

THE E-UNIVERSITY COMPENDIUM

VOLUME ONE

Cases, Issues and Themes in
Higher Education Distance e-Learning

CHAPTER FOUR

Introduction to the “Impact of the Internet” Case Studies

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1. Introduction*

This paper introduces the case-study chapters that make up part 2 of this compendium.

It first gives some background on earlier case studies. Next it overviews the “Impact of the Internet” case studies which are the subject of the next 10 chapters (5–14 inclusive). Finally it looks at other case-study work that has been done in the period since 2001 and draws some tentative conclusions about what future case studies would be interesting and relevant to UK HE.

For completeness and consistency it also gives a table of all the institutions mentioned by name in this chapter. However, note that there is a Gazetteer annex to the compendium which provides a much more comprehensive listing of online “virtual universities” around the world.

There are two appendices to this chapter:

- Appendix A reproduces the interim conclusions from the case studies reached by a working group (October 2001) and written up by HEFCE but not so far published.
- Appendix B is the text of the original Invitation to Tender for the case studies (April 2001).

2. Previous Case Studies

There have been case studies of other institutions since the early days of e-learning. In particular, UK Open University staff have been carrying out work of this sort for nearly 10 years; in fact, in 1995 a report of a three-week study tour round the US and Canadian players in the nascent e-learning game¹ was produced and widely circulated in OU and European circles. Indeed, one could argue that some of the benefits of collaborative projects comes from gaining the ability to discreetly analyse one’s potential rivals. (This is not a new aspect caused by e-learning; long before there was rivalry in e-learning, there was rivalry in research, and some of the telematics research in the early 1980s took on distinct and unappealing “national champion” aspects.)

The government also used this mechanism from time to time. For example, in 2000 Ecotec were commissioned to benchmark **learndirect** against a number of overseas organisations with similar missions and a report *Learndirect – A Comparative Study* was produced in April 2001 for DfES.² But such activities tended to be discreet and only occasional information came out onto the Web and into the public domain generally.

* Critical reading and additional research provided by Terence Karran.

In January 1998 the Australian government released their magisterial report *New Media and Borderless Education*³ and the world of e-learning was never the same again. The impact among (the few) e-learning gurus and “policy wonks” of the late 1990s was similar to that of the announcement of the Japanese “5th generation” computing program among computer scientists of the 1980s. Some who had been doing discreet and largely unsung analyses over several years felt vindicated; others panicked; many dismissed it as some kind of Southern Hemisphere self-flagellation. But the wheels began to turn and the UK and Australian universities and funding bodies decided to jointly fund a larger study, which became the *Business of Borderless Education* multivolume report (starting a new e-learning tradition, perhaps), released in March and July 2000.⁴

However, some months before the actual publication of this corpus, the political wheels were in motion, culminating in the announcement of “the e-University” by Secretary of State for Education David Blunkett on 15 February 2000.⁵ (There is a Chronology annex to the compendium for those not good at dates.)

3. The “Impact of the Internet” Case Studies

3.1 Background

Shortly after the announcement of the e-University in February 2000, a number of reports were commissioned from consultants; most importantly, a large team of consultants was set working on the “business models” mega-report, and several smaller teams were set working on technical and marketing aspects. Now although the mega-report and the other reports touched on case studies, and contained several sections on competitor institutions, competitor analysis was not the prime motivation for these studies. One might argue that once a strategic threat is identified, the smaller, tactical threats are (for a while) less important. (The technical reports form part 3 of this compendium.) Throughout 2000 and just into 2001, further work was commissioned, of a business-modelling, marketing and technical nature (some of which appears in part 4), and more case-study material was generated, but again not as a prime focus.

No doubt reflecting on this and other reasons, HEFCE decided in early 2001 to commission a comprehensive series of reports on Internet-based HE learning across the world. The phrase “competitor analysis” was not widely used, but to many people that is no doubt what they looked like; and the word “competitive” was used in the documents (if only twice, in paragraphs 6 and 8 – see appendix B). The studies were called “The Impact of the Internet” and an Invitation to Tender was issued in April 2001. The reports from these studies form the remaining 10 chapters in part 2 of this compendium.

3.2 Structure of the Case Studies

The Invitation to Tender specified clusters of reports according to a particular structure (see appendix B). Due to the demands of the publishing process and the need to ensure that we have stand-alone chapters on individual institutions, projects or countries, the original reports have been split up further (good learning-object design, of

course). To explain this, it is best to start with the structure that HEFCE proposed and show how this maps onto the chapters of this compendium.

The following numbered paragraphs are edited from paragraph 15 (section 3) of the ITT. Each is followed by a bulleted paragraph with a list of institutions chosen. We shall comment later on the institutions included and omitted.

- a) *North America*. The reasons were that: “The US market is generally regarded as the prime target for e-delivery; US provision poses a particular challenge to the UK; and North American institutions (both public and private) are regarded as leading in the development of e-learning. North American “for profit” institutions that have caught the attention in the UK are: Unext.com and Jones International. There have been interesting developments in Canada (Canadian Virtual University).”
 - After discussion with the consultants, reports were commissioned on:
 - *Unext.com* (Cardean University): chapter 11.
 - *University of Maryland University College*: chapter 12.
 - *JSTOR* (a digital library in the US): chapter 13.
 - *CANARIE* (the Canadian equivalent of JISC/UKERNA): chapter 10.
- b) *Northern Europe*. HEFCE suggested a “focus on the Scandinavian countries, Netherlands and Switzerland. The Scandinavian countries have taken considerable interest in e-learning because of the high penetration of the Internet there, the geographic dispersal of their population and the innovation of their domestic communications industry. There have also been interesting developments in Netherlands (English language use and strength of the Dutch Open University) and Switzerland [Swiss Virtual Campus].”
 - After discussion with the consultants, reports were commissioned on:
 - *The Netherlands* (the University of Twente, in context, with a little on SURFNet – the Dutch equivalent of JISC – and the Dutch Digital University): chapter 5.
 - *Finland* (Helsinki University, in context, with a little on the Finnish Virtual University): chapter 6.
- c) *The Spanish Language Market*. “The University of Catalunya⁶ has attracted attention in the UK as a model that has informed our e-University project, also the UNED⁷ alliance with America Online. The Spanish language market (notably in Latin America) is emerging as of major private sector interest.”
 - After discussion with the consultants, reports were commissioned on:
 - *The Spanish-speaking World* (the Open University of Catalonia with material on its links with South America): chapter 7.

