

Tangible Benefits of e-Learning

Does investment yield interest?

Briefing Paper

March 2008

Over the last decade extraordinary developments in technology have taken place and the education sector has not been slow to invest in technology-enhanced learning. The issue of whether this investment is actually delivering tangible benefits for learners, teachers and institutions is however one that has taxed both institutional leaders and public funding bodies.

The JISC e-Learning Programme set out to explore the diversity of current e-learning practice across the sector and to find out what evidence there is relating to return on investment. A project led by JISC infoNet, in partnership with ALT and the Higher Education Academy, worked with 16 universities and 8 subject areas to investigate this question. The project produced 37 case studies which show clear evidence of a range of significant benefits resulting from investment in various types of e-learning activity.



Defining Tangible Benefits

The first challenge faced by the project was to define what might constitute a 'tangible benefit' and what kinds of evidence can be provided. The open-endedness of the research question, and the eclectic approach to which it seemed to lend itself, resulted in a surprising diversity of data and has produced a rich picture of activity in the sector.

The benefits identified can be mapped onto a spectrum which ranges from activities that are easy to quantify in terms of both cost and benefit through to exploratory and developmental activities (see Figure 1). An area such as large scale assessment, which offers a solution to a well-defined logistical problem, may give readily measurable cost savings (as well as delivering pedagogic benefits) whereas other, more pedagogically-motivated, interventions may manifest improvements in terms of improved recruitment and retention. Some of the most innovative developments may involve more investment and less immediate return but are expected to bring benefits in the future.

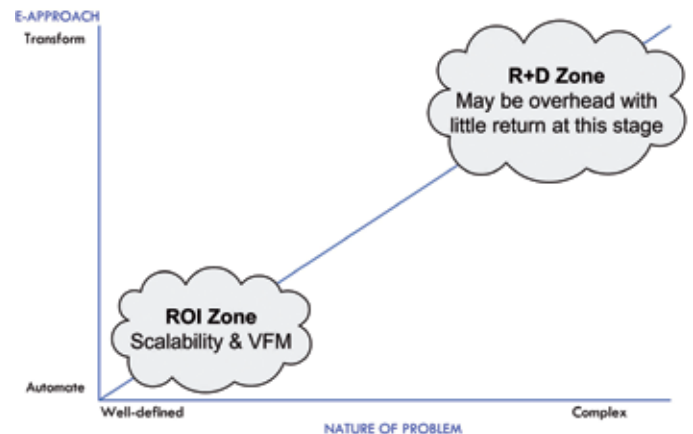


Figure 1.

The project highlights a need for both institutions and the sector as a whole to balance investment across the spectrum in order to achieve real progress. For example we may already be able to assess students quickly and cost effectively using technology but if we assess them and find they are failing we need projects further up the research and development scale to address that.

The tangible benefits identified through the case studies are wide-ranging but can be summarised under the following broad headings:

- Cost Savings/Resource Efficiency
- Recruitment and Retention
- Skills and Employment
- Student Achievement
- Inclusion
- Widening Participation and Social Equality
- Other Benefits

There were often clear differences between the various subject disciplines in terms of technological and pedagogical innovation and what appears well embedded in one subject area may be quite innovative in another.

Cost Savings/Resource Efficiency

Probably the most readily quantifiable cost savings were identified in the area of e-assessment where automated marking of exams for large cohorts of students now takes seconds rather than hours. Other savings resulted from the ability to cope with larger numbers of students, perhaps geographically spread, and the use of e-portfolio solutions for Personal Development Planning (PDP).

Recruitment and Retention

The possibility of offering online courses has opened up new markets abroad. Technology has enabled institutions to support additional student numbers and improved personalisation and mentoring has helped students who might otherwise feel isolated. e-Assessment has led to greater student satisfaction with their programme of study.

Skills and Employment

Many of the initiatives studied were aimed at equipping graduates to be 'fit for purpose'. The broad skills agenda features across the full spectrum of examples but employability and employer engagement were specific features of many developments.

Student Achievement

There is clear evidence that e-learning offers increased opportunities for formative assessment leading to real benefits in terms of student retention and achievement. There was evidence of improvements in pass rates and overall marks and a high degree of student engagement with the process.

Inclusion

e-Learning offers opportunities to support learners with a range of learning difficulties in ways which would simply not have been possible in the past. Many case studies explored how this was achieved, and again, e-assessment and flexibility were significant factors.

Widening Participation and Social Equality

Case studies demonstrated that the use of e-learning has undoubtedly widened participation in UK HE, be this participation by overseas students who would not previously have been able to attend courses in the UK, by professionals who need to fit study into a busy working life, or by the groups of 'non-traditional' learners who form the target of government widening participation strategies.

Other Benefits

Other benefits which may appear less immediately tangible, but nonetheless significant, include the external (international) recognition of the quality of UK HE, the professional development of staff, improved pedagogic approaches and beneficial effects on the development of research communities.

Strategic Implications

Institutional

Institutional strategies are providing top-level support for initiatives that improve learning and teaching but seem rarely to be the key drivers behind innovation. There is a clear need to ensure close alignment between strategy and policy in the use of technology for learning and teaching, and both need to keep pace with developments both within the institution and the outside world. The use of social and collaborative technologies (the Web 2.0 phenomenon) is one such example and all academics need exposure to current technologies and sound advice on how to apply these to learning and teaching.

National

The investments made by the UK Funding Bodies have undoubtedly enabled institutions to move forward more rapidly and in a more strategic way than would otherwise have been possible. Much of the investment made in e-learning has been channelled through national development initiatives such as JISC's e-Learning Programme which supports the sector in taking risks and engaging in development that few individual institutions can afford. There appears to be an ongoing need both for this type of large-scale development activity and for organisations such as the JISC Services and the Academy Subject Centres to support institutions in delivering against their individual strategic objectives.

Conclusion

The most fundamental point to come out of all of the case studies is that the appropriate use of technology is leading to significant improvements in learning and teaching across the sector and this is translating into improved satisfaction, retention and achievement. e-Learning is facilitating the expansion of the sector without necessitating corresponding increases in the footprint of the physical estate and it is allowing broadly the same numbers of staff to educate a larger and more diverse student body. The kind of high quality, diverse, accessible, expanding higher education system desired by government and funders is no longer possible without e-learning.

The sector is investing in a diverse range of solutions under the e-learning banner, some of which are moving to maturity whilst others represent research and development activity. However, the challenges to institutions, and the education system more broadly, are significant if they are to keep pace with the developments in technology which have so much to offer. Continued investment and innovation in the field of e-learning is essential if the UK is to remain a world leader in education.

Further Information and Resources

This briefing paper draws on a JISC infoNet publication:
**Exploring Tangible Benefits of e-Learning:
Does investment yield interest?**

Available from:
www.jiscinfonet.ac.uk/publications

The case studies mentioned in this briefing are available from the JISC infoNet website:
www.jiscinfonet.ac.uk/case-studies/tangible

For further information on the JISC e-Learning Programme visit:
www.jisc.ac.uk/elearning