Continual Reinvention: The future for open and distance learning

Abstract

The use of ICT in all forms of education and training renders it more difficult than ever before, to distinguish the distance from the non-distance sector of provision. However, there continues to exist a range of social contexts requiring the systems capabilities of distance educators in bringing effective and flexible learning opportunities to learners in both technology-poor as well as technology- rich environments. We should also see the future of ODE in terms of innovation informed by the most challenging ideas and new directions, whatever their origin. Examples from two areas are discussed - pedagogies for learning communities, and technologies for reusability and portability in resources for learning. Both these areas are generating developments that put distance education at the forefront of innovation and enable it to 'speak to' the interests of many who do not consider themselves as distance educators. The future does not consist in focusing on what makes distance education different, but on ensuring that it cannot be ignored, because it continues to work with the latest and the best ideas, about both pedagogy and technology. In this sense, distance education has to continually reinvent itself, by applying new ideas that will probably not have originated in the field, but which can be adapted to it and invigorate its practice. It is still a field that distinguishes itself by taking what is at the forefront of thinking and making it work for real learners, not merely in pilot projects and research laboratories.

Introduction

Addressing the issue of the future of open and distance learning tends to raise the question of what counts as 'open and distance'. As many have already pointed out, there has been a widespread adoption of the use of information and communication technology (ICT) in all forms of education and training. These technologies are also being actively promoted. Within Europe, the Sixth Framework Programme Information Society Technologies area includes funding themes for mobile user applications and what it terms 'e-inclusion'. The objectives of this are to '*promote e-inclusion as a core horizontal building block in the establishment of the Information Society to ensure equal access and participation for all in Europe and to develop intelligent systems that empower persons with disabilities and ageing citizens to play a full role in society and to increase their autonomy.*'

The European Commission's Web-edu project carried out regional analyses of the use of e-Learning Learning Management Systems and discovered rapid growth in their use, particularly in the Nordic countries . About a third of the 89 institutions surveyed over 2001\2, each offered at least 50 courses online, demonstrating a clear trend 'towards large scale online education' (Paulsen et al, 2002, p. 8). Inspite of the dominance of American Learning Management Systems, locally developed systems are more likely to be used than BlackBoard and WebCT in countries where English is not the first language. Many learners now study using resources other than direct contact with their teachers, and at sites remote from their campus. However such learners and their institutions do not necessarily think of themselves as involved in distance education. As the report authors note: '*In most cases online education is used as a help and addition to the traditional face-to-face education.*" (Paulsen et al., 2002)

Definitions and Diversity

The terms 'open' and 'distance' probably achieved their high watermark as a magnet for practitioners on the conference circuits of the eighties and early nineties. Since then, we have seen the rise of terms such as elearning, mlearning and the variants yet to come. In his 2002 report titled *'The future of learning: from eLearning to mLearning'* Desmond Keegan revisits terminology and definitions for distance education. He seeks refuge in what he terms 'legalistic differences' between the distance and the non-distance sector:

'A distance student has not contracted to join a community hosted at an institution, whereas a conventional student – however she or he studies for their award – has crucially signed up to join a place and a community.' (Keegan, 2002)

However I doubt that even this distinction will still hold. Many distance education students now do join a community of other students, though not to study at a particular location. The Students Association of the UK Open University for example, has a conference for every course, and university-wide conferences for social functions of chat, FAQs, access to services and so on. Most Course Teams also provide specialist course conferences in addition. It is the University's deliberate intention that students do feel part of a community (Scott and Phillips, 2000), and that now also includes access to the OU Library from home. Students can develop their IT skills and information search capabilities via online supported study developed by the OU Library, and many courses offer guided introductions to the web-based resources relevant to different disciplines (Needham et al., 2001). Where studentship is concerned, there seems every reason to allow virtual communities to count, just as much as face to face communities.

But we probably should not be too concerned about defining ourselves as a distinct sector. In practical terms, some of our leading authors simply ignore the issue, or choose to focus on other aspects. Terry Evans and Daryl Nation for example, in their book *Changing University Teaching*, published in 2000, foreground the theme of creating educational technologies in university contexts. The various chapters use case studies of distance education to focus on themes which connect the practice with a much broader educational sector than just distance educators. There is a lesson here I think in presentation. If we want the world to be interested in what we are doing, we need to present what we do in terms of themes and sectors of interest that we share with those who would not describe themselves as distance educators or trainers. Currently it seems to me now very difficult indeed to identify distance education as a distinct sub-sector of practice, bearing in mind the way in which information and communication technologies are being used by all manor of organizations, including many campus-based institutions (Evans and Nation, 2000).

