

This work has been submitted to NECTAR, the
**Northampton Electronic Collection of Theses and
Research.**

<http://nectar.northampton.ac.uk/3700/>

Creators: Burnapp, D., Zhao, W., Boteju, D., Jament, J., Feng, Y., Li, S., Powis, C., Klimes, C. and Mallam-Hassam, Y.

Report title: The strategic implications of different forms of international collaboration in Higher Education.

Date: September 2011

Chapter title: Chapter seven: Developments in information and communications technology (ICT) and the growth of E-learning.

Chapter author: Burnapp, D.

Report to: the Higher Education Academy.

Also funded by: National Teaching fellowship Scheme.

Originally published by: The University of Northampton.

The InterCollab online tool which accompanies this work may be found at:

<http://nbsbitesize.northampton.ac.uk/intercollab-tool/interactivetool-intro.php>

Example citation: Burnapp, D. (2011) Developments in information and communications technology (ICT) and the growth of E-learning. In: Burnapp, D. *et al.* *The strategic implications of different forms of international collaboration in Higher Education*. Northampton: The University of Northampton.

Version of item: Project final report

Chapter Seven: Developments in information and communications technology (ICT) and the growth of E-learning

Author: Dave Burnapp

7.1. Introduction

7.1.1. In international collaborations in higher education – as indeed in all other areas of education – developments in information and communications technology (ICT) are extremely varied and have effects which are far reaching. Hence, in order to illustrate this range, this chapter will begin with a bricolage summarising different aspects of ICT which have been referred to in other parts of this research project.

7.1.2. Such technology has been an important, indeed an essential, medium which has enabled this research to be carried out, and virtually all of the cases and themes which have been investigated have made use of the internet in some way or other: as a means of communication; of project dissemination; or of programme delivery (in whole or in part). A short anecdote here simply illustrates the ease of using the internet to find information. Two of the researchers on this project were discussing the pronunciation of 'Web 2.0': should it be 'two point zero' or 'two point oh'? By using a search engine, in less than a minute, they were directed to an entry from the BBC pronunciation unit reporting research that showed that the most common usage is in fact 'two point oh'¹.

7.1.3. After the initial summary the chapter will then go on to outline three particular trends concerning ICT; these trends are not restricted to international collaborations, but they have certainly affected and enabled many international and transnational schemes. These are: the growth of FDL (Flexible and Distributed Learning) using ICT; the movement from using Web 1.0 to Web 2.0 in education; and the growth of the open education resources movement.

¹ http://www.bbc.co.uk/blogs/bbcinternet/2008/02/how_to_say_web_20.html

7.2 Summary of aspects of ICT reported in other parts of this research project

7.2.1. The aspects of ICT illustrated elsewhere in this project can be grouped into several categories: those relating to institutional strategies; those enabling a massification of delivery; those concerning methods of communicating with students; those referring to a medium for carrying out research; those using ICT as a means of networking; and those where it is used as a mode of delivery of programmes. These opportunities will then be balanced with several concomitant risks which practitioners need to be alerted to.

7.2.2. *Opportunities: ICT, internationalisation, and institutional strategies.* Developing ICT expertise and infrastructure is often a stated *goal* within institutional strategies, and similarly it can also be a *means* of achieving other goals, for example of creating a presence in other countries via development of e-learning programmes. Similarly, creating international collaborations can be connected to staff development strategies, which can include development of ICT competences and familiarity with new delivery technologies. Such developments can benefit institutions' programme delivery more generally, not just for international collaborations. Hence ICT aspects of international collaborations can link to institutional capacity building and to staff development both as objectives and enablers: that is to say both a reason *why* institutions enter collaborations as well as being a way of *how* this should be done.

7.2.3. *Opportunities: Scalability.* In the eChina-UK project the possibility of exploiting the scalable benefits of the e-learning mode of delivery were discussed, that is the possibility of reaching large numbers of learners without greatly increasing costs. Hence using distance learning programmes can be conducive to the massification of education, and so can be used as a way of widening access. This may be particularly attractive to developing countries with an urgent need to increase participation in HE². In addition such scalability may enable institutions to rethink their offerings within the dynamically changing HE environment within the UK, and may be particularly attractive to private suppliers.

7.2.4. *Opportunities: Communicating with students.* The internet is used as a means of communication at virtually every stage of the student life-cycle, beginning with students accessing information about studying abroad generally by looking at advice on the websites of agents (see Case Study 13) and other bodies including UKCISA³ and the British Council⁴. Institutions are increasingly

² See the elearning Africa website at: <http://www.elearning-africa.com/index.php>

³ <http://www.ukcisa.org.uk/>

using the internet to transform induction into a longitudinal process (rather than a one-off activity during fresher's week) by offering online pre-arrival information⁵ and establishing early contacts between potential and existing students, which can then be linked to buddying schemes when new students arrive. Whilst on their degree programmes, institutional VLEs (Virtual Learning Environments) are becoming the predominant channel of communication between institutions and students (as well as providing access to course materials), in effect blurring the distinctions between students who are on-campus and those studying off-campus including via transnational (TNE) programmes. After graduating, the internet is used for maintaining contact with alumni, and to enlist these to participate in word-of-mouth activities using social networking platforms with potential new students.

