

Learning Technology: Key Implications for IT Services Staff

Report of a career development study of learning technology staff in UK higher education (HE)

A national study was commissioned by the JISC¹ to provide an in-depth audit and review of staff roles and activities associated with the embedding, development and support of learning technology in HE. The study team also investigated patterns of staff recruitment and deployment across the audited institutions, relating these to critical institutional factors. Recommendations for further study and strategic focus by the JISC and guidelines for institutions on staff recruitment, deployment and development for effective support of Information and Communications Technology (ICT) for learning and teaching were also included. Whilst there are constant changes in emphasis within this fast-moving area and many institutions are now focusing on e-Learning or managed learning strategies, the findings and guidance resulting from this study are still very topical and will be relevant to all those who work with learning technology within HE.

This paper describes:

- Why this study is important to you and how you can make use of it
- The emergence of new roles and cross-boundary working
- The ways in which support for learning technology is changing
- Key implications for information services staff
- Further information and support

The study

The use of learning technology is an increasingly central aspect of the student learning environment. Until now, staff employed in a learning technology context in UK HE have often lacked visibility and have been largely fitted into other categories of staff and career structures. As learning technology becomes pivotal in the pedagogical and institutional changes facing HE, there is a need to understand the multiple roles and players, often working across boundaries, and to find out more about them. This study set out to investigate the staff working with learning technology at all levels and to identify common patterns of skills, distinct and emerging roles and the practices, values and needs of this community. It also set out to identify institutional factors affecting the working context and related professional issues.

Why this study is important to you

This briefing paper aims to highlight the areas of the study which are most relevant to IT services staff, whose involvement with learning technology is rapidly changing with the convergence of systems for learning, ICT infrastructure, course administration and assessment.

Throughout the paper there are questions and issues for you to reflect on. These are designed to help you in turn to ask the right questions and identify who and what can help to move things forward for you and your institution.

Five studies in one

The study consisted of a number of distinct but overlapping studies, including studies that focused on individuals, designed to provide a rich picture of the diverse, multiple and emerging roles within this increasingly active area of learning and teaching, together with investigations into the institutional context of learning technology work. These studies were:

- A role analysis of 35 diverse individuals
- A series of in-depth case studies with 17 individuals, chosen from four representative HE institutions

¹ The Career Development of Learning Technology Staff Scoping Study was carried out between June 2000 and January 2001. It was led by Helen Beetham and a team from the Universities of Plymouth, Bristol and Glamorgan. Since then, follow-up work has been undertaken to make both the findings and methodology more widely available to the HE community.

- An audit of 23 institutions, carried out in addition to the role analysis. Auditors were drawn from the local learning technology team
- An analysis of patterns of staff recruitment and deployment across the audited institutions, relating these to critical institutional factors
- Case studies and interviews at four institutions focusing on institutional managers – heads of personnel, staff development, educational development and learning and teaching

New and changing roles

The study identified three categories of individuals with a distinctive range of roles for each type. These categories were: 1, *new specialists*; 2. *academics and established professionals*; and 3. *learning support professionals*.

New specialists included the role of learning technologist, but also those of educational developer, educational researcher, technical researcher/developer, materials developer and project manager. In practice, these roles were rarely carried out in isolation, with most individuals having responsibilities across at least two different areas. There was evidence that some staff from traditional IT services roles were moving across into specialisms of this kind.

The study also demonstrated the changing roles of *learning support professionals* such as IT services staff, who are now taking on more responsibility for access to learning technology. They are also called upon to support the large number of academics that are variously involved in the development and use of learning technology throughout the UK.

Learning support professionals comprised staff in non-academic roles. The study identified a number of distinctly different roles in this area. The main roles were: technical support professionals, with responsibility for maintaining technical infrastructure; library/resource professionals, with responsibility for managing electronic-based resources, and ICT skills professionals, supporting the effective use of learning technology and ICT-based resources. Also included in this category were learning skills professionals. The figures suggested that around 4,500 such individuals with a learning technology remit were employed in UK HE. Their numbers were difficult to audit accurately but were believed by focus-group participants to be rising.