Notwithstanding this point, there is still a need in many areas of the world, for the classic expertise of distance educators in delivering access and flexible learning opportunities. I would define this in terms of systems and capabilities for effective delivery to learners, particularly adult learners, at a time and place of their choosing. This includes provision in both developed and developing countries. In Canada for example, the numbers registering at Athabasca University have doubled since 1995, with under 25's now forming 40% of their intake. Such students are turning to distance education for first chance higher education, and may well continue as lifelong learners. Bates also reports that approximately 75% of distance students at the University of British Columbia are taking courses while registered as full-time students, both to access options otherwise unavailable and to speed up credit accumulation and graduation. In the very different context of Mozambique, there is a current project to invest in training a cadre of distance educators. They will operate across their country through local centres for distance education provision which will provide the only

opportunity for learning to adults who live much too far from conventional provision to benefit from it.

Distance education is currently a hugely diverse set of practices therefore, encompassing provision that might not be much different from that of the eighties, to provision that is state of the art in terms of online and mobile technology applications (Hanley and Marshall, 2000) .

Innovation the route to new practice

However, speculating on the rather longer term future for distance education, it must continue to generate innovation if it is to retain its position in the vanguard. It must respond to the latest challenges of technology and pedagogy, in this sense 'reinvent' itself in terms of new thinking and new practice, much of which will originate from outside distance education itself. What distance education has to do is to earn the interest of those both in and outside our field, by continually demonstrating that we are at the forefront not just of innovative thinking but *putting that thinking into practical effect*. What made us the theme of conference circuits in the eighties and early nineties, was precisely that we were doing things that nobody else was doing outside of distance education. We were taking learning to new people and new places. But now everybody has to be concerned about access and partnerships for progression. Certainly all UK universities have to demonstrate a practical commitment to access whatever methods they use to deliver it, so that flexibility, access, openness and so on, no longer distinguish distance education from the rest.

Happily I see every likelihood that distance educators will continue to gain the interest of our peers outside the field, through innovative educational practice that is of interest to all sectors, not just to distance educators. I intend to support that assertion by looking at innovatory practice in two areas: in a) pedagogy and the development of learning communities, and b) digital technologies for creation of reusable, flexible and portable resources.

Pedagogy and the Development of learning communities

Theorists of learning currently stress social constructivist approaches to learning as the framework within which to develop appropriate pedagogies, particularly at the stage of post-compulsory education (Brown et al., 1989, (Jonassen et al., 1995) . The dominant view is that learning is about understanding and engagement by the learner in an active process of constructing meaning (Hung and Chen, 2001) . The social context of learners has been recognised as crucial to the learning process. Knowledge and capability develop through interaction with others in social activity. This has been taken a stage further in Lave and Wenger's analysis of practice communities, where learning the practice and becoming a recognised member of the community are achieved through the same process of mutual engagement and group identification. Newcomers have a legitimate role 'on the periphery', and gradually take on more and more of the language, conventions and functions of those at the heart of the practice (Lave and Wenger, 1991) . Although their analysis was not intended to define a new strategy for teaching and learning, it has helped to generate a widespread interest in creating learning communities through online study. It is also stimulating a 'communities of practice' approach to the preparation and in-service development of professionals.

There have always been critics of distance education, who make quality of learning the focus for their criticisms. It used to be the charge that distance education students were 'spoon-fed' and could only develop the lower quality learning of memorisation. That was the charge, but the use of pedagogies based on reflection, project work, and continuous assessment with detailed and personal feedback, were just some of the ways in which from the beginning, distance education has always

been able to counter that charge and deliver high quality learning. We have effectively demonstrated that our students achieve a critical grasp of knowledge the equal of their peers on campus.

At its best, distance education has led the field in terms of pedagogy and learning quality. It has pioneered approaches to assessment for example, such as clarity about criteria and extensive feedback, that are still leading edge and not universally adopted across mainstream campus-based provision. It is not surprising therefore that the current emphasis on social constructivist approaches to learning is led by educators using online teaching, many if not all, working within distance education.