7.2.5. Opportunities: A medium for carrying out research. Most of the secondary data used throughout this project has been obtained from internet sources including reports from various agencies, electronic journals, and institutional grey literature. This is particularly useful for what can be thought of as just-in-time information, meaning information which needs to be regularly updated. A specific example of this is identified in the case study relating to Careers Services (CS 2), where the frequent changes in regulations concerning student visas and their right to work has meant that giving up-to-date advice and publishing current guidance has become increasingly difficult: hence a response has been to publish guidance to employers on the internet, rather than by producing printed brochures and CDs.

7.2.6. Opportunities: Networking and Mailing alerts. Similar just-in-time opportunities are the various mailing alerts which institutions can subscribe to in order to get notification of developments and funding opportunities relating to international collaborations: for example from the British Council⁶, the Training Gateway⁷, the 'Quality Update International' of the QAA⁸, the Observatory of Borderless Education⁹, and the International Unit¹⁰.

7.2.7. Opportunities: A mode of delivery of programmes. This research has repeatedly shown that offering transnational education, often carried out in partnership, is an area of great growth and potential. One mode of delivery of

⁴ <http://www.britishcouncil.org/new/>

⁵ One such excellent resource, produced by the University of Southampton but an open access resource for all in the sector is <http://www.prepareforsuccess.org.uk/>

⁶ www.britishcouncil.org/pmi2-connect

⁷ <http://www.thetraininggateway.com/buyer-pages>

⁸ <http://www.qaa.ac.uk/Pages/default.aspx>

⁹ <http://www.obhe.ac.uk/>

¹⁰ <http://www.international.ac.uk/home/>

such programmes can make use of the internet as a medium of distance learning, and one of the case studies (CS 7) describes an online module where students from different parts of the world can form online collaborative working groups. The case study concerning staff development in the UK (CS 10) also demonstrated a use of online learning, and several times it has been shown that the 'access from anywhere' nature of e-learning makes it eminently suitable for continuing professional development, making it useful for life-long learning and enterprise training. The case study of the e-China UK project (CS 12) gives elaboration on the programme delivery potential of the internet. Materials produced by the TIS project, (CS 14) also include suggestions and supply resources relating to online learning¹¹

7.2.8. Risks: underestimating costs. It is important not to underestimate the costs which are necessary if distance learning relying on ICT is to be done well. This research has pointed out that it is essential not to assume that a VLE currently used within a home campus can be accessed without problems in collaborating institutions abroad, and indeed that entering into distance learning provision using the internet involves far more radical changes to teaching and learning approaches than merely arranging access to VLEs (See the case studies CS 12 and CS 7 in particular). There is always a need to conduct a technical audit of possible dangers, including band-width problems associated with downloading materials, and checking whether all of the many different IT-related features of a course will work, such as presentations, animations, flash-based exercises, blogs and wikis, podcasts, and any synchronous forums used for discussions. Similarly it is necessary to establish whether there will need to be an involvement from e-learning developers, and what will be the costs of this. A further risk is associated with the complexity of licensing the use of eBooks with partners, hence it is essential to check with institutional librarians what any difficulties about off-shore students' accessing eBooks licensed to your campus library might be (See Chapter 6).

7.2.9. Risks: underestimating QA issues. TNE programs, including those relying on e-learning, are expected to be largely equivalent to analogous courses delivered at 'home'. There will always need to be compromises when offering distance courses, however the danger is of making a compromise too far, resulting in a significant difference in student learning outcomes and a significant lowering of the student experience. This can result from building online modules around a relatively small number of eBooks and online materials such as study guides, which may supply the core information needed in a programme, but do not allow for the sifting and selecting of chosen information from a large array of

¹¹ http://www.heacademy.ac.uk/resources/detail/internationalisation/ISL_Online_teaching

other texts. Such compromises would reduce student autonomy and reduce the development of more generic student key skills and competences. This is exemplified in more detail in Chapter 2, and later sections of this chapter will describe how the use of Web 2.0 and of Open Education Resources (OERs) can enable good quality materials to be produced.

7.2.10. Risks: underestimating differences of pedagogy. For staff, as well as for students, there is a danger of assuming that adapting from face-to-face learning to e-learning is simply a matter of gaining familiarity with the technical aspects of a VLE. It is essential to recognise that the differences can be far deeper than this: the case study concerning the eChina-UK project demonstrated that developing quality online materials requires resources and time, and a shared understanding of both the pedagogic and the technical aspects of online learning. It may require new relationships between staff and students, and amongst staff (for example between academics and e-learning developers), and any staff development programmes may need also to include staff in partner institutions. The skills set for teachers described in the eChina-UK case study included:

becoming aware of issues concerning the creation of online communities and ways of interacting; adapting to different pedagogic approaches used in different cultures of learning; becoming familiar with the specific tasks used in different courses; becoming familiar with the particular e-learning tools used on a particular platform; becoming proficient in supplying feedback in e-learning contexts.

