as commercial interests and as services provided by online deliverers, though there is little research documenting their impact on student learning, satisfaction or completion.

A type of network application loosely referred to as 'social computing' has recently merged that aspires to allow users to create and maintain social networks with friends, colleagues and co-workers regardless of their physical location (Musser, Wedman, & Laffey, 2003). For example, some tools allow users to meet others with similar interests, to share workspaces, display cases or entertainment venues where digitized objects can be displayed and conversation engaged around these objects. Others allow users to annotate physical or digital objects as information sharing and conversation starting tools. Certainly many of these developments will fail as they leave fundamental human needs unfulfilled. However, at the same time, it is likely that social education applications will be developed that allow learners to create satisfying social interactions with other students, staff and autonomous agents associated with the study of formal courses. Ironically many of the safeguards designed to protect privacy and security among participants in online learning can impair the capacity for students to provide social support for themselves. It is likely that whole new systems of trust and recommendation will be needed that allow students to casually introduce themselves, and find associates for collaborative learning activity with the same relative sense of security and opportunity (or not) that such an introduction might cause in a campus environment. For example, the Students Union at Athabasca University (2004) supports this type of qualified introduction by facilitating contact between students and student mentors. They also sponsor a group-based referral virtual club for students who are also mothers.

Systemic Learner Services

The final of Tait's (2000) classification of learner services refers to those of a systemic or administrative nature. Much work has been done in this area over the past few years by most distance and campus-based organizations. The benefits in terms of anywhere /anytime access and the potential cost savings provided by automation of these systemic services provide both a consumer push and an administrative pull for increasing the scope of these services.

Examples from two dedicated distance learning institutions illustrate the variety of services available and the public nature of these services, invite readers to go to the web sites listed for additional detail. The Open University of the United Kingdom offers a host of tutorials, online resources, frequently asked questions (Phillips & Hawkins, 2003) including:

- A general first steps orientation to the OU at http://www3.open.ac.uk/firststep
- A guide to course selection at http://www3.open.ac.uk/courses
- A guide to credit transfer http://www3.open.ac.uk/credit-transfer
- And of course the ubiquitous linkages to a variety of administrative, counselling, library and registration services.

A similar set of services are provided at Athabasca University as well as a series of online surveys that allow a student to assess their own readiness to engage in university level distance education programming and their particular skill in English, mathematics and computer science (cf. Athabasca University, 2003). In addition the business school has developed a sophisticated information portal, call centre and customer relationship management (CRM) system whereby human staff with very sophisticated network tools can provide both accurate and timely services to individual students. This service has reduced the calls to skilled academics by 80% and reduced the cost to the school of business by approx. $100,000 annually with no significant difference in student satisfaction rates (Woudstra, Huber & Michalczuk, 2004). Questions, responses, service time and referral arrangements are tracked by the system, thereby allowing for the best person to address a student concern in the most timely fashion possible. The CRM system tracks and stores interactions between students and support staff providing qualitative statistics on frequently asked questions, the amount of systemic service requested and provided by human service providers.

As students become more accustomed to and more skilled at accessing automated information services, there expectations for these services will also increase. One can easily imagine the same preference for automated service in the education service sector as is provided by automatic teller machines (ATMs) in banks. Sophisticated web tracking and data mining tools will also be used to track and analyze the type and amount of automated services used by current and perspective students. Finally, one can easily imagine these services provided through a human interface such as a ‘chat bot’ that provides a text or voice input caricature that uses artificial intelligence techniques to ‘converse’ with human beings (Alice Artificial Intelligence Foundation, 2004). An example of legal services provided by the talking chat bot Alex, is provided by the Jurist information portal of University of Pittsburgh Law School (2004).

Research Opportunities and Challenges

In an era of increased measurement, accountability and fiscal restraint there is increasing call for effective means to assess the efficacy of all forms of learner support services. A recent resurgence of the “paradigm wars” as relates to appropriate research methodology has produced both articles (Slavin, 2002) and government funding programs that very stridently call for the type of randomly assigned comparison group studies that have defined much science and health research. These calls have been hotly debated and from this debate emerges a particular hybrid of qualitative, quantitative and action research most recently referred to as design-based research (The Design-Based Research Collective, 2003). Design-based research has much in common with developmental research espoused by van den Akker (1999) in which the research extends from the design, literature review and theoretical development of a project, through design and construction of an intervention, through multiple iterations of the design in practice, to formative and summative evaluation and ending with studies of implementation (Bannan-Ritland, 2003). Throughout this process, a team of developers, evaluators, implementers, students and learners work together to develop and assess interventions that offer the greatest chance of improving practice within the fiscal, social and culture constraints of actual practice. Design-based research utilizes both qualitative and quantitative research tools, as applicable. It seeks to insure that interventions are owned not only by the researchers, the developers or the implementers, but that each share in development and the research. These new types of research models seem to offer the most likely model for transferring results of research and innovation into the working lives of professionals and active distance students and thus are a much better model for research than either the neo-behaviourist controlled studies or the interpretative narratives of external researchers.

Conclusion

It is obvious that student services will continue to play a vital role in the provision of formal education service in a networked era. However, the mix of human supplied and machine automated services will likely continue to merge in favour of more provision of support provided anytime anywhere by machines. The expanding affordances of the Net coupled with reduced costs make such a trend both inevitable and desirable for those whose goals are to provide quality educational opportunity to all Earth's citizens. It is as challenging for distance educators today to accept that most student support provision will take place without human intervention as it was for traditional teachers to imagine learning taking place outside of the teacher moderated classroom in years past. Classroom education has not gone away and neither will personal interaction in distance education. However, there will be many instances where cognitive, affective and systemic learning services will be provided more effectively and more cost efficiently without human intervention of professional staff. We ought not to fear this future.

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UNIT TWO: STRATEGIES FOR LEARNER SUCCESS

SOM NAIDU

Supporting Learning With Creative Instructional Designs

Abstract

This chapter discusses learning and instructional designs that seek to scaffold student learning and optimize the quality of students' learning experience. It attempts to show that sound learning and instructional design is at the heart of effective and efficient learner support. Creative instructional designs are learning and teaching strategies that serve to suitably scaffold learning. Some of these widely used designs are story-centred learning and problem-based learning. These designs comprise learning activities that are motivating for the learner, and incorporate the sorts of activities with which learners are likely to be engaging, in their professional practice. In the absence of careful attention to sound learning and instructional designs, attempts at learner support are likely to remain a reactionary event to a never-ending series of learning problems. Indeed many of these problems reported by learners, such as loss of direction and focus in learning, can be eliminated with creative approaches to learning and teaching. This chapter attempts to show how this has been achieved in several courses and contexts.

On Supporting Learning

A great deal of work has gone on in supporting student learning in open and flexible educational settings with various technologies (cf. for example, Bates, 1990; Collis, 1996; Khan, 1997). These authors survey several technologies including print, radio, audiocassettes, telephone, computer-based applications such as electronic databases and CD-ROMs, computer-mediated communication technologies (i.e., e-mail, computer conferencing, bulletin boards, audio and video conferencing, broadcast television, and the Internet). Many of these technologies are ideal vehicles for content delivery and supporting communication, but in themselves, they are lacking in the capability to support or "scaffold" student learning activity.

A "learning scaffold" is best described as a "transitional support strategy" which is put in place to guide student learning in desirable directions, or to enable the development of desirable cognitive skills in students. The expectation is that when this learning scaffold is removed from the context, the targeted skills become part of a learner's repertoire of learning skills. Parents or human teachers are excellent examples of learning scaffolds. Among other things of course, they are there to provide advice and support when these are most needed. At some point in the child's cognitive development, these types of support are progressively removed until they are no longer accessible or accessible to them only in limited ways. Children go on to live and function in society independently of the support and advice previously provided by their parents and teachers.

Learners in open, distance and flexible learning environments who work independently with self-instructional study materials, need help with the organization and management of their learning, as well as the skills to critically reflect on information they may have gathered. While a great deal of work has gone on in supporting student learning in such settings with various forms of technology and local centre-based support, work is sorely lagging in the area of cognitive supports for student learning in open, distance and flexible learning environments (cf. for instance McLoughlin, 2002).

Existing work on supporting student learning with various types of learning and study strategies (cf. for instance the works of Weinstein & Mayer, 1986; Schon, 1983, 1987; Candy, 1991; Schmeck, 1988), suggest that the development of learning strategies (for example *learning how to learn*) can influence learning. These researchers have identified several categories of learning strategies, namely *rehearsal, elaboration, organizational, self-monitoring and motivational* strategies. They argue that these strategies provide a pedagogically sound framework for supporting *"learning how to learn"*, and employing these strategies can help with the cognitive processes and learning outcomes. However, while these sorts of learning strategies can be taught to learners independently, they are likely to be more potent when they are integrated into the learning context.

Goal of this Chapter

This chapter discusses several attempts at integrating powerful cognitive strategies into developing practical models of learning and instructional design. It argues that modeling the student learning experience in this way comprises the most pungent form of learner support, as these are able to provide learners with the kind of cognitive scaffolds they need to make learning, effective, motivating, and meaningful.

However, good course design cannot, by itself, offer all the support that students will need. It is one critical attribute of a sound educational experience. Another key attribute in this equation is the presence of a committed teacher or tutor who serves to provide the kind of facilitation that is necessary to make learning an interactive process (cf. for instance the chapter by Gilly Salmon, in this volume). Indeed there are numerous ways of supporting student learning, and more is not necessarily better. Being able to provide learners with the support that they must have and at the time they need to have it has implications for resources. This chapter shows how course designers can proactively set up opportunities for the engagement of learners, tutors and teachers in the educational transaction, in order to ensure a supportive educational environment.

Story-centred Learning

Research in learning and cognitive sciences has shown that the most effective way to teach new skills to learners is to put them in the kinds of situations in which they need to use those skills, and to provide mentors (i.e., expert practitioners) who are able to help learners as and when necessary (Schank, & Cleary, 1995). Through this engagement, learners come to understand when, why, and how they should use targeted skills on the job. They receive key lessons just-in-time, which is when they want the information, when it will make the most sense to them, and in a way that they will be most likely to remember the information for later use when they need it in their work.

Schank and Cleary (1995) have argued that the design of such a learning experience takes the form of a storyline in which students play a key role such as being a manager of an e-business or e-learning organization. These roles are carefully selected to reflect those that students of such a program might actually do in real life, or might need to know about because they will very likely manage or collaborate with others who might be performing those roles. Students work in small groups in these scenarios with the help of detailed information about the simulated context, together with project details. Supporting materials and resources are also available, and online mentors are available to answer questions and point students in the right direction on a needs basis (Schank, 1990; 1997). This is the main point behind the story-centred curriculum (SCC) popularized by Roger Schank and his team (Schank, Fano, Jona, & Bell, 1994).

The story in this instance is the simulated context in which the student plays a major role. The story in this curriculum serves as the essential scaffold. These researchers argue that stories have always been a part of human existence. Humans have always told stories, and the most powerful of all stories shape the way in which we relate to our world. Furthermore, we tend not to forget these life-changing stories. There is good reason then to make powerful stories the centre of educational practices. These stories must involve students as well as their peers, because that is how their work situation is most likely to be. A story-centered curriculum is goal-based, and the goals are those that the student has for entering school and following a curriculum in the first place. A story-centered curriculum is also activity-based. Students work through these activities to learn the critical skills they require in order to complete their mission and successfully accomplish their goals (Naidu, Oliver, & Koronios, 1999). This is what is at the heart of the concept of "learning-by-doing". Learning designs such as these focus attention on improving the quality of the student learning experience. They ensure that the student learning experience is situated in authentic learning activities that reflect real life situations, that it is meaningful, and therefore inherently motivating for the student.

Problem-based Learning

Problem-based learning (PBL) is a widely used approach to learning and teaching that uses an instructional problem as the principle vehicle for learning and teaching. The analysis and study of this problem comprises several phases that are spread over periods of group work and individual study (Barrows & Tamblyn, 1980; Schmidt, 1983; Evensen, & Hmelo, 2000).

Distributed problem-based learning refers to the use of this strategy in a networked computer-supported collaborative learning (CSCL) environment where face-to-face communication among participants is not essential. It starts with a case or vignette that is presented to learners online. Learners study this vignette individually. As part of this analysis they generate explanations for the occurrence of the problem. Based on this exercise they identify what they know and do not know about the problem and make decisions about individual research. As the next step, this individual research is carried out and its results are reported to the group via the collaborative learning environment. Following this, a re-evaluation of the problem takes place and the first perceptions are probably revised. All of this is followed up with the preparation and presentation of a critical reflection, which is a personal synthesis of the discussion that has ensued.

The bulk of the learning task in this model takes place in a networked electronic environment (cf. Naidu & Oliver, 1996). For each one of the topics addressed in the course, the learning experience in this electronic environment may unfold in stages over a defined period such as four weeks. In the first week students are required to articulate their first perceptions of the problem as presented to them. They develop some hypotheses which are their conjectures regarding the problem including its causes, effects and possible solutions, outline how they were going to go about searching for evidence to support their hypotheses and then collect that evidence. They "post" these comments on the electronic environment so that everyone can read each other's approach to the understanding and resolution of the same problem. In the second week, after reading the initial reactions and comments of others on their own thoughts, students re-examine their first perceptions of the problem. They expand and refocus their conjectures regarding the problem and if necessary revise their hypotheses and data gathering strategies, and post these on the electronic environment. In the third week, as a result of the online discussions students are able to identify new or related issues, revise their conjectures regarding the problem and perhaps make modifications to their problem resolution strategies. In the fourth week they prepare and present their own "critical reflection record" on the electronic environment. This comprises their final comment on the problem situation and how they sought to resolve it.

Critical Incident-based Learning

This learning design reflects growing interest in building learning environments that focus on supporting groups of learners engaged in reflection on critical incidents from their workplace (Wilson, 1996). Reports of knowledge sharing during tea and lunch breaks abound. In the casual and friendly environment over a cup of tea or coffee, the personal experience is transformed into a powerful instructional event. This gives rise to the notion that there is much potential for the storyteller in supporting learning.

A design that embodies the essence of this focus is reflected in the "Critical incident-based learning" (Naidu & Oliver, 1999). It is so called because it integrates reflection on and in action, and may also include collaborative learning, and computer-mediated communication into a model of instruction. It is inspired by knowledge of the fact that practitioners regularly encounter in the workplace critical incidences which present them with learning opportunities. It serves to teach learners to recognize these critical incidences as learning opportunities, reflect on them critically, and then finally share these reflections in a computer supported collaborative learning environment.

A critical incident (from the workplace) presents a learner with a learning opportunity to reflect *in* and *on* action. Learners can do this by keeping *learning logs*, which is a record of learning opportunities presented. The log records how one approaches the incident, their successes and failures with it, and any issues that need to be resolved (e.g., things not fully understood or concepts that didn't make sense). The critical attribute of the learning log is that it concentrates on the process of learning. It is not a diary of events nor is it a record of work undertaken, rather it is a personal record of the occasions when learning occurred or could have occurred. The learning log also relates prior learning to current practice and is retrospective and reactive in action.

Learners engage in this process of critical incident-based learning in a phased manner. Phase one in the process comprises identifying a critical incident. Learners can do this by identifying a critical incident from their workplace. They describe the "what, when, where and how" of this critical incident including its special attributes and more importantly the learning gain they derived from this incident. Phase two comprises the presentation of the learning log online. This would outline to the group the critical nature of the incident and the reasons for the actions taken by the practitioner during the encounter with the critical incident. It includes reference to what should or shouldn't have been done and the learning gain derived from the incident. Phase three comprises the discussion of the learning logs posted on the systems by all students. Learners attempt to make insightful comments and observations about other's learning logs with the hope of learning from the pool of experience that lies there in front of them in this shared electronic space.

Finally, phase four is about the coalescence of theory and practice, that is, bringing theory to bear upon practice and practice to inform theory. This last phase in the process has to do with learners making the connection between what they are being presented as part of their formal education and what they are being confronted with as a part of their daily work. This process leads to a summary reflection, which seeks to identify the extent to which learners feel that the theory enabled them to cope with the critical incident they encountered at their workplace. It also reflects the adequacies and inadequacies of their theoretical knowledge, and any enlightenment they may have gained from reflecting on the learning logs of their peers and from the reflections of others on their own learning logs.

Design-based Learning

Designing as a means for acquiring content knowledge is commonly used in practice-based disciplines such as engineering and architecture (Newstetter, 2000; Hmelo, Holton & Kolodner, 2000). The obvious benefit of a design task is its inherent situatedness or authenticity. In design-based learning activities, students' understanding is "enacted" through the physical process of conceptualizing and producing something. The structures created, functions sought, and the behaviours exhibited by the design solution also offer a means to assess knowledge of the subject matter. As such a student's conceptual understanding or misunderstanding of domain knowledge can be ascertained from that artifact. The failure of that artifact, for example, may suggest an incomplete understanding of the subject matter.

A big advantage of using a designing task as the basis for studying a body of subject matter is the variety of cognitive tasks required to move from a conceptual idea to a product. These include *information gathering, problem identification*, *constraint setting*, *idea generation*, *modelling* and *prototyping*, and *evaluating*. These tasks represent complex learning activities in their own right, and when they become the environment in which knowledge of the subject matter is constructed, students have the opportunity to explore that content in the different phases and through different representations (cf. Naidu, Anderson, & Riddle, 2000).

The complexity of design activities makes them excellent vehicles for knowledge acquisition. Moreover, design complexity requires iterative activity toward better solutions that can support refinement of concepts. Design complexity also dictates the need for collaboration. A workable team possessing different kinds of knowledge and skills can tackle complexity more successfully than an individual. On student teams, one student might have good research skills, another domain knowledge, another drawing and representation skills, and another construction skills.

Role Play-based Learning

Role-play simulations (RPS) are situations in which learners take on the roles of particular characters in a contrived educational game. As a result of playing out these roles, learners are expected to acquire the intended learning outcomes as well as make learning enjoyable. Role-play is a commonly used strategy in conventional educational settings. It is less widely used in distributed web-based learning environments although the technology is available now to support the conduct of role-play simulations on the Web (Ip & Linser, 1999; Ip, Linser, & Naidu, 2001). The essential ingredients of a web-based RPS are a) dynamic goal-based learning; b) role-play simulation and c) online web-based communication and collaboration. Let us consider each one of these in turn.

First, goal-based learning is acknowledged as a strong motivator of learning. Typically, goal-based learning comprises a scenario with a trigger or a precipitating event. This event may be presented as a critical event and usually requires an immediate response from students. In RPS, each learner assumes the persona of different stakeholders in the scenario and may pursue different goals as constructed by the learners and negotiated with the moderator. Furthermore, during the "game play", the goals of the learners may evolve as the game environment changes (Naidu, Ip, & Linser, 2000).

The second critical ingredient of this learning design is role-play. Students are organized into teams to play out particular roles within the context of a given crises or situation. In order to play out their roles effectively they need to investigate and carry out research. The third critical ingredient of this learning design is the Web which houses the virtual space for the role-play, enables communication and collaboration among students, and between the students and the facilitators.

Concluding Remark

A major suggestion of this chapter is that supporting student learning needs to be seen as a *proactive* process rather than a *reaction* to learning problems that are encountered by students. This is easily achieved by carefully designing learning environments that require students to engage in meaningful, authentic and motivating learning activities. This is not to suggest that students' learning experiences ought to be choreographed to the extent that in doing so, one runs the risk of killing off creativity and independence on the part of learners. It suggests providing learners with a plot to follow, which will enable them to acquire the necessary skills, and within which learning achievement can be reliably and validly ascertained. Furthermore, good course design could not, by itself, offer all the support that students will need to have. It is but, one critical attribute among many, of a sound and supportive educational experience.

The act of designing powerful models of learning and instruction comprises putting together into an integrated whole, what is known about what works as far as learning is concerned. While models of instruction such as problem-based learning have been widely used to support learning for a very long time in a variety of contexts, there aren't any particular fixed approaches to these processes. In fact there are very many iterations of the generic problem-based approach to learning, and all of them are probably just as powerful for their particular educational settings. This leads to the conclusion that the design of learning and instructional environments is – to a large extent – a creative process, not unlike architectural or engineering design. In all of these instances, the designer is engaged in putting together a conceptual model that integrates what is known about what works in that particular setting. When this design task is expertly performed, its operationalization, and the chances of its success are optimized. In the context of learning, this would mean a powerful teaching strategy, which when combined with strong facilitation by teachers and tutors, is likely to lead to a successful learning experience for the students.

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MARGARET JOHNSON

Enhancing Study Skills: Developing Self-Help Materials for Distance Learners

Abstract

This chapter discusses the study skills needs of students studying through distance learning, whether by traditional paper-based courses or via online learning. It identifies the skills that need to be developed and argues for the need for institutions to offer study skills materials in addition to and separate from course materials. It uses, as a case study, the UK Open University's Student Toolkit project which provides both paper-based and web-based study skills resources to support an extremely large and diverse student body. It goes on to outline an extension of this project whereby web-based resources have been built in such a way as to make them both reusable and able to be contextualised for different faculty/departments. It suggests the need for a dual medium, pick and mix approach to the provision of study skills materials which could be replicated by other institutions.

Introduction

Students studying at a distance, whether through traditional paper based courses or via online learning, need to develop study skills in order to be effective learners. This chapter identifies some of those study skills and goes on to explore some of the reasons why institutions should assist them by providing study skills materials independent from course material. It looks in detail at how one distance learning institution, The UK Open University (OU UK), has supported its large and diverse student population by providing both paper and web based self-help resources through its Student Toolkit project.

The Study Skills Needs of Students

Simpson (2002) defines student support within open and distance learning as having two main strands: academic and non academic. Study skills support seems to me to straddle the two. One could argue that cognitive skills such as literacy and numeracy are clearly part of the academic, whereas aspects like time management and organisational skills and the skills needed to find ones way around a complex structure are the other end of the spectrum and would fit what Tait (2000) terms as 'affective' qualities that a student needs to develop. So, here, I am defining study skills in its broadest way which amounts to all the generic non-course specific skills that a student needs to develop in order to be an effective independent distance learner.

Students will need to develop different skills at different times in their career; they will also wish to use different methods according to their particular need and learning style. For these reasons, any attempt to help students develop skills must be presented in a highly student centred way.

Many students who are attracted to enrol on a distance learning course will not be traditional young undergraduate or postgraduate students. They may be mature students (as in the case of the OU UK) or students who, because of geography, mobility or financial constraints, are unable to travel to or attend a campus university. Some of these are likely to have skills gaps. This may be because they are unused to study per se, or that they have little past educational experience, or because the mode of distance learning may be new to them. Whatever the reason, distance learning is less tutor-centred, relying on the student to be more active and take a greater responsibility for organising their own studies. In distance and online learning where the traditional lecture and seminar is missing, there is a reliance on the written word: the course material is delivered via books or online texts and there is often an emphasis on written assessment as other forms are not available. All these factors lead to an increased need for the development of study skills.

It is easy to demonstrate why competent study skills are essential for the student, but institutions too should have an interest as clearly the success of their students is important to them. Many institutions are trying to draw in more untraditional students through their widening participation strategies. The UK Open University's Strategic Plan, Plans for Change 2002-2012 (2002) includes the following objective: "To increase the successful participation of adults with low previous educational qualifications, those from lower socio-economic groups, and from Black and Asian communities, and those with disabilities" (p. 12).

Once students are in, the institution has a duty to provide an inclusive learning environment which involves the development of the necessary study skills for success. This would be in keeping with Access and Equal Opportunities policies. The institution also needs to retain these students for economic and reputational reasons. Institutions (in the UK certainly) are funded according to numbers of successful students and the 'revolving door' helps neither the student nor the reputation of the institution.

What then are the study skills that students need to develop, apart from those taught within the course? They can be divided into three stages: preparation for study, on course skills and end of course skills.

Before the course starts, students need to develop good time management skills: distance learning courses tend to have a looser structure and many students are studying alongside a job or family commitments. Working out when you can study and how to make best use of precious study time is essential if the student is going to succeed. Good organisational skills are also essential to deal with course materials and administrative matters. Knowing how to get advice, including when and from whom, are skills worth developing as distance learners often have to be their own advocates and need to develop the resourcefulness to do this.

Students may also need to brush up on the more academic skills of effective reading and note taking so as to make the most of the study materials when the course starts. Furthermore, many courses also require data analysis and other numerical skills. Information technology skills of all kinds are needed if the course is online or has online components as increasingly they do today. Such skills as accessing and storing information, communicating with tutors and other students and taking part in online discussions and virtual tutorial groups are required. There are also a range of course specific skills that course authors have defined in their prerequisites for the course. It is important to offer students different methods and techniques so that they can select the ones that are right for them. It is also advisable for students to address their basic skills needs before the course starts as, once it is underway, the likelihood is that new knowledge and new skills will become the priority.

Once on course, the initial major hurdle can be the first assignment and students may need to develop essay or report writing skills, analytical skills and critical thinking skills to tackle this. Development of these may well be built into the course alongside course specific skills but it is useful to have additional resources to which the struggling student can turn or to which the tutor might refer students. Students often need to be highly motivated at this point so advice on how to keep going through tough times can be useful too.

At the end of the course there may be an extended assignment or project to complete that requires different skills. Alternatively, there might be an exam in which case students will need revision and exam techniques and help in coping with exam stress.

The Student Toolkit Project

To address these issues, the UK Open University (OU UK) has developed a strategy of producing self help student study skills materials both in paper and online through its Student Toolkit project.

The OU UK is a very large open entry distance institution offering its courses via supported open learning. Courses have traditionally been paper based but they increasingly have an online component and many new courses are being developed solely as online courses The original charter, awarded in 1967, states its aim as to offer higher education to all those who seek it, regardless of educational, social or cultural background. This still stands, although it has moved from the initial undergraduate institution to one which now also embraces access, vocational and postgraduate courses (and therefore has some educational entrance restrictions on some courses). In 2001, the OU UK had 201,786 students taking 224 different undergraduate and 185 post-graduate courses. Students can, on an undergraduate programme choose their own entry point. This means that both course choice advice and adequate skills development are vital. Some students inevitably find themselves on courses for which they do not have the prerequisite knowledge and skills.

The notion of learner support has always been fundamental to the OU UK and this support has been delivered in a variety of ways which have developed over the years: via written materials, web based resources, access to help and advice via telephone, letter and electronic communication and some limited opportunity to attend face-to-face workshops and meetings. All students are allocated to a tutor (a part time member of faculty) who is their first and most important point of contact with the university. The tutor marks students' assignments, offering correspondence tuition as well as assessment; offers help and advice on both the academic content of the course and study related matters by telephone, correspondence both written and electronic; and offers either face-to-face or electronic group tutorials. Behind the tutor there is a whole raft of staff both at the central campus in Milton Keynes or in one of the 13 regional centres scattered across the UK who offer academic and personal support backed up by strong administrative systems.

It is against this background that the Student Toolkit Project was set up in response to the perceived need for generic study skills materials that could be available free of charge on request to the whole range of students. Excellent study skills materials had been produced by individual tutors, members of support staff and faculty/departments but these were ad hoc and had been produced, often on a shoe string, according to individual enthusiasm and expertise. The intention of the Student Toolkit project was to develop a suite of professionally produced printed materials with an agreed content, overseen by a small steering group drawn from practitioners across the university who could provide a wide range of academic perspectives.

Each Toolkit focuses on a particular study skills area and is designed to complement the work undertaken by regional learning support staff as well as the approaches being taken to study skills by faculty course teams. They are aimed at meeting the needs of students who have a particular gap in their study skills. Each booklet is between 24-40 pages long, begins with a reflective activity for students to assess their current skills, is designed for active learning and contains both tips and practice exercises. Each Toolkit aims to be a starting point not a ‘magic wand’ and gives suggestions for further reading and study. The titles produced to date are as follows:

- Effective Use of English (1)
- Revision and Examinations (2)
- Working with Charts (3)
- Graphs and Tables; Reading and Note Taking (4)
- Essay and Report Writing Skills (5)
- More Charts, Graphs and Tables (6)
- Maths for Science and Technology (7)
- Learning How to Learn (8)
- Extending and Developing Your Thinking Skills (9)
- Using a Computer for Study (10)

The first four Toolkits were evaluated in a number of ways: by postal questionnaire to a sample of students who had requested one or more of them; a telephone survey of a subset of these; an analysis of the student database to identify the profile of students who had used them; and a survey of how regional support staff had distributed them and integrated them in their study skills strategy.

Feedback from the postal survey (Allen & Woodley, 2000) was largely positive although naturally there were differences in response between the different Toolkits. Overall, 71% of respondents found them quite or very helpful with only 3% finding them unhelpful and only 5% saying that they would be unlikely to recommend them to other students.

In the report based on the telephone interviews, the researcher concludes as follows:

> The interviews conveyed how important and valuable the toolkits were to individual students. They appreciated the value and aims of the toolkits. They have found them a confidence boost and students are reassured by the toolkits. … Students commented that the toolkits let them know that they were on ‘the right lines’ and felt that the style of writing was simple and easy to understand, although at times took too long to get to the point (Jelfs, 2000, p. 10).

Regional student support staff were also very enthusiastic about the Toolkits as an enabling resource:

Help such as this is long overdue and should definitely be continued.

The Toolkits are very good at instilling confidence in the students.

The Toolkits were useful for filling in the gaps in knowledge and skills for those changing direction within their degrees (Johnson & Barrett, 2003, p. 47).

Web Developments

The original aim had been to produce web-based versions of all the Toolkits alongside the written booklets. However, this did not happen, largely due to the length of time it took to develop interactive websites in comparison with the paper booklets. At the time the project began (1998) there was no recognised procedure for the production of such web-based resources. However, the first two Toolkits were produced in web-based interactive versions and the remaining ones were put on the web as pdf files to be looked at on the web or downloaded and printed. The two interactive sites have since been improved and updated and now sit on the main learning support web-site of the OU UK – *Learning with the OU* (OU, 2002 [secure website]). One of the advantages of the web-based sites is that they contain more interactive practice exercises with immediate feedback. In the usability testing of the Effective Use of English site (Doye & Johnson, 2002) one of the participating students remarked of such activities: “if I had a difficulty I wonder if I am going to know why” (p.12) and all participants felt that they would prefer to get more feedback on what they got wrong.

An extension of the project has now been made possible by the author being awarded a UK National Teaching Fellowship which brought with it funding to undertake a major project. This was to create a model for adapting generic study skills sites to make them specific to particular academic areas. Working with the School of Health and Social Welfare on their level one course, *K100, Understanding Health and Social Care* which attracts large numbers (59% in 2003) of students with low or lowish educational qualifications (defined as having one ‘A’ level or less which is less than the standard minimum requirement for entry into HE) the Effective Use of English site has been adapted by inserting Health and Social Care specific course material and examples into a generic template. In this way the site becomes much more relevant to students on the course. When undertaking the usability testing, students were asked if they would be more likely to use the site if it was more closely related to their particular course. Three out of the four participants felt that the examples of text would be better if related to the course (Doye & Johnson, 2002)

The methodology used for building the web site is that of Reusable Learning Objects (RLOs). These consist of autonomous ‘chunks’ or modules that can be used separately from each other. They are therefore portable and can be used in any number of different learning environments. Each module was ‘tagged’ with metadata which allows the nature and content of each module to be easily identified. This metadata is invisible to the learner. Therefore, for instance, a member of the Science faculty could ‘lift out’ a section on paragraphs from the Effective Use of English site and insert it into an online workshop on report writing, thus moving it to a new learning environment. As well as having this portability, the site has been ‘contextualised’, in this case for Health and Social Care. This process allows different faculties to insert their own text into the ‘chunked’ and meta-tagged learning objects to make it specific for their courses. This site is therefore both a model and a resource that can be used any number of times by any number of course teams. It is an approach that could be used for adapting other sites and for other academic areas.

Hopefully, the OU UK will develop this idea and instead of each academic area spending time and money on developing their own skills sites they will adapt existing ones using this advanced technology. This will also ensure a standard quality across the university. Certainly, the reaction from the School of Health and Social Welfare has been very positive both from the course team and from tutors. At a recent staff development event for tutors, a regional academic from the School of Health and Social Welfare said: “Having looked at the site I think it is just brilliant – a great resource for both tutors and students alike”.

A Possible Way Forward

It would seem that the way forward for a university that is going increasingly electronic is to create study skills materials in dual mode. There will always be a need for paper resources as this suits some students better: it can be more convenient as it is easy to carry around and can be used in a variety of contexts. The web is also not the best medium for reading large amounts of text but it is good for providing shorter chunks of study skills materials and for interactive practice with immediate feedback. Reeves (1997) says that the web “should only be used for the delivery of a learning environment when its unique affordances are appropriate to the needs that have been identified for faculty and students” (p. 3).

A student centred approach would be to build a website which offered students bite-sized chunks of study skills materials so that they could pick and mix according to need and so create a package that is right for them. One possible model would be to have a series of diagnostic tests, followed by ‘hints and tips’ but with the opportunity to access deeper learning study skills materials as needed. There still needs to be the mix of generic and course specific study skills on offer. Course Teams should develop their own versions of sites such as ‘Effective Use of English’ and ‘Essay Writing’ as in these areas it is better to develop skills within the discourse of the subject. However at the more ‘affective’ end of the study skills spectrum with aspects such as time management and organisational skills it would be better to produce generic materials so that all students of the university have access to the same advice and there is not unnecessary overlap. If we offer students a ‘pick and mix’ approach, however, then this needs to be backed up by good sources of advice and, ideally, a link to a real person to answer individual concerns

It is also vitally important that we work with the tutors as they are the students’ interface with the institution. They need to be made aware of the student materials and also be provided with complementary tutor manuals. These should provide advice in order to help them develop their students’ study skills using the materials available. These two sets of resources should be developed alongside each other. The OU UK is at present redesigning both its student and tutor study skills materials to this end. Wherever possible, tutors should be able to take part in staff development sessions, whether face-to-face or virtual, in order to help them use the resources effectively. Good practice in this area should also be shared and disseminated.

Conclusion

Once the full structure is in place, the future is one where the autonomous student uses these resources according to their need and their preference in a way that suits them. By these means, the UK OU can be seen to genuinely support students' study skills development and enhance their learning by offering a dual medium range of materials from which students can pick and mix to create their own self help 'package'. In an increasingly competitive environment, such support can only be beneficial for both the student and the institution. It is hopefully a model that could be replicated by other institutions.

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Appendix

Student Toolkit titles and authors:

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Student Toolkit 2: *Revision and Examinations.* (Goodwin, V. & Bishop, J.)

Student Toolkit 3: *Working with Charts, Graphs, and Tables* (Gilmartin, K. & Rex, K.)

Student Toolkit 4: *Reading and Note Taking (*Bates, D.)

Student Toolkit 5: *Essay and Report Writing Skills.* (Manning, E. & Houston, M.)

Student Toolkit 6: *More Charts, Graphs and Tables.* (Gilmartin, K. & Rex, K.)

Student Toolkit 7: *Maths for Science and Technology.* (Gilmartin, K., Laird, H., & Rex, K.)

Student Toolkit 8: *Learning How to Learn* (Coats, M.)

Student Toolkit 9: *Extending and Developing Your Critical Thinking Skills.* (Talley, J.)

Student Toolkit 10: *Using a Computer for Study*. (Macdonald, J. with Gilmartin, K., Clark, W., & Rowney, I.)

YONI RYAN

Pushing the Boundaries With Online Learner Support

Abstract

This chapter explores the rationale for using online modes of learner support in distance education, within the student-centered framework of the student lifecycle and the 'dialogues' (Laurillard, 2002) or 'interactions' (Moore & Kearsley, 1996) critical to learning in higher education. At each point in the student journey, institutions have a range of support services they can employ to increase retention and achievement.

Introduction

The last decade has witnessed an explosion in the use of online technologies as a component of distance education programs, although the percentage of 'wholly online', as distinct from 'online supplemented' courses, is still very low, estimated in the US as 3.2 per cent (Eduventures Report, 2003). The potential of 'learning technologies' to transform distance education, particularly in the developing world (UNESCO, 1998; World Bank, 2002) has rarely lived up to the rhetoric, as various commentators on initiatives such as the African Virtual University (Ryan, 2002; Wolff, 2002; Oketch, 2004) have noted. Notwithstanding over-ambitious ventures, distance education continues to increase in popularity, as 'time-poor' students seek the convenience of off-campus courses, to permit parallel paid work (Cunningham et al., 2000). Distance education enrolments in Australian universities have now increased to over 18 per cent of all enrolments, up from 12 per cent in 1995 (DEST, 2003).

The more egregious failures of online ventures resulted from commercially-driven initiatives hatched before business models for the internet had been devised and stabilized, and with unrealistic 'payback times' e.g. NYOnline, Cardean; or from academics without experience in distance education, convinced that simply providing their 'content' online would produce 'learning' e.g. Western Governors, and Fathom (Ryan & Stedman, 2002); or from technologically-driven 'learner management systems' which were more suitable for administration than for pedagogy.

Had the early designers and managers of online programs heeded the lessons painfully learned over decades of DE theory and practice, much of the attendant disappointment and frustration with online programs — of students, teachers, administrators (Mathews, 2000; Hara & Kling, 1999) — could have been avoided. Early online programs often seemed to exacerbate attrition, with some programs reporting up to 90 per cent drop out (cf. Ryan, 2001). Potter (1998) reports a rate of 75 per cent, in traditional mostly print-based programs at Athabasca University, and refers to a Bates' 1989 study detailing attrition of 25-50 per cent at the OUUK. Belawati (1998) reports 95 per cent attrition for the print and post programs at the Indonesian Open University. Clearly, distance students need high levels of support, not merely well-designed 'content' to succeed.

Distance education research has consistently identified the contributing factors for higher student attrition rates in distance programs than in on-campus education: unrealistic expectations of the program, the time commitment required, and ability; isolation from other students (Li, Lee, & Kember, 2000), lack of administrative support and academic feedback from the institution; and personal circumstances. Some of these, such as illness and family circumstances, are unavoidable, but many are within the province of the institution ─ at a cost. There is no doubt that measures to increase retention and student success eliminate the cost advantage of print-based distance education reliant on minimal student support, amortization of costs through high volume enrolments, and 'long-life courses' (and cf. Simpson, 2002, for the OUUK cost cutting experience). Further, our knowledge of how best we can support students is often outstripped by our capacity to provide these services, as Rumble (2000) quoting Tait, has observed.

Yet if we as distance educators are to fulfill the promises we make about education as a mechanism for self-realization, we owe it to our societies to provide the best possible support we can, at a cost that is sustainable for our institutions, in ways that do not deny access, and that maximize retention and success, so that our investment in programs brings intellectual and economic benefits for our communities.

Definitions

'Learner support online' essentially involves the provision of those services and support mechanisms that distance educators *know* improve retention and achievement, those services that any successful learning environment provides: adequate information about the program and its outcomes to enable realistic choices by students; robust administrative and technical systems; clear academic expectations and guidance; the provision of adequate learning resources (increasingly in digital forms); and access to counseling and study skills assistance. Where once distance students were 'supported' simply by the provision of learning materials and study guides, and the ministrations of a (more or less) encouraging teacher, education systems, including distance systems, are more cognizant of the importance of total learning environment focused on how students learn. Furthermore, the massification of educational systems has resulted in more complex and differentiated educational environments, with specialist roles (technical staff, librarians) supplementing the autonomous teacher as the sole source of student learning.

Providing services online challenges institutions that have evolved operating systems for on-campus students, in part because they have often made a decision to enter the booming distance education market without regard for the *student life-cycle*. In part, they have ignored the very real advantages of online support services which can overcome the traditional 'disadvantages' of the distance student: the lack of student-student interaction; lack of immediate feedback and contact between student and teacher; slow delivery times for hard copy resources.

For the purposes of this paper, 'learner support services' therefore excludes the actual 'content' or discipline knowledge, but includes those forms of 'learning help' which cannot be provided in conventional print form. It thus includes email advice to the individual or class that emanates from the teacher, as well as the email from a librarian assisting a student to explore digital resources; it includes 'static' information, as well as interactive exercises which are auto-graded, such as are possible in the many multiple choice question packages available, designed for student self-assessment and immediate feedback on learning achieved.

Many authorities (cf., for example, the comprehensive literature reviews in Cashion & Palmieri, 2002; Peters & Lloyd, 2003) now acknowledge that the most successful distance education programs exploit the benefits of multiple presentation modes, and respond to the preferences of the majority of students for a combination of print, online activities and resources, and communication modes (online asynchronous and telephone synchronous). We need never think that the telephone has been superceded in education (cf. the case study on Western Governor's University in Cunningham et al., (2000).

Frameworks

A coherent and logical framework for the development of learner support online begins with the recognition of 'student-centered learning', i.e. that the learning experience must be designed from the perspective of the student, not from the availability of a particular technology, or from the teacher's (understandable) focus on 'content', or from what suits the institution's systems. Such a framework is best situated within the knowledge of the distance student's lifecycle, from initial interest in distance education as a possible avenue for study, to inquiry at a particular institution, through academic counseling, to study and eventual graduation.

Further, the framework should build on the elements of successful learning environments provided via online technologies that are not possible or are limited in efficacy in print, and that are the 'fault lines' in traditional distance programs. Laurillard (2002) identifies 'dialogue' as the core mechanism of student learning; Moore & Kearsley (1996) prefer the term 'interaction', on three dimensions: student-content (the traditional approach adopted in print-based distance learning, where students are provided with study guides to text resources); student-teacher (traditionally provided by teacher comment on assignments, and more recently by telephone or sometimes summer schools and tutorials, as in the OUUK model); and student-student. The latter has been the biggest inhibiting factor for many students contemplating distance education, notwithstanding the efforts of many institutions that have encouraged voluntary local 'study groups'. Online technologies make student-student interaction not only possible, but a critical part of the construction of knowledge peer-to-peer, following Vygotsky's (1934/1962) social learning theories, and providing the social motivation provided in a group activity.

I would add to Moore & Kearsley's (1996) three 'enabling' interactions a fourth: interaction with learning support specialists. Today's optimal learning environment relies on increasingly specialized learning support staff, including librarians, often the front line for students in gaining vital information literacy skills (cf. chapter by George & Frank in this volume for a discussion of the role of the librarian.); technical staff at 'helpdesks' who troubleshoot the inevitable glitches in online systems; study and language skills specialists, particularly for the larger numbers of distance students of non-English speaking background. In 1999, for example, a full 10 per cent of all Australian university distance enrolments were off-shore international students (Dobson & Sharma, 2001), most with a home language other than English. (Cf. chapter by Johnson in this volume for a discussion of study skills support.)

Institutional systems must allow for these staff, as well as the teacher, to be accessed by students, both via online ‘self-service’ modules and resources, and directly. Yet current practices seem to reflect a continuing reliance on digital technologies as a delivery mechanism for ‘content’, notwithstanding expressed student preferences for print as a presentation mode for discursive material. Even the structures of course management, systems such as WebCT, result in an avalanche of email for teachers as they deepen dependence on the teacher as the locus of learner support.

Form and Content of Services

Using the student-centered philosophy, a student lifecycle framework, and the four dimensions of interaction and dialogue, enables an institution to plan and develop an optimal distance learning environment. Following Potter’s (1998) schema, a table of services might appear as below.