It has been in the field of conferencing and electronic interaction that some of the leading practice *pedagogically* has been developed. The pioneering work of the late 1980's in providing large scale conferencing to students studying at a distance launched many of the major themes in the field of computer mediated communication and its implications for learning (Mason and Kaye, 1989) . These included for example, issues to do with loss of all the cues of the face to face context, and the need to construct these again in a designed environment online (Feenberg, 1989) , methods that might support individual learners as they come to terms with the new environment and the way in which collaborative learning online creates 'a new domain for augmenting educational options and opportunities' (Harasim, 1989) . The technology of creating an environment that truly fosters a constructivist approach to learning, and takes that further in facilitating collaborative learning, has been led by educators working in the distance tradition (Stratfold, 2000) .

The stimulus of the medium can foster adult learners to rethink their whole approach to learning. We have the evidence for example, of one of the most experienced of distance educators, as she presents her students' reflections on their first involvement in an online course about distance education . Chere Campbell-Gibson (2000) provides direct quotations from her learners as evidence of the transformative power of being online – using Mezirow's definition here, for the kind of shift in perspective and attitude towards learning that her course online was designed to inspire. Her course is a three credit graduate class entitled 'The Adult Independent Learner' , taught since c1995 wholly online, though it originated in the early 1970's, set up by Charles Wedemeyer to introduce the theory and practice of distance education. Campbell-Gibson uses the phrase 'disorienting dilemma' and Mezirow's perspective transformation, for her own and her students' experiences of learning together online. Her approach has been to de-centre herself as teacher or instructor, and to encourage her students to think of themselves as a resource, learning from each other and their own experience, more than from her. Although it is possible to set up any face to face teaching in a similar fashion, this online version prompted emotional and challenging times for both teacher and students, as these quotations from her students demonstrate:

'After just one month of participation in a distance education class, I am beginning to understand how this medium can promote intimate and meaningful learning.

' use my fellow distance learners much more than in class room learning to understand the material and I'm surprised to find myself so actively involved in the discussions.

'The class...helped me finally understand how adults can direct their own formal learning when given the opportunity...

'It is now very clear to me that I can read the same material as someone else in class and have it impact (on) me totally differently because of the moment I'm in and the experiences I have brought to that moment.'

In response to this lack of prescribed schedule, authorizing leader, limited time frame and static information, I am filling it up with my own agenda and experiencing what it means to structure my own learning and contructing my own knowledge.
(Campbell-Gibson, 2000)

Online interaction when set up effectively, creates an intimacy that opens up new opportunities for distance education, and offers something more than a substitute for face to face encounters. It should be seen as a distinctive medium of communication with potential for community building online, rather than a substitute when face to face meeting is not possible.

Learning communities and employment

From this kind of evidence, as well as our students studying masters courses online at the Open University UK, distance education can now offer something more than face to face learning. Online interaction and group presence generates not simply a sense of being part of a group in the manner of contiguous education, but new kinds of intellectual development and connection with a community of learners, through the online conversations that are limited really only by the energies and time of the participants.

Not only can we create online communities, but we can link our student communities with experts outside the university, and possibly even create communities of practice online that create entirely new opportunities for work-related and work-based learning. This is opening up distance education to the possibilities that Wenger and others have argued exist in the creation of communities of practice (Wenger, 1998) . Although the origination of the term grew out of research of communities not engaged in intentional learning, it has been promoted and developed by educators as an inspirational goal for learning communities. Learners operate as members of the community of practice, initially in an apprentice-type role on the periphery, and learn through taking on more and more of the activities, roles and working practices of the community they wish to join. Engagement and identification with the community drive the learning process.

Wenger's ideas have been taken up enthusiastically by many in the field of computer mediated communication (CMC). Online networking and collaborative approaches to knowledge construction have been inspired by and linked to the idea of learner identification with and engagement in, a community of practitioners. While much online networking is associated with creating communities of learners, rather than creating communities of practice as defined by Wenger, there is evidence that more practice oriented networked communities can develop.