- d) *Australia*. “The Pacific Rim is clearly an important market for e-learning, with, for example, NextEd as a strong emerging supplier. Australia has previously been identified as a competitor for overseas students to the UK.”
- After discussion with the consultants, reports were commissioned on:
 - Australia and Asia: chapter 8.
- e) *The Private Sector: Technology and Content Providers*. “The large players aim to transcend national barriers. Commercial content providers have begun to play a big part in e-learning. These companies have been a significant force in recent virtual university developments. The providers of systems and technologies are also increasingly playing an influential part; they are important both because of the infrastructure they supply for delivery and conduct of teaching and research, but also because of the considerable capital that they may wield within the e-learning market and the specific interest some take in e-learning (for example, the Cisco Network Academy).”
- After discussion with the consultants, reports were commissioned on:
 - *North America overview* (mainly Internet demographics and trends in the USA and Canada): chapter 9.
 - *Cisco Systems*: chapter 14.

3.3 The Consultants

The ITT was sent out to a wide range of experts, and not just in the UK or Europe, but beyond. This had the beneficial effect that the case studies could often be done by those with local knowledge of the scene. The selected consultants were:

- a) *North America*. A US team led by ACT IV consulting, a US-based firm.
- b) *Northern Europe*. The noted e-learning experts Professors Betty Collis and Jef Moonen, plus colleagues from the University of Twente. It was expected that their Dutch language skills and local contacts would allow them to drill deeply into the Netherlands situation.
- c) *Spanish-speaking*. A team of experts under Epic (the UK e-learning firm based in Brighton) who included senior staff from the Open University of Catalonia.
- d) *Australia and Asia*. A team involving a key member of the *Borderless Education* study, Yoni Ryan.
- e) *Private Sector*. A team led by ACT IV. (The ITT had envisaged that tasks 1 and 5 would most probably be grouped together.)

Another feature of value (where feasible) was the use of UK experts to ensure that the findings could be interpreted back into the UK context. In particular, the Australia-Asia study involved Professor Roger King.

Short biographies of almost all team members are in the Contributors annex of this compendium.

3.4 “The Conclusions”

There were no crisp conclusions from the case studies – life is not like that – but the information was built into on-going work and planning for the e-University. Some idea of what HEFCE felt about the case studies at the time can be gleaned from appendix A.

3.5 Some Caveats on Case Studies

As noted in chapter 1, any case study comes with caveats:

- It comes from a particular point in time.
- It comes from a particular study team (whether internal or external to the studied organisation) with their own focus.
- The study team is given particular access to information (and possibly in some cases, disinformation) from the institution studied, its supporters and its critics. Information is not agenda-free.

These issues are likely to be more substantial where the institution studied perceives the study team as doing “competitor research” rather than an “academic study” (an increasingly vague distinction given that many universities are now in competition). It is likely that these issues have affected more than one of our case studies – this is inevitable. These caveats are one reason in the next section we provide references to other studies done by other teams, to allow the possibility of “triangulation”, i.e., correlation between studies.

4. Other Case Studies

Inevitably, the funds that can be spent on case-study work are limited, so that some hard choices had to be made in terms of what case studies to include – and what not to. Some current thoughts on this are in the next section.

Fortunately, however, in the last few years some other organisations have also provided case studies for analysts to consider. The most important of these are the case studies commissioned by UNESCO, via its semi-autonomous International Institute for Educational Planning (IIEP, <http://www.unesco.org/iiep/eng/>).

IIEP was created in 1963. It is supported by grants from UNESCO and by voluntary contributions from member states and other bodies. This particular study was supported by from the Department for International Development (DFID) of the United Kingdom and the Development Grant Facility of the World Bank.

The case studies commissioned by IIEP are as follows:

- UNITAR (a large virtual university in Malaysia):
<http://www.unesco.org/iiep/virtualuniversity/files/unitar.pdf>.
- Campus Numérique Francophone (CNF), Dakar:
<http://www.unesco.org/iiep/virtualuniversity/files/cnfd.pdf>.
- Open University of Catalonia (UOC):
<http://www.unesco.org/iiep/virtualuniversity/files/cnfd.pdf>.
- Universidad Virtual de Quilmes (UVQ):
<http://www.unesco.org/iiep/virtualuniversity/files/quilmes.pdf>.
- University of Southern Queensland (USQ):
http://www.unesco.org/iiep/virtualuniversity/files/usq_online.pdf.
- Athabasca University:
<http://www.unesco.org/iiep/virtualuniversity/files/athabasca.pdf>.
- African Virtual University (at Kenyatta University):
<http://www.unesco.org/iiep/virtualuniversity/files/avu.pdf>.
- University of Maryland University College (UMUC):
<http://www.unesco.org/iiep/virtualuniversity/files/umuc.pdf>.
- Université Virtuelle en Pays de la Loire (UVPL):
<http://www.unesco.org/iiep/virtualuniversity/files/uvpl.pdf>.
- NetVarsity (part of NIIT):
http://www.unesco.org/iiep/virtualuniversity/files/net_varcity.pdf.