For students, it is essential that induction to e-learning programmes should include aspects of developing personal self-management of the learning process; aims, processes, and methods.

7.3 Growth of FDL (Flexible and Distributed Learning) using ICT

7.3.1. This section will refer to Part B of the QAA code of practice which includes e-learning¹² ; Part A of the same document is covered in Chapters 2 & 3 which discussed the growth of transnational education. This code of practice recognises that in collaborative provisions using FDL it is possible that *delivery* of programmes, *support* for students, and *assessment* of achievements may be supplied by different providers, hence emphasizing the need for clarity of where all such responsibilities lie, not least in order to ensure clarity in the students'

¹² Code of practice for the assurance of academic quality and standards in higher education Section 2: Collaborative provision and flexible and distributed learning (including e-learning) - Amplified version October 2010. Available at: <https://www.qaa.ac.uk/academicinfrastructure/codeOfPractice/section2/appendix2010.asp>

understandings of what they are undertaking and what they can expect. The code reminds that in all cases the ultimate responsibility lies with the awarding institution. One sentence should be repeatedly constantly by those planning such provision:

Students should be able to expect that their FDL study materials are subject to the same rigour of quality assurance as the awarding institution would use for any of its programmes of study.

7.3.2. Most of the issues which relate to quality assurance of e-learning are in common with other forms of provision, but there are also several additional precepts in the code, which are 'couched in terms of a student's experience of study through FDL'. This reflects one of the key points reported in Case Study 12 that e-learning should be designed around the process of learning experienced by students rather than being organised around a structuring of the chunks of information which are the course intended learning outcomes.

7.3.3. The first two of these precepts discuss issues of quality concerning the programme delivery; (B1) concerns ensuring that students have clear information, preferably available in various formats, setting out the full specifications of the programme and how the components of it fit together. There needs to be complete clarification of the various responsibilities as described above, as well as detailed schedules of the sequences the programme will involve. From personal experience, an important practical issue arising from this is to ensure good quality 'house keeping' of institutional VLEs, and the need to ensure that all announcements, and course and module guides, are constantly kept up-to-date and the versions given in the different formats are consistent with each other. Importantly these details need to be available in advance, in order to allow students to create their own time management plans. This chimes well with a recommendation made in Case Study 12 concerning the eChina-UK project:

It is essential that student induction includes aspects of developing the competence of 'self-management of the learning process' (a psychological requirement) as well as introductions to course aims and approaches (a pedagogic requirement) and how to use the VLE tools (a technical requirement).

7.3.4. The second precept (B2) includes the requirements concerning the delivery system; its reliability should be tested (what was referred to in Case Study 7 as a 'technical audit'), it should also be fit for purpose and operable within the 'lowest levels of technology available to students'. This should be as basic as ensuring that a slide show presentation produced by a teacher in one

institution will actually be accessible if the computers in the students' study centre have a lower version of the slideshow software.

7.3.5. A practical cautionary point is relevant here: video resources which can be linked to VLEs from YouTube may not be accessible in all countries where institutions have collaborations, for example China. There also need to be alternative systems for delivery should there be technical problems; a 'belts and braces' contingency planning. Further aspects of this precept seem to match the general risk identified earlier of ensuring that there has not been a compromise too far; it is essential for the awarding institution to be confident that the quality of the learning materials match its normal expectations, and that they are regularly reviewed, so their transnational students have a learning experience comparable with their students on campus.

7.3.6. The next precepts relate to issues of quality in learner support. (B3) concerns clarity of explanation concerning 'the nature and extent of autonomous, collaborative and supported aspects of learning', again linking this to the students' needs for self-management and their possible lack of experience in self-directed learning. In addition there may be need for supported activities relating to becoming familiar with the technical aspects of the delivery, and the precept emphasizes the need to ensure that such preparation has been adequate.

7.3.7. It should be recalled, however, that at several times in this research project it has been stressed that essential characteristics of the *approaches* used in a programme (certainly including autonomous learning) need more than just explanation; they should be seen as requiring support for the problematic process of adapting to what may amount to a new culture of learning (see Case Study 9: Transnational Education).

7.3.8. Precept (B4) covers the communications relating to support, whether this be online or face-to-face. Again the key issue is to ensure that students have a clear understanding of what to expect and what is expected of them: 'They need to know about particular technical requirements for e-modes of learner support, or particular modes of required or optional attendance, such as residential classes or field trips'. A useful suggestion here is that some institutions have found that it is beneficial to involve students in the creation of learner contracts to demonstrate this balance of what students may legitimately expect and what is going to be expected of them¹³.