Table 1: The distance student lifecycle and four forms of interactions

Student lifecycle point	Online Learner Support	Interaction
Possibility of distance learning for a particular student	Advantages / disadvantages	
Credibility / integrity of institution	Authorized agency lists of accredited institutions/programs	
Program information	Complete details of program, including sample materials and assessment	Student–content
‘Can I do it?’ questions	Checklist – disposition, time commitment, other responsibilities, equipment needed, all fees, expectations	Student–learning support staff / DE specialist
Program decision making	Email advisor and potential teacher (+ Telephone synchronous)	Student–learning support staff/DE specialist; Student-teacher
Enrolment	Forms and submission online, auto-acknowledgement and ‘what next’ information, e.g. passwords, IT regulations.	Student–learning support staff/DE specialist
Payment	Secure credit-card submission (+options for payment)	
Preparation for study	• Equipment and software minimum requirements and instructions • Study skills tips • Information searching / research / literacy skills (on CDROM with links to website) (+ Telephone synchronous)	Student–learning support staff
Technical glitches / coaching	Helpdesk	Student–learning support staff

Study	Website for: • Email questions to teacher • Discussion forum • Bulletin boards (subject-based, program-based and whole-of-institution-based) • Digital resources • Exercises / problem solving • Assignment submission (auto acknowledgement) • FAQ	Student–teacher Student–student Student–learner support staff Student–content Student–content Student–teacher Student–student
Motivation	Group emails	Student–teacher Student–learner support staff e.g. DE administrators
Assignment results/ feedback	MCQs (auto grading) Accumulated results Website – Group email (generalized feedback; links to online study tips) Online commentary software	Student–content Student–teacher Student–teacher
Revision/exams	Group email; FAQ	Student–teacher Student–student
Re-enrolment reminder / motivation	Group email	Student–teacher; Student–learner support staff
Graduation	Group email: • graduation details • alumni contacts	Student–learner support staff Student–student

For Potter’s (1998) students, administration and learning support were preferred via a ‘one-stop-shop’, a central telephone and/or online point which could act as an initial ‘simple solution’ enquiry source for both technical helpdesk queries and administrative information, and a referral center for more specialized services.

‘Good Practice Exempla’

There are many excellent examples of how various agencies and institutions have attempted to meet the needs of distance students for learner support online. The Commonwealth of Learning (COL, n. d.), for example, has a toolkit, ‘Learner Support in Open and Distance Learning’, outlining possibilities for institutional support, though this is not solely focused on online support. Students should also have access to listings of accredited institutions and programs, such as those on the Australian Government Department of Education, Science and Training (DEST) website (2003) to ensure they are enrolling with legitimate providers. At the next level, they need detailed course information, including the opinions of previous students, the opportunities provided by the program, and employment prospects. The OUUK site is a good example of information required at the course level (OUUK, n. d.). Ideally, students should also be able to get reliable and fast information about credits towards courses, such as the automated service provided by the University of Phoenix. Several providers have relatively rudimentary 'can I do it?' type self-assessments which assist students towards a realistic appraisal of their likely success. Institutions *should* provide 'taste-samplers' of courses, so students can experience what is involved. Few do, though Learndirect (n. d. [secure web site]) in the UK offers a range of sample subjects. UMUC, with over 87,000 enrolments has a comprehensive support system, including professional development for teaching staff, perhaps one of the most important elements in finding the correct balance between student-teacher interaction or dialogue, and other forms of interaction, since it is the teacher who can most directly influence student-student learning through assessment practices. (For professional development programs, cf. the Virtual resource site for teaching with technology, UMUC, n. d.).

Orientation to distance learning, study skills and the appropriate software and hardware required for successful study must be provided independently of a website, since many students, like the beginning online student Jay Mathews (2000), who cannot intuitively proceed to an institutional course website, and waits to be told what to do by telephone or mail document. A CDROM, with all Standard Operating Environments for the institution, is the most appropriate form in our experience at Monash University, one of Australia's largest distance providers. UCLA's for-profit continuing education arm, OnlineLearning.net, mandates an online orientation program for new students.

Helpdesks have proved a challenge for most distance providers. Distance students are almost by definition part-time, and 'out-of-hours' learners, so a restricted 'business hours' helpdesk is 'unhelpful'. Macquarie University in Australia and the London School of Economics in the UK have devised an innovative partnership to share a helpdesk, so as to provide 24/7 support across all time zones. USQOnline outsources its helpdesk via internet service provider NextEd, to a number of locations across Asia, to enable 24/7 support (Cunningham et al., 2000).

Digitized library resources have proved the 'easiest' of the technical problems associated with online student support, notwithstanding the high costs to institutions associated with licensing digital journals and digitizing print texts. Access to such resources eliminates the time delays and costs of hard copy postal services, although print costs are then transferred to the student. However, the consequences have been less than helpful, with many librarians bemoaning the 'Google syndrome', whereby students, faced with complex search engines at university libraries, resort to a free online engine. At Monash University (2003) borrowing rates for hard copy materials have declined dramatically, and reference to extended texts has also plummeted. Clearly, online support must encompass academically valid search techniques and information retrieval, accessible online and supported by telephone assistance for student access to discipline databases. (Cf. George & Frank in this volume for further discussion of the role of the library.)

While many institutions routinely dispense academic counseling regarding course choices and study skills, via telephone or email, few have as yet exploited the potential of online personal counseling, partly because of the presumed difficulty of communication in a virtual environment without visual or aural 'cues', and partly because of the privacy issues associated with others' access to digital records. While some protocols have been established through organizations such as Kids Help Line (Brown, 2003), online counseling is in its infancy within distance education, although some interesting projects have begun, such as that at Open Training and Education Network in New South Wales (Brown, 2003).

Distinct equity groups require specific approaches for success in distance modes. Various disabilities can be accommodated by good website design and accessibility standards outlined and testable at ‘Bobby’ (Bobby, 2004) while the needs of non-English language speakers and Aboriginal and Torres Strait Islander indigenous populations are catered for in guides such as those provided by the Australian Flexible Learning Network (2004).

I have argued the centrality of student-student communication for retention and study success, and online communication provides this for distance students. Discussion forums, bulletin boards and FAQ pages can be maintained by students, but must be encouraged through demonstrating their value to students, through assessment criteria, and through limited and judicious comments from the teacher. This is the ‘highest and best use’ application of online learner support: that provided by other students to nurture and construct ‘a community of learners’ outside the classroom. Equally, as the above table demonstrates, revision tips, examination tips, and ‘survival guides’ are often best provided student-student, with some supplementary advice from the teacher, and perhaps the distance education administrator. This does not however, replace the institutional and individual teacher online guides.

The Commercial Model

Perhaps the most successful distance and online provider in terms of student numbers and graduation rates is the mammoth University of Phoenix Online (2004) which built on its commercial and graduate success in ‘on-campus’ education stripped of many of the social, youth-oriented ‘support’ services offered at traditional institutions, such as clubs, canteens, librarians and computer assistance. UoPOnline has developed a model which relies for economic sustainability on fees which are somewhat higher than those at public institutions, but which are payable per subject, rather than ‘up-front’; on standardized centrally-developed curricula, and on class responsibility for other students and whole-of-cohort progression. Yet UoPOnline maintains a low staff-student ratio, of 1:10, far smaller than the distance classes of most other institutions, where high volume provides economies of scale. Although some would argue that the nature of UoPOnline’s practical programs, the short duration of courses (five to six weeks), and its liberal credit regime are major attractions, it seems apparent that the provision of student-student contact and convenient frequent access to counselors and administrative staff constitute a large element in its success. UoPOnline (2004) does not publish attrition rates, but claims a 95 per cent satisfaction rating from its graduates.

Conclusion

Distance education providers must exploit wherever possible the multiple support services that can be provided online at the ‘fault lines’ of traditional distance study: the lack of student-student contact, delays in postal delivery of resources, lengthy delays in teacher feedback on assignments, lack of academic counseling and study skills advice, and library assistance. Adopting Potter’s (1998) framework of the student lifecycle to chart milestones in the distance education experience, they can design information and point to existing resources. Using this paper's four forms of interaction, they can also devise activities, resources, and mechanisms exploiting the potential of online modes to minimize the oft-argued 'disadvantages' of distance education. Given the rapid increase in distance enrollments worldwide, we owe our students nothing less.

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Glossary of Terms

Learner support online: the range of resources and communication tools that act to provide information to, and motivate, students.

Student lifecycle: the time span over which a student initially investigates the possibility of undertaking education via a distance program, through pre-enrolment, enrolment, study and graduation.

Forms of interaction: student interactions with the four elements of the student learning environment: content, teacher, other students, and learning support specialists.

LISA GEORGE & ILENE FRANK

Beyond Books – Library Services to Distance Education Students

Abstract

Librarians are stressing the need for students to develop information literacy competencies. Related to critical thinking skills, information literacy competencies can be defined as the ability to identify an information need and the ability to locate, evaluate, and effectively use the information. Without information literacy skills, students, especially distance education students, may not succeed in their academic career. Librarians are able to partner with faculty to provide distance education (DE) students with the same opportunities as on-campus students to develop these skills. Today's DE students must be able to find information using both print and electronic resources. Technical proficiency is important to information literacy. Libraries offer instruction in a variety of formats suitable for distance learners to assist them including development of web-based tutorials to introduce students to research techniques, use of specific resources, etc. Tutorials alone are not always sufficient to answer students' questions related to the use of library resources for a specific assignment. Librarians are prepared to offer specific research assistance "just in time" to DE students by using e-mail reference, chat services, toll free phone numbers, and the like. The wealth of electronic resources can be overwhelming for faculty and students. Librarians can provide both faculty and students with guidance in the use of these resources so that students are able to develop their information literacy competencies.

Information Literacy/Critical Thinking and the Librarians' Role

Librarians have taken up information literacy as a major component of the educational process. Information literacy can be defined as the ability to identify an information need and the ability to locate, evaluate, and effectively use the information. The Association of College and Research Libraries states, "Information literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master control over their own learning" (ACRL, 2000b). These information literacy skills are necessary for the next generation of researchers and citizens who will be the consumers of research. Lyman and Varian (2003) estimated that new stored information grew about 30 percent between 1999 and 2002. This increase is equivalent to 800 megabytes of recorded information produced per person per year. As the amount of available information rapidly increases these literacy skills become more and more important. More immediately, students can use these skills to be successful in their academic programs.

Information literacy competencies are related to critical thinking skills. Critical thinkers ask questions, evaluate information, define research topics, weigh assumptions and opinions against facts, look for proof of a theory, identify critical thinking as a life-long learning experience, examine problems carefully, and reject information that is irrelevant (Ferrett, 1997). Critical thinking logic is taught in conjunction with information literacy in order for students to be able to define facts, establish information needs, evaluate information, and identify what is true (Duldt, 2003). Information literacy and critical thinking are important elements of the education of today's generation of learners, more now than ever before (Brown, Murphy & Nanny, 2003).

Finding information has gone beyond using a card catalog to locate books in a library and now uses print indexing services to identify journal articles. The card catalog has been replaced by an OPAC (online public access catalog). Many print resources formerly restricted to onsite use in the Library are now available as remotely accessible web-based products, available to users from a particular institution. Where once students had to come to the library to use print journal indexing services and print journal collections, students now find that their library offers remote access to hundreds of electronic databases and thousands of electronic journals produced by the same publishers who formerly provided in-print scholarly resources. In addition to information literacy skills with print-based materials, today's distance education (DE) students must also relate to computers, software applications, and electronic resources including databases, electronic journals, and the Internet. Students need a high degree of technology skills to be proficient in information literacy skills (ACRL, 2000c) therefore; they need to master the use of these new tools in order to demonstrate their information literacy competence.

Teaching Information Literacy to Distance Education Students

Historically, librarians have taught "how to use the library" by conducting face-to-face lectures. These lectures might be offered in response to faculty requests to assist students with specific research assignments. Some libraries offer stand-alone, semester-long, for-credit courses in the use of the library offered on campus. These instructional strategies worked as long as library services and collections were available only in a tangible mode to the on-campus student. However, these traditional onsite classes do not reach (DE) students who may never come to their home institution's library. Libraries are altering their modes of instruction to provide options for DE students. At the same time, libraries are taking advantage of the World Wide Web to provide a platform for delivering resources and services to distance students. Libraries are working with computer and technology centers to enhance remote access to information.

A study by Brown, Murphy, and Nanny (2003) has determined that students who think they are "techno-savvy" also think they are information literate (p. 387). These students feel that they are finding good information sources because they can find something about their topic on the Internet. They are unaware of library-related resources that might be more relevant, more authoritative, or better represent various points of view on a topic. Technical proficiency is important to information literacy. Typical instruction includes researching skills in online catalogues and databases and other electronic resources as well as making better use of the Internet search, and allows students to accurately identify relevant information from all sources (Brown et al., 2003)

Librarians have been developing the means to guide students in information literacy concepts at a distance. To reach this goal, libraries offer instruction in a variety of formats suitable to reach distance learners. Librarians have developed web-based tutorials such as TILT (the Texas Information Literacy Tutorial). TILT introduces first-year students to research sources and skills (TILT, n. d.) covering the basics of "selecting appropriate sources, searching library databases and the Internet, and evaluating and citing information". TILT provides coverage of Internet censorship, security, and privacy issues. Each module ends with a short quiz. The set of modules can be integrated into online course management software such as Blackboard and WebCT. TILT is available through an open publication license so that other libraries can use it as is or customize the tutorials for their particular institution. Web-based tutorials can introduce students to the institution's online resources for finding books and articles including subject guides, as well as helping with issues such as proper citation and how to avoid plagiarism, and so forth. Indiana State University Cunningham Memorial Library's web page for Distance Education (Indiana State University Cunningham Memorial Library, 2003) provides TILT as a self-paced learning tool along with information about remote access to library databases, how to request document delivery and other services for distance education students.

UMUC's library provides an excellent example of an extensive array of instructional resources aimed at distance education students and faculty. The "Information and Library Services" web page provides the following online information literacy materials (UMUC, 2003a):

- **Web-based instructions** in finding library materials, how to search UMUC electronic databases and on-line journals, and instruction in the use of the Internet available from the UMUC Library's website.
- **Online subject guides** listing the most useful resources for topics ranging from Art to Women's Studies.
- **Web-based tutorials** offered through Virtual Library Classroom (VLIB 101) covering the use of the UMUC Library's databases and other resources. Students can access this set of tutorials at their discretion through the University's courseware.
- **An online short course,** UCSP 610 "Library Skills for the Information Age," consisting of seven modules with exercises and quizzes required for new graduate students.
- **APA Citation Explained Tutorial** (http://www.umuc.edu/library/tutorials/citation/) contains four modules consisting of an introduction to citation, identifying parts of a citation using articles, books and Web pages, correct APA style, interactive exercises. (new: http://www.umuc.edu/library/tutorials/apa/apa.shtml)
- **The Legal Research Tutorial** (http://www.umuc.edu/library/tutorials/legal/) is designed for non-legal studies students. It contains three modules – finding secondary legal information, finding case law, finding international law and legal material from foreign countries, and becoming familiar with basic legal research for a broad audience.
- **Research Skills Tutorial** (http://www.umuc.edu/library/tutor/intro.html) reviews research skills and introduces specific UMUC resources. There are seven modules – research process, copyright and plagiarism, libraries, resources and services, call numbers, how to find books, articles and web pages.
- **Using the Web for Research Tutorial** (http://www.umuc.edu/library/guides/web/usingtheweb.html). This tutorial details the type of information available on the Web. It contains descriptions of company, government, organization and statistical web sites and what information is available on each site. (new: http://www.umuc.edu/library/tutorials/webeval/webeval.shtml)

- **The Guide to Searching UMUC Library Databases and E-Journals** explains the use of library databases and e-journals, the log-in function, selecting a database, searching a database, obtaining articles, techniques for searching multiple databases, refining search parameters, evaluating findings and resources for help. (http://www.umuc.edu/library/tutorials/research/mod6.shtml)
- **Guide to Evaluating Internet Resources** presents the criteria by which Web sites are categorized. It details five categories – authority (who sponsors the page), accuracy (are sources factual and can they be verified), objectivity (is the page provided as a public service), currency (is the page dated), coverage (is the page completed or still under construction) (http://www.umuc.edu/library/guides/evaluate.html)
- **The Guide to Writing a Research Report** (http://www.umuc.edu/ewp/research.html) includes faculty resources and student resources. Faculty resources are designed to assist faculty in teaching students how to write, including designing writing assignments, helping students with copyright/plagiarism issues and citation styles. Student resources include:
    - Guide to writing a research report
    - Guide to managing research materials
    - Documentation guides
    - Guide to citing web materials
- **Guide to Citing Electronic Resources: APA Style** UMUC requires writing in the American Psychological Association style. This guide contains information on the ethical use of web-based material, recommended APA style for referencing Internet resources, using journals or newspaper articles from proprietary web databases, articles from public-access web journals and APA style to citing direct quotations.
- **The Effective Writing Center** is a comprehensive resource consisting of self-study tutorials and guides, including:
    - How to avoid plagiarism
    - Definition of plagiarism
    - Why an understanding of plagiarism is important
    - How to protect yourself from plagiarism and
    - Guides to academic writing styles, including introducing/citing/referencing source material
- **Online Guide to Writing and Research** details the types of writing and the writing process, thinking strategies, research process, academic integrity, library resources, writing plan & project schedule, including self-help materials to guide the student to a better understanding of academic writing.

Additional Library Services

Tutorials alone are not always sufficient to answer students' questions related to the use of library resources for a specific assignment. In these instances, librarians are prepared to offer more specific research assistance to students by using real-time chat, email reference, and toll free phone numbers to provide "just in time" support to DE students. Librarians can play a key role in offering assistance to DE students either synchronously or asynchronously. Synchronous access to a librarian includes chat, telephone, and videoconferencing. Asynchronous access includes e-mail, discussion lists, and bulletin boards. For example, at UMUC students can get help from a librarian from a librarian in various ways. "Help" for UMUC's global student population includes the ability to ask questions via email or via a 24-hour real-time chat service or a message board. Students can make an electronic appointment with a librarian. Telephone contact is available as well. UMUC also provides a list of library staff so a student can determine which librarian/library department can best suit their needs. Student questions can provide the "teachable moment", and librarians can use these opportunities to provide a student with the instructions that can be generalized to other situations as well as provide the student with the specific information.

Marketing Library Services and Resources to the Faculty

Students are apt to utilize all these resources and services only if required to do so by their instructors. If information literacy and the development of critical thinking skills is not important to the faculty, library resources and services will not be used. Faculty manage some courses and in some cases entire programs by providing students with a set of readings with no requirement to locate additional research materials. While this is easier for the student, this approach does not provide students with opportunity to exercise information literacy skills. With a prescribed reading list, students never have to grapple with identifying, locating, and evaluating other information resources in their discipline. Without the practice of finding additional resources, students may find themselves ill equipped to conduct literature reviews later in their academic career.

As noted above, libraries provide a rich array of online resources that can supplement assigned reading lists. Librarians need to market the libraries' resources and services to faculty as well as to students. Once aware of the range of material and the corresponding services available to their DE students, faculty realizes they can develop assignments that allow students to explore resources beyond the textbook and a proscribed reading list.

Librarians have developed resources aimed at faculty to suggest tips and techniques for making successful assignments that relate to information literacy standards. The ACRL Information Literacy site provides a web page called "Using Standards – Develop Assignments" (ACRL, 2003a). The University of California at Berkeley Libraries offer a web page aimed at faculty on "Effective Assignments Using Library Resources" (UCal, 2003). These suggestions can be adapted for the DE environment. UMUC provides a tutorial for faculty called "Information Literacy and Writing Assessment Project: Tutorial for Developing and Evaluating Assignments" (UMUC, 2003b).

Librarians need to market themselves as resource people who are available to the faculty. They are prepared to assist faculty in developing course-specific assignments that incorporate information literacy skills. They can ensure that assignments are successful and that needed materials are available. Librarians can also assist by providing information to students on utilizing proper citation and avoiding plagiarism. Markgraf (2002) described experiences in reaching out to faculty at the University of Wisconsin – Eau Claire. Markgraf notes students are more apt to use resources when the faculty requires their use. As part of a marketing campaign, librarians emailed notices to faculty involved in distance education courses, as well as providing printed brochures to educate faculty on the distance learning services available. In addition, the librarians made an effort to network with faculty members. While networking with faculty, librarians noticed that faculty needed more time for course preparation and other related work. The librarians expressed a willingness to assist students in research-related assignments in order to provide faculty with extra time. In another example, the addition of a librarian as a participant in the discussion board of an online course proved so successful that librarians are now members of the instructional design team involved in online course development. Buchanan, Luck and Jones (2002) also point to an online graduate level course on multimedia literacy offered at Austin Peay State University. Librarians were co-authors of the content that included material on intellectual property, copyright, and the social, legal, political, and ethical issues surrounding the use of media. Information literacy concepts were closely integrated into the course content with assignments chosen that related directly to the ACRL Information Literacy Competency Standards for Higher Education.

When working together, librarians can make faculty aware of newest resources and tools available to DE students. Librarians can suggest assignments that make effective use of all of the library's resources. Developing library-related assignments that are directly related to course content focuses students' attention on the material while providing them with the experiences to develop and demonstrate information literacy competencies.

Does the Practice of Information Literacy Skills Improve Student Retention and Academic Success?

What is the effect of library-related activities on student performance? We can point to some studies done in this area. Whitmire (1998) looked at the role of the academic library in the development of critical thinking skills in undergraduate students by analyzing data from the National College Student Experiences questionnaire for 1992-1993. The author concluded that while routine library use did not influence a student's development of critical thinking skills, focused library activities did have a significant impact on a student's ability to think analytically and put ideas together. Kuh and Gonyea (2003) revisited the College Student Experiences Questionnaire data covering 1984 to 2002. They found that library skills were related to other educationally valuable activities. They stated "what is most important to college impact is the nature and breadth of a student's experiences over an extended period of time" (p. 12). Instruction in library skills does appear to correlate with student outcomes in particular courses. Kuh and Gonyea (2003) cite a study "Information competency improves grades" done by Glendale Community College that found students who participated in library workshops had a significantly higher pass rate in English and ESL classes (p. 257).

All UMUC degree-seeking students must complete the "Information Literacy and Research Methods" course. Students learn techniques in using electronic sources such as the Internet, e-books, online databases, and journals (Read, 2002). Students access the course via UMUC's Website and are entertained with colors and animation as they work their way through the online course materials. By providing "eye-candy" by means of attractive design, this course holds the attention of the students. The information is presented in a format that keeps the students focused on the subject matter. Discussion boards are also used and conversations about researching and libraries are encouraged. In addition to the course website, faculty members have access to a separate website that provides information and advice on teaching techniques. The Maryland Distance Learning Association recognized this course as the best distance education course offered in 2001-2002. Many students have appreciated the course even though it was outside of their degree program (Read, 2002).

More on Library Resources and Services

DE programs open the door for libraries to exploit the electronic age through the use of electronic resources that draw students and faculty into the electronic library. DE students require virtual services and remote instruction (Heller-Ross, 1999). DE students need the same services and collection resources as provided to the on-campus student. DE students may use nearby public and academic libraries, but often, these students will be coping with a technology-based medium to access materials and to receive services. Services include reference assistance, information network connections, course materials, and inter-library loans. Students with adequate access to the Internet can use these services remotely. Even better, these services can be provided asynchronously to the DE student. While real-time service is sometimes necessary, email and web-based forms can provide students with the ability to order materials, request help, and expect a reply without remaining online. UMUC's library services and resources are divided into the following areas:

- An extensive array of electronic resources, including databases and electronic journals, electronic books
- Library resources through use of the library catalog and the physical and electronic libraries located throughout the UMUC system, including Asia and Europe
- Interlibrary Loan from University of Maryland libraries and libraries outside UMUC, using U.S. Distance Education Book Delivery, serves to provide access to the UMUC collection as well as supplement the UMUC collection for distance learners.

UMUC meets the standards for library services to distance education students suggested by the Association of College & Research Libraries in their Guidelines for Instruction Programs in Academic Libraries (ACRL, 2003b) and the Guidelines for Distance Learning Library Services (ACRL, 2000a). Canadian Library Association's Guidelines for Library Support of Distance and Distributed Learning in Canada suggest a similar range of library services (Canadian Library Association, 2000).

Conclusion

Today's libraries provide information in many forms from traditional print resources to electronic media. Electronic resources have the advantage of being accessible to any faculty or student with Internet access. However, the wealth of resources can be overwhelming for the novice user who may be grappling with sophisticated scholarly literature for the first time. To add to the confusion, electronic resources lack standard interfaces. In addition, appropriate use of bricks and mortar libraries can be equally daunting for students who rarely come to campus. Along with these rather mechanical concerns, students need to know how to apply the information that they are able to locate. Librarians are emphasizing information literacy competencies as primary skills for students researching in an electronic age. Students need the ability to define an information need, locate, evaluate and analyze information, and use it appropriately.

Without information literacy skills, students, especially distance education students, may not succeed in their academic career. Information literacy competencies cannot be learned in one face-to-face library session or by working through one or two web-based tutorials. These competencies need to be developed over time and practiced throughout a student's program of study.

Distance education students are a challenging audience for the academic librarian. Librarians may not have the opportunity to meet students face-to-face at the reference desk or in a traditional bibliographic instruction lecture. Nevertheless, librarians are engaged in serving distance learners' information needs. Librarians have developed web-based tutorials, guides and web pages focusing on doing research in specific disciplines or even specific class assignments. These guides can be presented on library web sites and may be incorporated into the course shells of course management software such as BlackBoard or WebCT. In order to communicate with distance learners, librarians may provide toll-free reference phone numbers, e-mail reference service, and real-time communication using chat software. Librarians are experimenting with VoIP (voice over IP) and video-conferencing in order to provide better service. With so many resources available, the librarian is now able to provide comprehensive library services in many forms, reaching DE students in the true sense of the word "distance".

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ELLEN V. BLACKMUN & PHYLLIS POUYAT THIBODEAU

Learning Communities

Abstract

This chapter evaluates the vital role of learning communities, generating both challenges and opportunities for student support in distance education. The concept of student support will be examined relative to educational processes, with emphasis on experiential contexts and social interaction, toward transformative and constructive learning. Variable, interactive learning communities will be discussed, including higher education, the role of knowledge base sharing, and communities of practice that incorporate experiential applications of theories. Examples of social networking, utilizing distance education resources, toward 'constructed' learning community enrichment for distance education students, will be highlighted as an emergent, distributed form, integrating learning and support aspects.

Introduction: The Impact of the Information Age on Student Support in Distance Education

The rapid development of communications technologies has transformed the industrial era to a global economy of interactive information exchange. Opportunity for interactive dialogue via the Internet has generated expansive interest in distance education, and facilitated the formation of learning communities in support of distance learners.

Universities have traditionally offered learning community environments devoted to inquiry and study that are segregated from vocational training or commercial practices. The original form of Socratic education, where teaching inherently integrated inquiry with support through personal dialogues within shared contexts, has been reconfigured over time by the mandate to improve access to education for more students (Sewart, 1993; Sinclair, 1999). The result is larger classes, with detached professors serving as "lecturers", and mass produced learning materials. Distance education institutions in particular have designed packaged educational materials, utilizing various types of media, to minimize reliance of students on physical classrooms, campuses, or libraries.

To help equalize opportunities for academic success, traditional colleges have typically offered face-to-face student services. Campus-based support services have included libraries, computer labs with technical support, writing labs, career counselors, academic advisors, student clubs, study groups, office hours with faculty or tutors, and quiet study spaces set apart – all combining to create a learning community culture and environment. For distance students, who are inherently removed from campuses, this form of services is often impractical.

As networked computer technologies increasingly provide distributed opportunities for learning, students may study and/or communicate anywhere, anytime. To some extent, the same computer tools used for web-based courses may be utilized to deliver "campus" information, advising, interactive dialogue, and library resources. Relative to the educational process overall, from admissions through graduation, institutions increasingly capitalize on the notion of "autonomous" or "self-directed" students to achieve cost effective distance education systems (Moore & Kearsley, 1996). The majority of students choosing to pursue degree programs via online distance education programs are adults, often combining study challenges with jobs and family responsibilities, adding complexity and increased distraction from the required focus on higher education activities (Evans, 1994; Sinclair, 1999). Technical components assumed for access present new financial challenges and/or prerequisite skill requirements for students, often resulting in obstacles to participation or frustrations that lead to increased drop-out rates (Bates, 1995; Hara & Kling, 1999).

Sewart (1993) warns that support must be integral to overall course delivery, and must be recognized as the most direct interface between the student and institution throughout the educational process. However, management strategies often segregate the student support function, increasingly styled as service industry ‘call centers’, which minimize personal interaction with the student, and often result in frustration rather than true support. Tait (2003) emphasizes the imperative of building stronger relationships with students to foster engagement, “deep learning” and improved academic success. Kegan (1994) prescribes a fundamental principle to meet the complexity of contemporary learning: “…people grow best where they continuously experience an ingenious blend of support and challenge, ... [which] leads to vital engagement” (p. 42). This blend of challenge and support may be cultivated within learning communities, wherein students may exchange ideas and experiences, with both professors and peers. Genuine relationships may be developed through dialogue, utilizing variable communications media. Ultimately, distance education students may find it valuable to merge benefits of membership in more than one type of community, and essentially construct the combination of challenge and support they need. For example, a student may take a class online, while applying theory to practice in a local community project, or within a professional community.

Discussion

1. Learning Communities Defined

In an effort to describe an emergent virtual community, Unsworth (1996) maintains that “community is generally a function of shared location, shared interests and sometimes shared government and shared property; in order to deserve the name, a community needs more than one, though not necessarily all, of those attributes” (p. 138). Unsworth notes that communications networks offer an “environment in which, independent of need, one can pursue creative activities with tangible, communal, and perhaps even economic results” (p. 148).

Over the past few years, “learning community” has become a common term. Palloff and Pratt (1999) point out that while “community is no longer a place-based concept” (p. 21) it may nonetheless be considered a “conscious community” through the sharing of goals, communications styles, and behavioral norms (p. 23). The central focus of an educational community is on “learning about learning” (p. 23).

For purposes of distance education, Palloff and Pratt (1999) consider “geographically disconnected people becoming ‘connected’ in a community with several purposes but with a shared interest” (p. 23) which takes on a more egalitarian form than traditional classrooms, wherein exploration of a subject area occurs with all participants contributing, toward improved understanding of both the topic and of each other’s perspectives. To achieve this goal, early clarification of purpose, codes of conduct, conflict resolution, roles and responsibilities are important. Harasim (1996) emphasizes the benefits of improved social equality in the online environment, wherein gender, handicaps, appearance and even shyness become less of a barrier to participation. Overall, respect in a learning community is gained "by exhibiting expertise and command of the subject matter" (p. 211).

Specific types of learning communities include:

Virtual learning communities are those learning communities that only "exist" in the conceptual space of computer-mediated communications (Palloff & Pratt, 1999). Today, the method of communications is the Internet, specifically the World Wide Web. In Harasim's view, the Internet is really a "place" where communities are formed rather than a network of routes to information (Harasim as cited in Palloff & Pratt, 1999). Thus, community members create a virtual environment that permits interpersonal exchanges to occur. The first virtual community to gain recognition was the WELL, as described by Rheingold (1993). Using the computer-mediated communication tools introduced through the early Usenet bulleting boards, the WELL community developed quickly into a social network where topics of interest are shared online for diverse public exchange. Thus were born a multitude of discussions about gardening, books, grassroots political campaigns, career advices, or even finding friendships.

Knowledge building communities generally focus on the development, accumulation, and maintenance of a significant knowledge base that serves a specific learning community group or profession (community of practice). Such information-based communities rely extensively on the information technology and database management tools now available on the Web, and may support distributed members of the profession, or the general public who may draw on data resources (Turner, Liu & Wagner, n. d.).An example of this would be Baltic University Programme's shared database and knowledge resources, known as TRENDS, which gathers input from various participating researchers, and is then utilized in distance learning courses for various universities in the region (http://www.balticuniv.uu.se/esd/resources/resources.htm).

Communities of practice have been extensively discussed by Wenger (1998). Under his concept, learning for individuals focuses on their engagement and contributions to the common practices of the communities of which they are part. Learning involves refining best practices so new generations of members will join and sustain the community, within a specific experiential and social context (Wenger, 1998). Shared common practices and a focus on tasks faced by real-world members of the community are characteristics of communities of practice (Jonassen, Davidson, Collins, Campbell & Bannan Haag, 1995; Palloff & Pratt, 1999). The business management community is especially geared to draw on knowledge gained from observing best practices in competing organizations, and/or by building partnerships. Cooperative education, which strategically merges theoretical coursework with practical internships or projects in the students' local context, is used by the University of Maryland University College for undergraduate students to support their development of skills in professional practice (http://www.umuc.edu/careercenter/ccec.html).

2. Distance Education Pedagogy: The Role of Interaction in Learning and Student Support

Adult learning. Theories of adult learning emphasize the concept of 'transformative learning' wherein the learner moves through a process of fundamental change in worldview and self concept, translating to changed behaviors, applied in their local context (Cranton, 1994). Adult students are motivated by previous experiences and values that prompt their inquiry, together with personal objectives for learning and meaning-making that may be different from a particular institution's set of objectives.

Herein the role of dialogue, integrating narratives of personal experience, is essential to associative and constructive learning processes, particularly for adult students (Daloz, 1999). Moore's theory of "transactional distance" emphasizes dialogue as the bridge that minimizes the perceived distance between the 'autonomous' student and the 'structure' of the course and/or institution (Moore & Kearsley, 1996; Moore, 1997).

Conversely, institutional decisions for web-based course delivery and student support tend to segregate physical and affective considerations from 'teaching', intended to prioritize 'cognitive' activities alone (Sewart, 1993; McLoughlin & Marshall, 2000)**.** This dualistic approach disregards foundational adult learning principles that emphasize relevant meaning-making for adult students, intertwined with problem-solving in their immediate context (Knowles, 1998). Daloz (1999) discusses the process of mentoring adults, who need particular support through personalized dialogues, incorporating narratives of experience, as the student's identity and values move through various stages of adjustment in a transformative learning process.

Contemporary course design theories increasingly refer to principles of 'socio-cognitive constructivism', emphasizing the *interactive* aspects of situational context and social interactions with cognitive perception, toward constructive meaning-making (Garrison, 1993; Jonassen et al., 1995; Tam, 2000). Belenky, Clinchy, Goldberger, & Tarule (1986), Burge (1998) and von Pruemmer in this volume) further suggest that designs for education that are technology dominant, emphasizing rationalism detached from affective experience, may be especially disenfranchising for women, who tend to learn through experientially 'connected' methods of knowledge construction. More generally, learners have variable learning styles and cultural orientations which cannot be equally accommodated through technology alone (Sanchez & Gunawardena, 1998; Soles & Moller, 2001; and Spronk in this volume). True learner-centered designs for distance education must consciously integrate physical, affective and cognitive aspects, to maximize meaningful and relevant learning. Again, cooperative education designs offer such opportunity, wherein students may learn theory with an academic mentor, while also deriving experiential learning from application to projects on the job, with additional support from a professional coach. SUNY's Empire State Degree Program is well known for their use of learning contracts that facilitate this type of learning design (Daloz, 1999; Knowles, 1998; Peters, 1998). As mentioned, UMUC provides this type of opportunity for undergraduates through a cooperative education program, which similarly utilizes learning agreements. In both cases the student is actively involved in negotiating the goals, logistics, and resources for their own learning experience, together with supportive mentors and advisors.

Collaborative learning. Toward offsetting the limitations of independent learning, collaborative learning incorporates social interaction and environmental aspects toward creative problem solving (Johnson, Johnson, & Smith, 1998; Thorpe, 2002). Amabile and Tighe (1993) emphasize the importance of intrinsic motivation combined with liberty for multidirectional exploration and "intra-individual" dialogues to achieve creative outcomes. Collaborative learning through small groups, both online or "on the ground" incorporate the components of creative process, and offer potential support for students through personalized exchanges, with potential for continuing relationships beyond the 'class' space. Thorpe (2002) emphasizes that these human elements of conversation and community must be carefully considered, so they are not lost in the "technicist approaches to system or learning management" (p. 107) and to properly utilize technology toward constructive learning outcomes. Cf. the chapters by Naidu and by Drago and Smith in this volume for a discussion and examples of designing collaborative learning into instruction.

Creative problem solving. Kanter (2001) discusses themes of creativity and learning in the context of workplace communities where theory must be practiced. She asserts that face-to-face relationship building, combined with the benefits of "email and chat rooms, with everyone looking at the same documents or drawings, can facilitate speed and seamlessness" (p. 156) in creative problem solving.

Community building. Kanter (2001) further emphasizes that "community has both a structure and a soul", with social interaction being key to progressing

> … from bureaucracy to democracy…community is the behavioral and emotional infrastructure that supports those other organizational processes and makes them effective. Community action and spirit permit speed and seamlessness, encourage creativity and collaboration, and release human energy and brainpower – the essence of e-culture. (p. 196)

Learning community. Jonassen et al. (1995) specifically emphasized the term "learning community" as the interactive environment that facilitates constructive learning, and further, the role that technology could play in creating communities of learners and practitioners. Knowledge construction is herein facilitated through collaboration, reflection, and conversation with other learners. Computer-supported collaborative work tools and technologies, including group decision support systems, project management tools, electronic conferencing systems, and shared editors, would permit groups in distributed environments to engage in negotiation of solutions, which are the "hallmarks of constructive learning" (p. 18). In the constructivist view, a consistent and meaningful learning community is "key in sustaining the type of interactive exchange that in turn promotes both retention and knowledge-building" (Conrad, 2002, ¶26). The key to the design of a constructivist environment is authenticity, or the "extent to which the environment faithfully reflects the ordinary practices of the culture" (Jonassen, et al., 1995, p. 21).

Rogers (2000) defines a learning community as one which embodies a "culture of learning in which everyone is involved in the collective effort of understanding" (p. 384). Responsibility for learning is shared among group members in an online learning community. Collaboration is essential, in that the process of working together on a task enriches learners' repertoire of learning processes (Rogers, 2000). The result of collaboration is thus a richer, more dynamic product, which has been built by group members helping each other and participating actively in the creation of their own learning processes.

Mills (1996) and Sewart (1993) suggest an emergent reconfiguration of the original distributed support center model, wherein a ‘network’ of community-based study spaces may be shared by students who may attend different schools ‘online’, while also coordinating their study with practical application within their own context. Integrated course designs may therefore be informed by distributed local groups, to facilitate relevant community problem solving, on the ground as well as online, toward more holistic learning experiences (Thorpe, 2002).

3. Learning Communities: Student Support Methods and Techniques

The characteristics of participation in a community are similar online and ‘on-the-ground’. Individuals must explore and observe the environment to learn who else is participating, on the type of activity, and the rules that govern the ‘space’. They must gather understanding of the standards for behavior and practice common language, with understanding of connotations, particularly as they are used in text formats and/or symbols. Meaningful communication must move beyond generic information, incorporating shared personal experiences, with ‘affect’ applied in ways that will enhance understanding. Methods of mutually respectful dialogue must be cultivated, with or without visual cues, depending on the mode or media.

Specific tools and techniques that may be used to implement a learning community on the Web include:

Dedicated, shared Website. Most learning communities supported by information technology rely on a central Web page to organize the various resources involved in learner support. This Website should permit access to online conferences, online knowledge databases and libraries, student advising and counseling services, e-mail communications, and organizational documents (such as syllabi) that define the content presented in and maintained by the community.

Online information resources, including information for prospective students, orientation documents, information about student advising, program services, and technology requirements are essential to establishment of the community and should be maintained at the shared Web site (Blackmun, 2003).

Online classroom where the various conferences, e-mail addresses, members of the group, and study groups are organized for members of the community toward specific learning objectives.

Online conferencing or discussion threads are generally constructed to support discussion of a particular topic, section of a structured course, or interpersonal communications. The challenges presented to learners in sharing personal experiences, reflecting on particular topics, sharing in meaning-making and creating new ideas are substantial. Many learners or new participants in the community may have no experience with publication of their ideas on the Web, or may have little experience expressing their ideas in writing. This form of learner involvement provides a unique opportunity to develop writing skills and the ability to express personal perspectives for comment by others.

E-mail communications provide members of the community with the ability to communicate one-on-one, to ask variable questions about the community and learning support mechanisms, and to communicate with other members of sub-groups in the community.

E-mail also provides an excellent opportunity for peer-to-peer support and encouragement, which can be essential, especially with learners who have not previously studied at a distance or extensively used the technology tools.

Study groups may be offered as a method for facilitating small group collaboration, which is essential to the meaning-making assumed in a distance education environment. This is usually a private space where members of the sub-group may communicate via private online conferences, develop shared documents, and share resources to be used in the creation of projects consistent with the goals of the community. Study groups may present a particular challenge to adult learners, who have little experience working with teams in the online environment, and may experience difficulties organizing roles and responsibilities to achieve a shared goal.

Facilitation by an instructor or experienced learner or other member of the community may be key to overcoming the reluctance of some learners to participate in study groups and online conferencing. Such a facilitator encourages the group toward a common goal and helps individual learners become comfortable with the tools and the concepts used to create group projects.

Knowledge bases online are often developed for a particular profession or practice and should be searchable and constantly evolving. Members of the community may utilize these documents much as they would library resources.

Library databases should be searchable and draw on various on-the-ground and online library resources.

Chat rooms may be used to provide opportunities for socializing, casual discussion, or, less frequently, structured discussions of a particular topic. For a particular profession or practice group, the chat room may be used for regular meetings of the group to achieve common goals, or to document their progress.

Mentoring is a form of student support where an experienced learner or practitioner lends their direct, one-on-one support to a new learner or other member of the community. Mentoring is used by several higher education institutions to integrate teaching and support mechanisms for online students (Athabasca University, http://www.athabascau.ca/ Cappella University, http://www.capella.edu).

Blended learning with facilitation permits students to coordinate workplace projects with theoretical learning online, with peers that may be both online and on-the-ground. Faculty online may facilitate the individual learning process and/or cooperative education agreements can combine the facilitation of faculty and workplace mentors for individuals or small groups.

Resource-based, open learning. Public libraries offer one of the best examples of interactive, resource-based learning, as they retain a mission of democratic, public access to tools and educational programs. Local librarians coordinate with resources and other librarians online, providing continuity of presence for research assistance. (Cf. the chapter by George and Frank in this volume for a discussion of the evolving role of the librarian in supporting learning.) There is potential for groups with shared interests to utilize resources together both online and 'on-the-ground' relevant for individual learning contexts. Similar to campus environments, there are typically nearby community coffee shops, many of which include public internet access, providing a space where peers can meet virtually and/or in person, resulting in a distributed socio-technical composite form of learning community (Kling, 2000). For registered students, University System of Maryland offers students the opportunity to study online, while accessing library and campus facilities at any of the distributed college campuses throughout the state. There is a cohesive online reference system known as VICTOR web that allows students to locate the specific location for resources. Students may therefore access librarian support either online or at the library nearest their local community.

4. Learning Communities and Communities of Practice: Examples

Baltic University Programme (BUP) (2004) coordinated by Uppsala University, Sweden, includes a network of participants from 14 countries, and 160 universities, who collaborate in four fields, including environmental sustainable development and democracy. BUP offers cooperative education projects with municipalities, merging online studies and shared databases, with on the ground community interaction and application in various field stations.

Canadian community learning network (CLN) projects. Canadian visionaries are piloting new community learning network projects that are based on "public and private partnerships and inter-institutional collaboration" including schools, colleges and universities, as well as for profit education organizations (Skrzeszewski, 1999, p. 63-64). Such blended learning projects emphasize the fact that businesses, homes, government, education and community organizations increasingly utilize the same technology, which may also be shared with partners internationally.

Similarly, contemporary consortia, such as *Global University Alliance* (http://www.globaluniversityalliance.com/) are currently creating partnerships between universities, wherein students may utilize libraries or campus services from participating members (Moore & Kearsley, 1996). For these students a university library nearby may provide not only research materials, but digital access, printers, copy machines, quiet study space, and even the effect of a learning community environment while studying online (Association of College & Research Libraries, 2003).

Indira Gandhi Open University (IGNOU) coordinates distance courses for medical doctors in child health, with hands on practice occurring in 140 district hospitals, under the mentorship of hospital senior doctors (Goel, 2002).

Non-profit higher education membership associations such as the American Association of Collegiate Registrars and Admissions Officers (AACRAO, http://www.aacrao.org) and the National Association of Student Financial Aid Administrators (NASFAA, http://www.nasfaa.org) provide information for members, knowledge databases, white papers and analyses, and information about the associations.