Unlike the *new specialists*, the *learning support professionals* did not regard learning technology as the defining focus of their professional identity, but as the context in which they were now applying their professional skills. Unlike the *academics and established professionals*, they tended to be in the early stage of their careers, without managerial or strategic responsibilities. They were likely to have a client services orientation, though some also saw their role as developing or ‘cascading skills’ to others (staff and students).

In addition to these support roles, the study identified two developmental roles which were likely to be based in, or affiliated to, IT services. These were technical developers, with responsibility for developing and integrating the IT infrastructure, and resource developers, with responsibility for developing – or supporting the development of – new ICT-based materials such as Web pages, course materials and educational applications.

Although these roles are all functionally separate, they do not correspond to actual divisions of labour among individuals. The staff in the study performed 71.8% of the varied range of all identified roles on at least an occasional basis.

Table 1 describes the five most relevant of the roles outlined in the study. It shows the breadth of these roles and the increasing involvement of IT support professionals in the area of learning and teaching.

| Table 1: Learning support roles and activities identified by audit participants | |
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| Technical support professional | <ul style="list-style-type: none"> ▪ Provide technical support for hardware and networks used in learning and teaching ▪ Provide technical support for software and systems used in learning and teaching |
| ICT skills professional | <ul style="list-style-type: none"> ▪ Assist and support students in developing general ICT skills ▪ Assist and support students in developing ICT skills for a specific subject area or learning activity ▪ Address students’ ‘new literacy’ skills (eg online information retrieval and evaluation) ▪ Assist and support staff in developing general ICT skills ▪ Assist and support staff in developing ICT skills for a specific subject area or learning activity |

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|---|--|
| Technical developer/ researcher | <ul style="list-style-type: none"> ▪ Design/develop computer-based learning environments ▪ Design/develop Web-based applications for use in learning and teaching ▪ Develop networks and network applications for use in learning and teaching ▪ Evaluate computer-based learning environments and applications for use in learning and teaching |
| Resource/materials developer | <ul style="list-style-type: none"> ▪ Design/develop computer-based learning materials ▪ Adapt and customise electronic learning materials to meet particular course needs ▪ Adapt content for computer-based learning environment ▪ Provide content for computer-based learning materials or learning environment ▪ Adapt existing programmes and modules to incorporate use of learning technology |
| Librarian/resources professional | <ul style="list-style-type: none"> ▪ Facilitate and support student access to electronic resources ▪ Support, update and maintain electronic learning materials ▪ Facilitate student access to learning technology expertise and services |

ICT infrastructure

Over 80% of the institutional auditors participating in the study felt their ICT infrastructure was well managed and coordinated, although on the specific issues of learning technology planning, strategy and management, they were less positive. Although most institutions were moving towards a managed learning environment, the degree of integration of systems was very variable. Auditors were generally more impressed with the range of applications available to them on their personal desktop than with computer access in their institutions' lecture rooms and seminar rooms. Only one audited institution had functional access to learning technology across the range of different learning and working spaces.

Learning technology support

Institutions taking part in the study were audited on four aspects of support: technical support; support for teaching staff in embedding the use of learning technology into their practice; support for students in accessing and using the technology; and support for the development of new materials or applications. Four institutions (19%) had or were close to having learning technology support across all four of these areas, one professed to have almost none, while the rest showed very uneven development. There was no obvious association, for example, between support for staff and student access, or between support for users and support for development.

This picture of poor coordination is borne out by the qualitative data. Responsibility for support in the four different areas was often distributed across different services and departments. New posts were being created but there was no evidence that they were being better coordinated with one another. Learning technology applications were fairly likely to be centrally supported by computer services but less likely to be available and supported locally – for example, if a specialist application is required in order to teach a particular subject area. Support for the development of in-house applications and learning materials was found in only 38% of institutions audited.