7.3.9. Precept (B5) concerns feedback, guidance and inter-learner communication: it is essential that students know who they can contact and which channels of communication can be used, and similarly how they can give

¹³ http://www.heacademy.ac.uk/assets/documents/resources/heca/heca_lc23.pdf

their own feedback on the programme. In situations where the direct support provider is not the awarding institution, then such channels of communication with the awarding institution become even more important. Student communication with other students may also be either online or face-to-face.

7.3.10. The next precept (B6) touches on issues which have been raised repeatedly in this research project; relating to staff skills and hence to staff development. This includes both technical competence with the delivery channels but also competence in the specific pedagogic skills related to e-learning. In addition, although not mentioned in the QAA code of practice as it is not specifically about international education, such staff development should also include cultural competence relating to developing mindfulness of differences of cultural scripts of learning for students and partner staff.

7.3.11. Training needs relating to e-learning have been discussed in Chapter 6 and in Case Study 12, and several of the learning points made in them are worth repeating at this stage (particularly remembering that one of the major risks of e-learning collaborations identified earlier included underestimating such differences which need to be bridged and the associated costs). From Chapter 6:

Ch 6.4. *It is essential to recognise that internationalisation is a process of change, and that in any situation of change there will always be staff development needs which the organisation must address and allocate resources to. Such development will concern all departments; academic staff and support staff.*

Ch 6.14. *It is essential, if considering the extensive use of online learning, to ensure that the academic staff are fully trained in the approaches necessary: it involves far more than putting course notes onto VLEs. Will there need to be an involvement from learning developers, and what will be the costs? (See 6.3.11).*

7.3.12. From Case Study 12:

CS 12.3. *Developing quality online materials requires resources and time, and an understanding of both the pedagogic and the technical aspects of online learning.*

CS 12.19. *It is necessary to recognise that quality provision will often require a restructuring, indeed a recreation, of any existing modules: it is not simply a matter of allowing access to existing Virtual Learning Environments (VLEs) which may have been developed just as support for on-campus programmes.*

CS 12.23. *It is essential that instigators of eLearning collaborations recognise that teachers will need to undergo a series of transitions, and so*

to provide staff development opportunities to assist in these transitions: adapting to the change from face-to-face teaching to eTutoring; becoming aware of issues concerning the creation of online communities and ways of interacting; adapting to different pedagogic approaches used in different cultures of learning; becoming familiar with the specific tasks used in different courses; becoming familiar with the particular eLearning tools used on a particular platform; becoming proficient in supplying feedback in eLearning contexts.

7.3.13. A further aspect of precept (B6) elaborates the support that students can expect to receive concerning issues such as library, careers, and counselling, once again with a focus on clarifying whether such support comes from the awarding institution or from another identifiable supplier, and the responsibility of ensuring equality of experience.

7.3.14. Precepts (B7) and (B8) refer to both formative and summative assessments, including ensuring that assessment procedures and weightings are clearly laid out, that assessment items are secure – for example with reference to originality, and notification of receipt of work – and that channels of communication, for example to seek clarification of requirements and to obtain feedback on formative assessments, are in place.

7.4 The movement from using Web 1.0 to Web 2.0 in education

7.4.1. This ongoing development within ICT offers enormous possibilities for international collaborations, and can be a way of overcoming some of the risks which may be associated with ensuring equality of experience for on-campus and distance learners. This section will explain briefly what this change is, and will identify the opportunities it promises for HE in general and international collaborations more specifically.

7.4.2. The first uses of the internet (now referred to as Web 1.0) were essentially 'read only' (Thompson 2007), hence in education it was largely used as a way of presenting and finding information, and institutional VLEs were really electronic notice boards or filing cabinets. The key operations for students were finding information, aided by search engines, and downloading it. Web 2.0, in contrast, is about various forms of participation and allows for the creation of online communities, perhaps potentially a crucial feature for its use in international collaborations.

7.4.3. The applications used now can allow anyone (or any group working together) to produce online materials, so this is no longer a domain restricted to

Strategic Implications of International Collaborations in Higher Education

web designers. Alongside the authoring possibilities of shared and collaboratively written texts, such as blogs and wikis, there has been a parallel development of social networking sites such as Facebook (and now the development of cloud computing), which enable the sharing of all forms of files, including audio and video. Hence Web 2.0 is also referred to as Social Web. As a further prong to such developments, the expansion of mobile devices and applications now give access from almost anywhere (or rather anywhere with wireless connection). The key operations for students (and indeed for staff) when these are used within learning programmes therefore relate to being able to produce rather than just to consume information, an engagement which is more active, more engaged, more collaborative; or at least that is the promise.