University of Maryland University College. UMUC is one of the premiere US institutions offering online programs, including one of the only Master of Distance Education programs in this country or the world. While continuously enhancing its organization and services, the online community space for the MDE program characterizes many of the best student support online environments (Blackmun, 2003; Walti, 2002). UMUC's partnership with other institutions allows students to locate variable sub-community resources, including organized conferences, to help introduce students to the overall distance education professional community.

Summary and Conclusions

The contemporary tools and processes provided by information technology contribute substantially to the development of learning communities and communities of practice to support networked learning. Ultimately students live ‘on the ground’ while they may study online, and therefore participate in multiple ‘communities’, from which they may construct the combination of support elements needed. The careful design of holistic, constructive learning ensures balance between challenge and support. Learning communities coordinate educational content and experience that is relevant to the community and to the individual, and provide for resource sharing to support the institution’s mission for distributed education. Ultimately an interactive blend of online and ‘on-the-ground’ resource exchanges, facilitating peer partnerships for mutual support, may help bridge student support gaps in distance learning.

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CHRISTINE WALTI

Implementing Web-based Portfolios and Learning Journals as Learner Support Tools: An Illustration

Abstract

Web-based portfolios are becoming increasingly important in various educational environments. In the online Master of Distance Education Program offered at UMUC the development of a portfolio has been an integral part of the program requirements. To deal with the associated issues a number of policies have been adopted and a tutorial to support learners in their development process has been developed. Learning journals are introduced as a support measure in the development of portfolios. Both these tools strengthen meta-cognitive skills, build self-confidence and encourage students to become independent and self directed learners – all important factors for learners' success in a distance environment.

1. Introduction

This chapter addresses portfolios and learning journals as forms of learner support and illustrates how they can become integral to supporting the learning process over an extended period of time. Portfolios can serve different purposes but are always a goal driven, organized collection of items (artifacts) that demonstrate a learner's expansion of knowledge and skills over time (Kilbane & Milman, 2003). Journal writing is intentional reflection used to facilitate and support the development of insight, cognitive awareness, and critical thinking. These two tools, often used for assessment and/or to demonstrate growth, also provide forums that enable students to develop meta-cognitive skills, build self-confidence and encourage the development of the abilities needed to become independent and self-directed learners and thus make a significant contribution to the overall learning process. This chapter focuses on the theoretical underpinnings, the challenges of incorporating these tools into a program and how these can be addressed. The more practical aspects are based on experiences and measures taken in the online Master of Distance Education (MDE) Program offered by the University of Maryland University College (UMUC) and the Carl von Ossietzky University Oldenburg and the MDE tutorial for portfolio and learning journal development is introduced.

2. The Background of the MDE Program

The MDE was launched in January 2000 by the degree granting University of Maryland University College (UMUC) in partnership with the Center for Distance Education (ZEF) at Carl von Ossietzky University of Oldenburg, which contributes two of the six integrated certificate programs. The Master and Certificate programs are completely accessible online. The MDE sets out to "… qualify present and future managers of distance education …. in both public and private education, as well as in the training sectors…. These managers need to be qualified as leaders, since they will be required to be active advocates for distance education and training in their organizations and need to manage significant change processes…." (Bernath & Rubin, 2003, p. 20). The concept of portfolios as an element of assessment was introduced in the syllabus of the first course in early 2000. The guidelines state that

> Each Master's student will work towards the development of a personal portfolio. The goal of the portfolio is to demonstrate your qualifications gained in the field and to provide evidence of your competencies and skills in a variety of disciplines/ roles. It is our hope that this Portfolio would end up being your passport to the professional world. The portfolio contains formal and voluntary documents. Formal documents are appropriate assignments and other contributions to the final grades in each course. Obviously you will want to choose your best. Voluntary documents may show any other kind of active participation while you have been enrolled in the Master's program. These voluntary contributions allow students to show their proficiency and skills as a professional distance educator. In addition, the Portfolio will contain your Resume or Curriculum Vita, and may contain a photograph and graphics. This portfolio is a requirement for successful completion of the final Distance Education Project course. Each student is responsible for keeping a permanent copy of the various assignments and documents from each course. (OMDE690 The Distance Education Project and Portfolio, 2000, ¶6).

The introduction of portfolios also alleviates some of the uncertainty associated with the origin of students' contributions and assignments in a completely online program and thus increases the reliability of grades.

The MDE begins with the course *Foundations of Distance Education* (OMDE 601), where the idea of the portfolio is introduced and concludes with the required capstone course *The Distance Education Portfolio and Project* (OMDE 690). During the course of the almost four years in which the program has been offered, the guidelines for the portfolio have been steadily improved and refined. This has been most prominent in the capstone course and with postings to the MDE Homepage
(URL: http://www.umuc.edu/programs/grad/mde/ .)

Experiences in the capstone courses have shown that students are often conceptually and technically ill-equipped to develop web-based portfolios when they register for this final course. This circumstance leads to a steep learning curve and much more time needed than planned or envisioned for the completion of the portfolio in the 15-week course. It has become clear that portfolio development requires more guidance, in more detail and with more consistency and the program managers have taken on this responsibility. A number of decisions to support students in this ongoing work in progress have been made:

- A tutorial is to be developed that will introduce students to the idea of portfolios and learning journals and the skills and tools needed to support its ongoing 'construction';
- The tutorial is introduced to students in the *Foundations of Distance Education* (OMDE 601) course and a link to and a reminder of its importance is made in all MDE courses;
- Students must submit a draft of their portfolios prior to registering for *The Distance Education Portfolio and Project* (OMDE 690).

3. The Portfolio

3.1. What are Portfolios?

The idea of portfolios as a learning tool is not new, however the digital form in which students must submit the portfolio – as a web page or a web site in the MDE (OMDE 690: The Distance Education Project and Portfolio, 2000) – and the required skills often are. For this reason, the term 'web-based portfolios' is used in this article. Many examples of portfolios exist and are included in the portfolio and learning journal tutorial that was developed to support students and prepare them for OMDE 690.

The web-based portfolio can be a collection of work (assignments, research papers, essays, projects, faculty feedback and comments, photographs and graphics) around learning goals, the rationale for selecting specific items, the learner's reflections on the achievement of these goals and on the portfolio as a whole – "…a focus on growth and development over time, implemented through selection, reflection and inspection" (Barrett, 2001, ¶ 5). The MDE stresses the importance of the portfolio as the "…passport to the professional world" (OMDE690 The Distance Education Project and Portfolio, 2000, ¶ 6) and must also include a resume and/or Curriculum Vita. Using the Web gives students control in assembling, organizing, revising and integrating new materials throughout the course of their studies. Avraamidou and Zembal-Sual's (2002) research shows that "…portfolio development is a constructivist process that facilitates connections between concepts and practices" (¶ 33) and takes process and product into consideration.

3.2. Formal Set-up

The students are responsible for their portfolios. Being involved in a portfolio development process allows students to control, monitor and reflect their progress in the program and can be aligned with curriculum, instruction and assessment. It reflects learning experiences and can be used with potential employers.

It is important to introduce the portfolio early (Barrett, 2001; Kubler LaBoskey, 2000) and provide support to tackle the development phases with guidance from instructors (in the MDE in courses 601 and 690). The portfolios in the MDE program are not evaluated, but specific components must be included in each portfolio and assessment is either 'pass' or 'fail' (OMDE690 The Distance Education Project and Portfolio, 2000, ¶9). Other than that the format is open and there are very few prescribed requirements for content and none for structure. The MDE program's goal is to provide flexibility in the elements of organization, content, ideas and presentation.

Portfolios provide the student with the opportunity for deliberation and decision-making relating to questions and issues that are most important to her/him. The advantage, if introduced at the beginning of a program and followed up on in subsequent courses, is the extended period of time where a number of items can be collected (and discarded) and an ongoing reflective process takes place making the process a natural part of learning. This in turn could promote a portfolio 'culture' and the continued use of the portfolio in a holistic and lifelong learning environment.

In the process of portfolio development Barrett (1999) designated different levels and stages to address. These include:

- Collecting and organizing one's work, which is determined by the portfolios purpose, goals, audience and intended future use. This also includes thoughts on designing and planning the presentation, identifying software and storage resources, assessing one's skills and being aware of limitations (internal and external).
- Selecting from the collection what best demonstrates the specified objectives and goals and show individuality.
- Reflecting on the selected items and the portfolio as a whole. The learning journal serves as the basis of long term recording of reflection and self-assessment and as a tool for metacognition.
- Inspecting and self-assessing the goals, identifying patterns, and sharing with peers and instructors; setting goals for future learning in order to use the portfolio as a professional development tool and for future employment.
- Presenting and publishing in the appropriate manner and evaluating the portfolio's effectiveness in light of purpose and context.

The portfolio should include "… the rationale (purpose for forming the portfolio), intents (its goals), contents (the actual displays), standards (what is good and not-so-good performance), and judgments (what the content tells us)" (Paulson, Paulson, & Meyer, 1991, p. 62). Although the portfolio may serve different purposes at different times these should not conflict with one another and only contain what the student is willing to make public to a specific audience. Aside from showing growth over a period of time it provides a forum that encourages students to develop the abilities needed to become independent and self-directed learners (Ibid, p. 63).

3.3. Contributions to Learning

The advantages of creating web-based portfolios are numerous. The focus on growth and development over time through selection, reflection and inspection of course work, goal setting and self-assessment coincides well with a (the MDE program's) constructivist approach and builds self-confidence. It offers a method which not only identifies ones strengths but gaps in learning, which can generate future learning goals (NSCC, 2003). And, it can enhance a student's multimedia skills thus adding to one's employability.

The storage space for a portfolio is minimal; portfolios are portable and easily shared and accessed and have developmental potential beyond a program. The outcomes will result in unique collections of work, are learner centred and controlled, and provide a valid and balanced picture of a student's learning process measured against a program's intentions. In the MDE it can help tell the program's 'story' and its impact and may also provide a richer picture of the program's participants and their needs. It can be one tool to assess and reflect the program as a whole. Finally, Cooper (1996) believes offering portfolios as an additional form in which to demonstrate ones abilities may make a program more attractive to potential students. However, the students are the primary users and beneficiaries of portfolios "… using it as a tool to map their own progress as learners in terms of … abilities and … outcomes" (Alverno College, 2003, FAQ 9).

3.4. Issues and Difficulties

Portfolio development demands considerable time. In the MDE program, the issue of time management for students and faculty is one of primary concern. The first students had little structured support for the development of their portfolio, which led to steep learning curves in the capstone course *The Distance Education Portfolio and Project* (OMDE 690) itself. New policies were introduced and students who wish to register will first have to provide a portfolio outline. Consistent reminders to students are provided in all courses in order to enable an ongoing process and make the process more manageable.

Topics that need to be taken into consideration when planning the development of a portfolio are storage space for items; self-reflection and feedback; security and the ability to set viewing permissions; organizing links and grouping, as well as publishing and adapting the portfolio for the intended audience.

Using a ‘generic tools approach’ (Gibson & Barrett, 2002) where customized systems are not provided allows for a broader framework of creativity, but impedes the evaluation of the product. The learning journal (see point 4 below) is used to capture the process of the portfolio development, adjustments, and the learner’s growth over time. However, limited validity and reliability make evaluation and comparability difficult. Standardization requires well defined evaluation criteria and rubrics (Neiman, 1999, ¶. 15) and takes time and testing. Standardized outcomes are not intended in the MDE program and may conflict with other special qualities of portfolios. Parsons (1998) reminds us that linguistic and cultural backgrounds and boundaries also need to be taken into consideration. (Cf. Spronk’s chapter in this volume for a discussion of the intersection between learner support and culture/language.)

The use of portfolios over the duration of the program necessitates faculty/instructor training to handle and deal with portfolio development and even to re-think course design to accommodate the notion of portfolios (Batson, 2002). Long term extra burdens cannot be placed on faculty nor is there room for disruptions (time and managerial issues) as reported by Nidds & McGerald (1997). In the MDE program the task of introducing and managing portfolio questions and issues is the responsibility of the instructors in MDE 601 and MDE 690 and the program directors. A tutorial is introduced in MDE 601 as the entry ticket to the portfolio process; the final product achieved in MDE 690 is necessary for successful completion of the program.

Strategic and policy issues are not addressed in this chapter, however, the efforts encompassed in the portfolio development may stimulate discussions around and help determine the scope and value of ‘e-dentities’ (Ittelson, 2001) for students in online programs.

3.5. Technology

In the MDE program there is no prescribed portfolio software although it exists. Instead, commonly available tools that are low cost (or free) and low technology (thus keeping the development process flexible, and at the same time acknowledging students' varying skill levels) are introduced and described. The tutorial illustrates this more closely.

Students need access to a server, storage capabilities (floppy, CDROM or zip), authoring software (Frontpage, Dreamweaver), the skills to use these tools and awareness of associated questions (e.g. privacy issues). Use of other tools, programs, software or multimedia will depend on the students and their own developmental choices. In the MDE program students are responsible for collecting and storing items and in charge of the tools they wish to use.

4. Learning Journals

4.1. What are Learning Journals?

Journal writing is an intentional reflective design strategy used in various learning environments to facilitate and support the development of insight, reflection, cognitive awareness, critical thinking and to promote personal growth. Journal writing is a means of communication with the personal, professional and academic self (Fichten, 2000; Andrusyszyn, & Davie, 1997). Of particular interest for the online MDE program environment is literature (Burge, 1993; Andrusyszyn, & Davie, 1997; Fichten, 2000) that suggests responding and writing responses in asynchronous environments showed increased reflection:

> … the volume of dialogue generated and the asynchronous medium, can make it difficult to link disconnected threads of a discussion conceptually (Harasim, 1990). Access to and periodic review of the permanent electronic transcript generated in this medium encourages reflection and promotes the synthesis of ideas…. Although reflection may take place in the online environment as an outcome of the time learners take to construct responses, encouraging learners to shift beyond perception to deeper, more insightful meaning-making may be more challenging. (Davie & Palmer, 1984; Davie & Wells, 1991; Grabowski, 1990; Harasim, 1990, as cited in Andrusyszyn & Davie, 1997, ¶ 7).

The introduction and promotion of learning journals may help deal with this challenge and add a more private forum in addition to the courses, which are (semi) public.

4.2. Rationale

Learning journals provide a framework to support the process of reflective learning in individual courses and in the portfolio process as a whole. Their use not only documents the developmental process of the portfolios – making it more than just a ‘showcase or selection of work’ (Neiman, 1999, ¶ 7) – but also supports the documentation and self-assessment of processes. It ‘keeps records’, encourages metacognition, ownership and control, and provides guidance. The learning journal will be the basis from which steps, missteps, decisions and successes can be extracted (Hill, Kamber & Norwick, 1994).

Additionally, learning journals can capture research interests, literature and links that can continuously be built upon during the program and will be available when (in the MDE) the final project in the capstone course must be tackled. Steps, styles and advice on learning journals are illustrated in the tutorial.

4.3. Advantages and Issues

The learning journal and the portfolio compliment one another: both provide opportunities to critically reflect learning incidents (Naidu, 2003). At a more basic level the learning journal can be used to record events on a course basis and create transparency in ongoing processes. At the end of the program it can be pulled together at the portfolio level.

In the WebTycho learning environment, the UMUC platform with which the MDE program works/runs, discussions in the classes are often fragmented and difficult to capture, especially with large volumes of communication and interaction. To date there is no sensible and/or easy way to store these messages. The workbook provided in

WebTycho provides a temporary space during the course, but is not user friendly or accessible over a longer period of time. The learning journal can provide a space where conference ‘threads’, workbook entries, assignments, feedback and study group activities can be stored in a structured fashion and are available for review at any time to explore connections between courses, topics, issues and personal development.

Barriers to the development and maintenance of learning journals may be the additional time needed to maintain and manage them. In addition, it is yet another ‘writing’ activity in an already text-heavy environment. It demands self-discipline, motivation and the opinion that it is a worthwhile activity. However, when regarded as a ‘safe learning place’ and not associated with grades or evaluation and with some practice and experience it is reasonable to assume that value for many students may evolve. Given the graduate level of the MDE program, attitudinal barriers to keeping a journal (self-doubt, fear of exposure, feelings of threat, painfulness or discomfort) should not generally be a concern. If so, the introduction of learning journals may have the unintended positive consequence of a safe haven in the online learning environment. Here, as with the portfolio, frequent and regular reminders to keep up the process will most certainly be necessary and along with the tutorial itself constitute an important support element.

The learning journals will not be assessed or evaluated for the same reasons mentioned with regard to the portfolios. Nor is it this author’s opinion that it should be considered a mandatory part of the portfolio and assessed in the final course (cf. Kerka, 2002 for a review of literature on the assessment issues of journals). However, it is a tool that supports the development and finalization of the portfolio.

A number of possibilities exist to write/produce learning journals. Alternatives such as a simple learning journal in a text editor and more sophisticated possibilities such as blogs and wikis (Godwin-Jones, 2003) are discussed and presented in the tutorial. The main focus is on offering a variety of low cost and easy to use tools. The advantage of a web-based tool is that it can be linked to other logs, workbooks and be integrated in the portfolio.

5. The Connections in the MDE Program

Experiences in the MDE thus far and in research have shown that students must be supported in developing their portfolios. The topic of continuous portfolio development must be frequently mentioned to the students and MDE faculty must be made aware of this ongoing process in order to provide the information in their courses and link to the tutorial. This helps ensure that growth and learning are reflected on and students are well prepared to enter the final course *The Distance Education Portfolio and Project* (OMDE 690). Much of the anxiety and pressure felt by students thus far can be relieved. The tutorial for the web based portfolio and learning journal provides structure and guidance with regard to purpose, data structure, type of data, storage, control, design, technologies needed and available, as well as tools to facilitate the development of skills. Time will tell whether regular upkeep and completion of both elements can be achieved and the two activities compliment one another thus providing a richer process and a holistic product.

5.1. The MDE Tutorial

The tutorial for portfolio development and learning journal writing aims at providing background information on portfolios and learning journals with regard to theory, concrete practice and examples. Maximum student flexibility is stressed by introducing generic tools. The tutorial addresses the varying level of students' skills, as well as students' financial constraints and need for flexibility by referring to free or low cost generic tools.

The tutorial is still under development; a preliminary link (link and content are subject to change) is available: http://www.uni-oldenburg.de/zef/christinewalti/tutorial.

6. Conclusion

The concept and maintenance of portfolios and learning journals throughout a program must be systematically and consequently emphasized. Students are introduced to the idea of portfolio building, reflective writing and the tools that can aid them in this process. This encourages and supports reflection and learning throughout the program, facilitates consistency and mastery, alleviates anxiety and bolsters students' confidence.

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BARBARA SPRONK

Addressing Cultural Diversity Through Learner Support

Abstract

Cultural diversity amongst learners in open and distance education arises from colonization and more recently from the internationalization and globalization of learning made possible by distance education. Culture, defined as ways of seeing the world and operating within it, plays a central role in learning, in terms of learners' own cultures and cultural approaches to learning – hierarchy, learning styles, orientation to individual or society, and language; the cultural expectations of academia and its disciplines, including distance education; and the cultural forms imposed on learning by various media. A variety of strategies are suggested whereby distance educators can support learners in ways that not only acknowledge cultural diversity but celebrate it and its potential for enhancing emancipatory learning.

Introduction

Distance education began as emancipatory global practice. Its aims were to break down barriers to education and expand learner populations beyond the geographical, social, economic and political boundaries of the elite core of societies around the world. To the extent that these aims have been fulfilled, the learner populations whom distance education has reached have been arguably more diverse than those targeted by elite education. This diversity encompasses many dimensions, including class, gender (cf. von Prümmer in this volume), age, colour, ethnicity, and culture. It is this last dimension, cultural diversity, that we will consider in this chapter. This discussion will deal with the implications of internationalization and globalization of distance education, in particular the digital revolution, for the cultural diversity of learner populations; definitions of culture, particularly in the context of learning and learner populations; various intersections of culture and learning, in terms of learners' cultures, academic cultures, and the cultural forms imposed on learning by various media; and finally, some examples of good practice in supporting learners that not only acknowledge but celebrate cultural diversity and its potential for enhancing emancipatory learning.

Cultural Diversity in Distance Education

Distance educators, especially in the so-called settler countries of Canada, the United States, Australia and New Zealand, have been continually challenged by the need to take cultural diversity into account in developing and delivering courses and programs, even though these challenges have received only occasional attention in the literature. The populations of these settler countries are by definition culturally diverse, having been the product originally of colonization and subsequently of continuing waves of immigration. As a consequence, even mainstream programs offered by distance means involve sometimes a sizeable minority of learners whose first language is something other than the language in which the materials are written, and whose culture is not likely reflected accurately or adequately in the learning materials. This is doubly or triply so for the first, internally colonized, peoples of these regions – Canada's First Nations, the native peoples of the United States, Australia's aboriginal peoples, the Maori of New Zealand. Distance education, and especially open education, programs have been important educational and empowerment vehicles at both secondary and post-secondary levels for these learners, many of whom live in Third World conditions in some of the most affluent countries on earth (cf. McMullen & Rohrbach, 2003; Amaru, Rae & Shadbolt, 1995; Henderson & Putt, 1993).

In the world's poverty zones potential learner populations for distance education programs are even more diverse. On the continents of Africa, Asia and South America, the agents of conquest and colonization grouped and divided peoples according to political and administrative expediency, often as the spoils of war. If ethnic and tribal groupings were considered at all, the operative rationale tended to be divide-and-rule. The consequence is a set of nation-states in which the languages spoken number in the dozens or even hundreds and where racial, ethnic and religious affinities and divisions provide the raw material on which are enacted multiple and sometimes bloody struggles of identity and resistance. This diversity receives little attention, however, in the distance education literature. The narratives or analyses that do emerge from distance education practice in these contested states (and these are vastly underrepresented in the literature given the enormous numbers of learners that are involved) tell of the challenges of lack of resources, infrastructure, and trained personnel, but seldom of the nearly impossible task of meeting the needs of such diverse populations.[2]

This neglect of issues of cultural diversity in the distance education literature appears to be coming to an end, however, with the advent of on-line learning. As Gayol and Schied (1997, p. 1) point out, "On a global scale, computer mediated communication (CMC) is becoming one of the most important pedagogical sites for upper and middle class people". Thanks to the compression of time and space made possible by the digital revolution, courses on-line are immediately available to learners anywhere in the world who have the resources required to access them. Distance education providers, both public and private, have been quick to seize the opportunity that on-line delivery provides for truly global reach to market their courses worldwide. Many of these offerings are at postgraduate level, in the field of distance education itself (witness the Masters of Distance Education programs that are available online from Maryland and Oldenburg, the UKOU, Athabasca University, and the University of London/IEC) and in business subjects, particularly the MBA. These programs are expensive, and learners – increasingly termed "customer" or "consumers" in the language of the education marketplace – are choosing amongst the programs on offer with quality and value-for-money as prime considerations. Amongst the criteria these consumers are applying in their decisions are (1) relevance of content to their local situations and (2) recognition in the service or support components of their geographical, political and cultural realities. Providers are in turn discovering that in order to provide satisfactory learning experiences to this international audience they must pay increased attention to matters of culture. A variety of articles and books are now appearing that deal with the culture of learners and the cultural and ethical implications of the Internet as a vehicle for teaching and learning (e.g., Gayol & Schied, 1997; Lea & Nicoll, 2002; Tait & Mills, 2003).

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[2] The writings of Indian distance educators are a significant exception, and in their words we do hear of the challenges of honouring the multiplicity of voices, languages, castes and ethnic identities that characterize their learner populations (for examples see the *Indian Journal of Distance Education* and the proceedings of conferences held by the Asian Association of Open Universities – www.ouhk.edu.hk/~AAOUNet).

Defining "Culture"

Before launching into a discussion of these cultural issues, it is important to clarify how the terms "culture" and "cultural" are – and are not – being used here. We are not using "culture" to refer to singing and dancing, or, as Quirk (1989, cited in Gayol & Schied, 1997) puts it, a set of traditions, costumes, and ceremonies shared by groups and generally attached to ethnicities, territories, or institutions. Culture, especially as it operates in learning contexts, is far more profound and dynamic than these surface features alone. It involves beliefs and values, ways of seeing the world, and ways of knowing, thinking, doing and relating to the cosmos and to society. These beliefs, values and practices are learned from infancy onward, and are shared with other members of a particular culture or subculture, even though they might take idiosyncratic forms in any given individual. Culture is very much bound up in the process of defining one's identity, or better, identities, especially if one looks at identity in the way that Eduardo Galeano does (personal communication): "Identity is no museum piece sitting stock still in a display case, but rather the endlessly astonishing synthesis of the contradictions of everyday life". Notions of culture, especially if they are to be useful in discussions of learning, are therefore shifting and changing in their visible manifestations as individuals and groups respond to their circumstances. Inevitably notions of culture are abstracted and generalized from observations and accounts of behaviour; nonetheless, the more concretized one can make these notions in both space and time, in terms of specific groups in specific situations at particular times, the lower the risk of fixing or enclosing people and societies within artificial cultural boundaries.

Culture and Learning: Some Intersections

That said, we will proceed to explore some aspects of culture and learning, in particular the intersections of various cultures – those of the learners, the academy, and the media – in a admittedly abstract manner but with caution and drawing on concrete examples.

Learners' Cultures

Approaches to learning can differ profoundly from one culture to another. These differences can be summarized in terms of hierarchy, style, orientation, and language.

Hierarchy: Learners in much of the world are accustomed to a hierarchical approach to learning whereby the teacher and the text are superior and the learner inferior or subordinate. Learners are taught to pay respect and attention to the teacher and to the texts they are given, which they are expected to regard as authoritative and not to be questioned, at least overtly. Learners are also expected to take responsibility for their learning, which is accomplished through working hard, attending regularly and paying attention (e.g., Scollon & Scollon, 2001; Robinson, 1999). In the literature on culture and learning there tends to be a binary distinction made between a hierarchical approach such as this and the "Western", presumably egalitarian approach to learning. It is probably more useful, however, to regard differences among approaches as matters of degree rather than as absolutes. For example, writings on e-learning tend to emphasize a constructivist approach to teaching and learning, in which learners, as people who are already "knowers", construct their own learning alongside their teachers. This approach takes advantage of the capabilities of the Web and of computer-mediated communication for collaborative learning, but is far from being universally accepted or applied in educational settings by either teachers or learners (cf. many of the chapters in Lea & Nicoll, 2002).

Style: The same point can be made about learning styles. There is no question that learners differ in the styles of learning they prefer. For example, learners may take a "deep" or a "surface" approach to learning, as first described by Martin and Saljo in the 1970s (Martin & Saljo, 1976a, b). Entwistle (1994) further refined this schema to include a "strategic" approach: learners using a "deep" approach to learning are intent on understanding the material for themselves and transforming the information they receive into knowledge; learners using a "surface" approach intend to cope with the content and the tasks set and to reproduce what they receive; those using a "strategic" approach intend to excel on their assessed work and devoted themselves to organizing their time, effort, and conditions of study in order to excel (cited in Thorpe, 2002). There is also research evidence for some cultural constellations of learning styles. For example, Kawachi (2000) used Entwistle's "Approaches to Studying Inventory" (ASI) to research the approaches to learning of some 500 baccalaureate-level students in Japan, and found that these students tended to cluster in the "surface" learning range. Kawachi went further than simply applying the inventory, however, suggesting that a "surface" approach is not the inferior approach to learning suggested by Western interpretations of ASI data, and that restructuring ASI scales for Japan indicates that a surface approach and memorization are associated with good quality learning in Japan. There is also evidence that students tend not to use one learning style exclusively, but rather to use different styles for different tasks, depending on the nature of the task and their level of interest in it (e.g. Crook, 2002). As Crook puts it, this approach to learning as cultural practice moves us away from essentialist notions of "learning style" as something akin to "personality trait" and toward a notion of learning as something we decide to do rather than as something we are (Crook, 2002, p. 152).

Orientation: Students also differ in their fundamental aims or orientation to study, with individualism and education for self-development at one end of the continuum and the group and the advancement of the community at the other. Chinese education, for example, is described as serving the goals of socialist development, wherein teachers cultivate favourable attitudes in students toward learning and society. Learning in a group, face-to-face, is the norm (Robinson, 1999). Another example of group orientation comes from South Africa, where learners in the teacher education programmes described by Bertram (2003) and Corry and Lelliott (2003) appear to rely heavily on student study groups and face-to-face tutorials. A third example comes from distance education programs involving Canadian First Nations learners, who express a strong preference for group-based learning and at least some face-to-face contact with teachers and other learners (Spronk, 1995; McMullen & Rohrbach, 2003). By contrast, education systems informed by the philosophical tradition of the European Enlightenment tend more towards an individualist orientation that places a high value on individual achievement. This orientation is powerfully reflected in distance education, especially in its first- and second-generation versions, the implications of which for learners from other philosophical traditions are explored in more detail below.

Language: Finally, language plays a major role as a cultural characteristic of learners. Robinson (1999), for example, describes Chinese learners as having developed their own distinctive patterns of abilities and thinking (high on spatial, numerical and non-verbal skills and lower on verbal dimensions and analogical thinking), patterns that are attributed to their early learning experiences in mastering a logographic script. Kawachi (2000) also suggests that the surface approach to learning evident from his study of Japanese university students is likely influenced by a cultural difference in thinking, again influenced by neural networks created during early acquisition and reinforcement of Japanese language skills. Kawachi argues that language development in Japanese children generates dependence on visual-spatial intelligence, favouring memorization, whereas English language development preferentially develops logical-mathematical and linguistic intelligence, favouring active questioning. Mayor and Swann (2002) provide a detailed account of the ways in which English encodes values that may be unfamiliar or even unacceptable to students from other linguistic and cultural contexts; teaching through English is associated with a set of communicative and pedagogical practices that may be universally shared. These points are developed in greater detail in the following section.

Academic Cultures

Many features of the academic culture familiar to most learners whose first language is English may strike learners from other linguistic and cultural traditions as alien. These features include:

- Linear logic, thinking in straight lines, rather than the more lateral or spiral logics of other traditions;
- An analytical approach that emphasizes dividing reality into its component parts, rather than more synthetic approaches that emphasis the whole over the parts;
- An expository, declarative and deductive rhetorical style that works from the “big picture” or thesis statement down through the supporting details or arguments, rather than an inductive style that requires learners to be more tentative, stating rationales and arguments before attempting a more generalized statement;
- Encouraging debate, discussion and original thinking, compared with academic traditions such as that which Robinson (1999) describes for Chinese learners, for whom three key rules are “memorize the lesson, practice the skill, and respect superiors”.
- Privileging the written over the spoken word. Despite the continuing dominance of the lecture as teaching mode, learners in the West are assessed primarily on their ability to express themselves in written form. In contrast, most of the world’s languages have only recently been written down, in the context of conquest and colonization, hence the cultures associated with these languages are based on the spoken word and oral traditions and histories that continue to inform daily existence. The impact of the written word on oral cultures has been powerfully described by Ong (2002), and in specifically academic contexts by Scollon and Scollon (1981).

To further complicate this disjunction of so-called Western academic culture with other traditions of learning, there are also disciplinary subcultures. The essays required of a student in a course in English literature, for example, tend to take a form quite different from those required in psychology courses, and different again from the reports required from a physics lab. Distance education modes of presentation in many ways take on the characteristics of a subdiscipline of broader academic culture; many of its characteristics represent a departure from the norm of academic culture, and an even greater departure from the norms of other learning traditions, in a number of ways:

- Learner autonomy as a desired goal – first- and second-generation distance education modes (Nipper, 1989) were founded on the concept of the autonomous learner working through prepared course materials with the support of a tutor.
- An emphasis of "learner-centredness" in development and presentation of learning materials and an effort to meet individual needs, especially through various forms of learner support.
- The teaching function of the learning materials and the consequent facilitating and mediating role of the tutor – tutors in first- and second-generation distance education are expected to support the learner in learning from the provided materials, a role that most academics find unfamiliar and even uncomfortable in their first encounters with distance students.
- Multiple sources for course content – following on the example set by the UKOU, most distance teaching providers do their best to provide a variety of perspectives and voices in their learning materials, in an effort to provoke the learner to challenge the authority of the materials rather than to take their authority for granted.
- Dialogue as a central feature of both the learning materials and the learner support system – materials encourage activity on the part of the learner in response to what she or he is reading, watching or listening to; two-way communication with tutors and if possible other learners is a fundamental requirement of learner support provision (cf. Holmberg; Hülsmann in this volume).
- Processes of learning as a central concern of designers and developers of distance education provision – because of this focus on promoting dialogue and activity/ interactivity in distance teaching and learning, designers tend to pay a great deal of attention to the processes of learning at a distance, certainly more than is typical of the "stand-and-deliver" mode of face-to-face, classroom instruction.
- A focus on learning outcomes – this is a major feature of the emphasis on the processes of learning is, typically in the form of aims and objectives, toward and around which instruction is designed and on the basis of which learner performance is assessed.
- The use of media for teaching and learning – most distance education continues to rely on text, but text that is presented in a variety of ways, including electronic. Other media, such as sound and moving images, can be used as the primary means of providing learning material, but typically these other media are used in support of text rather than in place of it.

Media Cultures

This brings us to the third set of cultures that intersect in the provision of distance education, those of the media. Each medium relies on a different set of symbols – the written word and static visual portrayals in the case of the print medium, moving images in video formats, and sound in audio. Each imposes on the users, both learners and teachers, a different set of rules, protocols and logics, not all of which are equally appropriate for all tasks; the presentation of a detailed argument, for example, is more effective in a print format than in video. Each medium also makes different requirements of the user; for example, in distance learning contexts, video or audio presentations are most effective when accompanied by text materials that provide a framework within which to watch or listen, especially since most learners are accustomed to using video and audio as entertainment rather than for formal learning.

Media for learning have received a good deal of attention in the education literature, focusing on television in the 1970s and especially in the distance education literature on audio- and video-conferencing in the 1980s and early 1990s. The current preoccupation is computer-mediated communication and its challenges to teachers and learners. Gayol and Schied (1997, p. 1) describe its complexities: “CMC encompasses all the existing forms of narration: conversation, speech, written and visual… (and) is more powerful than other media not only because it allows for a fusion of technologies and texts, but because it allows people to have instantaneous, decentralized and always available interventions.” The authors explore the cultural consequences of the global use of CMC, including its continuing reliance on English and its cultural impositions, the possibilities for shaping and even creating identities in an electronic universe, and the potential for collaborative learning and communities of practice. Research on these issues is still at an early stage, and there is still much to know, especially about learners and teachers who use languages other than English (e.g. Aylward, 2002) or whose cultures are predominantly oral rather than written (e.g. Corry & Lelliott, 2003, Voyageur, 2001).

Good Practice

In the meantime, what can distance educators do to address cultural diversity, especially in terms of learner support? There are a number of strategies that foster an approach to learning which not only acknowledges but celebrates diversity, while still respecting the strictures of any particular medium or academic culture or subculture. These are not new; rather, they build on existing good practice amongst distance educators worldwide.

- *Contextualizing the learning*: Make the various cultural contexts – of the learner, the academy and the medium – as explicit as possible. First, tutors and others can structure activities that require learners to analyze their own assumptions about learning and the extent to which these assumptions are being challenged in a given course context. Second, the skills and requirements of the academy and the discipline need to be made explicit, and if necessary, taught; for example, learners accustomed to examinations as the sole assessment mechanism may have to be taught how to write academic essays or self-reflection pieces; learners who in other learning environments have been taught to copy will need to be untrained and assisted in following new rules about plagiarizing. Third, learners will need to be trained in how to use the particular medium of learning, its rules, protocols, requirements and possibilities.
- *Creating safe spaces for learning:* Assist learners to develop and abide by ground rules for communication based on mutual respect, constructive criticism, and informed and principled tolerance. When learners feel that their thoughts and opinions will be welcomed, subject to criticism but in a respectful manner that aims to build rather than in a hostile manner that aims to destroy, they will be more likely

to participate in whatever dialogue or discussion that is open to them, or even to initiate new ones.

- *Welcoming alternatives:* Give tutors and other support personnel the freedom and support to consider and even welcome alternative approaches to academic tasks, such as accepting a video or audio presentation in place of a written essay, or an essay that is structured in an unconventional yet effective manner. In this way learners will gain confidence in their own skills and knowledge, and course presentation personnel will gain experience in other possibilities for assessing learner knowledge and performance.
- *Using media effectively:* Train both learners and support personnel in how to work with any given medium. Even in the case of print, which most of us tend to take for granted, instruction and support may be needed in skills of comprehension and interpretation, especially if learners are operating in a second or third language.
- *Celebrating diversity:* Encourage learners to share information about themselves and to respond to others' sharing. Devise assignments and assign tasks that build on learner identities, and incorporate the results as much as possible into the course material so that everyone can learn from and appreciate the richness that arises from a culturally diverse group of learners.

Conclusion

In sum, in dealing with cultural diversity through learner support, the watchword is to take as little as possible for granted and to open up as many possibilities and alternative paths as the particular discipline and mode of presentation allow. Challenge and resist narrowness, and welcome and celebrate diversity. Both learners and supporters will be the beneficiaries.

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CHRISTINE VON PRÜMMER

Gender Issues and Learning Online

Abstract

The chapter addresses gender as an issue in open, online, and distance learning environments, specifically the role of gender in learner support. The concept of open and distance education has always been associated with the ideal of providing educational opportunities for minority groups and those who cannot access the educational system in the regular way. As we move from traditional ODL toward increasingly "virtual" learning environments, there is no less need for concern regarding the effects of gender and the equitable participation of women in online education. Gender is an issue in Open, Online, and Distance Learning Environments simply because – no matter how "virtual" they are – these environments are part of the "real" world and therefore gendered. Learner support, in particular, has to acknowledge gender as a category which shapes the provision of online education and which affects students and their ability to participate fully in open, online and distance learning. With regard to ODL students, evaluation studies show persistent gender differences in three areas: (1) access to, and control over ICTs available resources and the gendered division of labour; (2) know-how and computer literacy, confidence, language and writing skills; and (3) learning styles, communication preferences, and usage of ICTs.

Introduction

This chapter addresses gender as an issue in open, online, and distance learning environments, specifically the role of gender in learner support. It is based on my 25 years of experience with distance education (DE) at the German FernUniversität (FeU) and draws heavily on our own work and on comparative research, especially research with Gill Kirkup of the British Open University (OUUK). While our research topics and tools have changed over the years to keep pace with the increasing use of information and communication technologies (ICTs), our concern with gender equity has carried over into the "virtual" university.

Providing Educational Opportunities

The concept of open and distance education has always been associated with the ideal of providing educational opportunities for minority groups and those who cannot access the educational system in the regular way. The establishment of single-mode distance teaching universities (DTUs) such as the OUUK in Britain and the FeU in West Germany was an outcome of the political will to provide working-class people and other educationally disadvantaged groups with a second chance to access tertiary education and to obtain an academic degree (Boothroyd, 1994; McIntosh, Calder & Swift, 1977).

Although the social inequalities explicitly mentioned were mostly those of social class and ethnic backgrounds, other factors such as regional location, religion and gender were also part of the equation. For instance, the social movements of the 1960s and 70s in Germany, which gave rise to the creation of "reform" universities and culminated in the foundation of the FeU, had identified the "daughters of Roman Catholic working class parents in rural areas" as the single most disadvantaged social group when it came to higher education (Dahrendorf, 1965, p. 11). My own research at the FeU has shown that distance education does serve as a second chance for women from a working class background to achieve an academic degree previously denied them (von Prümmer, 1997; 2000). Nevertheless, issues of social inequality, including gender, do not play a significant role in our debates on the future of ODL/the virtual university and on student support services in online learning environments (OLE) (cf. Doerfert, Fritsch, & Lehner, 2003).

Modern DE has a long tradition, developing from the early correspondence schools and radio-transmitted classes toward the electronic university and Internet-based learning environments. Throughout, the driving force was a commitment to bring education to people who could not attend the traditional educational institutions. It was assumed that DE is potentially open to all segments of society and offers equal opportunities to those enrolled as distance students. This view came to be challenged by women distance educators in the early 1980s as they started to draw together their experiences in different countries and DE contexts. The Women's International Network WIN was founded at the 1982 world conference of the International Council for Correspondence Education (ICCE)[3] as a response to the striking under-representation of women delegates and the corresponding feeling of "marginalization and male control of knowledge production and transmission" (Burge, 1988, p. x).

The Situation of Women Distance Students

Looking at the situation of women and men in DE, it became increasingly apparent that imbalances existed based on gender and that these needed to be addressed in order to provide the same educational opportunities for women distance students as for the men. For instance, even in DE systems where women students on the whole were equally represented, the distribution of men and women in different subject areas followed traditional lines with men preferring science and technological subjects and women preferring education, social sciences and the arts (von Prümmer & Rossié, 1988; Kirkup & von Prümmer, 1997).

Two very important findings of the comparative empirical research done at the OUUK and the FeU concerned the learning styles of women and the conditions under which they live and study. It was shown that women tend to prefer a connected style of learning which is not always compatible with the distance learning mode. At the same time, women have more domestic and family commitments than men, often having to reconcile their distance studies with paid work as well. In order to attend tutorials and visit study centres, women distance students often have to overcome obstacles such as lack of transport and childcare (Kirkup & von Prümmer, 1990).

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[3] Later International Council for Distance Education, then International Council for Open and Distance Education (ICDE)

Why is Gender an Issue in Open, Online and Distance Learning Environments?

Once differences between men and women were pointed out, they were traditionally explained in terms of a deficit model which saw women as lacking the qualities needed to be a successful distance student. A case in point is the issue of gendered learning styles. The German FeU with its predominantly male student population propagated the ideal-typical distance student as the "autonomous, independent" learner who neither needed nor wanted extensive support. If women wanted "support and connectedness", they clearly lacked the necessary autonomy and independence (von Prümmer, 1993). Similarly, if women chose to study a limited range of subjects, it was basically their problem. And if women didn't manage to organise their lives and give priority to their studies, maybe they were not suited for this type of education and didn't deserve the opportunities offered.

Introducing the concept of gender into the picture means to take a different perspective. It means looking at all aspects of the provision of DE as well as the situation of the students and identifying gender factors and ways to turn gender differences into assets rather than disadvantages. For instance, in terms of this paradigm the need of women "for personal contact with tutorial staff or support networks" is not "seen as psychologically dependent" but rather as bringing to distance education "communication and affiliation skills which are valuable" (Kirkup, 1995, p. 11). In the same way, the gender differences in course choice would lead to a re-evaluation of the androcentric way in which the subject matter is presented.

A striking example of the difference made by applying a gender perspective in DE is the area of students' private lives. This is usually seen as something which does not concern the DE institution (other than granting the occasional dispensation due to family commitments interfering with the meeting of deadlines). It is strictly the student's responsibility to fit his or her distance studies into their work day. From a gender perspective, of course, we can see the gendered division of labour which places many more domestic and child-rearing responsibilities on the women than the men. Women, who often also hold a job outside the home, not only have to juggle multiple commitments. They also have less control over the family finances and are less likely to have a room of their own and undisturbed time and space for studying. At the same time, DE with its freedom from attendance requirements dumps the responsibility for creating one's own learning environment squarely into the lap of the student. It is inevitable, given the structural differences between the private situations of men and women, that men have less of a problem setting up a conducive study system for themselves.

Research has shown that individual women are likely to accept the blame for not being able to cope with all the demands on their time and strength. Acting from a gender perspective, the DE institution can provide information and opportunities for communication which help the student to realise that it is not her shortcoming if she has difficulties staying on top of all her commitments and that she has a right to pursue her education. A pilot project has demonstrated that the DE institution can positively "interfere" with these private circumstances by providing opportunities for communication and the sharing of domestic chores and childcare and, most importantly, by giving women an opportunity to realise that they are not incapable but are dealing with structural patterns based on gendered social divisions.