The IIEP case studies for UOC and UMUC provide useful updates of our chapters on the same subjects. In addition, the IIEP case studies on UVQ and USQ provide useful amplifications of our rather short sections on these (in chapters 7 and 8 respectively). We hope that, in reverse, our case studies will provide a useful historical perspective. Note also that the majority of IIEP case studies are authored by senior staff within the relevant institutions, which does mean that some external triangulation (by consultants) is beneficial.

Wrapped around the case-study chapters, there are also three analytic chapters. Interestingly, two of them are authored by people who have contributed to our compendium: we leave it as an exercise for the reader is to discover how their emphasis has changed in the period since they wrote our contributions.

- First, “The New Century: Societal Paradoxes and Major Trends”:
<http://www.unesco.org/iiep/virtualuniversity/files/chap1.pdf> (by Gudmund Hernes, Director of IIEP)
- Second, “The University – Current Challenges and Opportunities”:
<http://www.unesco.org/iiep/virtualuniversity/files/chap2.pdf> (by Robin Mason).

- Third, “A World of Borderless Higher Education – Impact and Implications”: <http://www.unesco.org/iiep/virtualuniversity/files/chap3.pdf> (by Robin Middlehurst).

The whole corpus is introduced by the editor, Susan d’Antoni, in a wide-ranging article at <http://www.unesco.org/iiep/virtualuniversity/home.php>. We strongly recommend perusal of the whole e-volume from IIEP.

5. Future Case Studies

20:20 hindsight is a wonderful thing. So what lessons might UK agencies learn about which case studies to consider for future analysis? What follows is a personal view, but one based on some years experience of studying virtual university systems – and being studied by them in return. (For URLs and other detail, consult the Gazetteer annex.)

- *Canada*. While some of the consortium and high-tech virtual university systems in Canada have had problems, **Athabasca University** continues to develop and thrive.
- *China*. There are major developments in e-learning in Chinese HE, and in view of increased interest in China from many UK universities, a better understanding of Chinese approaches to pedagogy, technology and organisation is called for. In contrast to the UK, some of the highest-ranking Chinese universities, **Qinghua (Tsinghua)** in particular, have impressive *operational* capability in e-learning.
- *European OUs*. There was a once-fashionable view that there was little to learn from the so-called “traditional” open universities in terms of deployment of e-learning, except possibly from the Dutch OU. However, in the last few years they have been re-inventing themselves – and in particular both the **FernUniversität** and **UNED** (the Spanish OU) should be analysed.
- *India*. **NetVarsity** (part of NIIT) and developments in the various **Indian open universities** suggest that India should be looked at again.
- *Malaysia*. Several analysts have missed the growth of the Malaysian e-university phenomenon over the last couple of years. (Perhaps their attention was drawn too much to Singapore?) Not only **UNITAR** but the other large virtual universities such as the **Multimedia University** and the **Malaysian OU (UNITEM)** should be studied.
- *Middle East*. Despite recent difficulties, there are emerging Virtual and Open University models there that need to be better understood.
- *Scotland*. The failure of **Scottish Knowledge** yet the quiet and growing success of its partial successor, the **Interactive University**, is obviously well worth studying. Very little is on the record about Scottish Knowledge.

- *Sweden.* The Finnish Virtual University has been extensively studied (and has half a chapter to itself in our compendium). But the **Swedish Net University** may also hold useful lessons for the UK as a whole or home nations in particular.
- *Switzerland.* The **Swiss Virtual Campus** is the obvious example.
- *United States.* Understanding the success of **Phoenix** has to be key. The second task is to understand **eCollege**. Yet the major feature of the USA is now the *breadth* of deployment of distance e-learning services in HE, including the beginnings of activity overseas, from literally hundreds of universities and colleges.
- *United Kingdom.* Despite the substantial funding for research and development in e-learning, there are at least **six large “conventional” universities** (covering all four home nations) who are quietly getting on with large-scale operational deployment of distance e-learning, by and about whom very few papers are being written.
- *International Consortia.* It may be felt that Universitas 21 is studied to death, but there several other global consortia interested in e-learning services that impact on the UK – the World Universities Network (**WUN**) in particular. It is sometimes felt that as long as one UK university knows what is going on in these, all do. That is “so not true”.

6. Institutions Mentioned in This Chapter

TABLE 1 Institutions Mentioned in This Chapter

Institution	ITT (app. B)	Of interest (app. A)	IIEP
African Virtual University (AVU)			Y
Athabasca University		Y	Y
California Virtual University (defunct)		Y	
Campus Numérique Francophone (CNF)			Y
Canadian Virtual University	Y		
Cardean (UNext.com)	Y	Y	
DeVry		Y	
eCollege			
FernUniversität			
Finnish Virtual University (FVU)			
Helsinki University			
Interactive University			
Jones International University	Y		
Lancaster University		Y	
Malaysian OU			
MIT		Y	
Multimedia University (Malaysia)			
New York University Online (defunct)		(Y)	
NetVarsity			Y
Open University of Catalonia (Catalunya)	Y	Y	Y
Open University of the Netherlands (Dutch OU)	Y		
Open University (UK)		Y	
Qinghua (Tsinghua) University			
Scottish Knowledge (defunct)			
Swedish Net University			
Swiss Virtual Campus (SVU)	(Y)		
UNED	Y		
UNITAR			
Universidad Virtual de Quilmes (UVQ)			Y
Université Virtuelle en Pays de la Loire (UVPL)			Y
University of Maryland University College (UMUC)		Y	Y
University of Phoenix (UOP)		Y	
University of Southern Queensland (USQ)			Y
University of Twente			
Western Governors University (WGU)		Y	

Notes to Chapter Text

¹ Robin Mason and Paul Bacsich, "Report of North American Study Visit: A personal account", *Learning in a Global Information Society* 6 (November 1995), <http://www.pjb.co.uk/6/visit.htm/>.