7.4.4. As with other aspects of ICT discussed earlier in this chapter, this movement should be seen as offering opportunities for higher education and also as introducing risks. A key consideration (Thompson 2007; Committee of Inquiry into the Changing Learner Experience 2008) is that many students have already great familiarity with these developments outside of university life. Prensky (2001) created the term 'digital native' for a generation growing up with ICT as a part of their lives, and this should not just be understood as their possessing an easy familiarity with certain technologies, but is rather a fundamental change of going about being in the world. Prensky (2001) proclaims: 'Our students have changed radically. Today's students are no longer the people our educational system was designed to teach'.

7.4.5. There is an interesting differentiation amongst the forms of online spaces which these digital natives may have developed; a hierarchy of spaces and boundaries ranging from a secret space, through group spaces, publishing spaces, performance spaces, participation spaces and watching spaces (Locke 2007, cited in Committee of Inquiry into the Changing Learner Experience 2008). Hence a challenge for universities is how to exploit Web 2.0 possibilities in order to use them as group spaces in learning situations, particularly as there may be a digital divide between the competences of students and staff.

7.4.6. Concerning staff competences, in contrast to student digital natives, Prensky (2001) considers many staff to be 'digital immigrants', lacking full fluency in these literacies, displaying uses which are heavily accented.

7.4.7. A matching deficit area concerning student competences with emerging information literacies relates to their not being selective, evaluative and critical of the products of their online searches (Committee of Inquiry into the Changing Learner Experience 2008), extending to actual plagiarism.

7.4.8. This Committee of Inquiry identified that, as well playing a large part of the social lives of students prior to arriving at university, their previous school experiences may well have also exploited these technologies hence influencing their expectations of university practices. The committee also, however, emphasised that for many students their desires are not for a fully online educational experience; rather they retain an expectation and appreciation of traditional face-to-face contact with tutors, but expect that this may be augmented by Web 2.0 technologies.

7.4.9. This preference of on-campus students to use Web 2.0 resources as supplements to – rather than replacements for – face-to-face learning is yet another reason to be cautious of attempting to merely adapt existing VLE materials for delivery of TNE provision¹⁴ as part of international collaborations, even when these use Web 2.0 applications. These existing materials are likely to have been produced just to support face-to-face learning, rather than to be exhaustive and complete resources.

7.4.10. That said, the creation of group spaces referred to earlier can be exploited in distance learning offerings, but in some ways entry by institutions into areas which students had previously considered to be their own may raise other issues (Committee of Inquiry into the Changing Learner Experience 2008). Research concerning how Chinese students in the UK use online opportunities to create a 'Virtual Third Space', a space where they can merge Chinese and UK resources in order to succeed in their courses, concluded with a rhetorical question: whether universities both could and should 'seek to exploit this student created space to enhance learning' (Burnapp & Yan 2007).

7.4.11. Later this chapter will describe two different examples of online international learning where 'e-Learning incorporating Web 2.0 offers the sense of being a contributing member of a learning community' (Committee of Inquiry into the Changing Learner Experience 2008, p8). It is this possibility of creating a sense of community that international collaborations can benefit most from by using Web 2.0 applications, at least as part of the total programme.

7.4.12. Before describing two programmes which set out to develop online communities in this way, and via this description to explore an important distinction between synchronous and asynchronous modes, it is worth repeating the risks that such developments should avoid.

¹⁴ Interestingly the Committee specifically exclude VLEs from their investigation, seemingly because they are closed rather than open systems. The author of this chapter considers this to be rather an odd decision.

Strategic Implications of International Collaborations in Higher Education

- It is essential not to underestimate the costs which must be incurred in order to create good quality online international offerings;

It is essential to ensure that there is a balance of attention paid to technical necessities and to pedagogic necessities;

It is essential to recognise that boundaries will need to be crossed, both in understanding new cultures of learning (relating to different systems of education), and in understanding particular features of e-learning as distinct to face-to-face learning;

It is essential to recognise that all these aspects are themselves dynamic and that any developments (technical innovations and concerning staff development) are never finally and fully achieved, but must be kept abreast of;

It is essential to recognise that despite its promise of universality there are in fact boundaries on the internet; YouTube is not accessible in all countries and – it will be shown below – in different places different methods of social networking have been developed.

7.4.13. *Example One: a synchronous module using live interactive webcasting.*

This concerns a programme which was developed to allow synchronous participation of students in several countries in a Postgraduate module in eHealth, run by the University of Plymouth. For further details of activities of the research group behind this initiative see the University of Plymouth Research Directory website¹⁵.

7.4.14. The synchronous and asynchronous distinction is clarified by Hrastinski (2008)¹⁶, who looks at e-learning from its potential for lifelong learning; though the points made apply equally well to uses in international collaborations. Initially most e-learning employed asynchronous engagement, meaning participants could access and respond to materials at times suitable for them. Increasing bandwidth is now enabling a greater development of synchronous programmes, allowing real-time contact and discussion. Hrastinski's pedagogic stance comes from: 'a view of learning as participation in the social world, which implies that learning is a dialogue carried out through both internal and social negotiation' (p51); hence it is clear that this position accords well with Web 2.0 possibilities.

