JISC

Key Issues facing UK HEIs

Staff quality, experience, skills and skills gaps

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An Overview of the Landscape

The HE sector generally experiences little difficulty in recruiting and retaining staff except in some professional areas of academic recruitment, where private sector salaries and external earnings potential are very high, and the labour market has historically been buoyant (e.g. the law, accountancy and some other specialist business fields).

However, the strong emphasis from government on the HE sector as a key economic driver, generating, developing and transferring applicable knowledge to other sectors, inevitably means that the expectations placed on university staff and on the institutions where they work are changing. For both academic staff and support/administrative staff new operating practices are gradually emerging as the sector adapts to its changed role in the 21st century knowledge economy.

- **Teaching:** There has been a sustained effort by government through HEFCE and the HEA to raise the professional value of teaching, which has led to a re-balancing of the criteria for assessing staff contribution to the work of the university. Teaching qualifications are now routinely on offer to new entrants to the profession and are validated nationally by the Higher Education Academy. The growth of student numbers and the reduction in the unit of resource, mean that the drive to improve the value placed upon teaching has been occurring at the same time as increases in cohort size and significant diversity in the prior experiences and attitudes to learning amongst the student body. Staff involved in teaching are expected to take a reflective and scholarly approach to their teaching to enable them to deliver a high quality student learning experience and there is a need for extensive staff development to support such development. The potential offered by ICT in teaching and learning is developing rapidly and academic staff are increasingly using that potential, as they seek to keep pace with the expectations and skills of students.
- **Research** is a highly valued activity for academic staff, and while there is still a strong bias towards the traditional scholarship of discovery, current HE policy also seeks to promote integrative and applied research practices. ICT offers increasingly sophisticated mechanisms for developing and sustaining strong interdisciplinary, international and inter-sectoral research networks. In relation to archival and bibliographical material, it offers access greater than ever before to materials from around the globe.

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Business and Community Engagement (BCE) by the HE sector is a key theme in government policy, and it is likely that the thrust towards knowledge transfer and applied research will grow in significance. Described as a "significant new funding stream", the "... strategic focus of the business & community theme is to enhance the contribution of higher education to the economy and society" (HEFCE 2008). However this is still a fragmented area of activity embracing a wide range of very different activities ranging from product licensing and other forms of IPR exploitation to the formation of community partnerships in socially and economically deprived areas. The Higher Education Innovation Fund (HEIF) is currently in its fourth round and universities are being encouraged to develop academic and support staff roles to support a BCE agenda.

- Against this background of increased mission and role complexity for staff, HE institutions are facing sustained pressure to diversify their 'business' oriented functions, to increase staff productivity in administration and institutional support, to reduce administrative and support costs and to keep aggregate staff costs within a ceiling of 60% of total costs. ICT processes are one route to improved business processes and staff productivity in both the core teaching, research and KT business, and in the wide range of administrative functions which support that core business. Adapting the human and business processes to new ICT systems is a serious challenge for University leadership teams, and in particular, will lead to the reconsideration of the current models for reward and recognition.

Three broad categories of challenge to the Higher education sector can be identified:

- input/customer expectations
- output expectations
- process expectations

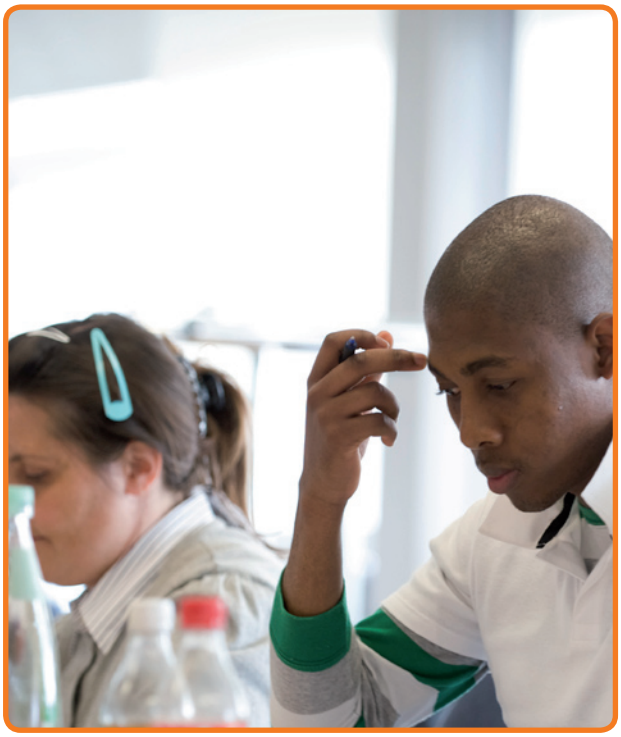
Input/customer expectations

Digital technologies are pervasive in contemporary society. Young people coming into universities have grown up with them, and have high expectations that their institutions will provide reliable and easy access to online resources. Degrees of engagement are variable, but a high proportion of young people consider the Internet as their principal means of accessing information and data, and of interacting socially with peers, as well as with the wider world. It is evident that students entering HE expect universal Internet access, support for using their own equipment within the university, and comprehensive access to learning and administrative information through the web.