Gender Blindness vs. Gender Awareness

In my work as institutional researcher at a large Distance Teaching University (DTU), I have often come across the assumption that gender is either irrelevant or can be ignored as distance education systems are seen to be non-gendered or even to favour women. This view is generally predicated on two observations about DE. Firstly, DE offers opportunities for studying without the constraints of time and place associated with traditional face-to-face education. This allows access for people who are prevented by work and family commitments or by other factors such as disabilities or lack of mobility to attend classes but who enjoy a degree of flexibility in their schedules. Women, especially the proverbial "housebound mothers of small children", thus are seen as the primary beneficiaries of DE. Secondly, there is empirical evidence that large single-mode DTUs such as the British Open University (OUUK) and the Canadian Athabasca University (AU) attract a higher proportion of women than is customary at face-to-face universities in these countries. In fact, open and distance learning (ODL) "has provided for many women, perhaps their only chance to learn when other educational institutions were inaccessible to them." (Kirkup, 2003, p. 47).

Both reasons hinge on access, and the suggestion is that women and men have equal opportunities to participate in open and distance education (ODL) and that gender therefore plays no role in these learning environments. The example of the German FernUniversität (FeU), also a large single-mode DTU, proved this assumption wrong as less than a quarter of its student population in the early 1980s were women, a severe underrepresentation compared to face-to-face universities as well as other DTUs. A large-scale comparative research project on the situation of women and men studying at the OUUK and the FeU uncovered a multitude of factors that impacted differently on men and women in both countries (Kirkup & von Prümmer 1990; von Prümmer 2000). Among these factors were the range of courses offered and chosen, course content and its presentation, types of student support services and forms of communication, learning styles and opportunities for interaction and cooperation, the structure and organisation of the degree programs, and – very importantly – students' background and outside commitments and the resources at their command. Later, gender was seen to play a role in the increased use of information and communication technologies (ICTs).

Gender Considerations in Online Education

As we move from traditional ODL toward increasingly "virtual" learning environments, there is no less need for concern regarding the effects of gender and the equitable participation of women in online education. In her book, *The Third Shift. Women Learning Online*, Kramarae (2001) gives three reasons for attention to women's perspectives: (1) Women are the primary users but not creators and educators; (2) mature women face significant barriers through multiple commitments and have serious financial burdens; (3) adult women are targeted as a primary constituency for online learning but little is known about their needs and interests (p. 5).

On the face of it, women in countries like the United States may have equal access to the Internet and the new technologies around which OLEs are built (Hentschel &

Keeding, 2002, p. 7). Some studies of online interaction show a blurring of gendered learning styles and even contend that "the virtual realm is a female domain" (Monteith, 2002, p. 64). Nevertheless, our research has shown prevailing gender patterns in the way in which ODL students can and do access, use and control these technologies (Kirkup & von Prümmer, 1997; Kirkup, 2001, 2003; von Prümmer, 2001). Whether or not OLEs are inviting and friendly places for women depends to a large extent on the recognition of gender factors.

In short, gender is an issue in open, online, and distance learning environments simply because – no matter how "virtual" they are – these environments are part of the "real" world and therefore gendered. Learner support, in particular, has to acknowledge gender as a category which shapes the provision of online education and which affects students and their ability to participate fully in open, online and distance learning.

What Are the Gender Issues in Online Learning?

If we accept the premise that online learning is an extension of traditional open and distance education, we can draw on the findings from DE research in order to identify the gender issues in OLEs. Specific research will then show how these issues manifest themselves in the online learning context, and what other factors might impact differently on women and men studying online.

To begin with, it is important to note that gender operates both within and outside the distance teaching institution. The institutional goal of providing non-discriminatory learning environments may be compromised by adverse gender effects in either one of these spheres or through a combination of institutional and outside factors.

With regard to ODL providers we are dealing with institutions mainly interested in setting up and delivering distance and online courses to increasing numbers of students, and in creating the necessary platforms and technology driven learning environments. Often the composition of the teaching staff shows traditional gender patterns within the subject areas and staff hierarchies. Where development teams consist of men and women, the men tend to work on the technology, the women on the design and pedagogy of the OLE.

With regard to ODL students, evaluation studies show persistent gender differences in three areas: (1) access to and control over ICTs available resources and the gendered division of labour; (2) know-how and computer literacy, confidence, language and writing skills; and (3) learning styles, communication preferences, and usage of ICTs. AU's Master of Distance Education module on gender issues identifies the following aspects as having particular relevance for women: access and success; learning design and support systems; technologies; content and curriculum; and practitioners' challenges (Spronk & Roberts, 1998, p. 6).

Access and Control

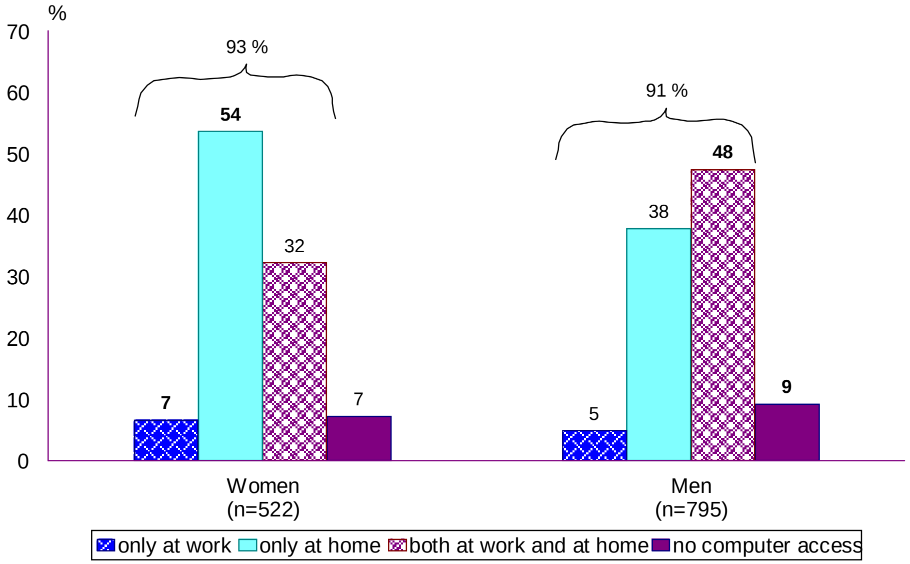
If we take the concept of "open" and distance learning seriously, we cannot afford to neglect issues of equity and overt or latent discrimination. It is true that many women have discovered the Internet and its potentials. It is also true, as our research findings confirm, that gender differences still exist with respect to access to the technologies and control over resources.

A survey on computer access and use of ICTs for distance studies carried out in 1999 at the FeU (von Prümmer & Rossié, 2000) showed that over 90% of the respondents could access a computer for study purposes, and that this proportion had increased quite drastically in the last few years. Significantly fewer students claimed to be experienced users (60% of the men and 40% of the women). Access to the Internet, although higher among the distance students who participated in our survey than in German households in general, was less wide-spread: over half the respondents (55%) had access privately and just under half (49%) had access at work.[4]

Looked at more closely, though, the survey data did show the usual gender-differentiated patterns:

- Women mostly have access to only one computer, usually at home, while many men can access more than one computer and often have access to a suitable PC at their place of work.

Figure 1: Computer access of women and men at the FeU



- academic year 1999/2000 -

- Women have less sophisticated equipment and software, especially as far as multimedia and ICT features are concerned.
- Women are more likely to leave the purchasing decision to their husband / partner and less likely to be the main user.

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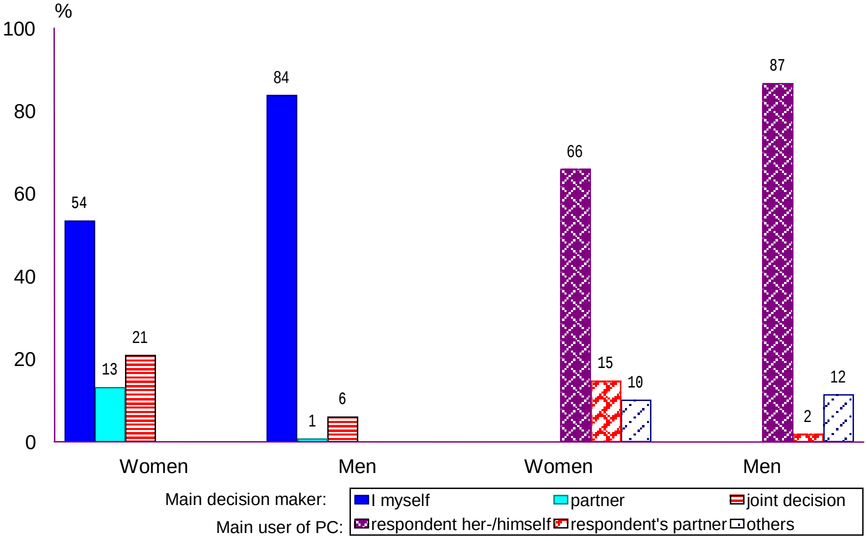
[4] The data presented in the following figures stems from a large-scale survey of FeU students done in 1999. While the percentages of women and men with access to computers and, more importantly, the Internet, has increased since then, the tenor of the findings is still valid. Smaller surveys of students and staff carried out more recently have confirmed the gender differences as well as the patterns relating to subject areas.

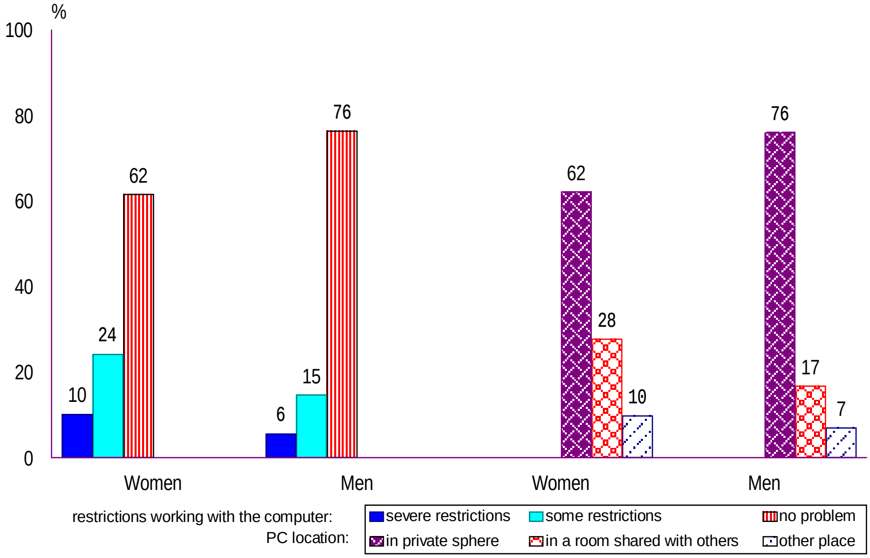
Figure 2: Main decision maker and main user of computer



- Respondents with computer access for study purposes -

- Women face more restrictions in access to computers. Since the PC is likely to be used by other family members, women have to organise their access times, with partner and children often taking precedence. Even when women are the main users, the system is often set up to suit the needs and interests of other family members. Also, women are less likely to have their own workplace and undisturbed learning environment

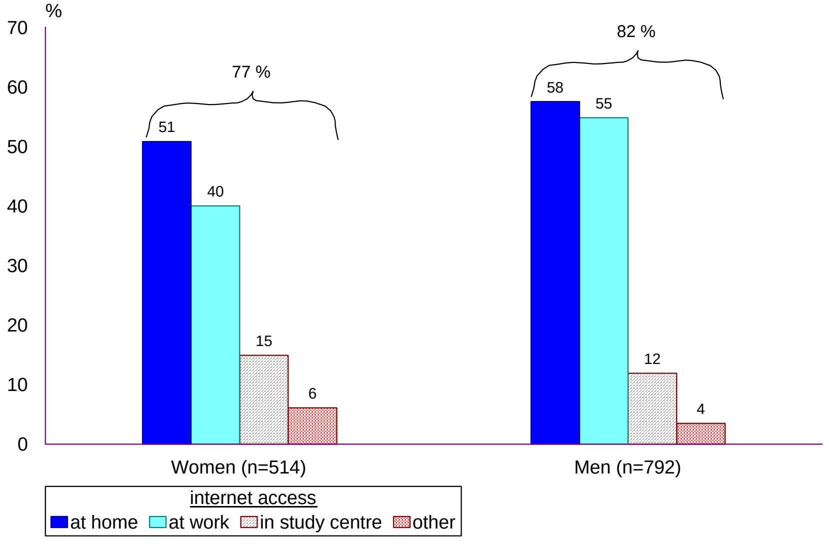
Figure 3: Restrictions of computer use and location



- Respondents with computer access for study purposes -

- Women have less Internet access than men, especially at work, and must rely slightly more on the provision of the technology in study centres and other external sources.

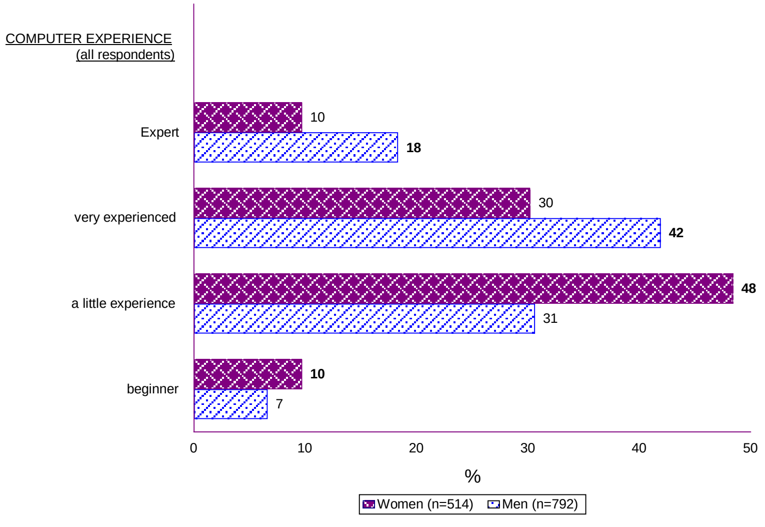
- **Figure 4: Internet access of women and men at the FeU**



- all respondents / multiple response possible -

- Women often have less experience, less interest, less confidence and less enjoyment in using the multimedia and ICT features of a computer.

Figure 5: Extent of computer experience



There are still differences between the students in different subject areas as people studying mathematical and technical subjects – mostly men – are more likely to have a computer, people studying education, social sciences and the humanities – mostly women – are less well equipped. Still, the *overall* results showed hardly any gender differences in computer access, a result immediately taken up by the university as showing, firstly, that gender has become irrelevant with regard to the new technologies and, secondly, that mandatory computer and Internet access would not be a problem for (prospective) students. At the very least the data analysis suggested that potential problems might be created for women distance students if they were required to own an advanced computer and high-speed Internet access in order to study successfully.

Another survey, carried out in the summer of 2002 with FeU students, showed the main use of the Internet for study purposes to be general information about DE and current information on important aspects such as updated examination times and places. Gender differences occurred with respect to Internet use in relation to coursework and information updates. This may be due to men enrolling more often in technical subjects where more courses require online studying.

Table 1: Use of the Internet for FeU study (Summer semester 2002)

multiple response possible	**Women**		**Men**		**All**	
	n	**%**	**n**	**%**	**n**	**%**
general information about DE	558	83.0	556	88.3	1114	85.6
for up-to-date information, e.g. exam times and venues	486	72.3	507	80.5	993	76.3
related to course-work	340	50.6	391	62.1	731	56.1
literature searches	362	53.9	334	53.0	696	53.5
to contact other students	307	45.7	307	48.7	614	47.2
communication with teaching staff	237	35.3	231	36.7	468	35.9
in the context of tutorial services	199	29.6	185	29.4	384	29.5

Based on research and experience we argue that the virtual university must not be left alone to develop "naturally", following technological advances and software revolutions without regard to their social effects. In order to ensure the full participation of women in the virtual university, factors which hinder this equal participation must be identified and measures taken to redress gender imbalances.

Characteristics of Online Learning Environments

One essential difference between traditional face-to-face universities and DTUs as well as the virtual or electronic university lies in the fact that the learning environment becomes the private concern of the student. The learning environment is no longer provided on a campus and in university buildings. Factors outside the university determine the learning setup and environment to at least the same extent as do the university‘s study rules and regulations. The student rather than the university takes responsibility for the conditions in which studying takes place and therefore the student‘s personal life, resources and access to technologies become increasingly important for her/his study success.

The "privatised" learning environment has some advantages. Students no longer have to fit in with schedules and locations set by the university. Their learning activities are more compatible with their other commitments. Many students, especially women, have no other way of pursuing their education and studying at a university. Students can communicate with other students and with tutors/lecturers either live or through asynchronous channels. This provides opportunity for working in groups and collaboration without spending time and money on travelling.

The "privatised" learning environment also has some disadvantages, especially when seen from a perspective of social inequality and gender. Students are responsible for setting up their own learning environment and have to supply the necessary equipment. This is easier for men who are used to fiddling with machines and less intimidated by hardware installations. Electronic communication and online studying require costly hardware, software and online-access but not all (potential) students have the necessary resources and financial means. Women are more likely to be among those who find it hard to afford studying via the Internet.

Isolation and Communication

Internet communication can help to reduce feelings of isolation which are more of a problem for women than men (Kirkup, 2003, p. 49). Even in DE systems that offer study centres as a meeting place, social isolation can be an issue for women because there are often few study centres and students have to travel great distances to reach them. Not only is travelling to study centres time consuming and expensive, women also find it difficult and expensive to organise childcare or the care of invalid dependents. Another problem might be the fact that there simply are too few women on a given course, e.g. in mathematical and technical subjects. For these women the Internet can mean a real opportunity for communication and networking because the diverse forms of communication allow asynchronous as well as synchronous contacts and exchanges, and e-learning offers possibilities for cooperation and connectedness without forcing women to travel and be present at specified times in specified places.

The danger of isolation increases if communication happens exclusively through the Internet. This is especially true for women who are not employed outside the home and are less likely to meet other students – or even other adults – in person. Women also have multiple commitments as mothers and homemakers, often in addition to full time or part time paid work outside the home. Often considered to be able to make their own schedules and manage their time independently, working mothers actually have highly fragmented workdays, having to fit their studying and their Internet use around the demands of family and employment.

How Can the Institution Support Women Students?

There are two approaches to learner support for women that are not mutually exclusive.

Affirmative Action and Gender Mainstreaming

Measures of "affirmative action" or "targeting" in OLEs ensure that individual women or groups of women students are not disadvantaged. They include women-only study groups/ courses/seminars, computer literacy classes; women tutors/counsellors; feminist/women's topics and concerns; provision for communication and interaction and networking. A successful example of this was a specific use of email in an online seminar, with the expressed goal of creating community and motivating students to participate in discussions, submit assignments and complete the course.[5]

“Gender mainstreaming” ensures the integration of gender perspectives in all aspects of online teaching by reflecting on potentially differential effects of content, presentation, organisation and structure, etc. (Jelitto, 2003, p. 1). The consistent use of gender-inclusive language and non-stereotyping images is an example.

In order to support women students, OLEs must be designed as women-friendly, non-discriminatory places, and students' personal environments and life situations must be taken into account. As these circumstances have profound effects on the way in which women and men are able to organise their lives around their studies and to pursue their academic interests successfully.

Examples of Good Practice

One area of support and services for (potential) women students are measures promoting the necessary computer-literacy and user confidence as well as supplying easy-to-use software with instructions which can be followed by people who are not familiar with computer jargon and do not aspire to become computer experts.

Another area is the field of content, presentation and curriculum. Women's studies and gender studies have been shown to be effective in redressing some of the existing imbalances of an androcentric educational system by focussing on previously neglected issues such as gender differences in subject choice and performance (e.g. Deem, 1980), women and social class/social mobility (e.g. Abbott & Sapsford, 1987), or housework and the domestic division of labour (Oakley, 1974), and by looking at issues from a different standpoint. The success of these programmes suggests that one of the ways to promote women's participation in the virtual campus is the inclusion of women's/gender studies in the curriculum, dealing specifically with gender-related issues and developing women-friendly ways of using the new technologies for teaching and learning processes. Prominent examples of this are courses offered by DTUs, namely the AU Master of Distance Education (MDE) degree which includes a course on *"Special Topics: Gender Issues in Distance Education"*; and the OUUK Masters Programme in Cultural and Media Studies which includes a module on *"Gender, Technology and Representation: Women, Machines and Cyborgs"*.

An example of a different approach is the VINGS-project developing an interdisciplinary and inter-university degree programme of *"Virtual International Gender Studies"*. The project is a pilot not only for its feminist content and curriculum and its use of ICTs, but also for the co-operation of the four participating universities, including the FeU, in course production and design, student support and crediting systems. Considering the limited resources and the high costs of developing high quality teaching materials and maintaining effective and conducive structures for interaction, it is very important that women from different universities, and from different countries, are given the opportunity to set up networks for co-operating and for sharing not only course materials but also their teaching and learning experiences and the results from their evaluation research. In this way duplication can be avoided, both of materials and of mistakes, and a larger store of courses by and from women can be built up.

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[5] This was in the context of the VINGS project which is about to be completed. A report including the email experiment will be available in 2004. Contact: ulrike.schultz@fernuni-hagen.de.

Conclusion

There is a tendency to assume that more and better equipment, more sophisticated computer programmes, more powerful data transmission, and increased communication technologies equate higher quality education. But is this true? We contend that "better servers" in the university do not automatically mean "better service" for the students, especially with regard to gender-specific patterns in access and study conditions. DTUs must no longer ignore the social and political implications of ODL provision as this adversely affects the chances of women. For instance, the proponents of virtual universities tend to focus on the technologies at the expense of the human element – we all know of cases where seemingly endless amounts of money are being spent on buying the hardware, and little or no money is spent on hiring and training the staff who will have to work with this technology, or on making sure all students and staff are computer-literate.

There is also a tendency of funding bodies and decision-makers to focus on subject areas which have an obvious affinity to technology such as the male-dominated fields of Computer Science and Electrical Engineering, and to be less open to developments in "unlikely" subject areas such as philosophy and literature which are more popular with women students. In fact, in the last few years some very interesting multimedia courses on the Internet or on CD-ROMs have been developed in subject areas such as law, psychology, literature, and even philosophy.

To the extent that ICTs replace the traditional media and access to advanced technologies becomes an essential prerequisite for studying in the virtual university, there is an increasing danger that women will be disproportionately disbarred from entering and enjoying the virtual learning environment – unless gender issues are taken into account and the definition and construction of the virtual university is no longer left to the existing male-dominated, androcentric academic and political decision-making processes or to "market forces".

In addition to these issues which have emerged with the advent of online education, we still have to contend with the unresolved gender issues of traditional ODE. If anything, the gendered effects of students' home also being their place of study are more pronounced in the "virtual" or "electronic" university. Not only must they find the space and time for undisturbed studying, students now need unrestricted access to sophisticated computer equipment and fast Internet connections. They also need the know-how to operate the equipment and the inclination to work online. Here gender differences still exist as does the danger of women being inadvertently excluded from equal access to the new online learning environments.

Gender is still an issue in ODLE, and an "institution that strives for gender equity must, in our opinion, be committed to presenting itself on the Internet/WWW in a non-sexist, gender-inclusive way, have an explicit policy regarding the design and content of Web sites, institute monitoring procedures with sanctions for offences and take measures to educate users in 'netiquette' " (von Prümmer & Rossié, 2001, p. 143).

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LINDA J. SMITH & KRISTEN DRAGO

Learner Support in Workplace Training

> *"In the information age, knowledge and knowledge workers increasingly drive organizations. Because knowledge constantly makes itself obsolete, the pressure is on everyone to learn and continually apply new knowledge to problems and opportunities"* (Schermerhorn & Chappell, 2000, p. 15).

Abstract

Cost efficient and effective delivery of learning in the workplace is a critical issue, particularly in today's information society with global competition for many organizations. Skills and knowledge of existing workers must be updated periodically to address competition, fast-changing technology, and organizational change, and talented new recruits can be difficult to attract and retain. Workplace training through distance means can help meet these needs, and support of the learner can be the critical component for success. Organizations are beginning to realize that the key to their success is learner success, and targeted methods of support for the learner are paramount. While there are common aspects to learner support in any environment, support in the workplace has its particular character and issues as compared to adult distance education in general. This article discusses the goals of workplace training, the trainee profile, challenges faced by the workplace learner, suggestions for addressing those challenges, and prioritization within the learner support plan.

1. Introduction

The traditional business model has been turned upside down. An emerging theme of the new management structure is support, particularly support for staff and staff learning. Along with corporations, government and education sectors are now seen as business entities in their own right. In the new order of things management is at the bottom of the pyramid as a support force that drives customer service. Schermerhorn and Chappell (2000) observe that every person in this new organization is viewed as a "value-added worker", creating and innovating in the interest of best meeting consumer needs. A primary source of an organization's competitive advantage is innovation, and people must be learning in order to be creative. Thus, critical to an organization's success is a focus on building core competencies by developing the value-added worker who can produce and apply knowledge. Web-based training and education has quickly become a cost-effective and efficient solution to the growing demand for learning, but this virtual method presents unique organizational challenges. A rush to produce and provide online materials without specific regard to the audience has resulted in low-quality courses along with low learner interest and completion rates. Organizations are beginning to realize that the key to their success is learner success, and targeted methods of support for the learner are paramount.

Achieving this success is a significant challenge. Skills and knowledge of existing workers must be updated periodically to address competition, fast-changing technology, and organizational change, and talented new recruits can be difficult to attract and retain. Workplace training through distance means can help meet these needs, and support of the learner can be the critical component for success. While there are common aspects to learner support in any environment, support in the workplace has its particular character and issues as compared to adult distance education in general. This article discusses the goals of workplace training, the trainee profile, challenges faced by the workplace learner, suggestions for addressing those challenges, and prioritization within the learner support plan. Where available, reference is made to literature that specifically addresses support of the workplace learner; however, as LaPadula (2003) found in seeking research concerning support of the higher-education student, research directed to the workplace environment is also scarce. For example, Berge's (2001) comprehensive book on distance training focuses more on organizational issues of implementing a training program rather than support for the distance learner. Similarly, the recent ASTD yearbook (Woods & Mantyala, 2001) covers a broad range of topics related to distance training, but does not specifically address learner support.

2. Goals of Workplace Training

On the employer side, training is linked to organizational performance objectives. Workplace training goals address three types of employee learning to meet those objectives:

- Information transfer
- Skill development
- Competency development

Information transfer provides learners with important knowledge about company policies, operating procedures, pertinent laws and regulations, and other matters of organizational concern. Key issues can include ensuring that all employees requiring the training complete it and retain the information.

Skill development involves teaching employees how to perform specific functions, use various technologies, or operate equipment. Key issues can include measurement techniques to determine that skills have been mastered and remain current.

Competency development may include an aspect of skills training (e.g., interpersonal skills development) but covers broader areas requiring critical thinking, the application of principles, and sound judgment. Examples of training areas are leadership, management, and analysis. Key issues can involve appropriate selection of employees and opportunities for exercising the competencies gained.

3. Profile of the Workplace Learner

On the employee side, organizations can no longer count on the loyalty of employees to dedicate themselves to training, particularly if that commitment extends to learning on their own time. From the employee perspective, learning must lead to the attainment of personal goals as well as organizational ones. Packer (2000) discusses the trend for employees to demand more than a job with a salary. He explains that employees often leave because they feel unappreciated and/or see no career path. He describes a growing tendency for talented employees to keep learning to maintain marketability. That includes a mobile perspective in which persons frequently move to better jobs that will support ongoing development. Employees who do not constantly update and improve skills and knowledge are highly vulnerable in today's economy where downsizing, outsourcing, and even company failures have become common.

The need for training extends from entry levels all the way to top management and applies to long time employees as well as new hires. Today’s workplace learner may be anyone from a recent high school graduate to a highly educated senior manager. S/he may be embarking on a first career or may have changed fields several times. In other words, developing a learner support program for workplace training means planning for a broad spectrum of needs, individual backgrounds, and personal learning styles.

4. Challenges for the Workplace Learner

There are obvious elements of success for workplace training, such as: well-designed courses and training materials presented by capable instructors; reliable technology for delivery of courses; and absence of an undue financial burden on the employee for participating in training. However, there are other areas in which learners can be challenged if support is not offered.

4.1. Learning About Training Opportunities

How does an employee find out about training options and needs? Learning about training opportunities goes beyond having access to a list of courses. Employees need information to help them determine which and how many courses they should take and when they should take them.

4.2. Motivation

Why should an employee invest him/herself in a training activity, particularly if participation extends beyond the normal workday or the level of effort exceeds normal job expectations? In a study concerning online training, Bonk (2002) found a lack of incentives common for organizations with poor course completion. Employees need a way to map training to career goals as well as organizational goals in order to find the motivation and energy needed to overcome other training challenges and to excel in learning. Performance assessment that relates training to improved job skills and potential for advancement can add to an employee's motivation.

4.3. Preparation for the Training Subject Matter

Is the employee ready for the training? Employees who are not prepared with prerequisite skills and knowledge are obvious candidates for failure.

4.4. Access to Equipment and Resources

Can the employee access the distance learning environment and course materials? Employees need appropriate equipment and facilities as well as sufficient time and schedule of availability.

4.5. Becoming Familiar With the Distance Learning Environment

Does the employee understand the distance learning environment? For many employees, the transition from a traditional classroom environment to a distance learning format can be difficult and may require an orientation period. The distance learner must accept more responsibility for his/her learning progress, time management, and participation.

4.6. Understanding the Technology

Can the employee use the technology easily? Each distance learning technology has unique characteristics which users must understand for a successful learning experience. For example, learners in Web-based training may need to learn how to upload files and participate in bulletin board discussions. Video-conferencing learners may need to become accustomed to time delays in speech, limitations on movements, and color and pattern issues for cameras. Interactive video training may have unfamiliar keypad and other equipment to master.

4.7. Adapting to a Diverse Training Setting

Can the employee be comfortable in a course where there is diversity of culture, language, and/or thought? Few persons in the workplace today are assured of a homogenous environment. Large organizations and small may have a workforce from various cultures, countries and opinions. Even if the workforce lacks diversity, the customer base will almost certainly exhibit it. For courses offered by external providers, there is a potential for distance learning students to be located anywhere in the world. Acceptance and appreciation of diversity is important for today’s learner.

4.8. Study Time vs. Job Responsibilities

Does the employee have adequate time to study? A conflict between study time and “getting the job done” often results in the job being the winner in the short term. Both the organization and the employees can be long-term losers, however. Bonk (2002) found lack of time as the chief reason survey respondents selected for learner attrition.

4.9. Assistance With Difficult Concepts, Training Exercises, Etc.

Where can the employee find help when s/he has problems with learning? The distance learning instructor may not be able to provide the full spectrum of support needed by the workplace trainee.

4.10. Peer Relationships

How does the employee relate to peers in distance learning? In a classroom, face-to-face experiences can offer opportunities for bonding, networking, and mutual support. Similar opportunities can benefit the distance learner.

4.11. Applying Learning to Achieve Job Performance Goals

How can the training be tied to employee job performance? While difficulty in relating training to outcomes on the job is not limited to the distance learning format, it may have its own problems, especially if the training environment looks and feels very different from the employee’s job setting.

5. Addressing the Needs

In considering ways to support the workplace learner in overcoming obstacles, attention must be given to how, when, and where the employee works and learns. Although the traditional office still exists in many places, Wentling, Waight, Strazzo, File, La Fleur, and Kanfer (2000) anticipate e-learning being integrated into a work environment where telecommuting, flextime, and self-direction are commonplace. Generally, those directly involved in training support include corporate trainers, instructional designers, training managers, and Chief Learning Officers (Bonk, 2002); however, learner support responsibilities extend throughout the organization and can include supervisors, higher level managers, peers, and other knowledgeable employees. Phillips (2002) reports that the American Society for Training & Development ranks managerial and peer support as lead factors in promoting successful e-learning outcomes. Included in the following discussion are examples of what some organizations are doing to support learners in their distance training programs.

5.1. Information Sources

There is a variety of information needed by the workplace learner. First, employees need to learn about the organization's training program. Hipwell (2000) recommends using three stages of a marketing and promotion approach with a launch that introduces the program, internal marketing that promotes it and registers users, and maintenance marketing that maintains and increases usage over time. He sees this as critical, especially in organizations that are just beginning to incorporate distance learning in their training programs. Other suggestions he offers are to: distribute business cards with help-line contact information; send brochures to employees via email; and hold an online "open house" to provide information, register new users, and link e-learning to solving business issues and problems.

The U.S. Navy offers a Distance Support Anchor Desk online to provide connectivity and information via a single, integrated network with access throughout the world (http://www.anchordesk.navy.mil). Through this site, training officers and personnel can identify required and optional training, access training courses and materials, locate and participate in user communities, find professional and personal development resources, and track training and education accomplishments, status, qualifications and certifications. Ford (2000) uses the acronym PRIORITY to discuss how to make training "stick," and key within the principles the letters represent is the communication of other important information. Employees need to know organizational goals, expectations for training outcomes, and feedback on the results. She notes that training will not be a priority for employees unless they receive the clear message through behavior as well as written and oral communication that it is a priority for management.

5.2. Identifying Training Needs

Step one of identifying individual training needs is counseling to evaluate an employee's position in the organization and what training is necessary for him or her to meet performance goals. But as Short and Opengart (2000) explain, limiting training plans to achieving immediate goals can result in a loss of employees and a waste of available talent. Many employees are seeking employability rather than job security. Personal growth and career development, then, may become key components of an employee's individual development plan (IDP). The IDP is a "living document" that provides a roadmap to the employee's future. Short and Opengart recommend that organizations link audits of learning, skills, and knowledge into the business planning process. Ongoing development and promotion of talented employees can provide the career paths they desire and the competent workforce the organization needs.

5.3. Pre-Training Assessment

Pre-training assessment is needed both for individual employees and for what the organization needs to consider regarding its workforce. Individuals require skill and knowledge assessment to determine their need and readiness for specific training. Both individuals and the workforce should be assessed regarding language and diversity issues. Distance training that crosses international boundaries or includes recent immigrants may require assistance to learners having difficulty with the common language of the course. Diversity must be addressed both in terms of a learner's ability to interact successfully with a diverse group (whether the diversity is of culture or opinion) and the trainer's ability to address cultural differences and expectations. Weech (2001) describes four critical dimensions that highlight variation in cultural expectations: egalitarianism versus hierarchy; individualism versus collectivism; achievement versus relationship orientation; and loose versus tight structure. Appropriate support cannot be provided without understanding cultural expectations (See Spronk in this volume on cultural diversity).

5.4. Orientation to Distance Learning

Distance learning, particularly in asynchronous formats, requires an independence and discipline unfamiliar to many persons. Employees can be introduced to the distance environment by handbooks and online tours. Orientation materials should include information on how to obtain tutorial and technical support. However, there is also a need for companion materials to these orientation tools to evaluate how well prepared students are following their use. Self-assessment tools that test independent learning skills and tutorials for addressing deficiencies would be valuable components of the orientation package.

5.5. Orientation to Training Technology

Phillips (2002) recommends that organizations never assume learners will know how to use a training technology platform. Everyday use of email and word processing software does not guarantee understanding of how to upload files, use multi-media resources, diagnose technical problems or perform the full range of activities that might be found in a course. An orientation program that includes explicit instructions and ready access to ongoing technical support are crucial.

5.6. Access to Resources

Access to resources can be more difficult in a work environment than for the at-home distance learner in higher education. For example, the organization must evaluate the impact of networks and firewalls on access and system performance for online learning. The availability of an employee's workstation for study rather than job activities must be considered. Conflicts in access time or competition between job activities and study time might require a separate area where employees can use equipment uninterrupted for course participation. Zimmerman (2001) cites a study by the ASTD that found people preferred working at a training center rather than their cubicles. Bonk's (2002) study reported that over 20 percent of responding organizations relied on employee access at home. Issues regarding responsibilities for providing equipment must be addressed. Some technologies (e.g., video-conferencing or interactive video training) require that the learner have easy access to particular equipment locations at specific times for course participation. In addition to ensuring access to appropriate equipment, access to digital libraries, glossaries, field-specific Web resources, book and Web-link recommendations, and online newsgroups can be useful (Bonk, 2002).

5.7. Mentoring

The value of mentoring in career development is well-established (Woodd, 1999). Mentor support can be offered through several models: apprenticeship; mentoring to achieve professional qualifications; and reflective practitioner. Woodd examines whether an effective mentoring relationship can be maintained when the primary form of contact is through telecommunications media. In her case study, Woodd found that telementoring could be used effectively as a supplement but could not replace the full spectrum of in-person mentoring functions, which include providing the direct social contact that many students prefer and perhaps need.

Stokes (2001) describes UK research in which a telementoring model developed in the Netherlands was studied to determine the effectiveness of providing online consultancy by trained mentors and academic experts. Mentors are accessed through posting questions on a Web site. Replies are sent by email and stored on a knowledge base for general reference. While the study addressed training support for small business managers, the concept could be adapted for a variety of training settings to expand the availability of mentors if the limitations found by Woodd are considered.

Hamilton-Jones (2000) describes another kind of mentor who is an educational counselor. This tutor mentor provides a broad range of ongoing personal support functions throughout an in-house degree program.

5.8. Peer Support

Workplace learners can receive peer support both within and outside of their courses. Phillips (2002) recommends that organizations begin introducing e-learning programs by selecting employees who have demonstrated an ability to learn independently and who are comfortable trying new things. She describes company successes in promoting distance training when these e-learning leaders have served as training ambassadors to their peers by giving presentations and encouraging co-workers to approach them with questions. For peer support within courses, Bonk (2002) reports that tools for learner online collaboration and sharing can be highly useful.

5.9. Incentives

Motivation is important not only in getting employees enrolled in distance training, but to complete courses and excel in applying the training to enhance job performance. Bonk (2002) reports that pedagogical principles were found to be most important for motivation in Web-based learning situations. Specific useful motivational techniques within a class included: cases or reflections about jobs; brainstorming or idea sharing; group projects; and visiting experts. However, work-related incentives, such as wage increases, rewards, etc., were cited as highly important to 31 percent of respondents. Hipwell (2000) recommends recognition programs that can be as simple as providing certificates of achievement or completion, notices in internal newsletters or bulletin boards, or notes to managers. An ASTD study acknowledges the importance of such incentives to motivate employees to take and finish courses (Zimmerman, 2001). Others suggest more substantial rewards, such as compensation for training taken outside working hours, salary increases, time off, gift certificates or added job responsibilities for successful completion of training. Phillips (2002) recommends a menu of rewards to accommodate different motivational choices.

Perhaps the most powerful motivational force is for employees to see a clear linkage between training and their personal career goals, including their marketability for better jobs within their organization or externally if they need to seek a new position (Packer, 2000). Employees may elect to take courses that are job-related outside of working hours. The Distance Education and Training Council (1996) describes techniques to motivate employees by providing tuition aid, such as: advancing tuition at time of enrollment to be repaid by wage deductions which can be reimbursed at course completion; reimbursing tuition in full or part upon course completion; or reimbursing tuition by a scale based on grades.

5.10. Time Management

Time management must be addressed both by the supervisor and the employee. On the supervisor's part, s/he must support the employee by allocating adequate time away from job responsibilities to engage in study. To avoid interruptions by co-workers, trainees may be allowed to post a sign indicating "study time" and forward phone calls to another employee or answering service. Phillips (2002) recommends that workplace learners be encouraged to set up a regular study schedule at the beginning of their training to help them manage the relatively unstructured environment of asynchronous courses. She gives examples of effective uses of reminder systems based on pop-up calendars for scheduled tasks or automatic emails that notify learners that they have not worked on a course for a specified period.

5.11. Post-Training Application

Tarr (1998) points out that distance learning does not mean the employee works in isolation. She emphasizes the need for opportunities to apply new skills and knowledge in the workplace with the reinforcement and ongoing support of managers. While this situation is the same for classroom learning, management may need to pay attention to planning for and scheduling such opportunities in the context of the more flexible time frame of distance learning. A reward system for applying new skills may also be effective.

5.12. Training Evaluation and Remediation

Evaluation should be an ongoing activity by both the learner and management. Self-assessment tools can help the learner monitor progress, and management should maintain awareness of employee progress in order to determine the need for coaching or mentoring (Tarr, 1998). Bonk (2002) recommends that organizations evaluate completion rates and add time to competency measures.

6. Prioritizing in the Support Plan

Learner support for workplace training requires a significant commitment of time and resources. Bonk (2002) recommends that organizations develop strategic plans related to e-learning, including guidelines for acceptable levels of student course completion, skill retention, employee satisfaction, and return on investment. Planning will be an ongoing activity. Berge, Muilenburg, and Haneghan (2002) note a difference in the perception of barriers during the initial stages of organizational maturity in distance education and training and advise that ranking which obstacles are most important to solve will change as distance training and education within the organization gains importance.

Neither individual learner support nor organizational progress can be maintained effectively without an information system that tracks training history, skills and competency mastery, and course completion. Individual employees, supervisors, and training planners need appropriate access to a training database for the many management information functions it can serve.

Support for learners may be affected indirectly by supporting their managers. Packer (2000) recommends rewarding managers' performance, in part, on their record of staff development. Similarly, Phillips (2002) recommends holding front line managers accountable for their staff's e-learning course completion. Tarr (1998) suggests a manager's guide that outlines training goals, courses their employees may take, and the manager's role and responsibilities. Management guidance in training issues, assurance of access to resources, and provision for study time are key elements of success.

While initial infrastructure for e-learning may be modest, orientations, mentoring, and incentive programs also must not be neglected. Prioritizing among the various kinds of support may be more a determination of the degree to which they can be implemented rather than which ones can be excluded.

7. Conclusion

Several major themes emerge in books and articles addressing workplace learning. First, no organization is likely to develop a learning culture unless management from the top down supports it in communications, resource commitment, and acknowledgement of achievements. Second, distance training requires orientation programs to ensure learner comfort with the environment and delivery technology. Third, ongoing involvement of supervisors, peers, mentors, and technical assistants will reduce learner attrition and help ensure employee progress. Next, incentive programs, whether they are simple or substantial, are important in motivating employees to seek and complete training. And finally, organizations need to track progress of their employees' learning, course completion rates, and training effectiveness.

While many of the learner support features sound like obvious contributors to success, there is little research available to provide hard data regarding the return on investment potential. Larger organizations as well as academic researchers may want to include studies of both the short and long term benefits of providing support to the workplace learner.

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UNIT THREE: PLANNING AND MANAGEMENT OF LEARNER SUPPORT

ALAN TAIT

Management of Services to Students

Introduction

This chapter engages with the management issues in open and distance learning (ODL) and concentrates on those relating to the delivery of services to students. The chapter attempts, following Paul (1990) and Rumble (1992), to identify those which are specific to the ODL context rather than addressing management issues in general. The chapter also attempts to do this in a practical rather than abstract way. To begin with, there are a number of issues which deserve particular attention. These are:

- Distance education represents substantially an industrialised process of teaching and learning, and support to students is conceived within the framework of a service industry (Sewart, 1993).
- Support to students is often delivered within a decentralised, distributed or franchised model, and accordingly many of the core activities like tutoring and counselling are ‘invisible’ to those with management responsibilities.
- There are specific issues with regard to the ways in which support services as a sector of activity relate to others within an ODL institution, conventionally divided into course production, operations and administration.
- In ODL as well as elsewhere in education, there is rapid change and at present considerable confusion about the relative status of students, clients and customers, which makes management problematic (Tait, 2000).