Key implications for IT services staff

- **Professionals in transition**

The now almost universal uptake of managed learning environments across the UK and the national agenda, which are driving institutions to ensure that learning technology is properly embedded, create new demands, new roles and new partnerships at all levels of our universities. IT services staff whose roles were, at one time, well defined and distinct will now need to work in multidisciplinary teams, across traditional boundaries with an increased focus on the teaching and learning infrastructure and interlinked systems.

What support is needed for IT services staff to make this transition? How can we ensure that these new roles provide a balance between autonomy and multidisciplinary team working?

- **Joined up strategy, joined up systems**

With the rise of institution-wide learning applications and environments it is becoming even more important that the development of the technical infrastructure is accompanied by changes in other aspects of the institution. These might include: registration procedures, administrative activities, learning

and teaching practices, assessment strategies, staff and student skills, even regulations about issues such as plagiarism. Staff from IT services are increasingly likely to work with – and have to understand – staff from other service areas. Our audit found evidence of some highly effective team working across these boundaries at the operational level, but less evidence of strategic integration at the higher level. This can create problems for effective cooperation and understanding.

Has your institution identified the relevant stakeholders and groups who need to work together?

Is there a strategic plan and planning group to lead the integration of systems? How can IT services staff ensure this high-level strategy is in place?

- **Joined up support**

During interviews with senior managers, it was clear that there were some very active partnerships in place, both for strategic developments and in relation to particular projects or initiatives – between staff developers and IT services, between learning and teaching support units and staff development, and between personnel heads and other managers. These often included staff from related staff development and training teams in Information Services or IT units/departments. Examples of this were the provision of Web training, new lecturer induction programmes, reports on staffing strategies, key competencies policies, student learning joint initiatives.

This joined up support provision, or as one manager called it, “co-operation without territoriality”, took place in institutions where a facilitating organisational and managerial framework was in place. What was interesting was that enthusiasm and operational flexibility did not seem to be inhibited by organisational or unit boundaries, and was as active in a ‘combined services’ context as in a ‘separate services’ context so long as there was high-level support.

What kind of organisational and managerial framework would be appropriate at your institution to ensure effective collaborative support across service boundaries? How could high-level support be guaranteed?

- **Dispersal and devolution**

While the role of IT services is ever more central to the functioning of the HE organisation, there is evidence that many IT services staff are now working in departments, partner colleges and other peripheral locations. This is, in part, due to the fact that, as technology becomes more integrated into the learning and teaching process, supporting that technology tends to become a subject-oriented specialism. Teaching physics, for example, requires different applications and resources to teaching French. Many staff have welcomed this change as allowing them to develop more specific skills, and to become more closely involved in learning and teaching. However, there is a danger of becoming isolated from staff in similar roles.

What support is in place for IT support staff who are not centrally located? How can their experience be fed back into central processes and decisions?

Read on...

This briefing paper can only serve as an introduction to the study, which is large and wide-ranging. A series of briefing papers have been prepared to present the most relevant findings to different audiences. It is recommended that you obtain all the briefing papers in order to obtain a comprehensive overview of the impact of the study and its findings.

Other briefing papers available

Briefing paper 1: Learning Technology: Key Implications for Educational Developers

Briefing paper 2: Learning Technology: Key Implications for Learning Technology Staff

Briefing paper 3: Learning Technology: Key Implications for Managers of Learning Technology Specialists and Heads of Personnel

Briefing paper 5: Learning Technology: Key Implications for Library Staff

Briefing paper 6: Learning Technology: Key Implications for Academic Staff

Briefing paper 7: Embedding Learning Technology Institutionally (ELTI): Using the ELTI Audit Tools

Senior Management Briefing Paper: Embedding Learning Technology Institutionally

Institutional audit tools

In addition to the briefing papers, the original audit tools used in the career development study with a full training pack and comprehensive guidance notes are available.

Copies of the full report, briefing papers and audit tools are available from:

<http://www.jisc.ac.uk/careers>

Further information and support

For further information and details of institutional support for undertaking an audit, please contact Sue Timmis at the Institute for Learning and Research Technology, University of Bristol, at:

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