² ECOTEC Research & Consulting Ltd, *learnirect: A Comparative Study* (DfES, April 2001).

³ Stuart Cunningham et al.: *New Media and Borderless Education: A Review of the Convergence between Global Media Networks and Higher Education Provision*, Report 97/22 (Evaluations and Investigations Program, Department of Employment, Education, Training and Youth Affairs [Australia], January 1998), <http://www.dest.gov.au/archive/highered/eippubs/eip97-22/eip9722.pdf>.

⁴ CVCP/HEFCE, *The Business of Borderless Education: UK Perspectives* (CVCP/HEFCE, 2000), <http://bookshop.universitiesuk.ac.uk/downloads/BorderlessSummary.pdf>.

⁵ "Major Project Launched to Develop Higher Education on the Internet", HEFCE press release, 15 February 2000, <http://www.hefce.ac.uk/News/HEFCE/2000/euniv.htm>.

⁶ That is, the Open University of Catalonia (UOC).

⁷ That is, the Spanish Open University.

Appendix A: Experts' Conclusions

The following is an unedited Note of a Seminar with Experts held on 23 October 2001 at HEFCE. The experts included members of the study teams and others associated with the e-University project.

A.1 Entry

The usefulness of “learning style” questionnaires was discussed. These could act as a diagnostic to help students identify whether they could successfully engage in independent e-learning. Australia might be ahead on this, and on administrative systems for eLearning. Such questionnaires needed to be linked with access courses (e.g., California University)* so that potential customers were not put off, as well as marketing approaches to “hook” the learner (such as trial modules). There was a range of access issues beyond pedagogic preparedness, including IT and language capability. DeVry and Phoenix† used such questionnaires but there was not a “perfect” exemplar as yet. It was agreed that research into the development of a learning style questionnaire and appropriate entry support would be valuable to keep the UK at the leading edge.

It was noted that academic entry requirements varied from course to course, and there were very different policies on access according to markets. Some took a commercial view that it was “caveat emptor” on entry but there was a danger that a multitude of failed applicants gave a venture a poor image. Accreditation of prior and prior experiential learning were important aspects of eLearning.

A.2 Pedagogic Models

A number of pedagogic models for eLearning were discussed:

- a) Problem-based learning, e.g., Cardean.
- b) Competency-based learning, e.g., Western Governors.
- c) Standard HE linear/theoretical learning, e.g., UMUC, UK Open University.‡

* California Virtual University actually closed in March 1999.

† DeVry is at <http://www.devry.edu/online/>; Phoenix is at <http://www.phoenix.edu/>.

‡ Cardean is at <http://www.cardean.edu/>; Western Governors University is at <http://www.wgu.edu/>; Western Governors University is at <http://www.wgu.edu/>; and UMUC, University of Maryland University College, is at <http://www.umuc.edu/>. The main OU Web site is <http://www.open.ac.uk/>.

- d) Task-focussed courses, e.g., leadership at Lancaster.*

It was argued that the standard HE course was easily available and eventually there would be sufficient standard product that the value of content would sink to zero. The Cardean approach could generate infinite markets. The pedagogic approach had to be appropriate to the relevant market, and markets would be segmented by age and preparedness, as well as critically by country and culture. It was noted that different countries had different attitudes to types of learning (e.g., Asia did not accept competency-based approaches).

It was considered that, generally, the conventional linear courses were more successful, but this probably reflected that this was what academic staff and students were best prepared for. However, there were strong arguments that leading edge providers would need to “push the envelope” and experiment with problem and competency based approaches. Courses which stressed “doing” over “knowing” could be very attractive to employers. There was little theoretical understanding of learning styles, and most work had been done on corporates. No models had been working long enough to generate evaluation results. There was a strong argument then for further research and pilot activity in the UK on new learning styles and approaches to pedagogy, to explore riskier avenues. Research and evaluation of emerging models would also be valuable. A marketing-led approach to programme development was critical.

Experts were agreed that acculturation of programmes to local markets was critical, as was in-country support for programmes. If the UK wished to be leading edge then there would need to be considerable effort made on partnerships with HEIs and Governments overseas.

A.3 Courses

The MIT experiment to put up learning materials on the web was noted.[†] The Mellon Foundation[‡] had paid for the project but the purpose was less clear. It did demonstrate something about academic commitment to freedom of information, but pedagogically it probably demonstrated that the real value to the student lay in the support and qualifications rather than content.

There seemed no evidence that higher levels of investment in courses necessarily led to more marketable courses. Student support did seem critical and it was unlikely that eLearning would presently generate the economies of scale predicted because of the human input required.

* Lancaster University has run many pilots in e-learning, especially from Lancaster University Management School (LUMS). See, for example, <http://www.lums.lancs.ac.uk/Departments/DML/Research/NetworkedML/>.

[†] This is the MIT Open Knowledge Initiative – at the rather confusing URL <http://web.mit.edu/oki/> (note that it is “web” not “www”).

[‡] The Mellon Foundation funds many programmes, including “Teaching and Technology”. For details see <http://www.mellon.org/programs/highered/teachingandtechnology/teachingandtechnology.htm>.

Programmes need to be designed by the author with a course development team, including an Instructional Designer and media production experts. Most courses, even those created by professional bodies, tended to take longer to work through by the student than intended. Hence the role of the Instructional Designer was critical to ensure that the material played out to the student as planned. Authors tended to put in too much material. Time and money could be saved in developing programmes by getting together subject authors – with input from professional Instructional Designers – to identify best practice in approaching programme construction. Development of standard authoring tools was not regarded as useful and experience suggested HEIs would not pay for this. It was agreed that the UK could invest in such best practice activity, possibly through the Learning and Teaching Support Network,* to keep abreast of the world in programme design. There might also be opportunities for the UK to identify paradigms for successful academic participation in course teams, and overall management of course teams, and disseminate these.