The Service Industry

Education and business have grown up separately over the centuries in most countries, with different purposes and ethics. Over the past 20 years, however, there has been in many countries a deliberate move by governments to diminish the autonomy of education as an activity which exists for its own sake, and to bend it more closely to serving the purposes, generally economic, of the state. Going along with this has been the widespread imposition of a changed attitude to the status of the staff in education, for the most part by bringing in accountability as against professional autonomy. This has been accompanied to a significant extent by related attempts to change the status of students more closely to that of customer. Much of ODL has also developed a separate, but in complex ways related, ethos of student-centredness, which has grown up alongside the inclusive access policies which have empathised with those excluded from more conservative and less student-centred institutions. All this bears on the core managerial question of ‘what are we doing in this organisation?’. The weight of this question revolves around whether the success of our students is a primary or secondary purpose. However, in many sectors of education and training where ODL is used, it is accepted that successful and satisfied students represent primary institutional goals, even within the conflicting value systems in relation to 'customer care' of having to fail students who do not meet required standards. Within an industrialised teaching and learning system, it has now been widely accepted that there needs to be a service industry approach to student support in achieving this primary objective (Sweet, 1993). What does this mean for management of services to students?

Essentially it means a very complex balance between the systems necessarily developed in order to achieve reliability and consistency, along with the capacity to relate to the individual and group in such a way that learners feel recognised in their particularity. There is on one hand a necessary bureaucratic framework which tells students what they can have, and on the other hand a commitment to giving students in various ways what they want. The balance, it hardly needs saying, is difficult to achieve. The success of student services in ODL is built not just on the second of these, although some colleagues seem to think from the best motives that this can be the case. It is also crucially built on the systemic development of services that demand complex routines. In their turn they necessitate management of a kind to which educational institutions have not hitherto, to any great extent, been accustomed, and to which there is an understandable resistance. If those systems, however, are delivered without real understanding of what students need (and this in part grows out of listening to them), without flexibility or transparency, and without a commitment to their success, then student support will remain only a bureaucratic service in the worst sense of the word. This represents the axis on which the rest of this chapter in many ways turns.

The Invisibility of Service

Where tutoring and student guidance and counselling are delivered on a decentralised basis this creates the significant issue of 'invisibility' of service. The same can apply to small units like study centres, from where administrative services are also delivered. While this might be worrying enough in itself, it is compounded by the fact that a significant proportion of services to students are delivered precisely where management and quality assurance activities find it difficult to operate. While there is no magic wand to wave, there are a number of elements that contribute to the construction and maintenance of good practice which is invisible to the headquarters of the organisation. These include focuses on staff and systems.

Management of Staff

With regard to staff management, the following elements are identified as important:

- appointment of staff;
- creation and maintenance of job descriptions;
- the induction and initial training process;
- mentoring;
- supervision and appraisal;
- teamwork;
- continuing training;
- values driven management.

Appointment of Staff

Different institutions and organisations will have their own approaches to the appointment of staff. Modern management demands that equal opportunities approaches are taken in order both to contribute to equity in any particular context, but equally to ensure that the best appointment is made to the job. For the appointment, it is necessary to construct a job description which makes clear what is to be done, and a person specification which makes clear the essential and desirable qualifications, experience and skills. The job description should include a passage on the values associated with the job, i.e. the approach to engaging with students that the institution wants to see in place. The candidates may undertake tasks which are based on the job specification e.g. making a presentation to students or tutors, doing some correspondence teaching in advance, or doing an in-tray exercise.

Creation and Maintenance of Job Descriptions

Each person should work to a job description which is current, and which can remind them of their core tasks and responsibilities. While there may seem to be a labour-intensive and bureaucratic element to this, it is surely better in the context of supervision to revise job descriptions annually so that they remain relevant, than to begin to ignore them because they are felt to be useless. Job descriptions should be simply and clearly written, with active verbs, e.g. manage staff in study centres; advise students on choice of courses etc.

Induction and Initial Training Process

Induction and training represent key ways in which the practice and values of the institution can be inculcated in the individuals who come to work for it. This is especially important in contexts where other educational systems from which candidates will naturally present themselves have very different values etc. from the ODL systems that they are coming to join. Induction and initial training can then follow on from the job description used at recruitment.

There is no doubt in distributed systems it is more difficult to provide such training than in a campus-based or one location organisation. While some induction is needed immediately in all cases, this can be provided on paper or through computer-mediated communication (CMC), while more interactive forms of induction can be staggered at least to some extent in order to bring new colleagues together if at all possible. The induction and initial training should be as much about values and mission as about immediate tasks in hand.

Mentoring

The allocation of a mentor for the first year or so of appointment for a new member of staff can substantially assist both in supporting that new colleague in his or her work in a non-threatening way through a peer, and also support the institutional agenda of establishing the values which underpin interaction with students or tutors. Mentoring, in other words, supplements the line management relationship (where it is termed so). It can be particularly effective as the values are seen to come from a peer and thus to be accepted by one’s immediate colleagues, and do not seem only an imposition from ‘management’ (cf. Morgan & Smit, 2001; Panda & Jena, 2001).

Selection and initial training of the mentor are thus essential elements in this approach if it is to be adopted. Key elements in training of mentors should include exercises to:

- develop listening skills;
- allow analysis of boundaries, e.g. which issues the mentee should be encouraged to discuss with his or her line manager;
- to allow discussion of the issues around confidentiality.

Supervision and Appraisal

Effective supervision of staff represents perhaps the core condition for the delivery over time of services to students of a quality desired by the institution, however defined. For many staff in education, if not in other contexts such as training and human resource development (HRD), such practices may still be foreign, since the staff inherit elements of a long tradition of being free spirits, accountable only to their subjects and to their peers. This conflicts in many educational contexts with both scale and complexity of what needs to be done, and also with the widespread interest of the government. Further, ODL using industrialized methods with new divisions of labour in all but the smallest of institutions reinforces the need to develop new approaches to management in general and to the supervision of staff in particular

A combination of qualitative and quantitative approaches makes up the optimum mix for this demanding situation. Along with the bottom-up approaches which induction and mentoring bring, it can be suggested that those with managerial responsibilities have three key approaches:

- commitment;
- trust;
- conversation.

By the first of these is meant that managers should themselves demonstrate commitment by showing interest all the time in what is happening. If, however, managers are always out of the office engaged with ‘more important’ activities, this will negatively impact on those they manage. Further, they will firstly not know what is going on, and secondly will demonstrate their contempt for the core tasks to their staff.

The second core component is the notion of trust. Here it is intended that within appropriate accountability and supervision, there should grow out of the managerial style a perceptible understanding by those who provide services to students that they are trusted to do so. In the ODL context this means above all that staff are trusted to work effectively and in accordance with the values of the organisation when they are working ‘invisibly’. This should grow naturally out of effective appointment, induction and initial training.

By the term ‘conversation’ is meant that managers should spend time listening to as well as talking to their staff over the delivery of services to students. Much can be learned of a qualitative nature both about the kinds of services which students are using, about shortfalls in services, and about what is additionally needed. Regular attention through conversational management to the delivery of service can make a substantial contribution to both the building of and, importantly, the maintenance of quality. To achieve this, managers need to be there.

Cultural specifics will determine in any one organisation how these or other managerial approaches need to be applied. The managers and staff sit down together, say once per year, in order to review achievements against historical objectives, revise objectives for the next year, and identify training needs. The revision of the job description can be undertaken in this context.

Teamwork

Large scale organisations in many contexts have over recent years moved away from extended hierarchies and watertight job designs towards teams where tasks are managed more cooperatively and flexibly. As ODL in most contexts is a more industrialised form of teaching and learning, this development is of particular interest, no less so in the delivery of services to students.

The creation of teams across traditional boundaries of teachers or academics and clerical/ administrative colleagues can do much both to improve and maintain services to students and to build on the values which the organisation wants to drive the work. This supports the objective of establishing quality in work which is 'invisible' much of the time. These teams can, for example, review the management of the admissions process, the quality of study centre accommodation, or the time-tabling of face-to-face elements of provision, in which all parties have an interest. Leadership in teams can move across hierarchies within education.

There will also be a need to participate in teams outside those concerned immediately with services for students, and which are based more widely within the institution as a whole. This is particularly true for senior staff. As the section below on value-driven management argues more fully, it is essential that the knowledge and values that drive the work of supporting students are represented elsewhere within the organisation. It is also conversely the case that those supporting students need to understand, through working in teams, the values and constraints that govern the work of those writing courses or who are responsible for regulatory compliance of one sort or another.

Continuing Training

It would be paradoxical if a book in the field of management of ODL were not to endorse the importance of continuing training and development, and the rationale for HRD as a contribution to organisational success does not need to be further rehearsed here (Robinson, 1998). It is, however, worth identifying some of the priorities for training and development after the induction period. The issues can be addressed in a number of ways. Training and development can be conceived to be:

- for remedial purposes for the immediate job;
- as preparation to meet change and future organisational needs;
- for individual development.

The first area, that of training for remedial purposes, is likely to be of the most clearly functional nature, e.g. providing IT skills where these are lacking, or induction to ODL. It will be particularly important where an institution or organisation is first going into ODL, as new skills will need to be introduced, such as management of student databases for ODL, the writing of course materials, or the creation of Web-bases. Important decisions need to be made, depending on the local context, as to whether training should be brought in for these purposes or developed in-house.

Responsibility for training must, of course, have home(s) in the organisation. Development of such a training function can represent a compromise between the alternatives of in-house and external provision. In-house training may be arranged for those that need to be met on a continual basis, while in smaller-scale cases, the training will have to be brought in. Points to be made to any outside training organisation or individual training include:

- Has the outside training adequately studied the needs of your specific organisation and of ODL?
- Will the training package be tailored or adapted to your needs rather than be an off-the-shelf programme which will have redundant or inappropriate elements?
- Is there space after the event or course for the outside training provider to discuss results of evaluations and other evidence of outcomes?

The second area, preparation to meet change and future organisational needs, is more developmental. In our specific context of supporting students, developmental training might look at:

- demographic trends over the next 10 years;
- historical evidence about recruitment and student success, which can be analysed in terms of its future trends and what activities might be undertaken as a response;
- management exercises in the context of, say, expansion. What would need to be done of an incremental or a qualitatively new nature?
- analysis of perceived competition, and resultant activities;
- implications of new technologies;
- international conference attendance and study tours in order to assess developments elsewhere.

In many of these activities it is very worthwhile to involve students as an element in the mix of participants.

The third element of training relates to that which is primarily for individual development rather than being based on an assessment of the organisation’s needs. This can include support in terms of fees and time for further study, or the learning of new languages. The extent to which support for training should be restricted to that which seems related to the support of students will vary from one context to another, and there is legitimate variety of view as to the extent to which such training contributes to staff retention or their departure for new opportunities. However, it is worth saying that there is an increasingly influential view that any learning undertaken by employees benefits their organisation in some broad ways.

Value-driven Management

Lastly in this section on staff management, comes the issue of value driven management (Paul, 1990). What is identified here is that management is not solely a technocratic activity, and in the context of ODL and of supporting students is unlikely to be related only to profitability. The institutional values as they relate to the importance of education and training for the development of people within a regional, national and increasingly international context should underpin all managerial activity.

The support of students in ODL will therefore need value-driven management which is founded on the importance of, not disinterest in, the success of students. This core belief, if acted upon by senior managers, will have a good chance of illuminating the work of all those supporting students, leading to students being treated seriously, with respect, and with care. Such values will inform many aspects of the work, e.g. transparency, i.e. the importance of systems and regulations being framed in ways that students can readily understand; and timeliness, i.e. the recognition that students are entitled to responses which come within an agreed period.

A supporting core value lies in demonstrating understanding of the ways in which educational goals are integrally connected with administrative competence, and overall represents a core managerial achievement.

A further and related core value lies in the ways in which the knowledge that tutors and students have is accorded status and respect. These categories of participants, from the periphery, if you like, in many ODL systems, are marginalised in many societies from a historical point of view in relation to their status as well as geographic location. But the knowledge they have is important knowledge for the institution or organisation, and represents a necessary and integral element alongside those of managers and teachers or academics. Those managing services to students may encounter attitudinal difficulties in espousing and operationalising such values.

Finally, services to students should embody the values of specificity, by which is meant a commitment to the individual and to the locality. Services to students are predicated on the recognition that particular students have specific needs arising out of their local circumstances and, therefore, student-centred values need to be promoted by those staff who serve students.

All these values have further to be represented in other domains of the institution or organisation. The core values that are developed in the management of student services are, in the very nature of things, unlikely to be universally shared across the organisation. The strategic planning at organisational level should contribute to the sharing of values throughout. Those managing support to students will have, as an important element in their role, the representation of the values which underpin their activities to other parts of the institution, as well as to the colleagues whose activities they direct.

Management of Systems

The management of systems, while it has followed the management of staff in this chapter, is no less in fact no less important. Indeed it stands as a foundation without which ODL of any scale at all cannot be managed. Attitudes of academic snobbery towards those who design and manage systems which support students is entirely misplaced, not least from a practical point of view. The systems which will admit and register a student, ensure the delivery of teaching materials or provide access and troubleshooting to the Web, which allocate tutors to students, accurately and speedily record changes of address, record future course choice, manage historically the accumulation of credit and notification of awards, chart and communicate dates of examinations, manage assessment scores, and so on: all these contribute as much to student progress and success as anything else that the institution does. The development of such systems relies on teamwork: those with responsibility for teaching and learning must work as colleagues alongside those with responsibility for the development and management of systems.

While this calls for professional management where the ‘academy’, i.e. the educationalists, are equals, not masters, those who come from administrative or managerial backgrounds have also to change their perspectives. They have to develop a framework of attitude that takes the ‘academy’ seriously, and they have to engage with the ideas about education and training that colleagues from that background bring. These shifts in attitude can be all the more difficult to manage in dual-mode institutions, where the institution may be dominated by more conventional delivery of teaching and learning, and thus the different needs of ODL are difficult to establish.

The design and management of systems for ODL is a huge topic which deserves a volume of its own. Within the scope of this chapter, however, the following elements can be identified as particularly important for notice:

- systems tailored to available technologies;
- record-keeping and data management;
- communications maps;
- complaints procedures;
- audit and inspection.

Tailoring Systems to Technologies

Key decisions in selecting and using technologies to support services to students lie firstly in whether they are for internal organisational use only, or are to be accessed by students. In organisations dealing within anything more than a handful of students, computerised data management is essential. However, the step-change for a centre-periphery organisation, as many ODL institutions are, lies in the capacity to network computers across a range of locations and their proper maintenance. What this reveals is that technologies have the potential not just to speed up what we do, but to change what we do and how we do it. As new technologies are introduced and facilitate new developments, the following questions become pertinent and need to be responded to:

- Can we deliver existing services more effectively? What are our criteria and measures?
- Can we deliver new services?
- Do we need different categories of staff for new services?
- Do we need staff in different places for new services?
- Are there implications for change in management activities and structures?
- How much technical support do we need in using new technologies?
- How do we construct a budget for the new services?
- How do we evaluate new developments, including cost-effectiveness measures?

Record Keeping and Data Management

There are a number of key points which can be briefly made about this complex area. They are made in the knowledge that the ways in which data is collected and manipulated is going to vary from the services for students in one institution to another in radical ways that make comprehensive discussion difficult.

Data Capture

Careful thought needs to be given to what data is wanted by the institution. There are a range of interest groups or stakeholders who will need to be consulted. These include:

- the admissions and guidance systems;
- the teaching materials delivery system;
- the tutorial system;
- the assessment system;
- evaluators and institutional researchers;
- strategic planning system;
- marketing;
- outside bodies, e.g. government departments.

These functions will exist in some form in all ODL systems, and nothing will be more frustrating or damaging to effectiveness or teamwork than to find that essential data needed by one or other function has not been collected. There will certainly be discussions about how much data can reasonably be collected from students or clients at the point of entry or during study. It will be more facilitating if data are collected, analysed and results communicated by one unit.

Data Manipulation

Obvious though it seems, in systems of more than micro size students will need a unique identifier, in other words a number or sequence of letters and numbers. This identifier means that the institution will never (or almost never!) confuse one student with another. A further dimension that is essential for almost all systems is the historical one. However data is collected, there need to be ways of using it historically so that you can ask, for example, which courses the student has taken, how much credit has been gained, or when a student is due for an award.

Communication Mapping and Management

The complexity of the division of labour in ODL organisations means that effective communication is essential. Mapping and management refer to activities which first of all make clear who should talk to whom about what (the mapping); management refers to the operation of systems that build in actual communication, which actually takes place. It also refers to the culture and attitudes that prevail. Most importantly, it means that while customer and service relationships exist between departments, the status of knowledge is one of equals.

There are a number of areas of particular concern within which such concepts can be more concretely understood. These include the following.

Course Production and Course Presentation Communications

In second generation ODL there have been particular difficulties in many systems over the communications between those responsible for producing courses and those responsible for delivering them in the field. The worst scenario is that which occurs when the design and production stage has been all but completed before thought is given as to how students will study e.g. how will materials be delivered, how students will be admitted or selected, who will tutor the students, how practical experience where necessary can be incorporated, how examinations can be held etc. In third generation ODL, where information communications technologies (ICT) provide the essential media, there may be more integration between production and presentation in the actual running of the course.

Centre-periphery Communications

From the perspective of communications management perhaps the most important element in any ODL organisation that has a centre-periphery structure concerns the ways in which the two elements communicate. The culture in which this is done is as important as the actual activity. In many systems, the culture has grown up that the centre has high status and the periphery – meaning tutors, and staff in regional offices or in study centres – has low status.

There are elements of this which are very difficult to impact upon. Nonetheless the well-managed organisation will at least recognise that the knowledge which is developed in the periphery is essential to the organisation as a whole – it is useful knowledge. In particular, it draws on knowledge which is much harder to identify at the centre, namely that which is drawn from the public at large about perceptions of the institution; from students and from tutors. Within dual-mode institutions, this can be especially hard if ODL is already seen as an inferior activity within the mainstream.

Thus, systems need to be developed which draw upon knowledge developed in the periphery. These conventionally are based on meetings at the centre, to which staff from regional centres and study centres, and sometimes students, are invited. Colleagues from peripheral posts can be used as chair-people. Occasional meetings can be held in regional offices or study centres, and ways should be found of involving students on major committees.

Where possible, meetings by telephone- or video-conference can be very helpful in diminishing time for travel. They can be especially important for minor meetings, or as elements within a schedule of meetings which take place half on a face-to-face basis and half through one of these technologies.

An enormous amount of communication within the organisation and to the external world now takes place by e-mail and CMC. Through its social dimension, CMC allows discussion across a range of locations in ways that resolve issues of time and place in revolutionary ways. In many cases, it offers a medium which is strong on discussion rather than decision making, where often it seems still to be felt that face-to-face meeting is imperative. There seems to be a kind of hierarchy developing within management where e-mail, CMC, video- and telephone-conferencing and simple telephone calls are conceived as being in ascending order, with face-to-face meeting remaining not only a desirable element, but the most desirable element where particularly difficult, important or sensitive issues have to be resolved.

Where all or some of these approaches are well managed through achieving the optimum fit of a particular set of circumstances, the term ‘distributed organisation’ rather than 'centre-periphery organisation' becomes more appropriate, and is certainly preferable. As is clear, it suggests a flexible if complex set of arrangements across more than one location, rather than a structure based on a headquarters and outpost mentality.

Institution-tutor and Institution-student Communications

Particular difficulties arise in the ways in which the organisation relates to tutors where they are part-time and distributed, and to students.

These are based around geography: the tutors and students are simply not in the building. They arise also around status, with the knowledge that tutors and students are all too often seen as subordinate to those who work full-time for the organisation. However, it has been argued here that the knowledge deriving from one category or another of participant in the overall ODL enterprise should not be seen as subordinate. While tutors and students represent only one element within understanding across the institution as a whole, their contribution should be seen as integral and necessary. This can be very galling for those who perceive their status within the organisation as threatened by having to listen, sometimes to criticism, to those they perceive as 'junior'. However, the knowledge that is represented in tutors and students about the success or otherwise of what is happening within the organisation is very important in its development and improvement. All, including the most senior, have something to learn.

Academic-administrative Communications

Communications about student services can also be diminished by attitudes which derived from former traditions within education about the subservient role of administrators vis-à-vis academics to teachers. As with tutors and students, it represents a false understanding of who has relevant and useful knowledge. In the context of ODL, where in more than micro-systems elements of industrialisation are likely to be present, it also represents a particularly damaging diminishment of a range of functions which can be termed administrative, and which are of core and integral importance in the delivery of services to students.

The most effective way of changing both the practice and its supporting culture in an organisation where this sort of separatism is present to a greater or lesser degree, is to move towards teamwork rather than the more traditional committee structure. In the latter, those with administrative responsibilities have been seen as servicing rather than participating in discussions and decisions. Their participation is likely to be more assured where they are members of such meetings rather than servants of it.

Communications Through Time

As well as spanning the organisation in terms of horizontal and vertical structures, in terms of geography as well as categories of staff, communications have to be mapped and managed across time. It is clearly good practice to have a record of major issues discussed and decisions taken at any meeting. It is essential that the record of the last meeting is referred to in order to check on who agreed to do what. Further, there need to be indices of decisions taken on a cross-organisational basis, so that when considering an issue it is possible to check quickly when it was previously discussed and what has been done about it.

Complaints Procedures

Complaints from students create both systemic and cultural issues for education in general. For ODL, there is the particular issue of how easy it is for students learning at a distance to make their complaints, and the impact on their progress or conversely dropout, if channels are not created (Fage & Mayes, 1997). Thus the first element in any ODL system is that students know how to complain. The second element is that the institution must have procedures for acknowledgement timescales within which answers will be given, and authority must be developed in order that redress can as easily as possible be made when necessary. At the same time, there must be channels to senior authority, perhaps an ombudsperson in a big system, for students who do not gain satisfaction and still feel aggrieved. Systems for logging complaints transparently must be set up, and management must ensure that student complaints are not swept under the carpet but addressed in a competent way. A central log for all complaints may be advisable so that an overall institutional perspective on what students are complaining about can be gained. While there are of course unjustified complaints, the culture should be that complaints are treated seriously, as the students who make them.

Audit and Inspection

There is no space in this chapter to address fully the issues of quality assurance for student services in distance education, under which audit and inspection can be broadly located (Tait, 1997). However, the terms denote both the regular internal cycles of audit and review which need to be undertaken to assure that service standards are being met, as well as the increasingly familiar process of external inspection from government agencies in many countries to assure that public resource is being effectively used. Services to students delivered out of sight in distance education may present particular difficulties for quality assurance activity. These can, however, be addressed through well-planned activity, gathering information from students and tutors, as well as ensuring that standards, for example of timeliness in services, process in teaching, facilities in study centres etc. are met.

Conclusion

For both the staff and systems dimensions of student services, managerial persistence over time is essential, in order to diminish the tendency which appears to be universal for systems overall to atrophy, and for familiarity to engender a relaxation of standards and a loss of commitment and concentration. At the same time, systems have to be developed which do not hamper the organisation by their cumbersomeness, either in terms of paperwork, meetings, or a bullying insensitivity to the needs of staff themselves, all of which where the balance is wrong will negatively affect the very achievement that they are intended to support. They will also diminish the potential for the fulfilment of key quality indicators such as respect for students or timeliness of response. The development and running of managerial processes to support the delivery of services to students in ODL, where there is a high degree of invisibility, is no easy task. Clearly, there will be a range of differences in how these elements are developed and applied in different educational sectors with different histories and cultures. The distinctions between single- and dual-mode institutions are particularly significant, and the revolution which new technologies brings difficult to foresee with any precision. This is especially the case where the call-centre model of customer care begins to impact on large-scale ODL organisations, and where information and advice is increasingly given to students on the Web. However, the commonalities of delivering student services in distributed ODL systems will tend to drive at least some commonalities of practice around the world, which make discussion of this nature worthwhile.

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GILLY SALMON

The Voice in the Wilderness: Enabling Online Teachers and Tutors to Tame Learning Technologies

Abstract

Higher Education (H.E.) is facing the complexity, strangeness and contradictions of a transformation the like of which no generation has seen before. Societies are in the midst of a fundamental rupture with the past that involves both loss and gain (Stille, 2002). The patterns of the use of information and communication technologies (ICT) cannot easily be determined, as the ways people adopt and use new forms of technologies are largely unpredictable. The introduction of ICT into these complex territories can result in academic deskilling rather than enskilling. Teachers and researchers in H.E. face a greater variety of tasks with fewer resources. Information and Communication Technologies (ICT) may increase these trends unless we recognise it for what it truly is – a tool and a medium to be embraced, moulded and shaped to our purposes. Using the metaphor of taming the wildness of the new landscape, this chapter explores the importance of the role of the human mediators in the support of online learners, giving an example of how their skills can be developed through the online medium.

1. About the Wildness

Although most learners are comfortable and familiar with the use of new technologies in their everyday lives, many teachers in Higher Education (H.E.) feel that Information and Communication Technologies (ICT) are worrying, risky or 'wild' when applied to learning and teaching environments. They experience ICT as strange, difficult to understand and not sufficiently well adapted to teachers' and learners' needs. Productive use of ICT does not have a long tradition from which teachers can draw and reflect.

The patterns of use of ICT in everyday life cannot easily be determined. The ways in which people adopt and use new forms of technologies are inconstant. Networked and digital technologies have been absorbed at a very rapid rate into entertainment and business. The speed and the unpredictability of the growth of the use of ICT have left the traditional architects and guardians of structured change processes in education struggling to keep up. Teachers concerned with the quality of learning experiences, may worry that ICT are insufficiently well tuned to learning needs and that some learners may focus on the technology rather than the learning content or process.

Acceptable use and the meaning given to new technologies are a complex mix of "… distinctive and perplexing forms of rational and non-rational behaviour" (Silverstone & Haddon, 1996, p. 45). Silverstone and Haddon see the implementation of ICT as a process of 'taming' wild objects, and adapting them to the routines and rituals of every day life – a process that has yet to happen on a wide scale for teaching and learning. At the same time that there is an increasing need for assistance in finding a way through the wilderness in the educational context, but a key aspect of the Internet is its ability to cut out the 'middle man' or agent.

These recent trends and pressures created by ICT have reduced operational control and discretion in H.E. and resulted in something of a 'humbling' of the academic profession (Ramsden, 1992). Hence, some academics and teachers have felt deskilled rather than enskilled by the addition of 'wild' solutions to their teaching and learning environments. They may be unsure which of their well developed teaching skills from the classroom are suitable for the less familiar online world or what expertise they need to acquire.

1.1. Taming the Wildness

In practice, the uses of the Internet are essentially *social* (rather than about computing), instrumental and closely connected to work, family and every day life. Castells tells us that [the Internet] '…is an extension of life as it is, in all its dimensions, and with all its modalities' (Castells, 2001, p. 118). The attempt by educational institutions throughout the world to jump on a highly technological 'solutions' approach to tapping into this amazing opportunity for enhancing H.E. and lifelong learning has contributed to many expensive disappointments.

First, moving online does *not* have to mean a loss of active and social learning. The key to success is a balance between applying useful older concepts about learning and the implementation of innovations using the best of networked technologies. Successful and productive online *teaching* is a key feature of positive, scalable and affordable e-learning projects and processes.

Second, regardless of the sophistication of the technology, online learners do *not* wish to do without their human supporters. Instead, learners talk of challenge and support by their lecturers, or of contact with the thoughts and the work of others. Most people also mention the fun and companionship of working and learning together. Such benefits do not have to be abandoned with the introduction of ICT to learning.

1.2. Clearing the Way

We are now at something of a crossroads in H.E. Some would say a watershed. Many colleges, universities and training organisations are 'moving online' with the associated challenges of student satisfaction, quality and professional uncertainty. For campus-based (terrestrial) students, e-learning is an addition to more traditional approaches and needs to add its own value. It may be necessary, in blended situations, to make the online components especially enticing or students and teachers will naturally gravitate to more familiar modes. For distance students, it may be their whole learning world. Either way, the role of the online teacher or trainer is known to be a major influence on success and pedagogical changes (Coldeway, 2002).

Many campus-based universities are seeing the benefits of enhancing classroom-based work with technology. Technology-enriched classrooms result in more student-centredness, and more collaborative and applied learning. Most importantly the roles of teachers are transformed.

> As the students began to use the technological resources to manage their learning, the role of the teacher was transformed from lecturer to guide. The availability of vast amounts of easily accessible information freed the teacher from the role of

> purveyor of facts… to encourage the students to use the computer as a tool for problem solving and decision making. (Hopson, Simms, & Knezek 2001-2, p. 117)

2. Empowering Human Mediators

The impacts of links and networks have the power to redefine the roles of teachers at all levels, but they need to fully engage in the *experience of working online* in order to appreciate both the needs and benefits of the environment for teaching and learning. There are multiple paths for reading and writing, and a huge range of possibilities for learning and teaching interactions. The culture of teaching in H.E. was created largely through apprenticeship in disciplines and consists of complex sets of values, attitudes and behaviours. Hence, influencing teaching practice to accommodate the best ICT, whether as a replacement or within a blend, needs careful consideration beyond simple ideas of training.

There are many instructors who are admirably trying to offer to others the chance to be ‘trained in new technologies for teaching and learning’. The subjects or participants of training however, jump straight into their usual trusty vehicles, framed by a complex world view acquired mainly through their formal education topped up by sprinkles of advice from people they admire and their own good and bad learning experience. They then believe if they learn about the menu items on, say, Blackboard or some other pre-prepared environment and maybe revisit ‘learning styles’, or teaching techniques and haul all this online, that all will be well. It’s not. However, offering online experiences to faculty for their development, preferably with peers, means that less training is needed and more online empathy and professionalism is encouraged.

Clearly, such attempts to address the reskilling of academic and teaching staff through half-day workshops only scratch the surface of influence and change. Indeed teaching faculty are often then convinced that teaching online is mainly about learning to use a computer programme. Similarly, focusing training on the use of the features of the Virtual Learning Environment (VLE) creates the merest dent in the long apprenticeship in practical and theoretical knowledge or competence in the teaching profession, much of which is acquired rather mysteriously, or at least informally. The innovators and the early adopters persist with more or less grace. Many of the others become convinced that satisfactory knowledge transmission and construction must happen in classrooms!

What we know of learning is that if we want professionals to change what they actually do, they need opportunities to explore what they already know and what they are prepared to develop. They need a little specific detail but then to engage in dialogue to investigate its implications in wider contexts. They must also engage in actual practice but with the chance to reflect (Harvey & Knight, 1996). First new skills must be acquired to enable teachers in H.E., new and experienced and at all levels, to be able to create, manage and successfully promote participation in interactive conferencing online. Second, attention needs to be given to how teachers can regain confidence, professionalism and keep up to date (Barker, 2002; Bennett & Marsh, 2002; Tsui & Ki, 2002).

The mechanism for acquiring and continuing to develop should be through the *medium itself* and depend on the role of experienced facilitators and peers. In this way, universities can operate as a *community* of scholars. There are two motives for groups of people to work together. One is self-interest and the other common interest (Csikzentmihalyi, 2003). The first can be promoted through extrinsic factors, such as incentives, but the second needs trust and mutual respect. By enabling groups of H.E. teachers to work together, through the new media, intrinsic motivators will gradually emerge and successful good practice be promoted.

3. The Lion Tamer

The term ’e-moderator’ has been adopted for teachers, trainers, instructors and facilitators in the online environment, especially those working with asynchronous networked technologies such as conferences and bulletin boards.

Stepping down from the ‘spotlight’ of the lectern and into the more shadowy virtual world can be hard to do. However, lecturers used to being successful ‘leaders’ in classroom situations have the basic skills and knowledge to become e-moderators, including introducing topics, engaging participants, and running plenary and feedback discussions (Broadbent, 2002). Knight’s (2002) summary of the move towards online facilitation is instructive: ‘It is ironic that what some take to be dehumanising technology may actually need teachers to be more empathetic and considerate’ (p. 122).

The more successful and scaled networked courses for teacher development use scaffolding (that is, intentional staged skill-building) approaches. Scaffolding is also a way of gradually moving from what we might call directed instruction to a constructivist approach, from short term needs to longer term and from immediate to more holistic learning (McNaught, 2003; Salmon 2004; Cummings & Bonk, 2002). I use a five-stage model of gradual increasing competency for learning and teaching online to offer structure to the process**.** The model can be used to give insight into what can happen with online discussions groups and to scaffold individual teachers’ development processes (Salmon, 2004).

The underlying assumption of the five-stage model is that learning involves very much more than undertaking activity on a computer. Indeed, online “Learning…includes an intricate and complex interaction between neural, cognitive, motivational, affective and social processes…” (Azevedo, 2002 p. 31). Learning is a transformation where the energy and impetus takes place, not smoothly, but in leaps and bounds. Learners move from the known to the unknown (Dirckinck-Holmfeld, 2002). A further assumption is that participants learn about the use of computer networking *along with* learning about teaching and *with* and *through* their peers, not under separate instruction.

If it is hoped that a learning community will develop, even a short term one, the e-moderators need to give very explicit attention to enabling and promoting all aspects of online socialisation, time management, and dynamic knowledge construction. To engage the participants in active involvement in negotiating meaning from the experience of working online, and to promote knowledge sharing and support, imaginative and creative images need to be deployed. Energies need to be harnessed towards the shared enterprise and purposefulness of the learning community. In a sense, a special cultural experience is created by *belonging* to *this group* at *this time* and through discussion and negotiation (Bruner, 1986).

3.1 The Lion Tamers' Qualities

The most successful e-moderators have some particular qualities. These characteristics can be found in traditional lecturers but are often surfaced and developed by those teachers more familiar with the online environment. For example, e-moderators need to be able to support text-based communication, know how to 'weave' and classify and be able to handle relationships without physical meetings (Bygholm, 2002).

Much of the experience of working online is mediated through human feelings as responses not only to the technology but also to relating remotely with peers. E-moderators need to learn how to understand the impact of the emotions on the success of teaching and learning online. The idea of Emotional Intelligence (Goleman, Boyatzis & McKee, 2002) is controversial but acknowledges that a great deal more is going on than cognitive capabilities in learning and teaching processes. Emotional Intelligence includes aspects such as motivation and intuitiveness (which act as goal drivers) together with resilience and conscientiousness (which curb excesses in the drivers). Especially important for e-moderating are self-awareness, interpersonal sensitivity, and the ability to influence. There is evidence that people who display higher levels of emotional competence have greater success in relations with others (on and offline) and superior performance. In particular emotional intelligence is related to leadership competencies (Dulewicz & Higgs, 2002).

E-moderators need to appreciate the differences between cognitive methods of teaching and learning where new information is assumed to be directly assimilated by participants and constructivist approaches where learners create their own meanings (Fibiger, 2002). Stimuli for this construction process can happen through interaction with other participants messages, by the introduction of 'sparks' of information or through the interventions of the e-moderator (Salmon, 2002).

It is important that participants appreciate that knowledge is not something that is fully 'fixed' and can easily be codified and transferred from one person to another. To learn from online conferences, participants need to be able to select, organise, elaborate and explore new understandings, in relationship to their existing knowledge. E-moderators need to learn to ask open questions, seek more discussion, motivate, challenge, compliment, and encourage all participants. Much of this can be enabled and promoted by the *design* of online conferences (Salmon, 2002) but also by the appropriate interventions by the e-moderator, including excellent threading and summaries and the removal of irrelevant messages (Schwan, Straub, & Hesse, 2002)

The nature of asynchronicity makes it harder for e-moderators to create positive group experiences and the excitement, rhythm, engagement and focus that we know as 'flow' (Csikzentmihalyi, 2003), compared to face to face groups. Only by experiencing this for themselves and then learning and practising all the ways of tackling it can this be overcome successfully. The most important skills to be learned are those of summarizing, archiving and weaving of participants' contributions. Further key issues are the ability to create clear goals and appropriate challenges, both a vision of the learning outcomes and very short focussed steps. In addition, ways of gradually reducing the dependency of the virtual group on the e-moderator should be demonstrated. E-moderators should learn to *design* for group interaction whilst creating a feeling of personal 'presence' to make it clear they are *not* always available. New and continuing teachers benefit from feedback and support provided by experienced e-moderators in order to develop and professionalize their online roles (Weller & Robinson, 2001). There are many benefits in sharing both resources *and* understanding (Barker, 2002)

3.2. The Lion Tamer's Manual: Online Training for OU Tutors

The UK OU was founded in 1969, as a single mode distance teaching institution, charged to use the technology of the day. It has since spawned over 30 similar open university institutions around the world. The learning support system operates on what Peters calls the 'industrial model' (1994). Phase one consists of developing high quality and paced learning materials. Over the years, more and more technologies such as CD ROMs and Websites have been included. The second phase is the delivery of group tutorials, feedback on individual assignments and support by part time tutors. Tutors have gradually learned to run their classes and groups in online environments as well as face to face.

In the first half of 2004, the Open University Business School (OUBS) offered development to around 80 of its tutors. We wished to enable them to work remotely using problem-based learning and assessment approaches as part of the fully distance and online, large-scale Certificate in Management.

There was a need to enable them to acquire e-moderating skills. These new approaches need to become embedded and professionalized with the overall tutoring role, to ensure quality and confidence when working with their students.

For effectiveness, efficiency, acceptability and coherence, we chose to offer them a two week, five hour, asynchronous online course. Participants worked entirely online with members of the course team and specially trained e-moderators in the software platform (FirstClass) they would use with their students. Our main intention was to encourage the tutors to feel they were 'on top' of the technological application and hence to feel free to develop a professionalised approach to deploying it happily and successfully as a tool in their tutoring. We promoted and valued their previous knowledge and teaching experience, whilst guiding them towards their new online roles.

Our message to staff about the objectives of the training was:

The purpose of this entirely online activity is to:

- *engage you in the continuity and changes between the older and newer version of the Certificate in Management*
- *introduce new and critically important aspects of the online teaching and learning process*
- *enable you to practice skills and develop ideas for use with your student groups*
- *offer you a focussed and structured opportunity to work with other tutors, course team members, colleagues and supporters of the Certificate in Management*
- *to enable you to save time and be more effective when tutoring online on the Certificate in Management*

What we are offering to help:

- *a structured and paced series of online activities (called e-tivities)*
- *3 online discussion conferences*
- *a web site with resources for viewing and/or downloading, if you wish*

- *an opportunity to develop a short personal development plan in preparation for the tutoring on the Certificate in Management*
- *a Certificate of Course Completion for your portfolio*

What we expect of you:

- *that you start on time and finish on time*
- *that you commence the week 1 activities within 24 hours of the start of Week 1 and that you start week 2 activities within 24 hours of the start of day 1 of week 2.*
- *you will get the most from the online activity if you visit each day for the next 14 days for a short time*
  and complete a minimum of:
    - *contributing at least two messages to each of the 3 discussion forums*
    - *complete and review at least 4 out of the 5 e-tivities*
    - *complete and submit your personal development plan*

Submission of your personal development plan and of the exit questionnaire will result in issuing of your Certificate of Completion and a claim form.

Our first message to our colleagues described their roles on the training course:

Online roles

It is important to keep in mind your roles as you work your way through the course. You will take the roles in this course of:

1. a participant in an online course process
2. a developing e-moderator and
3. an experienced tutor moving to a new approach to the Certificate in Management course

The roles may each have different objectives:

1. a participant aims to learn the skills of the e-moderator by taking part
2. an e-moderator aims to enable other participants to gain from the online interactions & as a group member aims to work with others to draw key insights from the course
3. a Certificate in Management tutor will want to know what is continuing, what has changed and why, and what s/he needs to know or do

In many of the e-tivities you will contribute initially as a participant and then respond as an e-moderator.

Each online course of 11–12 colleagues was typically completed by 95% of the participants, and attracted around 250 message contributions to the discussions and e-tivities. The feedback questionnaires and their Personal Development Plans demonstrated that all participants felt they had developed skills of direct use in working with their students, including how to:

- entice full participation online
- be inclusive
- encourage independent learning
- enable successful student interaction and groups

- use ‘sparks’ of information to promote dialogue and knowledge sharing (rather than big ‘chunks’)
- use archiving, weaving & summarising.

Critically, we observed a major shift in the tutors’ thinking from the focus on the features of the technology to what it could offer to the students on the Certificate in Management, and the key skills they needed to help. The tutors’ own learning happened very visibly through the online dialogue, and we could observe increased confidence in their online roles and in their development of specific ‘taming’ techniques.

As might be expected, the tutors worried about the use of their time, but they recognised that as they honed their skills, the time taken to work online would reduce. Participants felt they had got to know and learned from their colleagues and had enhanced their professional and support networks by taking part. Costs were tiny compared to those of bringing the tutors together for a face to face briefing and training sessions.

The OU Business School tutors particularly appreciated being able to work with each other and more experienced peers and especially recognised the value of taking part online. They realised that by undertaking their skills development in the same environment as their students, their understanding of feelings, responses and opportunities developed rapidly:

“I experienced what it is like to be a newcomer faced with a brand new conference and lots of instructions about what to do next; found the discussions really stimulating and interesting both in terms of content and the dynamics of how an online group focussed on particular tasks can work; also appreciated the practical honing of skills – i.e. here’s what we mean by weaving or closing.” R.M.

When asked what aspects of the experience they found most valuable typical comments were as follows:

“Interaction with a diverse group of fellow tutors who grasped not the opportunity for some ‘valuable’ learning about e-conferencing as well as the changes in the Certificate in Management course.” T.H.

They also recognised that there was ‘modelling’ occurring that lead them gently towards consideration and revision of their own roles:

“Our colleague who took us the role of ‘e-convenor’ did a great job. He offered just the right level of guidance and intervention. He’s now my e-moderator role model!” B.B.

We were especially pleased to note that tutors recognised that their key role was to promote online activity between their student groups. We offered the rationale for and practice in the techniques of ‘weaving’ and of ‘summarizing’ to show tutors that they still have an important *teaching* role to play with their online groups. Nearly all the feedback questionnaires mentioned the great value of learning these techniques. Many had previously viewed their role more as a host than a tutor:

“I enjoyed taking part in the activities, reading the comments of others and practicing weaving and summarizing which I’m now going off to try with my own groups!” P.R.

Even the more negative comments by the staff showed that they had gained new insights:

"Overall I found the exercise a bit like leaving home by car in a thick fog. Signs were difficult to read and at various points I completely lost my way. My time estimates were all wrong (mainly my fault), and when I got there I was not sure I had arrived at the right place! I must make sure my students don't experience these barriers." B.T.

Those tutors who had some experience of working successfully online were valuable in supporting their peers with less or different experiences. Even experienced e-moderators felt that they had benefited professionally:

"As a result of taking part, I have increasing the range of possibilities of interventions and initiatives available to me with my Web group students." I.J.

"*This has been extremely valuable time investment for me and I anticipate I will be a much better e-moderator having completed this course." J.U.*

Of the 80 participants, only 3 indicated that they needed more help with the technology. We feel that this indicates a shift in their thinking about the usability of the conferencing environment (FirstClass) and its relevance for their managing teaching.

4. Beyond the Wildness

The academic culture of H.E. is not yet ready to deliver and embrace teaching with ICT at a level that suggests massive institutional reform. The promise for faculty and learner support remains too tenuous, the risk-reward ratio too high, and the sense of urgency too low for the majority of faculty to change their current practices. Many teachers still experience the wildness of the technology and attempts at taming are still in the early days.

Hence in the early years of the 21st Century, there are few universities that have successfully restructured and fully adopted technology based learning. Conventional project-based approaches do not address the need for organisational restructuring (Kenny, 2002). Change has been gradual and unsystematic. In practice we need a process of negotiation of meanings through experience and dialogue amongst the divergent cultures and sub-cultures, and plentiful opportunities to develop and practice skills through the online environment itself and with peers.

Many commentators are now claiming that the impact of networked and digital technologies in education are likely to be less in the in the short term and but greater in the long term than the original naïve predications. Somewhere between prescriptive management and decentralisation, lies a balance with agreed educational objectives to the fore, and an action research approach to enable the territory to be reclaimed for online teachers with confidence. We need central vision with delegation, collaboration, flexibility…and maybe reward? Meanwhile teachers need to be *taking part*, using, understanding, and experimenting in the online environment itself. In this way online teachers in H.E. will go beyond seeing their online system as 'wild' and into viewing it as an active and lively human network with meaning and purpose for their teaching.