These customer expectations create both opportunities and serious challenges to university managements:

- How can staff prepare students to learn and work in a technology rich world of which they themselves have only a partial understanding? A key challenge, and one that is imperfectly addressed throughout the sector, is how the digital literacy of staff can be fostered alongside student literacies.
- Blended learning has become a common feature of many HE sector programmes. Online tutoring within such learning environments creates demands and expectations from students which can place serious time management pressures on staff. These can lead to stress and increased levels of student dissatisfaction when levels of contact fall short of expectations.

- Creating work spaces and library/information resources which match expectations; university 'plant' is adapting slowly to the changes in the learning styles that are being promoted by digital technologies.
- Learning resource departments are re-thinking the construction of traditional library roles, career paths and professional competencies as they come to terms with the rapid growth of digital information.
- The use of digital technology to improve assessment, feedback and staff/student interaction, and to support self-directed learning, is becoming pervasive.
- Employers and customers have an expectation that any information and service that is required should be obtainable and/or delivered electronically.



Output expectations

The expectations embodied in graduate 'employability' are increasingly encompassing high levels of skill in digital media, particularly spreadsheet expertise, graphics and document management. The contemporary labour market is mutating rapidly with declining shares for the primary and secondary sectors and steady growth in the tertiary sector. This brings with it an increased demand for continuous professional development, for acquisition of novel techniques which are frequently driven from the HE sector, such as in computing, business skills and engineering, and for access to skill updating.

Universities are required increasingly to develop skills in order to design and deliver:

- on-line short or professional courses courses
- blended learning opportunities
- self-directed learning
- a virtual environment in which students can link up with each other and with staff
- access to information and research outputs

Process expectations

Quality lies at the heart of all functions of higher education and quality enhancement relies on complex and adaptive processes of communication and information handling. The challenge to HEIs coming from internal process expectations is how to create opportunities for all staff to acquire the necessary skills that will enable them to deliver services efficiently and effectively in line with the national Digital Britain agenda.

Adapting to these expectations throws up a range of potential challenges to traditional approaches to professional/occupational training and to current working practices. Some of these are specific to HE and some are of more general educational or administrative application; in many cases, the common feature is the way that they offer opportunities to configure roles and career structures differently, and to change the way that HEIs have been operating hitherto.

Two relatively well-known examples of these challenges are:

- Teaching and learning through on-line tutoring systems creates new demands and expectations for tutors to continue to support their students' learning outside the timetabled classroom hours. The ability to access learning resources and support flexibly has the effect of blurring the distinction between the domestic environment and the official workplace, which has always been less clear-cut for many academic staff than for other professional staff. This blurring effect poses questions about systems access, systems security, wide area networking and makes it necessary to re-consider institutions' arrangements for home-working, home computing capacity, performance management and health and safety management and monitoring. Contracts of employment, which still widely rely on 1980s and 90s templates do not easily provide a framework within which these changes can be accommodated.
- New types of role are developing to accommodate the new options for administrative and academic processes. One widespread example is the emergence of the 'Learning Technologist' in a role which blends academic and technical skills in support of on-line and web-enabled learning systems. Similarly, PC based administrative processes require skill acquisition in IT and keyboard competences in addition to the traditional literacy-based competences and human interactive skills.

These changes are already raising issues about staff recruitment criteria, training and career development pathways, and management control systems; and additionally, a parallel stream of organisational change is emerging as administrative processes that have historically been handled separately in different administrative silos are being reviewed and brought together into, most typically, integrated student facing combinations. 'One-stop shops' for students imply that staff are likely to be expected to acquire extensive competences in e-enabled systems that will provide a package of service information to the customer who presents at the enquiry desk. Academic, financial and administrative databases and an understanding of what lies behind them will have to be understood by the staff member who is providing the service; and the service itself may have to be made available for a longer period than the traditional working day.

Institutional Responses: Strategies and Target -Setting

Most, if not all, HEIs have established internal structures for managing choice about ICT investment and the associated academic and business processes. These provide a locus for decisions about budget allocation, and about bids for additional resources to support new developments, and would typically be structured around a formal project management methodology. Institutions are able to access a range of well-established professional channels within the sector - including JISC - for the exchange of knowledge and expertise on these issues, and for supporting decisions about the use of technical applications.