There was a dearth internationally of Instructional Designers with an understanding of learning and teaching, and this was likely to be a problem for expansion of eLearning in the UK. Attempts had been made in the US to generate more designers. It was agreed that action could be taken in the UK to encourage a further supply of appropriate instructional designers, possibly by drawing on the expertise in HE design departments.

It was agreed that conformity with standards such as IMS and SCORM† was important but this alone would not make materials inter-operable. Dominant providers or suppliers were emerging who might enforce standardisation (e.g., NextEd‡ in Asia).

On course length, models of 6 weeks (e.g., corporates) or 13 weeks (e.g., NYU§) for cohorted learning seemed successful (15–20 hours of study in 6-week course).

Courses in sciences and medicine were emerging, although usually with some on-campus experience. The courses were often too rich for current bandwidth and were distributed by CD-ROM.

A.4 Supplementary Materials

There was considerable activity in the US to establish Internet libraries. Digital library companies were doing deals with eLearning suppliers to enrich programmes with e-

* LTSN, now part of the Higher Education Academy – see <http://www.heacademy.ac.uk/>.

† IMS is at <http://www.imsglobal.org/>. SCORM is not at <http://www.scorm.org/>; it is part of ADL, at <http://www.adlnet.org/> (note that the Anti Defamation League is at <http://www.adl.org/>).

‡ Like many players, NextEd is not as dominant as it was, but still active at <http://www.nexted.com/>.

§ This refers to NYU Online, a now-closed for-profit spin-off from New York University (NYU). A residual portal operation resides at <http://www.nyuonline.com/>, but it is unclear whether this site is connected to NYU.

texts and supplementary materials for browsing or independent study. There was an increased charge to the student. It was clear that eLearning providers could not assume that the basic reading infrastructure would be available to overseas students in some markets.

It was also noted that there was activity overseas (Canada, Scandinavia, US) to digitise materials for broader enrichment purposes. This enabled communities to get greater access to the knowledge generated in HE and internationally. It seemed unlikely that such activities could be profit-making. It did save storage costs (which could be considerable). There was also considerable cost in sustaining digital collections, and some party needed to pick up these costs if the activity was not profit-generating. This might be a university, as an example, to promote and extend use of its special collections. This was likely to be a “public good” activity. Some such materials might feed into new course development.

It was agreed that the UK would need to take action on eLibraries to support the commercial distribution of eLearning courses, and might wish to take public good action on digitalising a wider range of materials for enrichment purposes. The implications for bandwidth would need to be considered.*

A.5 IPRs

There was concern in Australia about the control of copyright in third party materials when programmes were distributed overseas. The problem in US was the ownership of materials by faculty.† It was noted that there would be time and cost implications for the UK in clearing third party materials associated with programmes for distribution in overseas markets.

A.6 Quality Assurance

A diversity of quality-assurance processes was noted. The Global University Alliance‡ relied on agreements between universities to use their own internal quality-assurance processes. Universitas 21§ had set up separate quality-assurance arrangements. There was less concern in the US about quality of imported materials, but accreditation was taken very seriously.

* It is interesting to note that a major part of the Finnish VU has been the national eLib project – this model is likely to be followed by the Swedish Net University and the Estonian E-University.

† Used in the American sense – in other words, academics.

‡ Global University Alliance is at <http://www.gua.com/>. The UK members are the University of Derby and University of Glamorgan. GUA is a partner of NextEd.

§ Universitas 21 is at <http://www.universitas21.com>.

A.7 Student Support

It was clear that some form of human mediation was needed, although this might be done over the Internet or telephone. The use of FAQs* was not yet resilient yet to enable eLearning to be fully automated. Personalised administrative systems were seen as very important, but these had to be able to handle high volumes and sift what could be automated and what needed human response. Catalunya,† as an example, used their customer relationship management (CRM) systems to “push” the right knowledge at students. There was also a maildrop system for additional queries. The amount of support needed would depend on the market. Many queries from students were on non-academic matters, such as IT, and it was not cost-effective for academics to answer these. It was agreed that the UK would need to focus on cost-effective and effective student support and knowledge management systems to stay abreast globally.

There was debatable evidence on whether networking‡ was an attractive feature of eLearning CRM systems. Universities did want to keep in touch with alumni and used eLearning as a device for this, for fund-raising purposes.

The experience from Spain was that IT centres were needed when selling into poorer countries such as Latin America. The models that had emerged so far for IT support were: student provides; IT provided by partner HEIs; dedicated support centres; Internet cafes; Government facilities. A subsidiary industry was emerging around the provision of local learning support centres (such as British Council, IDP§ or NextEd in Philippines), which provided IT, language and library support. Students did pay extra for this type of support. It was agreed that the UK needed to look into the student support “industry” to stay abreast.**

It was agreed that administrative systems needed to be “vanilla flavoured”. Athabasca†† in Canada was regarded as having good systems.

* Frequently Asked Questions. The pedagogic idea is to store all such questions in a computer.

† This refers to UOC, based in Barcelona, whose full name in Catalan is Universitat Oberta de Catalunya. Its official English name is Open University of Catalonia, and in other material one will often see the abbreviation OUC. Note that “Catalunya” was consistently misspelled as “Catalyuna” in HEFCE documents of the era; we have corrected it in this document.

‡ Used here in the human sense.