Indeed Leach and colleagues at the Open University claim that this is exactly what is developing, among the thousands of participants in two initiatives launched since 1994 (Leach 2002). An online environment for trainee teachers registered for a PGCE at the OU, involved 913 trainee teachers in the 18 months between 1998 and 1999; a current project aimed at CPD for teachers and librarians, had been accessed by 47,734 such staff in 2002. In the case of the second project, participants receive a certificate of completion at the end of two terms and complete an action plan for how they will develop the use of ICT in their teaching.

Leach presents evidence of clear stages in the nature and quality of interaction in this environment (Leach, 2002) , and demonstrates development in teachers' subject knowledge, school knowledge and pedagogic knowledge, integrated with personal constructs based on experience and conviction. As Leach argues, there is strong evidence of powerful online communities providing a context for personal growth. These are undoubtedly learning communities. However, they are also communities that have powerful ties to the shared reality of schooling and education as their day to day work experience. They may not be acting together, as they are able to do with their immediate school colleagues, but they are sharing tips, ideas, knowledge, contacts and so on, that appear likely to influence very directly the actions that they subsequently do take. The moderators of their conference are also leading professionals within their discipline/subject area, and thus their identification with these colleagues bring in strong processes of imagination and alignment.

There is evidence therefore that teachers can network online and can become effective discourse communities – learning about and developing the shared language and understandings of their subject, of pedagogy, and of their experience of both in action in schools. Such groups, as indicated by the extracts from their conferencing (Leach, 2002), are very much preoccupied with the practical implications of what they are learning, and developing close personal links with leading thinking in their field of practice.

Furthermore, Wenger's concept of a community of practice begins to become a real possibility, where practising professionals can join student conferences and answer questions through synchronous conferencing, and where working professionals can now interact online through new distance learning opportunities. Continuing professional development is being addressed through a partnership with the BBC Worldwide, titled 'TeachandLearn.net'. From January 2004, all schools and education authorities across the UK will be able to access online learning resources created specifically for professional needs of all kinds, and at all levels. All these opportunities mean than distance education is moving into areas of professional preparation and training that have not really been exploited previously.

In addition to the teacher training example discussed above, the OU is moving into pre-registration nursing, where a combination of assessed work experience with distance study, is creating new opportunities for nursing assistants to accredit practical skills and develop their knowledge base at the same time. It is also interesting to see that this is being delivered via new combinations of face to face and distance study. Pre-registration nursing is exploiting what has been called blended learning. Students start with a course which provides both printed texts and online activities that develop both individual IT skills and collaboration across small groups – KZX100 *Understanding Health and Social Welfare*. Their subsequent courses however combine local mentoring and work practice which is assessed, in a blend of local and distance study that is challenging and innovative.

Professional preparation in such key sectors as nursing, where assessment includes many crucial physical skills around patient care, is a new area for distance education. If we have demonstrated unequivocally that conventional academic study is achievable at a distance, what we are now doing is to demonstrate the same capability with regard to practice-based and professional preparation in challenging areas such as this.

Digital Technology for Reusable and Portable Resources

All resources whether text, visual, audio or moving image, can now be stored digitally and made accessible for editing, updating, and reuse of all kinds. However it requires sophisticated

procedures of resource description and shared use of standards, for the potential of the technology to be realised. That potential however offers educators a quite radical new world of virtually unlimited resources, available for reuse to suit local and regional needs. Glen Farrell writing on the internationalization of open and flexible learning, comments on the future he sees opening up for distance educators:

'The availability of learning materials produced in this manner based on a common set of standards that enable them to be shared, reaggregated, and modified according to cultural difference, boggles the mind in terms of the impact on the flexibility and internationalisation of learning. It heralds the realization of individualized learning on demand.' (Farrell, 2003)

The hype is still well ahead of the realisation of course. Furthermore, individualized learning 'on demand' is not necessarily the ideal to aim for. Fortunately reusable and interoperable resources are not restricted by the vision sometimes created, of isolated 'chunks' of knowledge 'consumed' as the need arises by isolated individual learners.