7.4.15. Asynchronous programmes remain most suitable when there are obstacles to participants being online at the same time; hence these employ exchanges facilitated by email and discussion boards. The second example below, taken from Case Study 7 about a module involving students in very

¹⁵ <http://www.plymouth.ac.uk/researchcover/rcp.asp?pagetype=G&page=256>

¹⁶ EDUCAUSE Quarterly, vol. 31, no. 4 (October–December 2008)
<http://www.educause.edu/EDUCAUSE+Quarterly/EDUCAUSEQuarterlyMagazineVolum/AsynchronousandSynchronousELEa/163445>

different time zones, used asynchronous delivery because of this constraint, as did the staff development programme reported in Case Study 10.

7.4.16. A positive aspect of this is the flexibility it offers, and this is illustrated in some of the examples supplied in Case Study 12 concerning the eChina-UK project, in particular for ongoing CPD of teaching staff. The flexibility allows busy people to fit their learning into busy days.

7.4.17. A second positive aspect is that this allows more time for student reflection before contributing their views, and for international programmes this may give additional benefits for students who are less confident in their language skills, or who are familiar with forms of studying (indeed cultures of learning) where considered comment is valued more highly than spontaneous contributions.

7.4.18. In contrast synchronous learning, where students have instant exchanges often using some forms of video conferencing, can help with the creation of an immediate sense of community. Hrastinski (2008) is clear that there is no question of which is better, but rather that careful consideration needs to be taken when deciding the appropriate format for any programme. His article is a suitable starting point for such decisions.

7.4.19. An evaluative case study of the University of Plymouth programme has been published (Jones, Maramba, Boulos, and Alexander 2009)¹⁷, and this should be consulted to discover the technical aspects of the delivery platform which was used, which they describe as a hybrid solution of video, discussion, file-sharing, blogs and chat. The author of this chapter is also grateful to Professor Jones for his permission to participate in one of the group's online seminars, which gave a good feel of the degree of interactivity and peer support which this form of learning can offer.

7.4.20. The following brief extract from Jones et al (2009) gives an idea of the types of engagement which this module permitted:

Live presentations in which the presenter was seen and heard in a (good quality) video window fading between a talking head and PowerPoint slide worked well. Participants particularly found the discussions (by typed chat) in smaller breakout groups an important and successful element of the delivery.

7.4.21. The cohort on which the case study is based included 16 students from six countries in a wide spread of time zones from Malaysia to Canada, who

¹⁷ <http://www.jmir.org/2009/4/e46/>

participated in 10 weekly sessions, each lasting two and a half hours. This mode of delivery, blending interactive webcasting with other learning and teaching activities, was chosen specifically to avoid the isolation of other forms of distance learning. Other video modes of delivery, such as streaming, do not allow for synchronous interactivity in the way that is made possible by webcasts, which allow for real time discussion, both amongst peers and also with tutors, hence offering instant feedback.

7.4.22. This goal was certainly achieved: the case study reports that: 'in a typical 2.5 hour session, students posted about 50 messages each', and in the student evaluations of the programme the closeness of the group and subsequent interactivity were features highly praised by the participants: 'the best part of the course'. Interestingly many of them had previous experiences of asynchronous learning and were keen to point out the advantages of synchronous delivery.

7.4.23. From the delivery point of view, the authors of the case study (Jones et al 2009) point out that the 'synchronous methods such as webcasting are a much easier transition for lecturers used to face-to-face teaching than are asynchronous methods'. It would seem, however, that the numbers of participants who can be managed in a single cohort might well be small.

7.4.24. Example Two: an asynchronous module using a VLE (Moodle).

This is taken from Case Study 7, which includes many other aspects of collaborations such as programme development incorporating different academics from different cultures of learning, so here only the features which relate to the asynchronous mode of delivery are repeated:

A specific and unusual aspect of the initial concept of this module is that it envisaged that the course participants must form collaborative online working groups consisting of students from the two institutions sharing materials and working together.

7.4.25. The vision of the module, therefore, was from the beginning founded on the possibility of forming an online community enabled by Web 2.0. It should be recalled that the difference in time zones between the settings of the two institutions is eight hours, and also that there is an imbalance in English language proficiency (the language used on the module); hence the choice was made to use asynchronous participation.

7.4.26. The materials were presented on Moodle largely as uploaded text with links to online resources. Attempts to vary this by using podcasts and video animation were frustrated by issues as basic as poor quality headphones and limited bandwidth in the partner institution.

7.4.27. The early stages of the student experience of the module deliberately involved a series of activities which had three simultaneous aims: to allow the students within each group (three from each of the two countries) to introduce themselves; to introduce the general topics of the module (cross-cultural communication and entrepreneurship); and to try out the different applications which the module employs (in particular the community-building collaborative aspects of discussion and file sharing). Again it needs to be repeated that this involves not just developing familiarity with functional aspects of how to use certain tools, but also philosophical aspects in order to develop appreciation of the pedagogic validity of the approaches the module employed, most particularly the emphasis on group work and discussion.