§ This refers to IDP Education Australia. IDP is “a global organisation with more than 101 locations around the world and activities in some 55 countries. Owned by 38 prestigious universities in Australia and representing all education sectors, IDP is an independent not-for-profit organisation.” (<http://www.idp.com/aboutidp/>) Further, note that the International English Language Testing System (IELTS, <http://www.ielts.org/>) is jointly managed by British Council, IDP Education Australia (IELTS Australia) and the University of Cambridge ESOL Examinations.

** The World Bank has funded the creation of Global Development Learning Network Centres in Latin America to address this issue – see <http://www.gdln.org/>.

†† Athabasca University is a large distance-teaching university in Canada. There is a “u” after “Athabasca” in the URL: <http://www.athabascau.ca/>.

A.8 Markets

There is still a strong market in business and IT, as well as professional areas like nursing, teacher training and prison services. Emerging markets were closely linked to very specific local requirements (like turf management). The “next big thing” might actually be a series of small things. Detailed marketing knowledge was critical.

It was noted that Catalunya had identified its market in terms of capturing a certain segment of the Spanish language market, rather than in terms of specific subjects. There had been considerable interest in the Asian market but the economic downturn there might affect this. China might become a serious market but it would depend upon their entry into WTO. The Middle East was another market in which there was interest. The implications of the GATT talks on international trade were not yet clear.*

It was noted that universities had not yet fully go to grips with costing eLearning and so it was difficult to assess the profitability of ventures. There seemed little market in sale of materials between universities. Large corporate deals were attractive because there was a guaranteed customer. New markets were emerging in public services in scale, like the US Army.†

* This aspect of protection of language and culture is also evident in the Finnish VU and the Open University of the Arctic.

† This refers to eArmyU, a hot topic at the time. See <http://www.earmyu.com/>. This may again become relevant, given the moves towards e-learning at the Defence Academy of the UK. (Cranfield University are to provide a fully managed distance-learning solution for Army officer education.) Note that the Finnish Military Academy were also involved in the Finnish VU project.

Appendix B: Invitation to Tender (April 2001)

The following material reproduces the original Invitation to Tender (ITT) issued by HEFCE in April 2001. A small amount of contact information has been removed; the original footnotes have been changed to endnotes (numbered as in the original document); and some misspellings corrected; but the wording and structure is otherwise unchanged. A very few footnotes have been added for explanatory purposes.

Section One: Introduction

1. The Higher Education Funding Council for England (HEFCE) is the main public funder (£4.4 billion in 2000–01) of teaching and research in universities and colleges in England. The Council undertakes projects and commissions studies to inform its funding.
2. The Council, with the representative body for universities in the UK – Universities UK (U UK),¹ has embarked upon a project to identify the impact of the Internet. The main aims of the project are to identify the leading edge players globally in harnessing communications and information technology (C&IT) and the Internet to deliver HE, to determine the gap between these and current activity in the UK and to make recommendations on the next steps needed for the UK. The project is being overseen by a Project Group,² chaired by Stephen Marston, the HEFCE Director for Institutions, which brings together HEFCE, the e-University, the Joint Information Systems Committee (JISC) and U UK. Further details of the project are given in Section Two.
3. We are now seeking to commission a number of expert studies to explore aspects of the project. Our specification is given in Section Three. Information on how to submit tenders and how we will select experts are given in Section Four.

Section Two: The Impact of the Internet Project

Background

4. We previously commissioned, jointly with U UK, a study into “The Business of Borderless Education”. That report was published in July 2000,³ and provided a very comprehensive description of developments across the globe. The report analysed a number of aspects of “borderlessness”, including the use of the Internet, the increasing emergence of transnational activities and the blurring of the conventional boundaries between public and private sectors, which are all impacting on the provision of higher education (HE) teaching and research.

5. These borderless trends provide both opportunities and threats to any national education and research system. The Internet, as an example, provides opportunities for increased richness and reach in communications between peers, and between peers and learners. It affords the possibility of the delivery of engaging and effective e-learning to remote learners. And it affords opportunities for a larger number and wider range of people to access knowledge and information services, which are of high quality and accessible. However, the use of the Internet may also bring new competitors, from overseas and other sectors, into any national system.
6. We have initiated a number of projects to ensure that our higher education system remains competitive and ready to meet the global challenge of borderlessness. In particular, the Council is currently in the process of establishing an “e-University” – designed as a major vehicle through which UK higher education institutions as partners can deliver Internet-based higher education programmes globally (see <http://www.hefce.ac.uk/Partners/eUniv>). A central purpose of the Impact of the Internet project is to inform continuing development of the e-University project. The JISC (<http://www.jisc.ac.uk>) of the Funding Councils promotes innovative application and use of information systems and technology throughout higher and further education. One of the JISC’s main services is the Distributed National Electronic Resource, a managed environment for accessing quality-assured information resources on the Internet which are available from many sources.

Impact of the Internet Project

7. The Council is now embarking on the impact of the Internet project to identify how far the UK is keeping up with world leaders in use of C&IT in HE teaching and research, and what we should do in the future to be globally competitive.
8. The BBE report provided us with the big picture of Internet and C&IT developments globally. But the area of Internet provision is rapidly changing and very susceptible to hype, and hence it is often difficult to determine who or what is actually “leading edge”. So we believe that to identify the future agenda for the UK, we need to focus very specifically on the players that are setting, or are likely to set, the pace for the future. We need to understand the factors that make them leading edge (either internally or from their context) and their strategies and plans. We need then to identify what this tells us about what we in the UK should and can do in the future.
9. We are using the term “player” in a very broad sense. This could be an individual institution, a company, a collaboration or structure embracing many organisations, or the strategy and activity of an entire country. While we will be drawing conclusions on the use of the Internet and C&IT in higher education, it could be that a player operating in a different sector is making a breakthrough that we should examine because it could have significant implications for HE. We are also not limiting ourselves to “leading edge” in terms of technology. We are interested in any type of innovation, for instance in organisation or structure.