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Transformation of Student Services: The Process and Challenge of Change

Abstract

Student services are the administrative backbone of higher education. These offices orient, register, provide aid, advise, bill for and collect tuition; they are often the first and last points of contact for students while they are attending an institution – either in-person or at a distance. As the nature of the student population has changed, so have the delivery of these services. The need for change in student service delivery came from several directions. First, and probably foremost, technology allowed for easy self-service delivery of traditional information and processes. Second, students came to institutions knowing the capability of emerging technology and were increasingly less satisfied with waiting in line. Third, across the country there were sweeping statements in the higher education community that customer service and satisfaction were integral parts of institutional missions and traditional service delivery modes were simply not adequate; to recruit and retain students it was essential to deliver services differently. Finally, the nature, and hence, the needs of learners are evolving; bricks and mortar remained the commonly accepted collegiate experience but increasing numbers of students were availing themselves of on-line educational opportunities. The confluence of these factors set the stage for overhauling service delivery. This chapter will examine how the University of Minnesota has expanded and changed student services and service delivery.

Introduction

Student services are the administrative backbone of higher education. These offices orient, register, provide aid, advise, bill for and collect tuition; they are often the first and last points of contact for students while they are attending an institution. As the nature of the student population has changed, so have the delivery of these services. This chapter will examine how the Office of Enrolled Student Services at the University of Minnesota has expanded and changed service and service delivery to meet the ever-changing needs of students.

The University of Minnesota is a public, research university with a student population of over 65,000 students (http://www.umn.edu). In the mid-1990s the University took advantage of the growing availability of the internet to offer students the option of registering for courses on-line. This was only the beginning of the University's commitment to altering service delivery to "decentralized learner-oriented services…[which] includes numerous opportunities for self-help as well as access to information and services on the part of students and faculty" (Kvavik & Handberg, 2000, p. 30). Learners rapidly altered their behaviors to utilize the ever-increasing self-service options and to spending less time in-line for service and more time on-line.

Regardless of the delivery mode, "the paramount goal of the registrar's office is to serve the students and faculty promptly, equitably, and courteously" (Quann and Associates, 1979, p. 116). This commitment to customer service extends far beyond the registrar's office to include all student service units. Changing the way service is delivered has allowed the Office of Enrolled Student Services at the University of Minnesota to further the institution's educational mission through serving the administrative needs of all student learners, not just those who participate in the educational enterprise on-campus.

According to the well-worn Webster's Seventh New Collegiate Dictionary in the office, service is defined as "useful labor that does not produce a tangible commodity" (1969, p. 793). Despite its age, this definition still applies to higher education student services regardless of their delivery mode. Either on-line or in-person student services provide a non-tangible, yet essential commodity to the wide variety of members of the institutional community.

Student services are accessed for various reasons and in an array of ways. As a direct service provider of student services (i.e., registration, financial aid, bursar) we must meet the burgeoning needs of all constituents; however, the most critical service user is the student. The role of service in supporting students' academic endeavors is ideally invisible; students are able to register, apply for and receive financial aid, pay their bills, and receive transcripts without much thought as to the mechanism by which it is accomplished.

American higher education is often referred to as a dinosaur, especially with regards to change – it is large, cumbersome, heavily laden with layers of bureaucracy and their "existing structures have response sets that shape what follows" (Clark, 1983, p. 184). The delivery of student services is no different. "We have always done it that way" is a common response to inquiries as to why things are done a particular way. Historically student support has focused on traditional students – those who are on campus. Technological developments have allowed the campus to deliver an ever increasing number of services off campus. In the early phases these services included telephone registration and grade checking. Students quickly availed themselves of these self-service options. As the computer became progressively more commonplace, it was only natural for the delivery of traditional student services to move to this medium.

Student Services Delivery

The University of Minnesota was an early adopter of on-line student services. Students could conduct their routine registration business (i.e., checking registration time, registering for classes) from the comfort of their home – if they had a modem – or in one of the many computer labs on campus. Although the business part of registration was accessible to students on-line most of the policies, procedures and processes associated with being a student remained rooted in paper and people. The advent of the World Wide Web allowed for the further development of self-service functionality.

The need for change in student service delivery came from several directions. First, and probably foremost, technology allowed for easy self-service delivery of traditional information and processes. Second, students came to institutions knowing the capability of emerging technology and were increasingly less satisfied with waiting in line. Third, across the country there were sweeping statements in the higher education community that customer service and satisfaction were integral parts of institutional missions and traditional service delivery modes were simply not adequate; to recruit and retain students it was essential to deliver services differently. Finally, the nature, and hence, the needs of learners are evolving; bricks and mortar remained the commonly accepted collegiate experience but increasing numbers of students were availing themselves of on-line educational opportunities. The confluence of these factors set the stage for overhauling service delivery.

Student as Customer

The student as customer – with rights and expectations – is often met with mixed reactions. The academic enterprise has traditionally been "producer-oriented" (Kvavik & Handberg, 2000, p. 30) in which students were passive vessels to be filled with knowledge, not as consumers of education. As students have moved away from the "vessel" orientation into a more interactive, consumer role they have begun to question more often the return on investment for their educational dollars. Many academics cringe at the commoditization of education. Previously frontline staff in academia focused on process not service. To combat this attitude it is helpful to have a campus change agent or "champion." This individual needs to have a firm understanding of the changing nature of technology, student service functionality, and institutional political dynamics because it is his or her responsibility to provide vision and to guide the campus community in the change process. The institution must be prepared for policy, procedure and process changes.

To the current students, technology is as much a part of the educational environment as chalk and blackboards have been staples in the past. It appears clear that the younger the age group the higher the percentage that uses technology for school, work, and leisure. Since technology is integrated into all areas of students' lives it is not surprising that contemporary students expect colleges and universities to keep pace with technological advances.

Within the higher education community, no where is the demand for ever evolving technology more keenly felt than with distance learners. Distance learners expect, and should expect, an educational product similar to the more traditional on-campus learner's experience. Their special needs and requirements – especially their physical distance from campus – should not inhibit their ability to earn a post-secondary or post-baccalaureate degree. As technology has advanced, student services are ideally poised to change their mode of delivery to meet these learners' needs. The University of Minnesota has found that traditional, on-campus learners also benefit greatly from these service enhancements.

Service Technology Implementation

Utilizing technology to deliver service, however, should not be haphazard. Colleges and universities need to establish priorities for development and implementation. These priorities must balance the often competing needs of learners with those of faculty and staff. The overarching goal is to provide the best electronic student services possible for on campus and distance learners. Using technology to solve problems, improve service and provide better levels of service is a fundamental element for today's learner.

When implementing new service delivery options, it is essential for the institution to establish concrete and measurable milestones, deliverables and objectives. These will be used to determine whether or not the established outcomes were achieved. One example of a measurable outcome is monitoring the number of phone calls received during peak times compared to a previous year. Through tracking the most frequently asked questions (FAQ) and creating a web-based FAQ, learners can access information at their leisure. The FAQ can also shed light on service areas that may offer the greatest benefit to distance learners, and should therefore be added to the list of self-service implementation priorities.

The following list of questions guides the discovery process stemming from the FAQ: Why is the question being asked so frequently? How can we, the service provider, disseminate this information sooner or in another format? How can we eliminate the need for this question? Should we develop additional communication via email or on the web for the learner? How can we solve the issue electronically so the learner doesn't need to stop processing and contact a service provider? By examining the answers to all of these questions, services continue to improve and learner satisfaction increases.

Other measurable outcomes can come directly from learners though survey methods or involving students in continuous process improvement initiatives. Institutional staff (i.e., advisers, faculty members, and front-line staff) can also provide keen insight into service improvements and their impact.

Projects have a tendency to creep in their scope. Scope creep is defined as continuing to add requirements or enhancements to the point where the project becomes so large it is difficult to implement. Scope creep can emerge from nearly anywhere in the institution; as campus members learn of new developments they naturally want to amend the project to meet an emerging need in their area. Ideally a project will accomplish everything in the first phase, but many times a project needs additional phases. It is essential to establish clear and agreed upon project objectives and outcomes early on in the service improvement process. This step should be completed immediately after identifying the problem and suggested high level resolution. The objectives and outcomes clearly establish a common goal for the team. In addition, project success depends heavily upon identifying a project lead. He or she has the task of identifying key individuals, getting buy-in from the institutional community and educating those who will be directly involved. Identifying this person is critical to project success. Success also hinges on this person's ability to engage the necessary constituents in the project.

Resources and Administrative Support

The administration must be an ally when transforming to electronic services. If they are not behind the project, it is bound to fail. Hence, it is essential to inform top-level administrators of the goals, objectives and outcomes of the project early in the process to establish their buy-in. Communication and engagement of the key administrative vice presidents is necessary for the following reasons: first, floating the idea by the stakeholders with a well-prepared presentation with the outcomes, service improvements and cost savings will allow the project to move forward rapidly and, second, by getting these key individuals involved and excited about the service improvement project, they will take personal interest in it. Administrative interest, understanding and support provide the avenue to ask for additional assistance if required to complete the project by the set deadline. It also underscores to members of those within and outside the institution the customer service aspect of the institution's mission.

Adequate resources are a critical factor in transforming to a best practices electronic services model. It is demoralizing to those involved to identify new areas for service improvement, only to learn that there are no resources available to implement them. Resource requirements include money for communication, software, and hardware and other common goods, as well as technical staff and/or business analysts, who can identify issues, write project requirements, test the product and develop the new service.

Change Implementation and Maintenance

It is important to establish strong working relationships between the information technology (IT) staff and the functional business staff. The two groups must work as one team with a common goal of transforming student services, since each brings a unique perspective to the project. The business analyst (BA) understands what the learner needs and wants, and the technical staff uses their skills to make it happen. If the two groups cannot work together the project could potentially fail.

The IT staff members also play a large role in electronic student services beyond the initial development and set-up. The IT staff must have the infrastructure in place to host the web services, provide troubleshooting tools for the business analysts, plan maintenance in coordination with business functions, and provide upgrade plans to stay current on technology impacts. They are responsible for load testing to assure the BA that the service application can handle the anticipated volume of users. There are various software pieces that all must fit together so that the user can freely perform the business requested. IT staff have a huge service role to play in all project: the IT staff is charged with providing uninterrupted learner support in all these business functions.

The business analyst (BA) is the key player for designing and creating the electronic functionality necessary to satisfy the learner. They identify the requirements necessary for execution of the electronic service plus ensure that all compliance and audit regulations are followed. Not only does the BA provide the requirements, but also establishes usability testing, writes and performs all the testing necessary to identify any bugs during development. The BA also monitors the application once it goes live and looks for ways to continue enhancing and improving the service tool for the learner. Further, the BA accounts for the quality control of the application and creates a list of enhancements as the project moves forward. The BA is also the communication link to the learner and others with a need to know.

The project manager, BA and IT staff must watch for project scope creep. Established project outcomes and implementation deadlines are compromised when additional requirements are requested throughout a project. As members of the institutional community understand and see the uses of technology, they often want to add new functionality to projects.

Another important but often overlooked aspect of any project is how maintenance will be performed once an application goes live. The human resource and financial investment necessary for maintaining and upgrading the project must be addressed in the beginning. Although it is not as glamorous as the initial development and implementation of the project, the BA and IT units must perform maintenance as a necessary requirement of the application.

The project lead and business analyst must keep in mind federal laws and regulations plus compliance rules. It is recommended to bring the internal auditor into the project early on and get compliance sign off as early as possible. Auditors look for privacy of student data, secure methods of authentication, security of the data and other compliance issue assurances. The auditor can provide solid recommendations that secure compliance of the application.

Organizational Transition

Successful project implementation depends on several other factors not previously mentioned. The staff within the business unit must buy into the new way of performing business. Of equal importance, the university community must understand the reasons for the new application and the benefits to them and their colleagues. Students or learners also must understand the reason for the new or improved electronic service or have knowledge of its implementation.

In many of the electronic service projects at the University of Minnesota, students are involved in the development or have suggested the project so gaining their support and acceptance is not an issue. The student services staff have consciously partnered with various student organizations which allowed for up-front involvement of the learner or recipient of the future service. Learners have come to enjoy this interaction and appreciate this way doing business. We have also found that students are our best means of communicating with the wider institutional community regarding new projects. As the old shampoo commercial said, “They tell two friends, and they tell two friends, and so on…” Additionally, students have proven to be a strong voice in convincing the faculty and campus staff that in moving to more electronic delivery of service is both beneficial and necessary.

The smooth transformation and integration of electronic services into the established business process is another factor that determines learner satisfaction. Previously service offices were silos within a community and communication was not common between units – there were no integrated computer systems, no web technology nor shared equipment. The learner ran from building to building completing his or her business. Today with electronic services, integrated systems, improved equipment, and web technology these silos will be nonexistent and service provision is ideally seamless to the learner. Business units must learn to work together as one team developing superb web applications that combine the business functions allowing for the development of a useful application for the learner.

To facilitate breaking down the long-established silos, the project lead must look at process changes across units, bring these groups together and show them the benefits of collaboration for themselves and the learner. Fear of potential job losses, loss of control, or simply the unknown often makes changing processes or combining processes challenging for the units involved. In most instances, the staff members who are willing to change will find that their time is freed-up to focus on other areas in need of attention since most units have too many job related activities to keep up with demand. Implementing electronic services provides tools to assist or refocus attention on other activities within the office and gives way to new creative business process solutions.

Understanding how the new application will impact the office becomes critical for keeping office staff composed. As technology improves and allows for increased automation of traditionally hands-on duties, jobs will change and retention may develop into an issue. For example at the University of Minnesota prior to implementing web registration, all staff in the registrar's office were required to assist with registration. The office pulled as many staff as possible to process registrations for students in arena fashion (students gathered in a large arena, waited in line, and registered for classes). The goal was to get students in and out as fast as possible with little concern for customer service. Since students waited in long lines and were very frustrated by the time they actually registered, customer service skills of employees were not a concern. Web registration drastically changed the registration process. Students embraced the application, and currently 92-percent of the student population uses the web to register for classes. The students who do not register on the web often require additional help, which means that the staff members in the student services centers need to have a different type of skill sets than those who had traditionally assisted students. Distance education learners usually need to conduct business via email or telephone if unable to complete transactions over the web applications, which requires staff with very good oral and written communication skills.

Generalists were no longer needed at the service counters, and front-line staff needed a new orientation, that is, to see themselves within the entirety of service provision. They needed to understand the registration, financial aid and billing processes and procedures to provide the best service. Learners have made it clear that they expect qualified, competent, decision-makers with experience in customer service at the front-line. Many of the learners prefer to process their business over the web, so if they must come into a center, make a telephone call or send an email for assistance, they demand and expect good quality service. The front-line staff members continually receive training on performing the web functions, systems capabilities, regulatory and compliance aspects of service, and policy issues. Due to their extensive training and thorough understanding of the student records system, these individuals are in high demand within and outside the university. As a result, retention of these key staff is an issue which was not anticipated, and necessitates a reorganization of units at the University of Minnesota. The Office of Enrolled Student Services created a salary band for the one stop counselors. The criterion used consists of number of years of service and performance levels during those years. The counselors are also offered the lead worker positions if staff should leave those positions. This organizational structure may help in retaining these staff.

Although not all staff members will be directly involved in the project to transition to electronic services, likely all staff members will be affected by the change. As the nature of business changes, staff need clear expectations and requirements set for them. Part of this may include reviewing or rewriting job descriptions; and reviewing job classifications by the central human resources unit as well as within the business unit. One challenge the University of Minnesota encountered was that central human resources offices had not updated job descriptions to keep up with technological advancements, so examining job classifications was difficult. For example, many job classifications identified typing speed and accuracy of applicants but never addressed proficiency in basic office hardware and/or software. Additionally, if the central human resources office has not been updating job classifications, problems may occur with labor unions and delay the staff transition. The necessary time and resources for educating and retraining staff members is also an important factor to be cognizant of as staff members are asked to perform new duties. It is important to recognize that the process-oriented supervisor may struggle with the new type of staff required and management must assist and support these staff members, too. Supervisors that are focused on process and not problem resolution or empowerment of their professional staff will have difficulty working in this new environment. The one stop counselors must have the authority to make decisions and not solicit approval from a supervisor on issues. The one stop counselors must be accountable for their actions and only solicit a supervisor if needed. Remembering that the web provides many of the transaction based self-service functions for students, only students with problems or questions tend to contact the one stop counselors.

Standard workday hours for student service employees no longer exist. Since electronic services are available 24 hours a day, 7 days a week, office hours are extended. Learner helplines must be staffed well into the evening and on the weekends.

Manage Priorities and Demands

As the transition to electronic services occurs, frequent formal and informal communication from supervisory staff is essential; no staff member should be caught off-guard regarding their role during or after the transition. Supervisors need to be open to employee feedback during this period. Some of the best ideas for further service improvement come from those most closely involved in the process. Moreover, giving staff the opportunity to provide feedback – either positive or negative – helps with team building and staff morale.

Some staff resistance can be expected because transiting to the new way of providing service is often difficult. These staff may be skeptical and some may cause problems within the office and they may need extra attention and guidance. Unfortunately, some of these staff members may not have the capability of making the necessary change and in these cases job reclassifications and salary adjustments are appropriate. Regardless of how much of student services are automated, there will always be back office processing to perform.

As universities continue to explore ways to increase electronic service offerings and meet the mounting needs of the distance learner, the list of service improvement projects will continue to grow. However, there will never be enough resources or time to implement all the improvements on the list. Instituting a campus- or institution-wide steering committee is one way to help establish priorities from the list of new projects. Individual committee members may not agree on the priorities, but consensus must be reached for projects to move forward. At the University of Minnesota, the student administration director compiles a list of all potential projects for the steering committee to review and prioritize. The information on the list is solicited from a variety of resources: associate deans, individual colleges and schools, students, departments, faculty and campuses. Investigating and determining the biggest win (impact) and quickest win (short project high profile) for the community helps set the priority. This process works very well.

The university community expects improvements, enhancements and new applications on a continuing basis. As tuition continues to increase, students' service expectations also increase. Service units are often caught in the untenable position of wanting to (and often being mandated to) provide increased electronic services, while simultaneously incurring large budget cuts. The project lead(s) and the "champion" must educate the administration that the technology and service units provide the infrastructure for the institution and must be funded adequately. Documenting the successes and cost savings of various electronic services can aid greatly in this process. In some cases, central administration does not realize that service units provide service to the entire university community and if the unit's funds are cut, services must be eliminated, leaving one of the constituents dissatisfied.

Recognition

Staff members must be recognized and rewarded for their effort to improve student service. Simple rewards bring great satisfaction for employees. Some suggestions include: an additional amount of unrecorded vacation, certificates, flowers, dessert day or a public celebration. These small recognition rewards can provide staff with the much needed and deserved thank you for their dedication.

Professional development increases productivity and energizes employees to think creatively about routine processes or problems. Meeting colleagues around the country and developing relationships allows for sharing of ideas and generating creative ways of performing tasks and improving processes. Colleagues also provide lessons learned and great information on past mistakes providing a better project plan and avoiding known problems. Also, encouraging employees to present at conferences not only recognizes their accomplishments but reflects back very positively on the institution, too.

Content Management

Electronic services, especially email and webpages, should not become information dumping grounds or bulletin boards. As with paper, information posted or sent via electronic means should be selective and purposive, to the point and used only when necessary. Email boxes are filled with junk and web pages are overfilled with updates, useless information and flashy gizmos. Since it is critical to keep to learners informed, selective measures and means need to be put in place to ensure communication is read. Methods would include direct targeted emails, campus newspaper ads, posters, web notes, brochures, and college or department notifications. For the distance education learner, a different approach is necessary. As the distance learner matriculates, communication modes must be understood between the university and the learner. Communicating effectively with the learner requires input from various learner groups. Communication methods would include a web portal designed for the distance learner, informational postings on a website, email, and informational postings on the web.

Many universities are making email the official means of communication with on and off campus students. This has all but eliminated the need for paper. Email eliminates the bad address problem and saves money in postage and mailing. Creation of an email policy for university officials and service units has worked well at many universities.

Distance learners are a highly diverse group. The younger students and their guardians require more information about a university early in high school. To meet this demand, student service units should develop outreach programs. These university employees must be the effective performers who understand their very important role, and make a very good and lasting impression on the potential learner and his or her parents or guardian.

Electronic student service provides the opportunity for continuous process improvement. Once self-service applications are functional it is critical to evaluate them regularly. Researching what is working well and what is not working well allows the business analyst to investigate how to continue to improve service electronically. Involving the users and using them to identify issues benefits the unit. Continuous upgrades keep technology current and applications in sync with various external applications such as browsers, and Internet connections for successful performance.

Managing web content and updating information requires a well-organized process in place or the learner will lose confidence in the information provided. Keeping various links current also adds to the struggle to maintain and keep the system accurate. Several web content management systems exist which allow for continually updating information. Updating information in a timely fashion requires processes coordination by several individuals. Content management allows for notification of issues and accurate information for the learner, but requires fulltime management of the content.

The delivery of student services has changed dramatically in the past five years. Both distance and on-campus students have come to expect that they will be able to conduct their education related business on-line and to only communicate via phone, email or in-person when they encounter a problem. Student service units including college advising offices need to embrace this and seek out new ways to support self-service functionality, rather than view electronic delivery modes as negative. Utilizing technology to perform perfunctory business can free up staff to provide more value-added services to all learners. Moreover, students regardless of their status as an on-campus or distance learner like conducting business electronically.

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THOMAS HÜLSMANN

The Two-Pronged Attack on Learner Support: Costs and the Centrifugal Forces of Convergence

Abstract

Traditional distance education had separated course development and student support because of a lack of responsive and interactive technologies. The distinction implied a separation of the teaching and learning process in two (hierarchically ordered) layers: course development, where all the dignity of academic teaching is vested, and tutorial support, outsourced to a less qualified and less expensive layer of adjunct academics. The high merit of course development guarantees quality and, being a fixed cost, can be regarded as a capital-for-labor substitution whose impact on average cost per student is tempered by the scale economies it allows. Tutorial support on the other hand, contributes to variable cost per student and is to be contained by labor-for-labor substitution.

The new information and communication technologies drive horses through this setting because the rationale for migrating the focus of teaching and learning to course development, due to a lack of interactive technologies for responsive communication, falls away. Two broad strategies are available: 'migrating back', i.e. academics leaving the ivory tower of course development by getting involved in the dialog with students, or, in a 'flight forward' movement, trying to develop even further the instructional design of 'internal interactivity', typical for distance education that wants to exploit the full potential of digital technology. Both options have implications on how student support is to be conceptualized and, in fact, organized in e-learning.

1. Introduction

This paper looks at the cost aspects of supporting learners at a distance. Hence the focus will lie on efficiencies rather than quality. However, we do not want to imply that strategies, which maximize efficiency or arrive at minimal average costs by exploiting scale economies, represent distance education at its best. The model serves to identify efficiencies and deviations from the efficiency path. While deviations may well be legitimate, planners should be aware of them.

In distance education students and teachers are geographically separated for most of the time. For this reason the educational process has to be conducted by means of media. Media (and their *capabilities*) have changed substantially in the history of distance education. In earlier generations of distance education, such as in correspondence teaching, communication between teacher and students had been cumbersome, which made it imperative to develop quality materials pre-empting most of the questions students may have. Hence media impinge on the process of teaching and learning in such a way, that, more than in face-to-face settings, content and communication had to be separated. Because of these difficulties to sustain responsive communication at a distance (especially in earlier generations of distance education), there is a marked shift in emphasis away from communication towards a specific instructional design, which involves the student in a 'simulated dialogue' with the text (Holmberg, 1995).

These two fundamental aspects of distance education are reflected in different terminologies. Holmberg (1995) distinguishes between one-way traffic (i.e. 'simulated dialogue'), and two-way traffic (e.g. forms of 'guided didactic conversation', which allows for the necessary feed back loops between teacher and student). Hülsmann (2000) tries to capture the same difference as one between *internal interactivity* (i.e. the internal dialogue triggered by the specific instructional design of distance education course material) and *external interactivity*, which refers to the communication between real persons most importantly the interactivity between student and teacher). Hence, external interactivity would comprise what Moore & Kearsley (1996) call *student-teacher* and *student-student interactivity* while their *student-content interactivity* corresponds to internal interactivity. Hülsmann also suggests classifying media along similar lines: media which can mainly be used to provide content and facilitate internal interactivity are *resource media*; media which sustain communication, are classified as *communication media*. The distinction between these types of media has obvious economic consequences since they differ in terms of cost structure.

Hence, learners are supported in both ways: (i) by providing them with learner friendly material (i.e. material in which some student-content interactivity is designed) and (ii) by sustaining a line of communication between teacher and learner.

Interestingly, a more canonical definition of learner support explicitly ousts the development of course material from the realm of learner support:

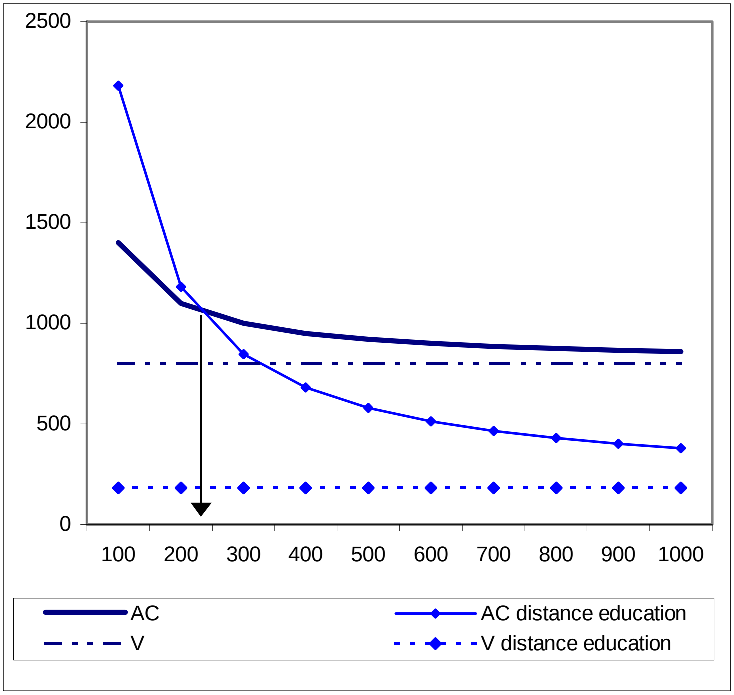
> For the purpose of the argument here, the widest definition of learner support will be used. This is the totality of the provision by an institution to support the learner, other than generic teaching materials produced by instructional designers/ course producers. To be absolutely clear, where learning materials are produced for numbers of student .... this is regarded as the academic teaching and is considered to be outside the framework of learner support. (Mills, 2003, p. 104)

A nominalist can live with any definition as long as it is consistently applied, but given the actual purpose of this discussion, i.e. to look at student support in ICT-based distance education, it may be questioned if such an exclusion of improved instructional design from the realm of learner support camouflages the intricate relationships between the two system components.

2. Costing of Student Support in Traditional Distance Education

In the following *traditional distance education* is understood as the generations of distance education up to (and including) the multimedia model of distance education.

Given the centrality of the mathematical model for any type of cost consideration, we shortly parade the standard argument claiming the cost-efficiency of distance education. Recall the *total cost formula*, which reads TC = F+V x N, where F stand for *fixed costs* and VxN *variable costs*, N representing the number of students and V the variable costs per student. Total costs allow to derive average cost per student by dividing TC by the number of students. This leads to the *average cost formula*, which reads: AC = TC/N or AC = (F/N) + V. The characteristic graph of such an average cost function is a curve which falls asymptotically towards a straight line parallel to the x-axis. *Asymptotically* means, that it approaches the straight line with increasing number of students but never falls below it. *Scale economies* means simply that, with increasing numbers, average cost per students fall. The potential for scale economies is the differential between fixed costs (F) and variable costs per student (V). The flattening of the curve shows the degree, by which scale economies are getting exhausted.



The figure above depicts two graphs[6], one representing conventional education, one distance education. The traditional argument asserting the efficiency of distance education then is as follows: Even if in distance education fixed costs of development may be higher than in conventional education, as long as the (aggregate) variable costs per student in distance education are lower (and this, it is argued, is generally the case), average costs of distance education eventually will fall below the average costs in conventional education. The arrow in the figure points to the *break even point*, i.e. the number of students, beyond which the average costs of distance education undercuts the costs of conventional education.

To the extent with which we can associate learner support with variable costs per student, it becomes clear why student support is sometimes regarded as the 'Achilles Heel' of distance education: (i) it defines the limit below which average costs never can fall, and (ii) it retains the linkage between costs and volume of activities (students to be taught), which distance education prides itself to loosen.

One would have, however, to add some *caveats*. First, all such model considerations may lead planners to think that they could at will adjust all parameters independently, in order to achieve the intended results. In fact, they can make decisions about media sophistication and set levels of teacher-student interactivity. But they cannot simply and independently set the enrolment level. Lowering media sophistication may prevent students from enrolling, which in turn may mean that the intended measure of scale economies cannot be realized and average costs are higher than expected. What applies to media sophistication may also apply to learner support since a supportive learning environment could influence enrolment levels and therefore costs.

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[6] We take as one graph the curve and the straight line towards which it falls.

Secondly, we need to distinguish between *efficiency* and *cost-effectiveness*. Efficiency measures usually use as performance indicator 'average cost per student', while cost-effectiveness measures control for academic outcomes and would look at 'costs per graduate'. We know that student support positively influences retention rates and even academic performance (e.g. Gibbs, 2003; Hohlfeld, 2003). If the funding regime shifts from 'per student' to 'per successful student' (Johnson & Barrett, 2003), there is an additional economic rationale for protecting a good student support system even it sets limits for lowering average costs per students.

One further comment: The efficiency path would lead to lower average costs per students. Given the enormous demand for education (and the 'perverse way' of raising unit costs, the capacity of distance education to bring down average costs per student is closely related to its remit to broaden access to education. Especially, in developing countries coping with large numbers is one of the main reasons to turn to distance education (Perraton, 2000). However, planners should be aware that lowering average costs per student in this model is achieved by expanding the system, which, in turn, raises total costs. (This *caveat* to any cost-analysis, exclusively singing the praises of distance education for lowering unit costs, is forcefully developed by Butcher & Roberts, 2004.)

3. A Fundamental Distinction

The term ICT draws together the two main aspects of the new technologies: (i) *information* processing, retrieval and exchange, and (ii) sustaining *communication* between people at a distance. We classify the respective usages as being of type-i and type-c respectively. Borrowing from Rumble (2004, p. 165) we define:

- *Type-i applications* offer Computer Based Training (CBT) involving textual, audio, and video course materials in digital format. Content can be downloaded from the Internet or distributed by CD-ROM. No further tutorial support is involved.
- *Type-c applications* offer Computer Mediated Communications (CMC) supporting tutor-student and student-student interaction. This support may be offered in the synchronous mode *(type-c1)* or asynchronous mode *(type- c2).*
- *Type-i/c applications* combine both CBT and CMC.

The distinction between type-i and type-c applications recalls the one made earlier between resource and communication media, which relates to different types of interactivity (internal or student-content interactivity corresponding to resource media, external or student-tutor interactivity corresponding to communication media). However, in the context of ICT-based distance education the difference between resource and communication media becomes increasingly obsolete due to *technological convergence*. While in earlier generations of distance education media could be classified according to their technologies, media capabilities in ICT-base distance education do not split along technology lines[7]. In fact, both applications (type-i and type-c) can be realized on the same learning platforms (or *learning management systems* (LMS) such as *Blackboard* or *Learning Space*). Instead of trying to select appropriate technologies for the best media mix to support learners, we need to define the optimal *educational scenario* (Baumgartner & Bergner, 2004). Educational scenarios are related to educational *interaction patterns*, which then are realized by using tools available within the learning management system. The interaction patterns, in turn, lead to the specific cost-structure characterizing the scenario. Recall what has been said about communication media. The main cost drivers are not the hardware or line costs, but the teachers' time, which means that costs of communication between teacher and learner are largely independent of the specific technology used to sustain it.

3.1. Supporting Students Through Type-i Applications

Type-i applications include CBTs to be downloaded via the Internet or distributed as a CD-ROM. CBTs can include simulations, computer marked assignments, video clips, graphics, and audio files. It is obvious that this means that producing such material increases fixed costs in a way that makes it difficult to define a ceiling for the fixed costs of development[8].

While the good news is that the cost-structure of such type-i applications are compatible with the traditional cost structure of distance education, it is difficult to imagine that the increased fixed costs of development can be compensated by increased enrolments[9]. Devolving the increased development costs to the learners might not be possible since it could counteract potential increases in enrolment, which may come with the bells and whistles of higher level of media sophistication.

The capabilities to support learners at a distance through type-i applications have lifted internal interactivity to new heights. Exploiting such capabilities, however, comes at a cost. Neither is it likely that such costs can be compensated through increased enrolments, nor is it possible to devolve them fully to the student. Assuming that the new capabilities can substitute routine tutorial work, learner support, conceived as communication between teacher and students (i.e. external interactivity), comes under pressure: if the aim is to contain average costs per student, and a situation that F rises what can you do? Traditionally DE institutions aimed at increasing N. If, as it is assumed here, the market does not allow this option then there are only two alternatives left: accept the additional costs and devolve them to the student (which may back fire in terms of reduced enrolments) or, more likely, manipulate the variable cost per student parameter (i.e. V). Since most of the tutorial support contributes to V it is therefore a natural target. This illustrates that the two main subsystems of distance education, far from being neatly separated, form a system of 'communicating tubes', where developments in one subsystem may increase pressure in the other.

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[7] We distinguish with Kozma between media and technologies. Media "can be defined by its technology, symbol systems, and processing capabilities" (Kozma, 1991, p. 180).

[8] Cf. Hülsmann (2000, p. 17-19) and Perraton & Moses (2004, p.149).

[9] This can be seen by a short 'back of the envelope' calculation. Imagine a course with the following parameters: $ 100 000 fixed costs of development $ 200 as variable cost per student and a shelf life of five years during which we expect 50 students per annum. Adding further $ 50 000 for the development of a CBT increases average costs from $ 600 to $ 800. You would need to raise annual enrollment rates by 50% to compensate for the additional fixed costs in development.

3.2 Supporting Students Through Type-c Applications

Type-c applications, synchronous (e.g. videoconferencing) or asynchronous (e.g. online conferencing), sustain communication between teacher and student. In both cases the main cost driver is teacher time.

A model for analyzing the cost of videoconferencing has been proposed by Hülsmann (2000). Again, the costs depend not so much on infrastructure and hardware, but on the teaching and learning scenario one may want to implement. This is because the *educational scenario* determines the *interaction patterns* and the interaction patterns, in turn, impinge on costs and cost structure: The more interactive, the higher the costs. If videoconference systems are used to lecture at a distance, per student costs can be brought down. But this may be taken as a case of *chained media*[10], i.e. not making use of the full capability the medium offers. The cost advantages of videoconferencing mainly reside in reduced opportunity costs (less forgone income due to lower loss in productive time due to savings in travelling time[11]). The cost-structure is similar to the one of conventional education[12].

Asynchronous communication may be conducted as *online conferencing* on learning platforms like Learning Space and Blackboard. To the geographic flexibility of synchronous communication time flexibility is added. Again the cost-structure depends on the educational scenario to be implemented. If discussion drives the course, claims on teacher times are higher than when the learning platform is essentially subsidiary to a print based course. This leads some analysts to complain:

> If there is one thing which researchers and practitioners of on-line teaching agree about, it is that interacting with students in this medium is more time-consuming than traditional campus lecture courses or print-based distance education tutoring. Anyone with experience of tutoring on-line will be considerably more familiar with the over-demanding, emotionally needy, or endlessly chatty student, than with any picture I have conjured up of confident, efficient, focussed learners. (Mason, 2003, p. 96)

Rumble tends to agree, although he reports conflicting evidence. Bates considers a class size beyond forty to be reasonable and Boettcher would allow class sizes between 25 and 65 (Rumble, 2004). The contradicting experiences reported may be explained by the fact that they correspond to different teaching/learning scenarios, by misleadingly insinuating that technology determines the scenario. Below the surface of the same technology quite different instructional strategies are emerging. You may staff courses with teachers and teaching assistants to limit costly expert time. This represents a labor-for-labor substitution. You may fend off communication volume by encouraging peer discussion and allowing only a limited amount of questions to be put to the expert (groups preparing expert interviews)[13]. However, eventually it will be difficult to administratively (and for economic reasons) limit the demand for student-teacher dialogue made possible by new technologies and enjoying un-abated prestige among educators.

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[10] Seel & Winn (1997, p. 319)

[11] There is a staple of literature, which claims effects of *time compression* attributable to the use of media (Witte, 1995; Whalen & Wright, 1999; Hasebrook, 1999).

[12] Some distance educators would not accept the synchronous model as a member of the distance family proper. (Cf. Peters exhortation of the extended classroom in Bernath & Rubin, 1999, p. 162).

Because of the increased ease of communicating at a distance, what applies for student-teacher communication in traditional distance education applies *a fortiori* in ICT-based distance education. The respective cost drivers contribute to rising variable costs per student and re-introduce a cost-structure linking costs to activities. Though it is possible to scale down the fixed costs of developing materials few economies of scale can be harvested (Hülsmann, 2003).

Hence, type-c applications also do not fit into the classic picture of the tutor belonging to a world strictly separated from academic teaching either. In this division of roles tutors are the mere interpreters of expertly developed courses and should not fiddle with the content. There is little to stop the online teacher from tipping the balance from static content which is pre-prepared towards the dynamically generated content of captured dialogue.

3.3. Recovering Lost Efficiencies

We have observed centrifugal tendencies. ICT-based distance education opens up two distinctively different avenues of development. One emphasizes type-i applications with a tendency to considerably increase fixed costs of development, one emphasizes type-c applications with a tendency to substantially increase variable costs per student. Mixed scenarios are possible as well and more likely to increase than to decrease overall costs. If distance education still wants to cling to its original remit of increasing access and, therefore does not accept that the higher costs price itself out of the market (Rumble, 2004, p. 48) we need to look for ways to recover lost efficiencies.

Re-purposing, learning objects: The digital format allows the re-use of material once developed and research is underway to itemize standardized *learning objects*. If for example you develop a unit on trigonometry with some interactive applications on sine and cosine, it is possible to store it as a learning object, which, in principle, could be archived, re-used, re-purposed and shared by being integrated into alternative contexts. Until now we have depreciated the fixed costs of course development over fixed shelf lives. We may re-conceptualize and associate fixed costs of developments with learning objects, which could be depreciated not only *longitudinally* along the shelf life of a course but also in a *cross-sectional* manner by re-purposing them in different applications. Some legwork in this direction is already being done by SCORM (Shareable Courseware Object Reference Model). While the potential of this line of development is still unclear, the malleability of course content in digital formats is reflected by the increased tendency of course developers to not set a definite shelf life for a course, but to plan updating the course in a rolling manner.

Strategic alliances: Collaboration at a distance has become technically easier. This facilitates forging alliances between institutions. Such alliances may allow offering courses which, if offered regionally, would, as niche courses, not be economically feasible. Recall, moreover, that distance education has been described as a complex system, comprising a variety of subsystems. The new possibilities to cooperate at a distance suggest that the different system components need not necessarily be hosted at the same institution. Rumble and Latchem (2004) give the most comprehensive account of what could be achieved through collaboration.

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[13] Considerations are even underway for billing the amount of learner support an individual student may claim.

> Technology and e-business approaches make it possible for integrated processes of open and distance education to be disintegrated into their constituent parts: curriculum development; content development; learner acquisition and support; learning delivery; assessment and advising; articulation; and credentialing. These processes can then be managed by different organizations. (Rumble & Latchem, 2004, p. 134) (Also cf. Moore, 2003; Bernath & Hülsmann, 2004)

4. Conclusion

We began by challenging Mills' (2003) definition of learner support, which, consistent with the organizational setting at the OUUK, defines learner support as being separate from course development. We have identified a very old tendency in distance education to shift the burden of teaching and learning away from the realm of learner support to the instructional design of course development. We have argued that it may make little sense to draw such a sharp line between these two major subsystems if we want to gauge the incumbent changes in learner support due to ICT-based distance education, because it is precisely the *technological convergence*, which pierces the membrane between the two subsystems.

We therefore find learner support in ICT-based distance education being subjected to a two-pronged attack. The increased capabilities of type-i applications increase fixed costs of development in a way not easily recovered through scale economies. The costs are not for nothing. They reflect the enhanced capabilities of type-i applications. It is not unlikely that distance educators will do what they have always done: shift the burden of the teaching and learning process towards highly interactive courseware thus substituting external through internal activities. The high costs of investment create the need to do so and the high capabilities of the type-i applications lend a certain credibility to this strategy. In any case, it puts learner support as we know it (or as Mills (2003) defines it) under pressure.

The second prong of the attack puts traditional learner support under pressure by blurring the lines between course development and teaching and learning. The online tutor does not stay the mere interpret of the holy writ issued by the course developing experts; he or she may add to and/or shape the content of the course. This is especially the case when online courses are no longer based on specifically developed course materials but draw from available resources (journals, library books, and in most cases, if possible, provided online). Given this two-pronged attack it is unlikely that learner support will remain unscathed.

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MARY THORPE

Evaluating the Quality of Learner Support

Abstract

Open and distance education systems are highly diverse, but most adopt a familiar division between the construction and use of a package of relatively free-standing materials, and the support of learners before, during and after study. The use of computer mediated communication has rapidly increased with the take up of the World Wide Web, and distance educators are now adapting this technology for learner support as well as for the delivery of resources. Where learning is supported and led through online interaction, the boundary between taught course resources and learner support is breaking down. However, whatever the intensity of ICT usage, the quality of learner support is vital and impacts very directly on the effectiveness of the course in terms of retaining students and enabling them to achieve their learning outcomes. Evaluation has a vital role to play in ensuring that a quality system is in place and delivered, and in enabling a continuing process of improvement of the system, better to support learners as they study. Practitioner evaluators need to draw upon the expertise of specialist evaluators and the literature of methods and research findings in this area. Effective evaluation is evaluation that is 'fit for purpose' and proceeds according to best practice in the field. It is not a single thing but a diversity of strategies, drawing in different ways on the key tools of review, planning, data collection, analysis and reporting. The practice of regular evaluation, with evidence that findings are used and reflected upon, is itself one of the indicators of a quality learner support system.

Introduction

While open and distance education (ODE) systems the world over are extremely diverse, they have often adopted a familiar division between the course package or resources for independent study by the learner, and learner support offered during the process of study itself. These two components in ODE have been a common feature of the literature in our field (Keegan, 1996). Although online teaching and learning is blurring the boundary between these two component sub-systems, and in some cases breaking it down, the process has not gone so far that we can forget about the particular features and issues distinguishing learner support from resources and course materials, and the attendant issues to do with evaluation.

Key authors in the field have defined learner support and together they draw attention to its salient features. Tait (1995, 1996) identifies it with the facilitation of the learning process – learner support being about the support that is provided to individual learners during the process of study of the uniform course resources. Learner support, in contrast to the study resources, should not be uniform, but should be adapted to and responsive to the needs of each learner. Sewart (1993) has emphasised the role of learner support staff, acting as intermediaries between institutions and their bureaucracies, and the needs and approaches of each student, remote from the institution. Thorpe has stressed a function-related definition, and defined learner support as "… all those elements capable of responding to a known learner or group of learners, before, during and after the learning process" (Thorpe, 2002, p. 108). This definition focuses on the real-time feature of learner support; the fact that it happens during the actual time period that a student studies, and that the identity of the learner and of learning groups, as well as their location and contexts, is the focus for what learner support is and what it must achieve.