7.4.28. A key finding in that project, which should be considered by others, was that although the students in both countries (the UK and China) were certainly digital natives they were used to different social networking applications. The dominance of Facebook, Google, YouTube, and Ebay in the UK is matched by a different array of possibilities in China, where in fact some sites are not accessible.

7.4.29. In order to reconcile the various issues which emerged during the preparation stage, it was decided to send an e-learning developer and a Chinese research assistant from the UK partner to China to explore the accessibility and suitability of the technical features of the choices which had been made. It is essential to carry out such comprehensive technical audits to ensure that the online materials are accessible.

7.4.30. The students who took part in the piloting of the project did develop a sense of community, and achieved the intended learning outcomes concerning cross-culture communication and entrepreneurship. It was found, however, that they did at times make use of synchronous contacts (for example by using Skype): as should be expected of digital natives they went beyond the facilities created and supplied by the universities to use the methods they felt comfortable with.

7.5 Growth of Open Education Resources movement

7.5.1. A frequently quoted definition of OERS is 'digitised materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research' (OECD, 2007). Within JISC CETIS¹⁸, (the Centre for Educational Technology and Interoperability Standards) 'Open Education

¹⁸ <http://jisc.cetis.ac.uk/>

Resources' (OER)¹⁹ are dealt with as a topic area, but as this relates almost to a visionary ideology concerning the future nature and role of education it is perhaps better to think of it as a movement rather than a topic.

7.5.2. The ideological nature is perhaps most clearly encapsulated in 'Creative Commons'²⁰ licensing, which sees the potential of the internet only being truly realised by universal adoption of a full and free access approach to publishing, something not limited to education but certainly with this as a main component:

The idea of universal access to research, education and culture is made possible by the Internet, but our legal and social systems don't always allow that idea to be realized. Copyright was created long before the emergence of the Internet, and can make it hard to legally perform actions we take for granted on the network: copy, paste, edit source and post to the Web. The default setting of copyright law requires all of these actions to have explicit permission, granted in advance, whether you're an artist, teacher, scientist, librarian, policymaker or just a regular user. To achieve the vision of universal access, someone needed to provide a free, public and standardized infrastructure that creates a balance between the reality of the Internet and the reality of copyright laws. That someone is Creative Commons.

7.5.3. Creative Commons provides ways for permission to be given for copying whilst retaining the credit for the creative and artistic element of the work. Examples of how this is achieved (in arts, in news, in education) are in a downloadable document 'The Power of Open'²¹, and one of the features within that gives an account of the Open University creating OpenLearn using creative commons licensing. The Open University materials are made publicly available via iTunes U, and can be adapted for local conditions and different platforms.

7.5.4. This is an area of great complexity, having aspects which are legal and technical as well as pedagogic and creative, and an enormous range of OERs are being written (or existing learning resources are being made open) within that ethos. Due to this complexity OERs can only be briefly glossed here, with particular attention to its role in international collaborations.

7.5.5. An overview of OER, including examples and links to institutional repositories, is given by Yuan, MacNeill and Kraan (2008), and the potential

¹⁹ <http://jisc.cetis.ac.uk/topic/oer>

²⁰ <https://creativecommons.org/about>

²¹ <http://www.oercommons.org/courses/the-power-of-open/view>

benefits for international collaborations of many of these is instantly apparent. The world leader in this field, MIT²², states that its goal is:

to increase our reach ten-fold: to reach a billion minds. We aspire by 2021 to make open educational resources like MIT OpenCourseWare the tools to bridge the global gap between human potential and opportunity, so that motivated people everywhere can improve their lives and change the world.

7.5.6. A project which employs OER approaches intended specifically for international collaboration is CORE²³, which aims to improve higher education in China by using the MIT open courseware (and courseware from other institutions) and also to encourage the sharing of Chinese advanced courseware internationally.

7.5.7. It therefore seems likely that institutions intending to engage in collaborative activities such as TNE will be able to incorporate OERs as a part of their programmes, as an element alongside the online community building possibilities of Web 2.0 referred to in the previous section, and so design programmes which enable them to satisfy the requirement to ensure that their TNE students have a learning experience which matches the quality of their on-campus students.

7.6. Conclusions

The following bullet points develop the main items identified in this chapter as a series of hints which any staff members who intend to become involved in TNE should consider:

- **Ch 7.1.** It is recommended that institutional strategies link development of international collaborations to development of ICT, including both institutional capacity building and staff development, and to see these both as objectives and as enablers: that is to say both a reason *why* institutions might enter collaborations as well as being a way of *how* this should be done.
- **Ch 7.2.** It is possible to exploit the scalable benefits of the e-learning mode to reach large numbers of learners without greatly increasing costs. Hence using distance learning programmes can be conducive to the massification of education, and so can be used as a way of widening access.