10. The BBE report focussed on e-learning, and did not cover the uses made of C&IT and the Internet by the research community. However, in this project we are seeking to draw conclusions on the use to be made of C&IT in areas relevant to research.
11. The types of insights of leading edge players that we are hoping to gain from the project are:
 - Are there new initiatives to target new demographic groups (for example, to provide access to e-learning to lower socio-economic groups accessing via mobile phone or digital TV)?
 - The Internet is beginning to penetrate new countries as there is greater connectivity through satellite or other signals/wires. Are new developments (products and technological developments) emerging to “acculturalize” content to new countries, and new target groups within these?
 - Are leading edge players developing a more comprehensive portfolio of e-learning programmes (beyond the heartlands of business and IT) to respond to new potential learners hooking up to the Internet – with new strategic alliances in niche areas, such as culture or specific professions?
 - More supplementary content from a wider range of sources will be on-line (the e-Library), increasing the range of materials accessible to learners, as well as providing more powerful search tools. Research communities may benefit from use of digital materials and datasets. Are there new initiatives to exploit these opportunities?
 - Are there initiatives to develop other services alongside e-Learning programmes – such as on-line expert advice, facilitation of communities of interest and careers advice, to sit alongside e-learning programmes? Similarly, are there initiatives to use the Internet in research networks, dissemination of research outputs (for example, electronic journals or letters), virtual science parks or remote access to major facilities?
 - It does not seem likely that major new functionality in technologies will emerge. However, are there developments in more efficient and effective methods of delivering existing functionality (for example, digital TV may open up Internet to new customers) which are being taken forward by leading edge players?
 - Are new structures or organisational paradigms emerging to respond to the challenges of C&IT and the Internet? Are new alliances or partnerships forming?

Terms of Reference

12. The project has the following terms of reference:

- a) To identify a small number of key areas for in-depth study, which may be countries, sectors or markets.
 - b) To commission specific expert studies of the areas identified. Expert studies should present a general picture of the area, and then focus on specific leading edge players, covering:
 - i. Current activity:
 - 1) Main activities or target markets.
 - 2) Financial analysis.
 - 3) Corporate structure, including partnerships.
 - 4) Underpinning technologies.
 - ii. Future plans:
 - 1) New activities/products under development/new markets targeted.
 - 2) Plans for future capitalisation and investments.
 - 3) Prospective strategic alliances and partnerships.
 - c) To commission other evidence, research, analysis or data as necessary.
 - d) To produce an overview report to bring together major findings.
13. The overview report at the end of the project will draw conclusions for the UK on:
- a) The leading edge players in the world in the use of the Internet and C&IT for teaching and research purposes, including:
 - i. The major emerging markets and areas of activity being addressed.
 - ii. Opportunities they have identified or are addressing for new products or activities.
 - iii. Technological developments being explored.
 - iv. Important partnerships and strategic alliances for the future.
 - b) The gap between the activities and plans of leading edge players and those of the UK, and the desirability and possibility of the UK bridging that gap.
 - c) An overall UK “business plan” to keep us in touch with the leading edge as far as possible, including levels of investment needed and likely revenues, deliverables and outcomes.

14. The overall timetable for the project is:

March–May 2001:	Project Group to determine overall specification for the project and key areas for expert study; and appoint experts.
June–August 2001:	Conduct of expert studies.
September–October 01:	Consideration of results of expert studies; undertake any supplementary analysis required; production of overview report.

Section Three: Specification of Work

15. The Project Group has identified a number of key areas for expert investigation. We now seek tenders from experts to deliver the following studies:

- a) *North America*. The US market is generally regarded as the prime target for e-delivery because of its size, level of Internet connection and wealth. US provision poses a particular challenge to the UK because of common use of the English language. North American institutions (both public and private) are regarded as leading in the development of e-learning. North American “for profit” institutions that have caught the attention in the UK are: Unext.com – because of its scale of investment and the partnerships it is developing with UK institutions; [and] Jones International University – because it is wholly Internet based and has achieved accreditation. The “conventional” US higher education system has seemed slower to respond to globalisation and the Internet, but there have been interesting developments in Canada (Canadian Virtual University).
- b) *Northern Europe*. Particularly the Scandinavian countries, Netherlands and Switzerland. The Scandinavian countries have taken considerable interest in e-learning because of the high penetration of the Internet there, the geographic dispersal of their population and the innovation of their domestic communications industry. There have also been interesting developments in Netherlands (English language use and strength of their open university) and Switzerland.
- c) *The Spanish Language market*. The University of Catalunya* has attracted attention in the UK as a model that has informed our e-University project, also the UNED alliance with America Online. The Spanish language market (notably in Latin America) is emerging as of major private-sector interest and hence may be an area to watch for future developments.
- d) *Australia*. The Pacific Rim is clearly an important market for e-learning, with, for example, NextEd as a strong emerging supplier. Australia has previously been identified as a competitor for overseas students to the UK, because of its

* That is, the Open University of Catalonia.

friendly and open image and culture, use of English language and accessibility for Pacific rim countries. There are conflicting reports on whether Australia is in fact emerging as a leader in e-learning.

The private sector: technology and content providers. Although private-sector companies emerge from individual countries, the large players aim to be global and transcend national barriers. Commercial content providers (i.e. publishers, “broadcasters” and media groups) have begun to play a big part in e-learning. These companies can combine grasp of the technology, with provision of content, with expertise in customer contact and information provision. Hence they edge close to becoming providers of e-learning themselves, and certainly they have been a significant force in recent virtual university developments. The providers of systems and technologies are also increasingly playing an influential part, including software, technology and communications companies, as well as the big systems integrators. They are important both because of the infrastructure they supply for delivery and conduct of teaching and research, but also because of the considerable capital that they may wield within the e-learning market and the specific interest some take in e-learning (for example, the Cisco Network Academy).