The term currently being used for material created for reuse and portability, is 'learning objects'. The term is defined rather differently by authors working within different paradigms, but in essence, learning objects are chunks of material that are portable, interchangeable with other learning objects, and readily updatable and versionable to suit different users and uses (Littlejohn, 2003). The investment required in order to create high quality learning resources such as are required for e-learning, means that reuse and versioning of good material is essential, rather than production from scratch by each provider for every occasion. Public sector institutions in particular are seeking to maximise the value of investment in resource creation. The Joint Information Systems Committee of the UK Funding Council for example, has been pursuing the preservation of digital resources since 1995. Twenty-two projects have been funded under the 'Exchange for Learning (X4L) Programme, which is aimed at creating a national repository of learning objects and materials, available to the sector.

The creation of a learning object requires that digital resources of any kind – text, video, audio and software - are produced using software or an authoring language that adopts standards such as those being developed in the US under the Instructional Management Systems authority, and in Europe under the Institute of Electrical and Electronic Engineers/Learning Objects and Metadata (EEE/LOM) grouping. Information about those resources, termed metadata, is included so that users far removed from the originators of the material can search for, find it and make use of it for their own programmes. Accessibility therefore depends on the originators following guidelines on specifying authorship, copyright, keywords, learning outcomes and so on. They must also create and store their material in chunks that are easily accessible and usable quite separately from the rest of the materials. All these requirements demand the original authors and technologists to work in rather new ways, in many cases.

It is as a result not easy to move forward into this 'brave new world' of flexibility and interoperability. The social issues furthermore, about creating an economy in which learning objects generate income in a process of free exchange, are also quite difficult to foresee coming into existence. The cultural and national controls around formal education in particular, mean that the usual conditions of a free market are not in place. However this does not necessarily mean that we should turn our backs on the possibilities, and practical solutions are being identified to the challenge of creating courses which can be reversioned and used again for different purposes.

Setting up courses which are flexible – preversioned if you will – usually requires material to be free-standing and structured in chunks which can be readily accessed and reused without extensive editing. Strategies are being developed to ensure that such courses are coherent, and provide guidance and a teaching narrative that facilitates learning. These strategies make innovative use of study guides, assessment and websites in order to ensure that a student-centred approach is the result. Four strategies towards achieving this have been identified (Thorpe et al., 2003)

Narrative 'tagged in'
By locating 'the speaking voice' of the course team in a single section of each item of course material, with metadata identifying it as such, it becomes feasible to reuse material because the narrative and audience-specific text can be easily identified and discarded or edited. This means that the original course still includes material directed specifically for the particular needs of the students, but that such material is not scattered throughout the content but concentrated in a known sub-section in each item of material. Its inclusion is not a problem from a reuse perspective therefore.

Wrap-around study guides
This is probably the most commonly used device for reusing and versioning material. Free-standing modules or chunks of material become elements in a coherent study experience, by means of a separate study guide that narrates the purposes and links of the course, points students towards pathways through the material and provides the speaking voice of the course team, addressing the particular needs of the original student group. The same material can thus be reused by providing different accompanying study guides, oriented to the interests and purposes of different group of students or learners.

Threaded through – the conferencing and web site approach
Courses which have web sites can use the web site as the location for study guide-type material. This can be changed or entirely replaced, to suit the particular reuse situation of the resources. If the course includes conferencing as a major teaching resource, then the conferencing can also be used as a means to ensure that students engage with the free-standing resources provided, and that they appreciate the significance of the content of the resources in relation to the learning outcomes of the course.

Assessment as the driver for learning
As we know, the tasks set for student assessment, drive the learning process. It is possible therefore to ensure that students study resources and appreciate their significance, by setting tasks that focus their attention on them at particular times and in particular ways. Marking criteria, and feedback from tutors can also be used to emphasise course themes and learning outcomes, thus providing guidance and fostering coherent study.

Benefits and challenges of reusable resources
These developments are of course not simply a reflection of the new opportunities that technological advance opens up for distance education. They are being driven by the collaborations and new opportunities of an international context, where the same resources might be of value to many different student audiences, provided they can be articulated and constructed to match each audience's particular cultural context and expectations. Some examples from the UKOU context will illustrate this.

We continue to work with US colleagues in identifying courses that will attract students in the US. However, these must be split into shorter modules to fit the US semester system, and modified to

suit the preferences of US students for short courses of around 130hours study, standardized web sites modelled on a weekly class schedule with a professor-led approach, explicit syllabus and assessment details. We have also collaborated with colleagues in the Arab OU, to identify courses that can be adapted to fit their needs. Courses may include references that are culturally specific and assume knowledge that is not present among the potential students in the reuse context. Such references therefore have to be identified and edited out, where they are minor and not essential to the argument of the course materials. It becomes much easier to do this kind of adaptation, if the original course is set up with metadata identifying culturally specific material, and organised in the form of shorter chunks that can be accessed and used independently of the rest.