All these definitions provide us with a key to the importance of learner support, and to the reasons why evaluation of the quality of learner support is so important in ODE. The identity of learners – their particular needs and motivations and their progress with the course – these are all at the heart of what learner support is about. Although there are new ways in which virtual learning environments can support the role of the tutor or supporter, it is still the case that person-to-person interaction is at its heart. The quality of a learner support system can impact very positively or negatively on students' learning experience, and either help to sustain the learner in studying the course, or on the contrary, leave the learner isolated and liable to stop studying at the first major hurdle.

Key Issues in Learner Support

Having outlined the vital impact of learner support on the experience of learners, we can already begin to see what issues typically arise and what purposes therefore evaluation is meant to serve.

Having set up a learner support system, we may simply need to know whether it has been delivered. Have our supporters (this term will be used in what follows to cover any of the terms and roles that are in use – tutor, mentor, counsellor, advisor, etc.) for example been appointed in the numbers, areas and with the skills/experience that we intended? Have they fulfilled the terms of their contract and worked with learners as we planned? Have there been any complaints from learners, and have these been investigated? Have supporters had any staff development or briefing, and what back-up has been provided to them? Questions such as these sound obvious, but it is crucial to know the answers to such matters of fact, because we can often assume that what we planned has been carried out and therefore come to mistaken conclusions about the outcomes of provision. We must first be confident that we know what actually happened, before exploring causation and coming to judgements.

The second major area in which we typically need to evaluate, is that of learner behaviour. What did our learners do at key stages in the provision of learning – how did they perform? What proportion contacted the organisation or the supporter, and at what points? Did they submit the assignments or sit the examination, if the learning was assessed? Did they go on to complete the course? Did they attend tutorials or study centres – how many and how often? Did they pass their course and what proportion dropped out? Such questions are key to finding out whether we and our learner support system are succeeding. We will usually want to judge this on the basis of student performance and the success with which they achieve their goals – not all of which will involve assessment but many systems will. Such issues are at the heart of many evaluation activities and the reasons why they are undertaken.

The third major area concerns understanding – getting to the heart of the question 'why' and 'what to do to improve things'. Having observed certain outcomes from our learner support system, we typically notice things that go less well than we anticipate. Let us suppose that fewer than half our registered learners complete the course of study, and that we expected a higher rate of completion. Perhaps our learner supporters are not the major factor in this, but we will surely want to understand whether changes in this area of our system might help to increase the completion rate.

In addition to evaluating the effectiveness with which learner support has been delivered – the 'what actually happened' question – we will probably want to probe more deeply into learner motivations and perceptions, and into how our learner supporters are actually relating to and interacting with learners. We will want to understand who our learners are, why they want to learn, and what they want to do with their learning. In relation to the process of learning, we might need to explore their preferences and constraints. How much time is available for learning? Are there barriers against contacting the supporter, or attending the study centre? Do they have access to the technology we have built into our system – to telephones, radios, computers, video recorders, transport, and so on?

In addition to the many practical issues involved in designing successful learner support, we may also need to understand how people feel, and what are their attitudes and insights about learning. Do they lack confidence in themselves – typically adult learners, particularly returners to learning, very much lack confidence in their abilities (Evans, 1994). Do they find it difficult to contact their supporters? Are their family members putting barriers in the way of their learning or conversely providing the major area of support? Do they feel that they will be able to achieve something once their course has finished? All such issues and many more, may be relevant considerations for the evaluator needing to identify strengths and weaknesses in their learner support system, and areas where improvements need to be made.

Planning and Implementing the Evaluation of Quality in Learner Support

The importance of learner support has been well recognised by leading authors contributing to the field, and methods of evaluating its quality have been set out in a number of key publications. In an earlier publication in this area, a definition and rationale for evaluation that practitioners themselves might undertake was set out (Thorpe, 1993). Evaluation is the collection, analysis and interpretation of evidence about the effects and outcomes of a particular activity or system of provision. It includes both intended and unintended outcomes and should support the making of judgements about the value of what is being evaluated, and how it might be improved.

While many everyday activities include something not unlike this, evaluation has most value when it is informed by good practice in terms of the methods used, and when formal planning and reporting is used. Evaluation should be deliberate and be informed by the literature of professional evaluation and practitioner-oriented research. The results of evaluation should be open to inspection by others, particularly those whose interests they affect, and the permission of those being evaluated should be requested and obtained. It may be important in some circumstances that the findings of an evaluation are published, but even where this is not necessary or feasible, the evaluative evidence should be clarified and reported to users, as the basis for discussion and decision-making.

As mentioned, there are numerous texts in the field of evaluation, and several key texts which the evaluator should consult for guidance on the methods to use (Thorpe, 1993; Calder, 1994; Oliver, 1998). In addition, relevant literature should be reviewed in order to explore what others have found, even in systems different from our own (Murphy, Walker and Webb, 2001; Simpson, 2002). Such review of the literature, particularly for the non-expert evaluator, is vital:

- It ensures that we learn from experts in areas such as survey design, interview schedules, and methods of reporting
- It provides comparative data against which to judge our own findings
- It suggests concepts and areas for exploration that we might otherwise miss – or pointlessly reinvent

Many novice evaluators for example think first of doing a survey of learners, then following up with some interviews – not realising that a good questionnaire requires detailed knowledge of the situation, gained from qualitative research and observation in advance. Thus it may be vital to do some qualitative research before quantitative surveys, if the evaluators are not already very familiar with the issues. Surveys are key for providing information about the *scale* of particular phenomena, and their importance across a population of learners; they are not the best method for providing evidence about what attitudes and activities are significant and should be surveyed in the first place. It may also be important to follow-up a survey with some in-depth interviews, but it is extremely difficult to design a good questionnaire without a good grasp of what the issues are and how interviewees phrase their concerns and perceive what matters. Once we have a reasonable grasp of these things, we can then design a questionnaire to find out how important they are, to whom, and for what reasons.

Review of the literature can also help us to target limited resources on what are likely to be key areas. For example, evaluation in my own institution provides much evidence of the crucial importance of the early stages of study for keeping students on course and in good shape to complete and pass the course. Distance education shows high rates of drop out by comparison with campus-based study in the UK, where very few students used to drop out, once having achieved their university place. Although this is changing, with the massification of higher education, reducing drop out and retaining students is still seen as one of the keys, if not *the* key characteristic of a quality learner support system. Exploring the reasons why learners drop out, and whether there are particular groups of students at risk, and key moments during which we should target learner support, are priority areas for evaluation, in such a context.

Other researchers have also documented the low levels of confidence that part-time students studying at a distance often experience, and the shock that many experience in the early stages of return to study (Simpson, 2002). There is much evidence therefore that the quality of any learner support system can be judged on how effectively learners are supported during the early stages of study. While this is not the only issue of course, if resources for evaluation are scarce, we will need to prioritise the important areas, and reading the literature, plus small-scale qualitative exploration, are essential preparatory activities, if we are to make the best use of our time.

The Impact of Electronic Media on Learner Support

Where electronic means of communication are integrated into the teaching process, there may be a significant blurring of the boundary between the two sub-systems of distance education. This is not a uniform development, and there are many gradations involved.

However, the ease with which supporters can communicate directly with learners using email and conferencing, impacts on their role. In courses where collaborative learning online is essential, the boundary is beginning to break down between the teaching embodied in the course resources, and the idea of a separate learner support system. This is because supporters and their online communication with groups and individual learners are as much part of the course content and its teaching, as are the resources (Thorpe, 2002). The reason for this is that computer conferencing plus communication via email, enable the online tutor or supporter to provide tuition and support to both individuals and groups, without the barriers of time and place that are experienced in arranging and attending face-to-face meetings or conference calls. It has become possible now to build into the course and even into its assessment, collaborative and group activities that online learners participate in and use in their assignments. Learners themselves are also communicating online with each other, and can provide very significant support and encouragement. (Cf. the chapter by Blackmun and Pouyat-Thibodeau in this volume for a discussion of learning communities). This is leading designers of courses to build-in learner activities and discussion online such that these become as much part of 'the course resources' as the provision of the resources themselves. In courses which are designed this way, and which incorporate successful online collaboration, the work of the supporter can also be embedded into the assessment system.

As already mentioned, not all courses using computer-mediated communication will adopt such a highly process-oriented approach, and there are still models which build the course resources first and define the tutor or learner support role as complementary to the course resources, which provide the totality of what is to be learned. However, even in this case, where CMC is simply used as an additional medium for interaction, tagged on to the traditional model, we are seeing the evolution of new models of tutoring or learner support and runaway demands by learners for previously unheard-of response times from tutors. Some learners may expect a response to an email query within hours, let alone days, and the scale of this demand is proving unmanageable, where supporters are essentially working part-time and to rates of pay which assume tightly defined roles and hours of work.

There are three major differences for the evaluator in the context where learner support is delivered using computer-mediated communication. First, if permission is gained in advance, it is possible to archive and to analyse all interactions that take place online. While we may not want to undertake this literally – we might be overwhelmed by the sheer quantity of data – it does give us the opportunity to sample particular periods of interaction, or particular representative groups, whose work we can monitor and analyse.

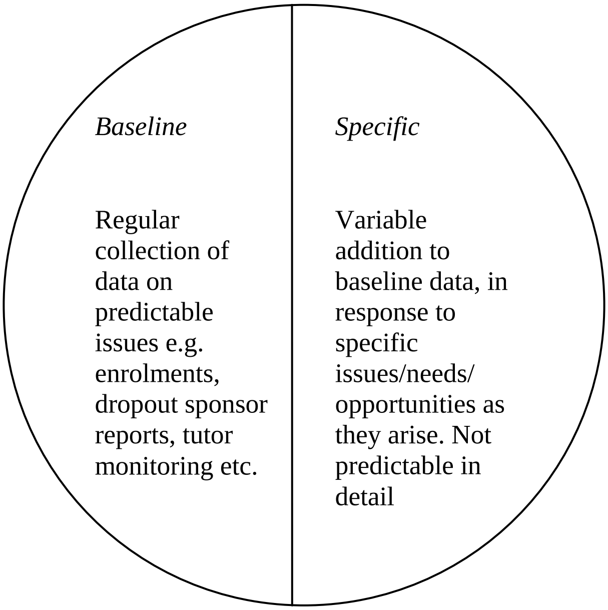
Second, we can use electronic communication itself for data collection. Instead of face-to-face or telephone interviews, we can use email communication to ask open-ended questions of students, or even use chat for discussion of issues, with groups and with individuals. It also becomes much more possible to sample activity and opinion regularly throughout the duration of learning. The main risk here is the probability that we overdo the collection of data and leave too little time for analysis, reflection and careful reporting. This is a typical mistake in evaluation, particularly where practitioners undertake the work. Their tendency is to focus too much on data collection, and to find themselves overwhelmed with the key tasks of analysing and making use of the data, once they have been collected.

Third, the speed with which changes can be made to a course and to the role of the learner supporter, can be very much quicker than in print and non-computer-based forms of communication. Online course materials can be updated much more quickly, and communication between the central organisation and each networked learner supporter is much more rapid. The potential therefore to respond to the findings from evaluation is in theory at least, greater and more rapid.

Evaluation for the Purposes of Providing Persuasive Evidence of Quality in Learner Support

There is not space here to discuss in detail the many different kinds of evaluation that are required for different contexts and purposes, though that can be pursued through the literature referred to. What should be emphasised here however, if our purpose is to have robust evidence about the quality of learner support, is that one-off efforts of evaluation are unlikely to be enough. Two kinds of information that an evaluation system is likely to need, particularly if quality is the focus, have been distinguished. The figure below refers to these as components of evaluation.

First we must have regular and reliable information on how our learner support system performs, not just in one instance, but month after month and presumably, year upon year. A quality system is not one which produces good results in one year, then fails in the next two years.



Baseline

Regular collection of data on predictable issues e.g. enrolments, dropout sponsor reports, tutor monitoring etc.

Specific

Variable addition to baseline data, in response to specific issues/needs/ opportunities as they arise. Not predictable in detail

Figure 1: Two essential components of evaluation to support a quality system

What we need is evidence about performance on a regular basis – baseline data which is regularly collected and provides robust evidence about predictable issues, such as size of learner groups, characteristics of learners and supporters, attendance and contact frequency, reasons for study, retention and course completion etc. This is the kind of data we need to collect regularly and compare, year on year, so that we can see patterns and changes, which themselves could indicate a need for follow-up or further study.

Such evaluation will often reveal the need for a specific study to follow up problems identified by baseline evaluation. Or it may be that there is a new requirement for provision of different courses or learning opportunities. In these circumstances, we need to set up an issue-specific evaluation – designed to provide additional and new evidence in relation to a new issue or to throw more light upon poor performance or difficulties as these arise. For example, we may introduce a new activity for our learner support system and wish to evaluate its impact. This requires an evaluation designed specifically for that purpose, and one we may not do more than once – depending on the issue of course.

Conclusion

Effective evaluation is evaluation that is ‘fit for purpose’ and proceeds according to best practice in the field. It is not a single thing, but a diversity of strategies, drawing in different ways on the key tools of review, planning, data collection, analysis and reporting. It can be undertaken for a host of reasons and be owned by different actors in the learning support system – learner supporters themselves can evaluate their own practice for example. However, if it aspires to provide evidence of the quality of the system of learner support as a whole, careful planning, user consultation, professional advice and experience, and long-term commitment to finance the costs involved, will be required. Indeed, the practice of regular evaluation, with evidence that findings are used and reflected upon, is itself one of the indicators of a quality learner support system.

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UNIT FOUR: KEYNOTE ADRESSES FROM THE 2004 EDEN CONFERENCE ON LEARNER SUPPORT

TERRY ANDERSON

Practice Guided by Research in Providing Effective Student Support Services

Despite the rapid increase in both participation and expenditure in various forms of e-learning, there has been very little sustained research that successfully informs practice in this area. This chapter examines the current problems related to funding and support for this research. It then examines the two major research methodological paradigms – qualitative and quantitative – and notes the problems each has in producing research results that really effect e-learning student support practice. The chapter concludes with a description and a call for a new type of research methodology known as design–based or developmental research. This methodology is demonstrated with a case study example of call centre use in providing student support services. The chapter argues that design based research with its inherent collaborative, integrative and iterative research model offers a methodology appropriate for and capable of improving the quality and quantity of research in this important area.

Introduction

Technical progress and the research that has enabled and supported its developments have fundamentally changed most aspects of daily life for the majority of humans alive during the start of this 21st century. But how has research been harnessed to change educational activity and specifically that delivered at a distance? In this paper, I argue that education generally and especially the newer forms that are sustained on the networks do not take advantage of sustained research and thus the potential contribution of networked learning is severely compromised. There are many reasons for this failure related to funding, the complexity of educational context and most fundamentally to the lack of an educational research culture amongst educators, learners, government policy makers and private sector players. I examine some of the reasons for this failure with specific focus on research methodologies that inform and influence practice related to the provision of learner services that are delivered at a distance. I argue that we need to recommit to the research endeavour. This includes increasing our production and consumption of relevant research using traditional qualitative and quantitative paradigms, but as importantly we need to develop new research paradigms that bridge the gap between scholarship and practice so as to make fundamental improvements to the quality and cost effectiveness of these services.

Defining Research

In my daily life as a Canadian Research Chair (CRC), I come across many understandings, definitions and practices of the activity and process referred to as “research”. For example, computer programmers who work with us constructing Learning Objects Repositories often refer to their work as *research*, especially in discussion with funders; yet, their work is not driven by theory and their *results* will not be published in peer-reviewed journals. On the other hand, when in more academic circles, we restrict our use of the term to refer to those activities related to learning object use that are directly related to a substantial theory base and the data collection and discussion emanates directly from empirical data collection. We also engage in more reflective discourse about the nature of teaching and learning in mediated contexts, using these same object repositories and use words with many syllables – and we refer to this as 'research' as well. Finally, we see end users searching our repositories for objects to use in course development and class presentations who consider themselves to be 'researching' the topic. It is clear that we do not all share the same understandings of the term.

In the face of such diverse usage of a single term, I flee to Google and its new Define: function to find 31 definitions of the word "research" in common use on the net. From these one can extract adjectives describing research as an activity that is disciplined, organised, transparent, problem orientated, public, creative, scientific, systematic, diligent, laborious and accessible. A more common dictionary definition is "… the systematic investigation into and study of materials and sources, etc., in order to establish facts and reach new conclusions" (Swannell, p. 919). So one sees that there isn't any distinction that says that research is conducted only by academics, by PhD's, by grant funded recipients, or by those seeking to publish their results in refereed scholarly journals. Neither is there a sense that research must be of a quantitative or qualitative nature nor that any one type of research is privileged over any other – yet as we will see later, this is far from the way that research is valued by either funders or consumers.

Thus, there is no particular set of procedures or a particular community of practice that has a proprietary definition of "research". I can, however, suggest a few shared properties. Glassick, Huber & Maeroff (1997) and his colleagues when writing about the scholarship of teaching describe all research as characterised by clear goals; adequate preparation; appropriate methods; significant results; effective presentation and reflective critique. In the paper that follows I try to apply these criteria to a sampling of learner support research.

Defining Student Services

Moving next to a clarification of what is meant by learner services leads to an interesting Atlantic Ocean divide. To most North American's, learner services encompass all of the functions of a formal learning institution that are designed to help and assist learners, but the actual teaching or functions relating to the discipline of study are explicitly excluded. For example Dirr (1999) includes in his survey of learner services a variety of non-academic interactions that the student has with a college or university, including: pre-enrolment services (recruiting, promotion, orientation), admissions and registration, academic advising, program planning, degree and transcript audit, technical assistance, library and bookstore services, personal and career counselling, social support services, and financial planning and management. But note that the actual teaching or academic and discipline related tutorial support is explicitly excluded from the list. By contrast Thorpe from the British Open University defines learner services "…. as all those elements capable of responding to a known learner or group of learners, before, during and after the learning process" (Thorpe, 2001, p. 4) and expressly includes the provision of academic support provided by tutors and teaching faculty. Given that we are this morning on the eastern side of the Atlantic, I will go with the much wider and exclusive definition that includes the important academic teaching function.

Why Conduct Research on Learner Services?

Putting the definitions of research and student services together raises the obvious question of just why research is important or more directly for this audience is what can it do for those involved in learner services? The answer to this question has two components. The first is to consider the very many facets of learner services to in which our knowledge is lacking and thus the ways in which our involvement in its provision is compromised. I am sure that many of you could provide a list of issues that are relevant to your practice and that have important consequences both to the lives of learners and to your institution's capacity to serve, to which your knowledge is at best untested and uninformed and at worst incorrect. These issues probably include traditional distance education questions such as how to reduce attrition, improve learning outcomes, and reduce the cost of services. But, now we are challenged to provide answers to questions raised by new forms of distance education provision, questions such as:

- Just what mix of personal and machine delivered services is needed by learners?
- What combinations of collaborative and group based learning are worth the cost and inconvenience to both teachers and learners?
- Do face to face tutorials really make a difference or is real time video conferencing just as effective?
- Is travelling to a learning centre worth the expense and hassle when we can cost effectively deliver via audio and video to the home or workplace?
- How much does expensive multimedia really enhance student learning; how important are real time interactions compared to asynchronous ones.

The list is long and growing.

It is even more important to ask ourselves if our current research practice is capable of answering these questions. At the recent ICDE conference in Hong Kong, I was on a panel session focused on distance education research. One of the audience members challenged the panel to name one result from distance education research that had really made a difference to practice. It was embarrassing, how long it took both the panellists to come up with some answers. Can you think of an example of where research has informed or guided your practice?

Why Educational Research 'Don't Get No Respect'

The American comedian Rodney Dangerfield is famous for his tag line lament that he "don't get no respect" – a sentiment with which most of us in educational research empathise. Compared to our colleagues in many other disciplines, our research is neither valued (by educational practitioners, potential sponsors or our research colleagues) nor well funded. The growing list of important questions just iterated leads to questions as to why we haven't done more and a related question of why is it that educational research has not made the contribution to practice that has research in engineering or health care. An easy answer is to blame the lack of public or foundation funding for educational research. Although governments in most developed countries spent only slightly less on education than on health, the discrepancy in amounts spent on research in these respective fields is large and growing. The amount spent in North America on educational research is estimated to be about .01% of total educational expenditures (Burkhardt & Schoenfeld, 2003). Health researchers set a goal of 3% or 30 times as much for basic and applied health research. This can be compared to other high tech information business that typically spent 15-20% of their turnover on research. To put this in perspective one multinational pharmaceutical company, Pfizer, claimed that in 1999 they spent over 200 million dollars of their 20 billion dollar research budget on research related to treatments for animals – a sum that is nearly 7 times as much as the US government spends on educational research (Smithsonian, June 1999 cited in Burkhardt & Schoenfeld, 2003, p. 3). It is obvious that educational research suffers from an extremely impoverished funding base as compared to related social and private enterprises. But is that a cause or merely a symptom of research productivity?

In a recent Educational Researcher article Burkhardt and Schoenfeld (2003) list a number of barriers that they believe inhibit the productivity of educational research. The first barrier is that it is no one’s job to turn research insights into effective practices. Researchers consider their job complete when their work is published and their granting agency audit is passed. Most practising distance education teachers and practitioners are so overwhelmed with the demands of continuing growth that they feel they have little time for studying research that may or may not meet immediate needs. Secondly, as researchers, we are very inexperienced and suffer a poor track record of working collaboratively on large-scale problems. Where is the educational equivalent of the Human Genome project or even the frantic effort to prove or disprove an educational claim similar to the effort that resulted from the claim of discovery of cold fusion? Unlike in disciplines like physics or medicine, a new discovery does not result in immediate focus of attention on verifying, supporting or refuting initial results. More often than not, I have been surprised by the deafening silence that results from publication of my own research results as from any informed discourse and public search for application and implementation. Perhaps this is only an indication of the value of my own research, but I think this is an experience shared by most educational researchers. Burkhardt and Schoenfeld (2003) also note the lack of an industry that is poised and eager to both support and later to implement and benefit commercially from educational research. The nearest we have to such a commercial base is the book publishers and they have almost a negative incentive to support or exploit research work that investigates substitutes for paper products or that otherwise changes the current nature of the educational system. They also note that there are no “consumer reports’ that compare the effectiveness of one educational product or innovation to another and thus there is little bottom line incentive to improve products to keep ahead of potential competition. Finally, and perhaps most critical is the lack of a research culture within our practice. Unlike health workers, little long-term record keeping or systematic evaluation is done of our performance in learner support and when such record keeping is demanded, it is often treated as a burden rather than an opportunity to enhance professional practice. Further, there is a pervasive sense of mistrust and lack of confidence in educational research capacity to make a difference that either improves learning or makes life more satisfying for either learners or practitioners. In brief, we lack a sustaining research culture.

I next turn to a brief look at the types of research methodologies employed in learner support to see if the way in which research is practised and the types of questions which it addresses could be a related cause in our failure to develop a culture of research.

Education research borrows and adapts research paradigms and tools from many other disciplines. These are often classified into three broad types – a scientific or positivist paradigm; a qualitative or interpretative paradigm and an emerging developmental or engineering paradigm. I will briefly overview these paradigms and illustrate them with examples of recent work in the paradigm related to learner support.

The Scientific Paradigm

This research tradition comes from the natural sciences and has had a long series of successes at informing our understanding of the natural world. This research paradigm traces its focus on observable behaviour back to Descartes who wrote in the 17th century that "… those who are seeking the strict way of truth should not trouble themselves about any object concerning which they cannot have a certainty equal to arithmetic or geometrical demonstration" (Descartes, as cited in Lines, 2001, p. 172).

The focus on that which can be consistently measured has evolved to a set of procedures that culminate in the random assignment of learners to treatment groups and the blind evaluation of results of these interventions. Since education is deeply contextualised, a single experiment is always suspect and thus the best research in this paradigm is replicated in many contexts and the results are amalgamated in processes known as a meta-analysis. In our field three such meta-analysis have been reported during the past year. In the first Bernard et al. (in press) and his colleagues at Concordia University sought to compare learning outcomes between those who studied at a distance and those who were enrolled in campus based programs. They examined 2,262 studies that had taken place between 1990 and 1999, but berate the fact that only 232 met their requirements for a control group and only a small fraction of these had rigorously used random assignments to these groups. A second study by Ungerleider and Burns (2003) looked at networked learning trails from the year 2000 to the present but found only 25 studies that used comparison groups and of these "only 10 of the 25 studies included in the in-depth review were not seriously flawed, a sobering statistic given the constraints that went into selecting them for the review. Studies were commonly flawed either in design, statistics, or interpretation" (p. 33). Both research teams spoke very critically of the quality of educational research and made calls for dramatic increases in the types of research that could be used to create what is often referred to as 'evidence based' results. In fact, this call has been answered by the Americans who promise in their 2003 federal education plan to increase their funding of 'evidence based research' from 7 to 70% (Slavin, 2002).

But what did these research results tell us? In the two studies referred to, these meta-analyses found no significant differences between those studying in classrooms and those at a distance. I should also mention a third meta-analysis done by Shachar and Neumann (2003) that did find a small positive increase in learning outcomes in favour those learners studying at a distance. But what if the results had shown very significant results in favour of either mode of delivery? Would they have informed our practice? I think the answer would be a resounding "Not very likely". The meta-analysis tells us nothing about the critical context in which the learning took place. What learner support services were in place? What was the quality of the teaching or of the content? What was the condition of the home study or the class environment – the list of contextual factors goes on and on. Thus, one can conclude that this gold standard – the use of randomly assigned comparison group research and subsequent meta-analysis is of only limited use to practising distance educators. These results may be useful in persuading reluctant colleagues or funders about the efficacy of distance education, but they tell us little that will help us to improve our practice.

Despite this problem, many very influential policy makers are now arguing that unless education adopts this type of "scientific and evidence based research", we will never make progress in the discipline and will be subject to fads and superstitions forever. The famous American education researcher Robert Slavin (2002) contributed to a major revival of the paradigm wars of the 1980's recently when he argued that educational researchers need to embrace "evidence based learning" rather than the current process that "more resembles the pendulum swings characteristic of art or fashion, rather than the progressive improvements characteristic of science and technology" (p. 16). This plea has fallen on fertile ground in many government circles.

It is not that I am unsupportive of this latest research fad that supports only quantitative and random comparison studies, rather I think that believing that this and only this type of research is either effective or capable of informing policy makers and practising educators is both naïve and unhelpful in garnering the respect and support we most sorely need.

Qualitative or Interpretive Learner Support Research

The majority of research published in distance education can broadly be classified as qualitative or of mixed design. Rourke & Szabo (2002) in a content analysis of the Journal of Distance Education classified the research articles as:

31% qualitative

25% quantitative

31% qual & quant (mixed)

Qualitative studies include case studies, interpretive ethnographies, grounded theory, phenomenological studies and a variety of other variations on a research paradigm that seeks to understand and explain practice from the participants' perspective. This research is usually more easily read (unless it is 400 pages long) and comprehended by practising educators but it too has difficulty showing that it has effect on distance education practice. A recent qualitative study by Dearnley (2003) of students studying at a distance towards their Nursing Degrees illustrates this point. She argues that "… support structures to facilitate personal and professional development within this context need to be in place and attention must be given to the provision of effective learner support" (Implications section, para. 3). These are nice sentiments to which few would disagree. However, an examination of a graphic illustrating the life process of students engaged in this program (figure 1) leaves me with little sense of how we could change or improve our learner support interventions – though again, the study has some value in revealing to us the life forces in effect among this group of learners.

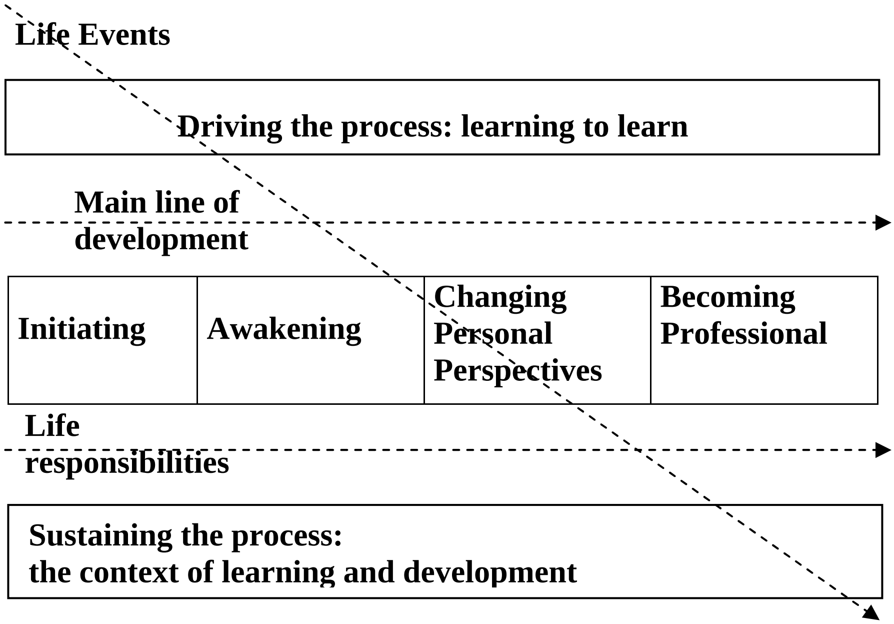

Life Events
Driving the process: learning to learn
Main line of development
Initiating
Awakening
Changing Personal Perspectives
Becoming Professional
Life responsibilities
Sustaining the process: the context of learning and development

Figure 1: Distance Learner Development from Dearnley (2003)

A second study by Cain, Marrara & Pitre (2003) concluded from interviews with eight graduate students studying at a distance that most of the students had no interest or desire to utilise any learners support services other than those provided by their teacher. These types of findings do little to inform or change our practice, at best they leave us with the conclusion to most questions that "it depends" – an answer that most of us know already about learner support provision in distance education. Burkhardt and Schoenfeld (2003) note that the test of quality in much qualitative study is "… critical appraisal concerning plausibility, internal consistency and fit to prevailing wisdom. The key product of this approach is critical commentary" (p. 5). Such commentary by researchers that is produced and often consumed only by fellow researchers does little to directly change or improve practice.

Developmental or Design-based Research

A third paradigm of research design is related more directly to the practical discipline focus of engineering and architectural study and work. This genre of research has yet to converge on a single name, but is most often referred to in North America as design-based research. The term "design-based" is generally attributed to the American Researcher Anne Brown from a 1992 article in which she described the challenges of undertaking real life research in classroom contexts. However, the concept is very directly related to the work on van den Akker (1999) and his Dutch colleagues and to Richey, Klein and Nelson (2003) who write about a set of practices that they refer to as 'development research' with a particular focus on construction and evaluation of technological learning prototypes. Design-based research has garnered a great deal of attention within the last year with special editions of the Journal of the Learning Science (13,1, 2004) and the Educational Researcher (32,1, 2003) dedicated to this emerging research paradigm.

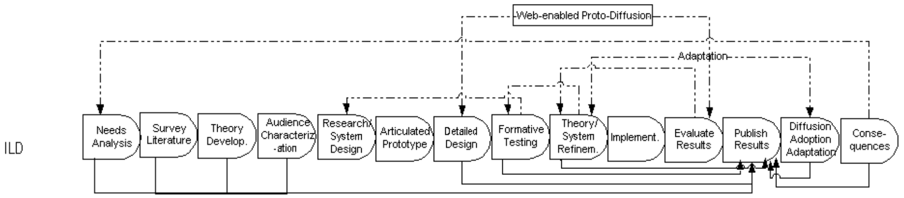
I am particularly attracted to what I will refer to as design-based research because it, like many distance educators, is action and interventionist orientated, participant centred and collaborative. Unlike many forms of qualitative research it goes beyond understanding the context from participants' perspective to actively working with participants to improve, assess and re-design the critical educational context in which learning happens. Moreover, it is unlike quantitative designs in that the researcher is not merely measuring – rather they actively and consistently intervene to iteratively design, redesign and measure variables that are interesting both to themselves and to their practitioner collaborators. In many ways developmental and design-based research are our only homegrown educational research contributions. In the way that anthropologists developed ethnography, educators developed developmental research. Finally, unlike many forms of action research that tend to ignore theoretical development or implications, design-based research also strives to generate, substantiate and improve theoretical constructs that can "… transcend the environmental particulars of the context in which they were generated" (Barab & Squire, 2004, p. 5)

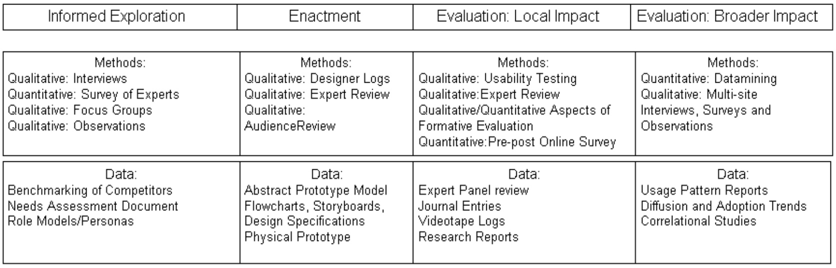
I would next like to provide an example of a design-based study that we are beginning that is focused on an installation of call centres at Athabasca University. I must confess however that this study is emerging from a project that was begun, before I arrived at Athabasca University and thus an example of "building airplanes in the air".

To set the context let me describe the undergraduate business programs at Athabasca University. This program is our largest undergraduate program enrolling over 11,000 students annually. Unlike many distance education programs globally, the distances from which our students enrol and their low concentration in any one location precludes any face-to-face interaction. In addition, these are continuous intake programs in which a student can enrol at any time and can progress through the course at their own pace. Traditionally at Athabasca the first line of student support has been telephone or more recently email interaction with a tutor. These tutors are 'on-call' for two hours a week for telephone interaction and respond to emails within 48 hours. The intervention introduced in 1994 was to create a call centre, modelled on those that have become the mainstream means of customer support in business within the last decade. Three call centres now operate at Athabasca (a general information centre, a computer help desk and a tutorial service within the School of Business) and the operational details of each are similar. Instead of having one day a week in which students can talk with a tutor they can now call or email 60 hours a week and talk, not to a specific tutor, but to an undergraduate business advisor. This advisor likely does not know the student personally but unlike the tutors, they do know Athabasca University Business school – its courses, curriculum, administrative requirements and the answers to questions that students enrolled in the business courses have been asking over the past 10 years. As Phillips and Hawkins (2003) report from the Open University of the UK it is extremely challenging to keep part time tutors informed and knowledgeable about the policies of the University even when this type of administrative information is reported as the most important type of learner services support (Cain, Marrara, & Pitre, 2003). Of course, not all academic questions can be answered by a general advisor not specifically trained in the discipline of study. However we have found that approximately 80% of students' queries are answered immediately by the advisors and the rest are referred for response within 48 hours by academic experts. Further, we have found that student satisfaction with the call centre service is high and that this innovation saves the School of Business saves over $100,000 a year (Woudstra, Huber & Michalczuk, 2004). But what has this to do with design-based research?

I would next like to illustrate how a design-based research design is used to provide meaning and hopefully valuable practical and theoretical assistance to practitioners both within and beyond Athabasca University. To do so, I would like to use a model of design-research developed by Bannan-Ritland (2003). Figure 2 provides a diagram illustrating the components and the use of various research methods and data in a design-based research study.

Figure 2





Informed Exploration	Enactment	Evaluation: Local Impact	Evaluation: Broader Impact
Methods: Qualitative: Interviews Quantitative: Survey of Experts Qualitative: Focus Groups Qualitative: Observations	Methods: Qualitative: Designer Logs Qualitative: Expert Review Qualitative: AudienceReview	Methods: Qualitative: Usability Testing Qualitative:Expert Review Qualitative/Quantitative Aspects of Formative Evaluation Quantitative:Pre-post Online Survey	Methods: Quantitative: Datamining Qualitative: Multi-site Interviews, Surveys and Observations
Data: Benchmarking of Competitors Needs Assessment Document Role Models/Personas	Data: Abstract Prototype Model Flowcharts, Storyboards, Design Specifications Physical Prototype	Data: Expert Panel review Journal Entries Videotape Logs Research Reports	Data: Usage Pattern Reports Diffusion and Adoption Trends Correlational Studies

Figure 2: Relationship between stages of the Integrated Learning Design Framework and types of methodology and data collection from Kelly & Lesh (2003)

In this diagram Kelly and Lesh track the four main areas of design research – informed exploration; enactment, evaluation in the local context and finally more general evaluation on a broader scale. They break these four main stages into smaller steps, many of which are familiar to educational researchers. Three things are striking about this diagram. First is the integrative and connected way in which one phase of the design-based research leads to another and that the whole of the research is not complete until the project has worked through all these phases. Much current research reported in our journals is confined to perhaps a needs assessment, a report of an intervention, and the results of a pilot implementation or a wider scale meta-analysis of adoption impact; – design research covers all of these domains and more. Secondly, note that Kelly and Lesh provide examples of the type of methods and data that are collected across each stage of the design process. Here you see qualitative questions, methods and data mixed with those emerging from a quantitative paradigm. Each data set and analysis informs the other. Finally note how each phase includes the active participation of both researchers and field based practitioners.

Returning now to the call centre project at Athabasca, I illustrate how each phase has or will be incorporated into a design-based research design of this intervention. In the informed exploration stage, call centre theory and practice were reviewed and studied in their mostly consumer support applications. Interviews were undertaken with some of the key actors and other sorts of qualitative data were collected. In the enactment stage the Lotus Notes applications was constructed. Unfortunately, we didn’t gather as much data on the production as we could have and thus there is little data detailing costs, timelines, and design specifications. Such data loss inevitably results in less capacity for the innovation to be replicated elsewhere. Finally, pilots were conducted and results monitored on pilot study and regular students. The evaluation stage consisted of more quantitative data collection. First and most importantly all calls (from telephone as well as email) are tracked in a database. This database can be searched and interrogated by faculty and administrators online using a web browser, thereby allowing faculty to monitor, on a continuing and on needed basis, the type of interactive questions, queries and concerns of their current students. This data can also be monitored over successive years thus gathering longitudinal data that can further inform our practice. This source of data is in marked contrast to the ‘black hole’ in which student interactions with tutors fell into in the past. Previous to the call centre, it proved a very challenging task to gather comprehensive data related to frequency, content and solution to student concerns.

In the local evaluation stage of the design-research annual evaluations of student satisfaction with learner support services are analysed to differentiate between students with traditional tutors and those assigned to call centres. These studies reveal that there is little difference in over all satisfaction. However, it should be noted that some students (and tutors) miss the familiarity that they were used to with a single tutor assigned to a restricted number of students. The final broader stage impact is achieved by ongoing publication of results (Woudstra, Huber, & Michalczuk, 2004; Woudstra & Adria, 2003; Adria & Woudstra, 2001).

We have also learned that the call centre is a disruptive technology. Some of the tutors and their union have expressed concerns that their jobs have been reduced in scope and in resulting compensation. Currently the call centres handle 80% of student concerns and only 20% of the questions are passed on to academic experts for reply. These and other questions are of course monitored, the time for resolution tabulated and the answers are made available for both tutors and call centre advisors in a frequently asked question file. Further design-research work is needed to monitor the effect of this innovation on long term completion rates, academic outcomes and the effect on working conditions of academic, tutors and advisory staff. The data collection incorporated into the system also encourages practitioners to monitor their own work. It provides a ready tool for the development of action and more theoretical research questions and projects since staff are able to easily monitor the effect on student queries of any further innovation on any part of the educational system that directly impacts students. Finally, it is hoped that publication of the research results will result in replication in different contexts, allowing further study and innovation development as the results of these innovations are shared throughout the distance education community.

In summary, design based research provides a path that leads away from the unproductive paradigm wars that threaten to break out once again within the educational research community. The vitriolic nature of the argument between advocates of competing research paradigms marginalises, stereotypes, separates, and backgrounds competing positions. Lines (2001) argues that we "… been seduced into accepting the inherent value and power differentials that operate in the dualist construction of the 'quantitative/qualitative' binary pair of terms" (p. 173) and that this confrontational attitude is highly unproductive for those seeking further support for educational research. Harkening back to the extremely low amount of funding currently available for educational research reminds me of the old saying that 'within academia the acrimony of debate is so high because the stakes are so low'.

There is no one correct way to conduct research. Each methodology has particular strengths and weaknesses, works better with different problems and better suits the culture and personality of different researchers and the context in which they work. But there is no inherently superior methodology either. In a very interesting study, Kennedy (1999) asked a group of practising teachers to evaluate research papers that used a variety of methodological designs on a wide set of criteria including usefulness, understandability and potential impact on their practice. She concluded that "… the findings from this study cast doubt on virtually every argument for the superiority of any particular research genre, whether the criterion for superiority is persuasiveness, relevance, or ability to influence practitioners' thinking" (p. 26).

Finally, I should note the variety of ways in which the Net is changing educational research. Anderson and Kanuka (2002) document the many ways in which the Net both facilitates traditional and allows new ways to examine learner behaviours in educational contexts. We conclude that new net tools can be used to research not only online behaviour but also very effective tools to survey and interview subjects engaged in non-net based educational activities.

The Dissemination of Research and Best Practices

Even the best of research is of little value unless its results and recommendations reach the busy practitioners who are in a position to implement the findings and best practices revealed. Traditionally, this has been done through paper journals, conferences and more recently via email discussion lists. The cost of travel and inconvenience of travel limits the effectiveness of face-to-face conferences. Virtual, real time conferences have their place, but the demands of real time obligations limit their effectiveness for practitioners. Further, conferences provide a type of information that might be described as 'hit and miss, just in case' that only coincidentally meets immediate needs. Mailing lists are also useful but their proliferation as well as the 'spam' that accompanies all useful email, limits their usefulness. Paper journals and especially those published by for profit publishers are increasingly too expensive for many of the world's distance education practitioners – although access through databases such as EBSCO is an encouraging sign.

At the risk of being accused of self aggrandisement, the model of publishing high quality peer reviewed research articles and technical reports and making these articles available to all, such as is the practice of the journal that I edit, is the most cost effective and accessible way to encourage meaningful dissemination. Athabasca University's journal the International Review of Research on Open and Distance Education (IRRODL) is possibly the most widely read of the peer reviewed journals. I am also pleased to see the developments of Europe's International Research Foundation for Open Learning with one of the core functions being the dissemination of research results as well as training practitioners and researchers. I especially am pleased to read about the upcoming publication of a series of online handbooks for researchers to be published in conjunction with the Commonwealth of learning. Yet another example of the value of open source type distribution of research results and best practice is the recent publication by Anderson and Elloumi (2004). 3700 copies of this 17 chapter book were downloaded during the first two weeks in which the e-book was placed online. This number compares very favorably with the 2,000 copies of Anderson & Kanuka (2002) – many of which still sit in the virtual sales racks of Amazon.com.

However, even the best of articles gets lost in a sea of electronic information and is too often forgotten by busy researchers and distance education practitioners. We need to develop systems that allow for qualifying, organising, and harvesting research data and summary articles. The emerging semantic web (Berners-Lee, Hendler, & Lassila, 2001) offers promise to meet this need. A first step towards this goal has been done recently with the publishing of all IRRODL documents in (rich site summary) RSS format. Although a simple system, the XML coding of four important fields (title, author, abstract and link to the full text) in RDF format to create the RSS feed is a first step in allowing content to be stored and harvested selectively by both machines and by people. In further work we have recently been working on ontology of educational research terms that we hope will provide a much richer means to identify and retrieve articles from throughout the educational world. Applying and growing the metadata that describes not only the results of individual research projects but metadata that grows in an organic fashion as it informs and is further informed by practice and later research is a looming challenge that we are just beginning to understand. The Educational Semantic Web does not yet exist but my experiences editing with Denise Whitelock a special issue of the Journal of Interactive Media (2004) (http://www-jime.open.ac.uk/) convinces me of the potential value of this technology – despite the considerable obstacles yet to be overcome.