²² <http://ocw.mit.edu/index.htm>

²³ <http://www.core.org.cn/a/About-CORE.html>

Strategic Implications of International Collaborations in Higher Education

- **Ch 7.3.** It is essential to accept that achieving the benefits (including scalability) offered by e-learning as a mode of delivery, for example in TNE collaborations, will require cautious consideration of risks and a willingness to invest in the creation of high quality provision. It is important not to underestimate the costs which are necessary if distance learning relying on ICT is to be done well.
- **Ch 7.4.** It is advisable to consider e-learning as a suitable mode of delivery for programmes of continuing professional development, and of enterprise training, exploiting the 'access from anywhere' possibilities it offers.
- **Ch 7.5.** It is essential to conduct a technical audit in the locations where students will access the materials to identify and counter possible dangers, including bandwidth problems and checking whether the IT-related features of a course will work, such as presentations, animations, and flash-based exercises, blogs and wikis, podcasts, and any synchronous forums used for discussions. The materials should be accessible with the lowest levels of technology available to students.
- **Ch 7.6.** It is essential to check with institutional librarians what any difficulties about off-shore students' accessing eBooks licensed to your campus library might be.
- **Ch 7.7.** It is essential to recognise that TNE programs are expected to be largely equivalent to analogous courses delivered at 'home', and to ensure that compromises do not result in a significant difference in student learning outcomes and a significant lowering of the student experience.
- **Ch 7.8.** It is essential to ensure in-depth staff development for e-learning, including becoming aware of issues concerning the creation of online communities and ways of interacting; adapting to different pedagogic approaches used in different cultures of learning; becoming familiar with the specific tasks used in different courses; becoming familiar with the particular e-learning tools used on a particular platform; becoming proficient in supplying feedback in e-learning contexts.
- **Ch 7.9.** It is essential to ensure in-depth student induction to cater for their possible lack of experience in self-directed learning, including developing personal self-management of the learning process; aims, processes, and methods. Similarly it is essential to supply induction to the pedagogic approaches used in a programme, such as autonomous learning or critical analysis, to support the process of student adaptation to what may amount to a new culture of learning
- **Ch 7.10.** It is recommended to design e-learning programmes around the process of learning experienced by students rather than around a

structuring of the chunks of information which are the course intended learning outcomes.

- **Ch 7.11.** It is essential to ensure that students have clear information concerning the specifications of the programme and how the components of it fit together, as well as the support they will receive concerning issues such as library, careers, and counselling. Similarly it is essential that students know who they can contact and which channels of communication can be used, and how they can give their own feedback on the programme.
- **Ch 7.12.** It is essential to have robust procedures in place for assessments, both formative and summative: clarity of weightings; security of processes including for receipt of work; clarity of requirements; and feedback.
- **Ch 7.13.** It is recommended that e-learning programmes should incorporate Web 2.0 technology in order to allow students to feel that they are contributing members of a learning community, and that there is careful consideration in the choice between synchronous and asynchronous modes. This should include issues such as differences in time-zones, language proficiency, and previous cultures of learning.
- **Ch 7. 14.** It is recommended that Open Educational Resources be explored as a way of ensuring that students on distance e-learning courses have access to high quality and varied learning resources, and hence that their learning experience is not disadvantaged.

References:

- Burnapp, D. & Feng Yan (2007), *Exploring Digital Third Spaces – an inquiry into the use of digital support systems by Chinese students in a British university*. Paper presented at The 5th International Conference on ELT in China & the 1st Congress of Chinese Applied Linguistics, Beijing, May 16-21, 2007.
- Committee of Inquiry into the Changing Learner Experience, (2008). *Higher Education in a Web 2.0 World*. [Online] available at: <http://www.jisc.ac.uk/media/documents/publications/heweb20rptv1.pdf> (Accessed 19.07.2011).
- OECD (2007), *Giving Knowledge for Free: the Emergence of Open Educational Resources*. [Online] available at: <http://tinyurl.com/62hjsx6>. (Accessed 21 July 2011).

Strategic Implications of International Collaborations in Higher Education

Prensky, M. 2001. Digital natives, digital immigrants. *On the Horizon*. MCB University Press, Vol. 9 No. 5.

Thompson, J. 2007. Is Education 1.0 ready for Web 2.0 students? *Innovate* 3 (4). [Online] available at:
http://innovateonline.info/pdf/vol3_issue4/Is_Education_1.0_Ready_for_Web_2.0_Students_.pdf (Accessed 31 May 2011).

Yuan, L., MacNeill, S, Kraan, W. (2008) Open Educational Resources – Opportunities and Challenges for Higher Education. JISC CETIS. [Online] available at:
http://wiki.cetis.ac.uk/images/6/6d/OER_Briefing_Paper_CETIS_without_recommendations_with_cover_page_.pdf (Accessed 31 May 2011).