16. (The descriptions given above include some initial thinking about why these areas are of interest, including some perceived leading edge players. However, we would expect those tendering to put forward their own ideas, based on their expert opinion, on the specific players to focus on in the study.)
17. As we stressed in paragraph 9, we are using a broad definition of a leading edge player, and we do not expect that that player need be leading edge in its technology. We do want the project to be fairly sharply focussed on specific exemplars, and we would expect the expert to agree the specific players that will be the subject of investigation with us. We do expect, however, that the final report from each study will put the leading players in context, so we can understand whether the experience could be replicated in the UK.
18. Our initial expectation (but we would want experts to comment on this) is that:
 - The study of North America should focus on around 4–5 specific players.
 - The Australian and Spanish language studies should look at 1–2.
 - The Northern European study should look at 2.
 - And the private-sector study should cover around 6, but might be conducted in conjunction with the North American study to reduce overlap.
 - (Studies hence will be of different sizes.)
19. Although the overall project will look at the use of C&IT and the Internet in both HE teaching and research, we expect the expert studies to focus primarily on HE teaching, and any cross-overs from teaching to research. (As an example, the expert studies should not look at implications of supercomputing). The project group will seek other evidence to underpin the conclusions it draws on research in the final overview report.

20. For each study, we would expect the relevant expert to do the following:
- a) Identify a number of leading edge players, in the relevant area or sector specified for the study, to be the focus of the work, and agree these with us.
 - b) Provide a general description of developments in the area/sector, to make clear the context in which the leading player operates (and hence factors that might or might not make the initiative replicable in the UK).
 - c) Examine in what ways the players identified in a. are considered leading (for example volume in their chosen markets, profile in markets, size of ambition, innovation, credibility), and particularly any measures of these.
 - d) For each of these, describe their offering or activity:
 - i. subject (content, level, size of “unit”, structure)
 - ii. markets targeted (geography, client sector)
 - iii. services (support, peripherals)
 - e) What are their corporate structure, alliances, partnerships?
 - f) What level and types of investment have they made; in what; with what sources of capital?
 - g) What is their underpinning technology – current and planned; what is the relationship between the technology provider and the provider/actor itself?
 - h) What is their pricing structure and the various income sources?
 - i) What analysis have they done (that might be available to us)?
 - j) To what do (i) they, and (ii) others, attribute their success so far?
 - k) What are their vision, strategy and/or plans for the future (by market, technology, subject, service, activity)?
 - l) How serious are they as potential major players in 2-3 years time?

Timing and Deliverables

21. All experts should deliver:
- a) Proposals on the leading edge players to be the focus of the work, for agreement with the project group.
 - b) Regular oral progress reports to the project manager (Alice Frost).
 - c) A draft final report by mid-August 2001.
 - d) A final report by end August 2001.

Section Four: Tendering and Selection

How to tender

22. It is expected that studies will be conducted by relevant experts with a wide ranging grasp of both the area/sector of investigation and the use of C&IT in teaching and research. We would not expect, therefore, that the studies should involve considerable research and background information gathering. The chosen expert should have a sufficient grasp of the area to be able to produce a general description, and home in on leading edge players, from their present understanding. Further in-depth investigation (for example, interviews) might, however, be needed to provide the in-depth examination of the leading edge players that we require.
23. It is also expected that each study will be undertaken by a different expert or expert group (which has the relevant area knowledge), although the North American and private-sector studies might be combined.
24. Tenders must be submitted in the name of a lead organisation, which will be responsible on behalf of the bidder(s) for the provision of services in accordance with HEFCE terms and conditions of contract.
25. Tenders *must* include the following information:
 - a) A description of the critical issues to be addressed and the method for delivering the study; and the major risk factors that may threaten successful completion of the study. This should include comment on the number of leading edge players that should be covered and initial thoughts on who these should be.
 - b) The stages of the work and timetable for delivery of these.
 - c) Details of the experience and expertise of the investigator and any other team members, including CVs in an annex.
 - d) A price, inclusive of VAT and all charges (including expenses), for the delivery of the study.
26. Tenderers should email a copy of their tender by noon on Friday 25 May. One hard copy should follow by mail.
27. HEFCE reserves the right to negotiate with one or more tenderers following the submission of the tender proposals.
28. HEFCE is not bound to accept the lowest or any tender.

Selection

29. Members of the Project Group will assess all tenders. Telephone (for overseas tenderers) or face-to-face interviews may be held.

30. The contract will be awarded to the most economically advantageous tender, taking into account the following criteria, which are not listed in order of importance:
- a) The extent of the proposed team's experience, knowledge and expertise related to the delivery of the study.
 - b) The extent to which the tender demonstrates an understanding of the Council's specification and sets out a practicable plan of work to deliver the required results.
 - c) The plausibility and creativity of the proposed approach.
 - d) Evidence of delivery to short deadlines.
 - e) The extent to which the proposed work will provide clear value for money.
31. We expect work to start by the beginning of June 2001.

Further Information

32. To discuss any aspect of this specification please contact:
Alice Frost, HEFCE.
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Notes to the Invitation to Tender

¹ Formerly the Committee for Vice-Chancellors and Principals (CVCP).

² Stephen Marston, HEFCE; Alice Frost, HEFCE (Project Manager); John Slater, e-University; Malcolm Read, JISC; Jannette Cheong, HEFCE; Joanna O'Brien, U UK; John Rushforth, HEFCE; Quentin Thompson, Independent Adviser.

³ Executive Summary, Analysis and Recommendations and Case Studies and Annexes. Available from U UK, email info@UniversitiesUK.ac.uk.