Conclusion

To conclude let me reiterate that we desperately need an increase in both the quality and the quantity of educational research and especially that devoted to learner services. Further, this research must involve and be co-directed by practitioners so that the results inform and inspire practical improvements. To achieve this goal we need to fight much less about the various research paradigms that are available and learn to integrate all research paradigms – extracting value and meaning from each as it provides effective tools to answer our many problems. The emergence of developmental or design-based research seems to offer a promising new methodology that can effectively use all research methodologies in a process that follows interventions through from literature and theory research, to multi-mode data collection to implementation and adoption studies. The development of such a methodology gives promise for the creation and sustenance of a vibrant research culture in distance education. Cultures are not formed quickly, but once established and nourished they provide the sustaining impetuous for collective action that is so desperately needed in our mission of providing quality educational opportunity to every inhabitant of our global home.

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NICHOLAS ALLEN

University of Maryland University College: Institutional Models and Concepts of Student Support

Introduction

The topic for this session is "Institutional Models and Concepts of Student Support Services". I think I can best address this subject by speaking from the perspective of my institution, University of Maryland University College (UMUC), because that is the one I know best. I want to first describe this institution. Then I would like to talk about some key decisions that have defined where we are today in the world of online learning, and how we got here. Together, these describe the model we have pursued in online delivery. Finally, I shall talk about some of the challenges we are facing: the defining values and emerging issues that I think describe where we are going and our view of how we can best serve and support our students. These latter ideas are rather messy, because we are grappling with them every day. But those are issues that are extremely important to us, and they say something about the type of services and the type of institution we are, and aspire to be, for our students.

About UMUC

We are a relatively young institution, founded in 1947 as a continuing education unit at The University of Maryland College Park. We became an independent University in 1972, and today we are one of eleven degree-granting institutions in the public University System of Maryland. So when you hear about the Maryland university with a basketball team or a football team (which in North America we hear a lot about), it is *not* UMUC but rather our sister institution, a very large, traditional research-oriented residential institution in a multi-institutional state system.

UMUC is unique because we are a complete university with a mission devoted primarily to adult and part-time students. Very few institutions in North America can say that. We are also unique because throughout our history we've received little support from the state government. Beginning in the early 1990s, we got perhaps 3% of our budget from the state; then they had a recession and took it away. In 1996, with a new governor we were successful in getting a funding formula for about five years. We reached about 7% of our budget from state funding and, sure enough, last year during the recession and the state budget crisis, our share was reduced to about 6% of our total budget that this year will be about $240 million. So we are mostly dependent upon our own resources: the tuition and fees that our students pay, and some small revenue-producing enterprises.

Today UMUC is a very large university, with roughly 91,000 students and 3,100 faculty worldwide. We have 575 full-time faculty; the rest are part-time. Traditionally we have been a university that delivered courses on the ground in the face-to-face format.

Currently we have about 160 locations worldwide. Many of those locations are in Europe and around the Asian perimeter. Most (but not all) of those locations are part of large contracts that we have with the U.S. Government to deliver courses and programs to U.S. citizens overseas: government employees, U.S. Military, and their families around the world. We also have programs in Russia, with Irkutsk University and Far Eastern State University in Vladivostok. We are also partners with Carl von Ossietzky University in Oldenburg, Germany for the Master of Distance Education program, and we have cooperative arrangements in place or in progress with a number of other universities and institutions around the world.

UMUC is a comprehensive university with everything from Certificates to Associate Degrees, Baccalaureates, Masters, and the Doctor of Management. We deliver very little non-credit programming. We also have a National Leadership Institute that we run for executive and management training, but that is about all; everything else is credit-bearing.

We say that we are a university with many formats. Of course, we've always used the face-to-face, traditional classroom format. But we are also very big online, and we have used interactive video, two-way video conferencing, and instructional television in the past. We have executive formats, and short residency programs in which students combine face-to-face meetings with work over the Internet. We offer some classes in which the faculty will fly in to a site for face-to-face meetings, then interact with the students online or through synchronous video conferencing. So depending upon the situation, we can mix formats.

We have considered ourselves a distance university for many years, beginning about 30 years ago with instructional television. Today we have 17 Masters and 18 of our Baccalaureate degrees available to our students fully online. We offer more than 600 online courses altogether, and that number is climbing. Last year we had more than 110,000 enrollments online. And all this growth has happened since 1997. In fact, I can recall when, in January of 1995, we introduced our first graduate course online and we had 22 students; we thought it was fantastic. Look what has happened since.

It's also interesting to see where we were in 1997 in terms of the different types of delivery. At that time online enrollments accounted for only 4% of our total enrollments. They grew to 9% in 1998, 20% in 1999, 39% in 2000, and reached the 50% mark in 2001. Today online enrollments account for 71% of our total enrollments. Online is really the delivery mode "du jour" for us. We don't want to give up face-to-face delivery, but our students are voting with their feet, or their fingers you might say.

Our student body is quite diverse. In age the biggest segment, is from 25 to 44; but increasingly the age group under 25 is growing. These are usually traditional students who go to residential campuses. However, in the United States, those campuses are becoming more and more expensive, and many students have to work and go to school part-time. So increasingly they come to us.

We are also watching very carefully the 45 and older age group as the baby-boomers mature and consider retirement. We think they are going want something related to their intellectual needs, and we hope to be there for them when they do. Our student body is somewhat more female than male. And we are quite diverse in terms of ethnicity. Our students really reflect the diversity of society in our state and across our country.

Key Decisions

I would like to talk now about some of the key factors and decision points that got UMUC to where it is today as a leading provider of online education in North America. First, UMUC was perhaps the right university in the right place. In the early 1990s, Internet and information technology had advanced to the point where it was ready for mass availability. There was also a large population of adults in North America who were very ready to go back to school to enhance their credentials and improve their career opportunities. In this environment we have UMUC, a student-centered institution with a mission and experience in delivering quality education to working adults at times and places convenient to them. We had curriculum that was ready and had been delivered in other distance formats, and we had a reputation as a public university. So we were well positioned to capitalize on the external changes and the external environment. However, that alone may not have been enough. I think there were some key decisions we made that capitalized on the changes in the external environment as well as our University's strengths that got us here today, five key decision areas in which we made the right choices.

The first critical decision concerned the level of academic quality for online delivery. For us there was no question that the outcomes for online learning must be the same as for face-to-face. If it is not so, then what would we be we saying about one mode of delivery over the other? That one is inferior or superior to the other? So we decided that we have to look very carefully at inputs and processes, and that we have to manage these so that the outcomes for the student will be the same regardless of the mode of delivery.

We have worked hard to try to make this outcome a reality. The faculty who teach online are generally the same ones who teach face-to-face, and some of them switch from one mode to another. The curriculum is the same in both modes. We have worked hard to provide the technology, information resources, and institutional services to support both modes, on which I shall comment more shortly.

For us, interaction is critical in online delivery, as important as in the face-to-face classroom; so that governed how we would design our delivery platform. We have always felt that students must be engaged in their learning, so we have encouraged our faculty to be creative in facilitating that process in the online classroom. And of course, we need assessment and feedback. All of these inputs and processes were as important to us in offering the online classroom as in the traditional one.

A second critical area in which we made the right decision, was that we saw the challenge of online delivery as not just converting a course or even a program for Internet delivery. The real challenge was to be able to surround the whole thing with a rich package of support services for both students and faculty.

We began working on this problem from the beginning. We felt we must have 24 hour by 7 day technology help service available to students and faculty. So we provide interactive guidebooks, e-mail, chat, and an 800 number for students and faculty to call if they are having trouble with their technology. In addition we offer online orientation and tutorials for those students who may be new to the use of the technology.

We believe the library is the heart of the learning enterprise. So we decided that we must provide 24 by 7 library services for students who are distributed across the Continent. It took us until last year to get the 24 by 7 service, but we have it now. Students can get help from a librarian through e-chat, e-mail (with a guaranteed two-hour response), or through an 800 number they may call to ask a librarian a question. We also have a lot of guides and tutorials. We belong to the public University System Library Consortium; so there are about 12 million hard copies available that students may order online and have them delivered to their doorstep overnight if they wish. We have an e-book library service that has several thousand copies now and is growing. Students may go there to read and bookmark texts online. We also have over 100 online databases, about half full text, that students may use to retrieve articles from journals and bulletins. And we have e-copy services online, so that if a faculty member or a student cannot get the full text e-copy, the librarian will retrieve the copy, get the copy-rights permission, and post it in the classroom.

In student services, we set a mandate that every service a face-to-face student needs must also be available online. We are working hard to try to meet that goal, but it’s always a challenge. Nonetheless, students can do everything now via technology. They can apply for admission, enroll, get advising, get grades, and apply for graduation, either via online or phone. This goal required us to rethink our student service operations, and to try to introduce business process management techniques to them. We are making progress, but we still have work to do, which I will comment on shortly.

Of course, distance faculty also require online services. In addition to the technology and library help services I mentioned, we have an online training and certification program. No faculty member enters the online classroom until he or she has successfully completed the five-week online training course. We provide numerous other services for faculty, including the ability to submit grades online and participate in online symposia and other training opportunities. Increasingly we encourage them to be linked in online communities.

A third critical decision concerned how we were to convert our face-to-face curriculum to online. Should we do it inside the university or go outside?

We decided to stay inside with our own faculty. We had a number of ways to construct the curriculum. We have some faculty, largely in the Graduate School, who were very innovative and technology fluent, and wanted to do it on their own, sometimes with the help of a technologist. In our undergraduate programs, however, we used a team approach in which we surrounded the faculty member with course designers, multi-media technicians, editors, and graphics people.

It worried us for a while that we were using two different approaches, but in the end we decided it provided us with a great deal of flexibility. Today, we have reached a point where we would like to see a merger of those two processes in both the graduate and undergraduate operations. We are searching for the right balance between a standard approach used by all faculty and the opportunity for faculty to bring their value added to each course section, according to their knowledge, professional background, and style of teaching. We think we have arrived at an approach in which we have avoided the tug-of-war found at some universities between institution and faculty over who owns what. Basically UMUC owns the delivery platform and any commonly produced instructional materials or lecturettes. The faculty bring their value added, which primarily appears in the conferences, and that is their material. Being able to find the right position for this issue has enabled our University to avoid energy-consuming conflicts and get on with the business of getting our curriculum online quickly.

A fourth critical decision involved choosing the right delivery paradigm. We found a continuum of delivery paradigms emerging between the so-called broadcast model at one end and the interactive model on the other. The former is one in which communication is largely one-way – students are sent materials and instructions and are largely on their own as in an independent study, or perhaps the tutorial approach. Sometimes there is a large investment in multimedia with a single course costing several hundred thousand dollars to develop. An advantage for the institution is it may be open to very large class sizes.

At UMUC, we chose the interactive model that relies heavily on two-way online conferencing. In this model, faculty and students proceed through the class as a cohort, engaged in considerable discussion. The investment in multimedia is usually more modest. However, this model places limits on class size. We have limited that to about 30, and hopefully smaller.

In the elements of our online classroom, the learner is central, so we put a very heavy emphasis on conferencing. There is the opportunity for study groups and the creation of common documents, or for common problem-solving. Private e-mail is an option for one-to-one communication. Most of our classes still use the paper textbook. We do not believe that e-textbooks are quite ready for primetime, although the publishers are pushing them. Students have the opportunity to get other learning materials such as CDs, and of course, faculty developed or institutionally-developed materials which are built into the classroom. Finally, there is the Web itself. We saw the Web as not just a mode of delivery, but also a very rich resource for learning materials, some of which would be far too expensive for us to develop by ourselves.

The fifth critical choice we made at UMUC was in the selection of a delivery platform. We had to decide whether to stay with our own or buy one of the commercial packages, of which there were quite a few in the mid 1990s.

We developed our own proprietary delivery platform, which we call WebTycho (after the Danish astronomer). This system has been very successful for us. The platform is largely invisible; it does not seem to get in the way of students or faculty in carrying out the learning process. It is quite friendly and extremely reliable, and it is very scaleable, enabling us to grow rapidly.

Over the past twelve years, some have advised our university to get out of the software development business and move to one of the commercial delivery platforms. However, each time we have done an evaluation of the leading commercial systems, we found we were quite satisfied with our own system, and moved to develop its next generation. We liked its responsiveness to the needs of our faculty, and we liked the advantage of being able to control our costs rather than being subject to the commercial market and outside vendors.

So these five areas involving quality, online support services, course development, delivery paradigm, and delivery platform were critical ones for us. We think the decisions we made were the right ones for UMUC as we were confronted with challenges and opportunities in the external environment over the past decade.

Governing Values and Defining Issues for the Future

I would like to talk now about the governing values that are reshaping our institution, some of the challenges ahead, and some of the issues that are defining the way in which we deliver services to our students. UMUC has been successful, yes. But the environment continues to change. Our survival as an educational institution depends upon our ability to continue our transition.

UMUC is first of all, a *public* university. As such, we think the governing values for our university must relate to *access*. Some would say access is equivalent to “open,” and I’ll talk more about that shortly.

Quality is another governing value. Quality might also be equated to “accountability.” There are many ways to define quality, and every institution says it has quality programs, but quality also brings with it accountability to society and to our students. Do our students grow and learn and how do we know that? This is an issue that is being discussed a lot in North America right now, within the government and across the country, as the cost of education continues to increase. That leads to the third value, the third responsibility, we have as a public institution: *affordability*. Are our programs within the financial reach of our students? More and more students in North America are paying for their educations through very large loans. This is a national issue that is being debated and tied to quality and access.

So these three values: *access*, *quality*, and *affordability* are ones that we are taking very, very seriously at the UMUC. We believe that how we perform in carrying out these values will define us in terms of whether we are just another university or will be a great university. Each of these, in its own dimension, drives a number of issues that we think will define us as a university as we make the transition to a new level of operation over the next decade.

Access

Access drives a number of issues that are part of our everyday conversation at UMUC. If we are to be accessible, this means to us we must turn away no qualified applicant. Thus our entrance requirements are minimal. As essentially an *open university*, we must deal with *growth*. Many students will seek UMUC as the university where they have the opportunity to fulfill their educational goals. In fact, in our State of Maryland we are being looked to as the solution to a student capacity problem in our state. These are the children of the baby-boomers, the baby-boom echo, who are emerging from the high schools expecting to attend college to improve their career opportunities. They are why our 25-and-under age group is growing very rapidly. There are no seats for many of these students in the public university system, so the State is looking to UMUC to deal with this capacity problem.

If we are to be accessible, we must also deal with students who come to our door with very *diverse academic backgrounds*. Some of these candidates are well prepared, some of them less so, and we must be able to help them. We cannot control what society delivers to our doorstep. This means our University must develop and provide the resources necessary for under-prepared students to acquire the skills the need to succeed.

Access means *growth.* Thus we must attend to *scalability* in our operations, and in services we provide to students. This is a question we find ourselves asking frequently whenever we consider a new initiative or a new idea: “Is it scalable?” Growth means we must have scale. We must also look for opportunities to achieve *standardization* in services so that we can consistently deliver a high level of service for large numbers of students.

To cope with growth, we shall rely heavily on *technology mediated processes* and reengineering to standardize many services we provide to students. We also know that students have individual needs, so we must look for opportunities to achieve *mass customization*. This term is one we use more and more and I like very much. We look to the mass customization of our services as the means to support individual needs, but at a lower per unit cost as a result of our efforts to scale and standardize the basic level of service. I like this term and I hope you will think about it a lot. Frank Gehry, the architect, is a master of using mass customization in the design of his buildings, and, of course, his buildings look very distinct, don’t they? I think this concept is one that has a place in the delivery of higher education.

Finally, to provide access and to serve large numbers of students, we must attend to *measurement*. We must measure everything we do in providing services. Are the phones answered on time? What is the response time for e-mails? What is the abandonment rate of our phone calls? What is the course loading of our academic advisers? How long does it take to transfer credit evaluations? And so on. All of these *metrics* (and many more) will be critical to our operation, and we are working hard to have these indicators available to us instantly.

Quality

When we speak about *quality*, there are a number of issues of concern to us that will shape us and become part of our daily vocabulary. The *curriculum*, of course, is first. Is it *current*? Is it *innovative*? Is it guided by what an individual will need in today’s complex society and workforce? We must attend to that.

We also look closely at our *faculty*, of course, because they are the ones who deliver the curriculum. We are concerned about the addition of new faculty, and their qualifications. It used to be that we treated faculty as a staffing problem, that is finding someone qualified and available to assign to a class so that it would not have to be cancelled. But we now know we must go beyond that thinking. As we bring in new faculty, we must provide a higher level of training than how to use our online delivery system. New faculty must know our values and culture as an institution, our expectations for faculty, and how we want faculty to deal with our students. So we are building a *faculty academy* through which all new faculty must pass before we shall invite them to join our ranks and put them into the classroom with our students.

Quality also means an increased emphasis on *standards*, expectations for our students and for our faculty, and an emphasis on achieving *consistency* in the level of instruction our faculty are expected to deliver to our students across class sections.

I have earlier mentioned the importance of academic *support* resources for students who have had less preparation in their previous educational experiences. This assistance is critical to helping these students acquire the skills they need to succeed, persist and graduate. A very large initiative that we have right now concerns *persistence and retention* of our students. We're about 18 months into this initiative, and I expect it will continue for the next 3 to 5 years. We have already learned some interesting things in this persistence/retention effort. We discovered there are barriers in the external environment with which we can give students some help. Financial aid is an example. Some students arrive without the resources to pay their tuition. But if we provide better services and ways for students to get the funds they need, they can overcome that particular barrier more easily. Students on financial aid tend to stay with their program and are more likely to finish their classes that those who are not.

We also discovered that students most likely to withdraw or fail in their class are those who register after the class has begun. In U.S. higher education, it is common to have a week of late registration after the semester begins. But those are the students who are most likely to withdraw and fail. So why do we do this to ourselves and to them? This past year we have tried to change that culture by moving registration ahead a week so that the last registration ends before the class starts. In a few weeks we will know if we've had any effect on withdrawal rates in those classes.

We have discovered there are administrative barriers as well. We learned that every term we disenrolled about 1100 students after the class has begun because they had not paid their bills. This makes no sense because the students are already in class; we know who they are; we have their addresses; we shall almost certainly collect our tuition from most of them. So why do we throw them off the plane after it has taken off? We have now stopped that practice.

Mass customization is another concept important to quality. We are building what we call the standard syllabus, in which certain parts are common across all courses and all our programs. Other parts of the syllabus can be tailored or adjusted by the faculty members according to the needs of their particular classes and from the perspective of the individual faculty members' expertise and discipline.

Assessment and measurement. If we take in students who come from diverse backgrounds, we must pay a lot of attention to *learning outcomes.* What do our students learn? How are they different when they graduate from when they came to our institution? We need this information, first for ourselves in order to confirm that we are making a difference, that our students are learning. We also need this information to show others in the external regulatory environment that indeed, we are making a difference with our students.

Affordability

Affordability drives its own set of issues. To generate the revenue we need for our programs, we must have *growth*. Growth generates tuition revenue, but in order to have margin left over to strengthen the university's infrastructure and program enhancements, we must look to *scalability*. Services and business practices must be *standardized* and we must rely heavily on *technology* to do that.

Affordability means we must pay a great deal of attention to *cost management.* I am very pleased to say that over the past three years we have changed our budgeting process to achieve that objective. Previously we had a system where all major departments had operational budgets with funds they worked hard to spend by the end of each fiscal year, at which time they worried about what would be available for the next year. We stopped doing that. We said that in order to build a stronger university, the leadership would set aside investment money of our own that is only to be directed towards infrastructure and improvements to the academic programs, and that money is protected independent of operational crises. Now, when we design the budget for the coming year, we first set aside the reserve fund; then the money for investments. Only after that do the departments do their operational budgets with what's left. It has worked well, because every year we now have investment funds to go into new improvements and enhancements.

To be affordable, we must also pay attention to *differential pricing*. Not all students will pay the same tuition. Students supported by businesses and corporations pay one rate. Students in our state who have limited means will pay a different rate. And students outside the state may pay still another rate. All in all, we are very careful about pricing.

Finally, everything that we do, again, must be *measured*. I have already mentioned its importance. Measurement is becoming a byword in our institution. If it moves, measure it. If it will be a new initiative, how shall we measure its achievement or effectiveness? Only by having a clearly defined set of metrics shall we know that we are going in the direction we intend. Measurement is critical to our achieving affordability.

Conclusion

I have described some of the key ideas or issues that are defining how UMUC will achieve its governing values of access, quality, and affordability. As I hope you have detected, some of these cut across more than one value set. How well we address these issues over the next several years will play out in the type of university we become.

I want to conclude my discussion with a word about our mission. We are in the middle of a strategic planning process at UMUC in which we are revising our mission. I think this is probably the first public gathering to which I am making the following statement. This mission has still not been approved by our Board of Regents, but we expect it will be this year. For the first time, we are stating that:

"UMUC will be the *open university* of the State of Maryland and of the United States with one focus: the educational needs of nontraditional students."

What does 'open' mean to us? It means *access*. It means, as I said, that we will turn away no qualified applicant. We will deal with students who come to us with highly diverse educational backgrounds, but we will provide the support that motivated students need to succeed. We will minimize barriers to retention and graduation. We will work very hard to do that. We must also embed in our culture the assessment of learning outcomes so that we can confirm to ourselves that we are making a difference with those students. And finally, of course, we value lifelong learning for our students of all ages.

Well these are some of the things about which we are thinking. These will define our actions and our future. I hope you found these thought-provoking and that we shall see some discussion in this conference, and perhaps in your future papers, about these issues. Thank you.

ALAN TAIT

On Institutional Models and Concepts of Student Support Services: The Case of the Open University UK

Introduction

I want to do three things in this paper:

- give a history of learner or student support at the Open University UK, and explain why that institutional example is of significance;
- fit that history on top of a longer history that seeks to explain where we – practitioners and researchers in the field of learner support – have come from, and to offer some examples of other institutions that might give us a sense of how and why we do things;
- and thirdly, and more speculatively, to seek to locate that history of student support in distance and e-learning in a wider framework of social attitudes and moral values. I will conclude by suggesting that this dimension of moral values is too often excluded by the demands of technological change and imperatives of business planning.

A Little History

I will begin not in the order that I have set out above, but with some historical context, drawing out three exemplars of practice that illustrate a number of important themes. We know that in England in 1844, Isaac Pitman saw an opportunity with the arrival of the postal services, themselves enabled for the first time on a general basis by the railways – to offer a correspondence course with an interactive dimension (Threstha, 1997). He sent out learning materials that taught shorthand, but offered to revise student exercises and send them back in a timely way. We can see straight away how technology – an industrialised postal service itself carried by the technology of the steam engine – permitted the separation by time and place of teaching and learning. We can see in this well known example too the birth of key characteristics of student support in our field that have come down to the OU UK: the integration of support in assessment; the importance of timeliness when teaching and learning are separated by time; and the centrality of direct personal feedback to the student.

The second exemplar lies with the critical move of the University of London External Programme in the slightly later period of the 1860s – the first full account was published by Bell and Tight in 1993, and is interestingly elaborated on in our conference papers by Richard Arnold. The University of London did something quite extraordinary in 1858 when it decided to allow students to take University of London examinations anywhere in the world without ever having set foot in London, except as it happened for the subject of Medicine. The university broke the link between place and study in a way that is still too radical for some universities. This permitted a number of things to happen. It increased access enormously, providing the basis for the social mobility that the

External Programme offered in the mid to late nineteenth century, not least from the dimension of gender (cf. also von Prümmer in this volume) as well as place and occupation. (It was going to be another 60 years or so before women in Oxford and Cambridge were permitted to take degrees.) It was a fundamental modernising step by a secular university in the country's capital (as opposed to the elitist universities of Oxford and Cambridge, dominated by the Church of England, the establishment, and the upper classes, and not least men). The differences in 1891 were explained thus

> The great advantage an Oxford or Cambridge man claims over his London rival is his social education. It is he says a moral training. His university career is far more than the acquisition of knowledge. He is no lowly student, working narrowly for his own hand, but a man among men, and he points to the union debating society, to the collegiate and university football, cricket and boating, as influences to this end. (University Correspondent 1891, as cited in De Salvo, 2002, p. 38)

We can note the gender of this mythical student, and wonder over the moral education that football, cricket and boating provided, and pass quickly on. I will want however to return to some historical legacies of a positive kind that these universities bequeathed to teaching and learning in Higher Education in the UK, and to the OU UK in particular.

The extension of access by the University of London External Programme took place not only within the UK, but globally. The global extension primarily served the wandering British as they set up and served their Empire. However, by one of the paradoxes of distance education I shall return to, exemplified by the University of South Africa, also began to serve those few people native to the colonies who could rise to the formidable challenge of study in English of English curriculum. I have met later generations of those wonderfully able students. For example, one that I knew grew up and lived in Lesotho in Southern Africa and took her first class degree in English Literature in what was her third or even fourth language. Right up to the decolonisation movement of the 1960s and even beyond, the new elites of the former British colonies gained their higher education in many instances not only through coming to the UK but also by studying for University of London External Degrees wherever they lived and worked.

However, this University of London separation of place from study did not include student support. What students were offered was a curriculum outline of a fairly rudimentary kind, and the chance to sit examinations. Around this a range of commercial correspondence colleges created provision to fill the gap. Many were in the traditional correspondence business of offering qualifications that would provide miraculous new careers to those gullible enough to enrol and pay fees. They created the tradition of high recruitment/ high drop out, and the poor reputation of distance education organised by unscrupulous people from which the field still to some extent attempts to escape. It cannot be said that the adoption of ICT and e-learning over the last decade has entirely escaped making the same impact.

On the other hand, many correspondence colleges did offer valuable support to students, classroom based local instruction and study systems at a distance, that helped prepare students for the University of London External Examinations. As we know from the valuable history by Anna de Salvo that goes into the background of the National Extension College, tutorial systems at a distance, residential schools and classroom based instruction all formed part of the repertoire of student support for University of

London External students from the late 1880s onwards. To summarise, between 1887 and 1931, 39,326 external students are recorded as passing University of London External examinations supported by the University Correspondence College alone, with some 10,000 gaining Bachelors or even Masters Degrees (De Salvo, 2002, p. 39). While the number of London External students in the UK has decreased due to the wider availability of opportunity to study, support for such students is still mounted from a small number of colleges.

Before coming to the OU UK, let me turn to my last exemplar from which we can learn, UNISA, or the University of South Africa. The story now moves on to 1946 in South Africa and the establishment of the world's first exclusively distance teaching university. UNISA, based in the country's capital Pretoria, recruited large numbers of students, and remarkably during the apartheid period remained a university not classified by the ethnic or racial group it was allowed to teach, as were almost all other Higher Education institutions. It was set up in order to meet a challenge for social justice, at least as understood by the Afrikaners. They felt substantially excluded from the nascent higher education system in South Africa by the British, not least by language. UNISA would offer university education to the Afrikaners at their farms across the country, the great majority of Boers being farmers. Sadly, but not unusually, that experience of oppression did little to educate that group about the oppression of others. Paradoxically, UNISA however offered opportunity to large numbers of black and so-called coloured students excluded from most educational opportunity as well as from political rights, along with whites for whom UNISA was originally intended. However, major weaknesses in the UNISA system identified after apartheid was ended included very importantly:

- low success in terms of completion and throughput rates
- the correspondence nature of programmes in comparison with well-functioning distance education
- inadequate learner support which is exacerbated by the lack of a co-ordinated regional network of learning centres. (SAIDE, as cited in Nonyongo, 2002, p. 128)

The student support available was simply the possibility to telephone headquarters in Pretoria between 9 am and 1 pm, at which time the lecturers went home. You can imagine which students had the telephones in apartheid South Africa! While it is very difficult to isolate the variables in an educational system, and identify a simple causal relationship of learner support with student success, the UNISA example before reform provides the clearest case for the importance of learner support in a distance education institution. For many students, especially from the majority population who were excluded from the best universities in South Africa, the opportunity offered by distance education was not a real one. UNISA provides us with the best-documented case hitherto of the dangers of developing distance education without adequate student support.

As a step along the way in my elaboration of the argument, let me point out at this stage how these different approaches to student support reflect not only technology and pedagogy, but also the social and moral values in which these systems for teaching and learning were embedded.

The Open University UK: Part 1

I want to elaborate that argument further in the case of the OU UK. First of all why has this case been selected for attention? I suggest it is because as well as the radical new ideas that the OU UK brought in its first year of teaching to learning materials, (the integration of multi media – in those days print, TV, radio, face to face and the residential experience), there was also equally radical but much less talked about innovation in student support. It is worth reminding ourselves how radical the new institution was. In the UK we had in the late 1960s some 6 % participation in Higher Education, and that small proportion was heavily skewed by social class. We had a legacy of social exclusion that was beginning to be as economically damaging as it was morally repugnant. The OU was set up to serve an audience of adults only – not as an add-on to school leavers but to the exclusion of school leavers (at that time admission to the OU UK was not permitted until the age of 21). And it was set up with the truly revolutionary notion that there would be no entry qualification to its undergraduate programme: this remains the one unique characteristic above all others in UK Higher Education today. Students choose the OU, and not the other way round. It is worth reflecting on how that changes the balance of power in an educational institution: an issue I want to come back to.

Student support became in this new university not an add-on, not a separate activity, but an integrated activity, and indeed *the* interactive and integrative activity for learning materials and the student.

The key concepts in the founding vision for student support were that it should be:

- personal and individual;
- local;
- provide in study centres the opportunity for social learning;
- include a residential element in the form of a one week summer school that enhanced ‘solidarity’;
- embed the teaching and support role in continuous assessment with the tutor;
- provide ‘continuity of concern’ throughout a student’s career.

While many colleagues made the vision work, the key names in the design of this new learner support system were Robert Beevers and David Sewart, the former the founding director of a division called Regional Tutorial Services that oversaw the work of the OU regions with their study centres, regional centres, academic staff within Faculties as well as independent of Faculties, their student counsellors and advisors and their student support administrators. Beevers, who published very little, was an Oxford educated former Inspector of Schools (I mention Oxford for reasons that will become clear), who was also familiar with the English adult education tradition and had been influenced by it.

The Oxford element of experience can be seen in Beever’s vision of the importance of individual and personal support to students (the tutor or student supervisor idea was and is above all an Oxbridge contribution to teaching); the importance of continuity of support through study, with the pastoral dimensions of a moral tutor along with an academic tutor; and the relative importance or even unimportance in some subjects of lectures or content. Many people prided themselves on having studied at Oxford or Cambridge and hardly having been to a lecture. To show that this is not just the attitude of the irresponsible golden youth of those former finishing schools for the upper middle classes, let me cite Hobsbawm, a refugee from Berlin in 1935 or so, who fled to London, and became one of our most eminent historians. He wrote of his study as an undergraduate at Cambridge:

> Good students soon discovered that they could get more out of an hour reading than an hour listening to undemanding public speech. (Hobsbawm, 2002, p. 110)

It would hardly surprise anyone if that attitude had influenced Beevers, who was a contemporary of Hobsbawm, and might explain why the new teaching and learning strategies for the OU were so attractive to him. We can speculate that the educational counselling system that Beevers designed with close colleagues like David Grugeon were intended to build around the courses, with the learner in central place. Beevers was surely reminded of the personal tutorials in Oxford and Cambridge that were based, ideally at least, on the Socratic method of conversation, which had already influenced other thinkers in distance education such as Börje Holmberg, with his notion of ‘didactic conversation’ (Holmberg, 1983).

The OU mission to recruit and support unqualified or underqualified adult students in its attempt to remedy the educational exclusion of the previous 100 years or more found institutional form in the tutor role. The tutor was employed part time by the university to ‘teach by correspondence’, that is to teach, assess and grade the 50% or so of the assessment that was necessary for the student to complete during the course, complemented by an end of course examination. This personal feedback on written work makes up the most central contribution to the student’s intellectual development, centred as it is in the need to support the student’s emotional confidence and her or his progress to successful course completion. The tutor was local, or as local as could be managed, across the 260 or so study centres in the UK at the time, offered face to face tutorials, and was available on the telephone. This tutor role has not changed substantially to this day in terms of functions (although, of course, media have changed) and has been influential all around the world. We can see from the tutor link with assessment how it was integrated into the student's learning.

Educational counselling was also offered to all undergraduates on a local basis. The counselling support was predicated on:

- the need to have activity in support of the learning that grew from the student as well as from the subject or course;
- the need to acknowledge the vulnerability of adult students in terms of support of study skills, (at that time, a very new notion that students might not arrive at university knowing how to write academic essays or solve mathematical problems), and to boost and sustain confidence, in other words to recognise the affective dimension of study;
- the need to provide personal individual support in order to do all this;
- and finally the need to offer this not only on a course by course basis but throughout the student’s career, the so called ‘continuity of concern’ that was given institutional form by one person with the counselling role throughout the student's time with the university.

Thus in the tutor and the tutor-counsellor (the person in whom the counselling role was embodied) there is the mitigation of:

- geographical distance;
- impersonality;
- vulnerability of adult learners in educational settings with which they are unfamiliar.

All this is in the interest of retention and student progress, but is also embedded in the moral and ethical implications of recruiting and teaching students in a distance learning context. While the OU UK concept of student support was intended to be active within the cognitive, affective and systemic domains (Tait, 2000, p. 89), it was framed more broadly within a shared understanding of a social and moral responsibility for adults in a learning setting. This moral engagement within a teaching and learning strategy challenged the hierarchy of teacher and student with its emphasis on the adult status of its students (in other words rejecting the parental model of responsibility), but it continued three other strands of social and moral concern from within the English tradition of public service in general and higher education in particular, albeit in an attenuated form. These were as follows:

- the Judaeo-Christian tradition of pastoral care, drawing on the metaphor of the shepherd caring for the flock, especially the weak;
- the social democratic tradition of caring for the vulnerable who are pushed aside in capitalist society;
- the patrician tradition of care for disadvantaged social inferiors.

All of these played a part in higher education in the UK, and indeed they can be linked, especially the first two. It was a Labour Prime Minister Harold Wilson, the politician who first took up the torch for the OU UK, who said he was more Methodist than Marxist. The tradition of pastoral care drawing on these strands represents one of the differences in approach between the Anglo-Saxon and continental European models of education.

I want to add at this stage a further model of student support, namely that associated with self-help, or peer support. This has always been present in the OU UK, organised by students themselves, with a greater or lesser degree of success and effectiveness. When it works well it can, according to students, be as effective as anything that the OU itself provides (Simpson, 2002, p. 125), and complements other resources that students themselves have access to, such as family and friends (Asbee & Simpson, 1998). So we should add to the traditions of care for students, an independent activity of community self-help.

Before moving on to the changes in the OU UK learner support system post 1998 or so, let me rehearse my view that just like the OU UK which came after them, the commercial correspondence colleges, the tutorial colleges for the support of London External students, and indeed UNISA in apartheid South Africa, embodied in their practice their own moral and social values. The very contrast between them makes my point about the embedded and implicit moral and social values in student support systems in distance and e-learning.

The Open University UK: Part 2

I should return briefly to the second architect of student support in the OU UK, namely David Sewart. His contribution during the 1970s and 1980s was to direct the practice of continuity of concern, and to identify the non-industrialised nature of student support in comparison with the industrialised nature of learning materials production, following the work of Otto Peters (Sewart, 1993; Peters, 1989). It was Sewart who identified the critical contribution that student support made to the quality of the student experience, at a time when competition for the adult student market was becoming stronger.

However since 1998 or so the practice of student support at the OU UK has changed with rapidity and is still doing so. I suggest there are a number of reasons why this has been so:

- scale;
- complexity;
- expertise with regard to management of information and its relationship with quality;
- Information and Communications Technologies (ICT);
- the commoditisation of relationships with students, and the rise of the notion of the customer.

I will say more about each of these headings.

The OU UK grew from the early 1990s from some 70,000 to its present figure of some 180,000 registered students. At the same time in terms of complexity, the OU has over its 30 year or so period moved from one award, the Bachelor of Arts with or without Honours, to more than 100 awards presently available. This combination of scale and complexity has created strain on the delivery of quality of service to students.

The quality of service to students had until 1995 or so been based on that service being as physically near to students as possible; and this nearness was the core contributor to quality of experience: geographical nearness was culturally how we understood advice as being personal rather than impersonal. The speed of social interaction was either managed in a face to face setting, by phone or by post. In parenthesis, it is hard for anyone under the age of 40 to remember the speed of organisational communications through the post: the writing of the letter by hand; its typing up; its being posted and one or two days its being delivered; its being opened by a secretary and put in the in-tray, and lying there waiting to be read. A reply then being written by hand; being typed; being posted and being delivered the next day or the day after that; being opened by a secretary and put in the in-tray, and waiting to be read. That simple exchange represented probably more than a week, and was the norm until the early 1990s in many organisations.

The mixture of social practice and technology represented in such an exchange created cultural expectations that were met in the 1970s through the local educational counsellors for OU students, supported by a Regional Centre. However in the new world that I have described of scale and complexity, the local generalist was having real problems in dealing with the information she or he was expected to master. Further student habits about travelling to gain information were changing. New models elsewhere of serving customers had begun to appear. We have only to think in the UK, one of the more liberalised countries in Europe it is conceded, of how banks have changed their practices:

most banking for personal customers is now done by phone or through the internet. The credit card has had an extraordinary impact on the social practices of managing purchases and cash. The purchase of books and music through Amazon, and their trading through E bay, represent well the ways in which social habits have changed.

The impact of all this on the ways in which the OU UK now organises its student support has been profound. The OU UK has dropped the generalist educational counsellor for students available on a local basis, and has dropped the notion that geography should be the primary paradigm for the delivery of services to students through the 13 regional centres. The OU UK has introduced Call Centres, where time constraints are diminished: they open for longer hours than most Regional Centres used to, and you can depend on availability of service to a greater extent than the local part time counsellor who might or might not be at home when you telephone.

The Call Centres have greater expertise with a specialisation of function supported by the management of databases that ICT makes easily updateable and distributable. The service is delivered anonymously: you do not develop a relationship with a Call Centre worker. Lastly a Customer Relationship Management System is being installed which, as in the commercial world, will use the data on our ‘customers’ – see how the vocabulary has changed – to stimulate telephone intervention. For example, will it be long before the following telephone calls are received by OU students? ‘Good morning, my name is Roger, I am ringing from the Open University and I am your customer service advisor for today. I notice that you haven’t sent in your first assignment. I wonder if I can help?’ Or ‘Good afternoon, my name is Judith. I am ringing from the Open University where I am your customer service advisor for today. Have you thought about registering for your next course? We have some very good offers this week, and I am able to give you a discount if you register today’. And so on. You can see how the information collected through a CRM can be evaluated. Has Roger increased student completion, to the benefit of the OU’s retention statistics and indeed income (with a proportion of government grant coming as a result of student completion as well as recruitment)? And has Judith increased sales for the next presentation of courses?

In summary, the OU UK is engaged in adopting a fifth model to add to my earlier four (the Judaeo-Christian, the social democratic, the patrician, and the community self-help), namely:

- the business model, based on delivery of customer services at a price and to standards that can be defined (Tait, 2003).

There are a number of significant factors to identify here. Firstly we see how relationships with students have become commoditised: all undergraduates in the OU now pay over 60% of the real cost of their courses as opposed to less than 30% some 30 years ago. The neo-liberal approaches to policy at governmental level over the last 20 years have necessarily changed the ways in which students think of themselves. They now express wishes and demands as customers, as much if not more so than needs as students. There will be those who find this to be a more appropriate basis for human relationships in this field – less patronising for example – and others who find it a diminution of more demanding, more complex, potentially richer relationships. Mason has written of the ways in which higher education used to demand only 30 years ago that students come in by certain times of night, and had to have permission to travel during term time, and suggests that change in student service away from the parental model of care is paradoxically coming late to distance learning as embodied in the OU UK (Mason, 2003).

It is certainly true that students think of their rights to customer service in ways that have destroyed the third model of care identified earlier: patrician care for your social inferior, which was still influential in some currents of social reform in the UK in the 1970s. At issue is whether the new business model of customer service will complement the Judaeo-Christian and the social democratic notions of care, or destroy them; I have my doubts whether fully human relationships such as we have aspired to in educational settings can be sustained by such a narrow set of concepts as those of customer service. It may on the other hand be one of the spurs that creates greater interest in the community self-help mode of activity. However, this is not to say that the business model of customer service should not make up one element of any system that supports students. But customer care may change the relationships within education in the same ways that mean, for example, we now no longer know our bankers, our bookshops assistants, our checkout assistants etc. That may be inevitable, and it may be that the benefits will outweigh the disadvantages: who after all would want to go back to systems for the management of cash pre 1980? But the issue deserves reflection.

I want to say something briefly about the impact of these changes on the tutorial role. While the role has been in its essence unchanged over the period of the OU UK‘s history, the impact of ICT has nonetheless been considerable. ICT has made possible social and collaborative learning supported by the tutor through e-conferencing. The impact on student activity is best explained through Paulsen’s theory of ‘co-operative freedom’ – free to participate at any time through asynchronicity, free to co-operate at a distance, and free to fully balance individual and social dimensions of study for the first time in distance education settings (Paulsen, 1992). We should also note the enormous growth in what I termed ‘the ‘community self-help’ model of student support, with the development of e-conferencing. The OU Students Association has many hundreds of e-conferences based around courses, study, affiliations, and extra-curricular interests, all supported through the OUSA website (OUSA, 2004). The community dimension of life as an OU student, for those who find on-line life engaging, has never been as real.

We know that on-line learning can be very effective, providing access and the chance to interact for many students for the first time. It can also be very ineffective, and there are as many empty or vacuous e-conferences as there were poorly attended and inconsequential tutorials in the past. But does it change the concepts with which the OU UK has worked? Does it, for example, change one of the longest standing but most effective explanatory frameworks, namely Moore’s theory of transactional distance (Moore, 1993)? My own view is that the core hypothesis that the space between the learner and the structure of teaching must be mediated by dialogue, offering the learner the opportunity to be an active participant – remains valid. However, the sharp distinction between learning materials and learner support is elided in some web-based teaching, where more exploratory tutor and peer supported approaches to learning take place, as has been noted by Thorpe (2002). We should also note that student support is enabled to move more into an industrialised mode than ever before, thus also breaking ties with some of Sewart’s (1993) earlier writing, as moderation replaces tutoring, as frequently answered questions on the web complement enquiry workers, and as Call Centres replace local offices. There is an industrialised scalability to student support in third generation distance education over and above what has been possible hitherto. (Cf. Guri-Rosenblit in this volume for a discussion of the contradictions between the industrial model of distance education and the new models required by the introduction of ICT.)

Conclusion

In the OU UK we have elements of the old world of second generation distance education alongside, sometimes uneasily, elements of the new world. We have a plurality of students and programmes of study which make it impossible in my view, should we want to do it, to move into an entirely on-line mode of interaction in less than the next decade. But I suggest that we are moving toward the following characteristics in the ways in which we support our students:

- relationships that are further anonymised and distanced;
- modes of response that are speedy and offer instant enquirer reward;
- advice that is accurate and expert;
- relationships that last only as long as the interaction.

We are moving towards ‘lite’ relationships that carry less emotional weight.

While all this is discussed, as it must be discussed, in terms of market share, customer retention, cost efficiency ratios, and management structures, it is also clear that the fundamental bases for our behaviours with students have changed. What has been generally overlooked in discussion, and what I want to highlight in conclusion, are the social and moral values that are inherent in the student support systems that we invent. Where we do not make them explicit, they will conceal the ways in which we conceive our relationships with other human beings in the distance and e-learning context. That these social and moral values may change over time is evident, but it is dangerous to ignore the fact that they have a powerful life. It is dangerous to overlook them because they will remain implicit and unexamined, and therefore we will not know in the full sense what we are doing. I would like to suggest that this is an issue that all of us working in this field with our different approaches to student services can reflect on. This can be illustrated with a simple example. Have we yet adequately thought through what the differences are in terms of social and moral values between saying ’I want to support this student to learn successfully in her or his own terms’, and ‘I want this customer to feel satisfied and to purchase again’, and whether there are any tensions in wanting both?

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