However there are also potential disadvantages with this approach. OU course teams for example value the creation of an integrated set of course materials as providing the best support for students to achieve demanding study goals. The idea of pre-specifying all elements in the course resources in terms of chunks of a particular size and design, challenges our taken for granted notions of what a course is and how to produce it. Authors are also not necessarily willing to take on board the additional time it takes to learn a new authoring language, or to add metadata to their drafts, describing the type of learning activities that it contains and providing other kinds of information. Some would also challenge the pedagogical model on which learning objects are being promoted, which can be little more than a reductionist, access to bits of information, oriented to individual learning and content rather than dialogue (Thorpe et al., 2003) .

However there are solutions to these issues, as the options outlined above for creating narrative coherence and study guidance have demonstrated. The UKOU has also developed a new type of course for distance education students that minimises the negatives and maximises the positives of the learning objects paradigm. The University, working jointly with the University of Cambridge, is using learning objects for its pilot course for the UK eUniversities, H806 *Learning in a Connected Economy*. The course team has taken the learning objects approach, and adapted it to the context of higher education, for a globally delivered course (see Pegler, Weller and Mason, 2003 for a full account of the course). The course materials are all delivered online and can be updated, edited and adapted with much greater ease than before. This creates flexibility and enables responsiveness to events and news items. If the original material has been authored and stored using international standards such as are embodied in HTML and XML for example, it does not require complex processes of accessing and editing to enable changes to be included.

Learning objects have been created of different kinds. Some are designed for straightforward delivery of text, others are more activity based. Each study session also has a narrative object that outlines the theme of the week and makes connections to other parts of the course – such objects would never be re-used so the problems that such cross referencing would create are irrelevant. Complex objects have also been created of multiple files, where the text in a file may refer to other files but these are all grouped within the same learning object and thus the 'rule' of not referring to other objects is not broken.

Course authors also developed a common approach based on combining new introductory and overview text, with externally authored material, specially designed activities, and 'companion' activities that enable individuals to pursue their own interests. Students contribute their own solution to a problem presented in a companion activity, and post their solution to a database of other student responses to the same problem, which they can then read, and analyse. Debate about the different solutions then occurs in the tutor group conferences, but these are not reliant on all contributing during the same period in time.

Optional routes through the material are encouraged, and the needs of students from either the public sector or the private sector have been particularly borne in mind. Much more extant material in the public domain has also been used in the materials than is usual in OU courses. A common design for the learning objects has been developed based on introduction of the topic, external readings (students are connected to the Web), an activity, either individual or collaborative. An overall framework of ideas and guidance has also been created on the course website, so that students can select a pathway through the options available and make choices that suit their interests while still working within an overall conception of the themes and narratives of the course. Tutor support and conferencing also provide a version of narrative coherence across the course as it develops, enabling students to debate general issues and avoid getting lost in a plethora of small topics. Assessment also requires students to integrate their work across the learning objects, thus ensuring that the sum is greater than the parts.

The course is particularly suited to a postgraduate audience and would not directly transfer to less confident or experienced learners. However it was produced within about a year, and the learning object approach also helped in the efficiency achieved by the course team. The design was broken down into blocks and study hours and made available to all authors on a website created for the development of the materials. Since all authors could access the site and review the design, this aided a complex authoring process with many authors.

In its first year, H806 has recruited a global student body of about 50 learners, but is designed for large scale teaching and economies of scale. Early signs are that the learning object approach has been successfully adapted to retain the teaching quality that students have come to expect from more conventionally designed courses. The experience of the course team and of these students makes this particular distance education course of great interests to all involved in elearning as well as distance education. It demonstrates the effective adaptation of new practices and technology, and thereby helps others to see its practical potential. It creates new opportunities and opens up new possibilities for the future. It provides a concrete example of the capability of distance educators to break the mould of the familiar, and adapt new ideas and technologies creatively and successfully for distance learners.

CONCLUSION

Distance education has an assured future. It thrives because of its unrivalled capacity for flexible access suited to a wide variety of social and economic contexts. Its future rests on continually striving to offer its students the best and the most innovatory provision, whether we define that in terms of pedagogy or technology, or a combination of both. The aim must always be to deliver the highest quality learning experience for our students, while making imaginative use of the latest pedagogies and technologies. When used with imagination and commitment to such quality, we can see examples of practice that uses what technology offers to open up new kinds of learning via distance methods. Two examples have been discussed; elearning that connects learners and creates the possibility of new forms of community and work-related learning, and courses built around learning objects that enable time efficient course production and flexible reuse and redevelopment of resources. These innovatory practices are engaging with theories and discourses originating outside distance education, and demonstrating to those communities that distance education is still working at the forefront of education, with things to teach those outside the field as well as inside it. Distance education does indeed have a long and a challenging future.

REFERENCES

Brown, J. S., Collins, A. and Duguid, P. (1989) Situated cognition and the culture of learning, *Educational Researcher,* **18,** 32-42.

Evans, T. and Nation, D. (Eds.) (2000) *Changing University Teaching,* Kogan Page, London.

Farrell, G. M. (2003) Internationalization of open and and flexible learning: Planning and managing in a global environment, In *Planning and Management in Distance Education*(Ed, Panda, S.) Kogan Page, Londonn.

Feenberg, A. (1989) The Written World, In *Mindweave* (Eds, Mason, R. and Kaye, A.) Pergamon Press, Oxford.

Hanley, N. and Marshall, S. (2000) Lions and merlions: critical reflections on the introduction of new technologies in higher education in Swaziland and Singapore, In *Changing University Teaching*(Eds, Evans, T. and Nation, D.) Kogan Page, London.

Harasim, L. (1989) On-Line Education: A New Domain, In *Mindweave* (Eds, Mason, R. and Kaye, A.) Pergamon Press, Oxford.

Hung, D. W. L. and Chen, D. (2001) Situated Cognition, Vygotskian Thought and Learning from the Communities of Practice Perspective: Implications for the Design of Web-Based E-Learning, *Education Media International.*

Jonassen, D., Davidson, M., Collins, M., Campbell, J. and Bannan Haag, B. (1995) Constructivism and Computer-Mediated Communication in Distance Education, *American Journal of Distance Education,* **9.**

Keegan, D. (2002) *The future of learning: From eLearning to mLearning,* FernUniversitat, Hagen.

Lave, J. and Wenger, E. (1991) *Situated learning:Legitimate peripheral participation,* Cambridge University Press, Cambridge.

Leach, J. (2002) The curriculum knowledge of teachers: a review of the potential of large-scale, electronic conference environments for professional development, *The Curriculum Journal,* **13,** 87-120.

Littlejohn, A. (Ed.) (2003) *Reusing Online Resources: A sustainable approach to e-learning,* Kogan Page, London.

Mason, R. and Kaye, A. (Eds.) (1989) *Mindweave: Communication, Computers and Distance Education,* Pergamon Press, Oxford.

Needham, G., Parker, J. and Baker, K. (2001) Skills for lifelong learning at a distance: information literacy at the Open University, *The New Review of libraries and Lifelong Learningq.*

Paulsen, M., Keegan, D., Dias, A., Dias, P., Pimenta, P., Fritsch, H., Follmer, H., Micincova, M. and Olsen, G. (2002) Zentrales Institut fur Fernstudienforschung, Hagen.

Scott, P. and Phillips, M. (2000) Developing Web-based student support systems: telling student stories on the Internet, In *The Knowledge Web: Learning and Collaborating on the Web*(Eds, Eisenstadt, M. and Vincent, T.) Kogan Page, London.

Stratfold, M. (2000) Promoting Learner Dialogues on the Web, In *The Knowledge Web: Learning and Collaborating on the Net*(Eds, Eisenstadt, M. and Vincent, T.) Kogan Page, London.

Thorpe, M., Kubiak, C. and Thorpe, K. (2003) Designing for reuse and versioning, In *Reusing online resources: a sustainable approach to e-learning*(Ed, Littlejohn, A.) Kogan Page, London.

Wenger, E. (1998) *Communities of Practice Learning, meaning and identity,* Cambridge University Press, Cambridge.