However, institutional strategies face a number of common limitations which reflect some of the main barriers identified above:

- the uneven pattern of engagement and understanding on the part of the staff who will use the systems leads to a variable 'buy-in' and to a more incremental approach than might sometimes be desirable

- inadequate attention is often paid to the evaluation and identification of benefits in the project planning process, and weak benefits 'capture' feeds weak cost-benefit analysis
- a relatively high degree of cultural conservatism about administrative and academic processes alike which places limitations on the scale of potential innovation.

The sector is not generally seeking to bring about radical transformation of its processes, whether academic or administrative, but this climate of cautious incrementalism results in a relatively lower priority being placed on developing staff skills and competences in this domain than in many others (e.g. dealing with customers, dealing with staff problems, appraisal, management accounting). It is safe to conclude that, while institutional responses to this point have not been conservative, they have nevertheless not been sufficiently innovative to optimise the use of the systems that are available.

Barriers

There is widespread understanding of emerging opportunities and possibilities across the HE sector, and they are widely discussed in both formal and informal fora. Across the world, HE institutions are adapting to new ICT systems in many different ways, and most institutions can point to a strategic overlay on developments in their university that suggests that they are being handled in a focused and structured way rather than ad hoc.

Nevertheless, it remains the case that there are evident skills and cultural barriers and resource constraints which are preventing a more comprehensive and thoroughgoing adaptation to these opportunities. The resource issues are unsurprising in a system that has traditionally worked with very slim margins of surplus generation and that is open to a range of unpredictable external factors, but the skill/cultural barriers are perhaps more unexpected in a sector that is orientated towards personal, intellectual and cognitive development. They derive on the one hand from a perception that new systems do not necessarily improve quality, and on the other, from a 'cultural lag' between the skills of those managing these workplaces and those who have developed the new systems.

ICT-based administrative processes e.g. for student admissions, personnel, finance, student progression, drive the associated administrative structures and the skills required to a certain degree, but allow very wide scope for variation in the way that systems are actually utilised in practice. The same is true of e-enabled teaching and learning environments, which provide scope for the adoption of a very wide range of approaches to curriculum, teaching style, and use of e-systems. In very few instances, does a technical solution drive the associated process completely thus placing the emphasis on the users to determine from the 'pick and mix' menu, their preferred approach to the learning or administrative outcome. Cultural and individualised preferences - whether at the institutional or programme/systems level - are key determinants of choice.

It is clear that the contemporary structures for providing support, training, guidance and consultancy in making these choices are not generally fit for purpose. While universities offer a wide range of training opportunities, attendance is frequently voluntary and consequently very variable. Academic staff, in particular, are reluctant to create the time

required for generic training alongside their other roles and responsibilities. Our improved understanding of how professionals learn and develop in work settings is leading to innovative approaches to educational development which run alongside normal course development, design and quality assurances processes (e.g. one to ones with learning technologists, workshops with course design teams) and create communities for development (e.g. ELESIG, eL@b, HE Academy Subject Centre special interest groups). On the administrative side, the transferability of experience is limited by wide variations between institutions in internal organisational structures, career progression structures and relationships with other processes. Administrative staff are, however, generally open to the adoption of e-enabled processes and willing to acquire the skills to use them if there are tangible benefits. More basic awareness training will help to ensure that universities get more from their existing and future ICT provision

Practical recommendations for JISC

i) How can JISC help to move these issues forward?

ICT systems clearly have the capacity to assist the HE sector to improve staff skills, to make administrative processes more user-friendly, accessible and cheaper to run, and to support the provision of flexible and rich teaching and learning environments that meet student expectations and improve learning outcome. However, HEIs will not want or need to adopt every new ICT tool. Users and institutions need above all to have support in making informed choices and to be guided through the choices of technology platforms and associated applications. This is true both in the choice of an institutional VLE or library system, and its introduction and use, but also in the choice of administrative solutions which give student flexible access to financial and academic systems.

Staff need guidance in implementing tools and in some cases, very practical training still needs to be provided. In most cases, professional development is more a case for mentoring and guidance about the ways in which, for example, curriculum and feedback/assessment can be improved through the use of ICT, or on the administrative side, large scale processing can be used in ways which enhance the provision of management information and value for money. The JISC role in supporting HEIs to make choices through objective and sector-wide evaluation of practice should be extended.

ii) and iii) Where can JISC become involved in innovative development and in providing advice and guidance?

The role of JISC must be essentially facilitative - providing options, brokering connections, giving a lead with choices clearly set out for HEIs to consider. Information flows around the sector in very many ways, but despite a plethora of professional organisations for IT staff and those interested in learning technologies, there is no sector-specific depository or clearing house. JISC may wish to reconsider how it gathers, archives and distributes advice and information so that it can more directly influence policy choices at the institutional level. If it remains the case that most users of IT systems make no use of 90% of their potential, there may also be a need for

expert evaluation of the ways in which more optimal user/systems interactions can be achieved. Meeting the requirement to provide for the exchange of information about 'what works', how systems are best embedded/introduced/used, evaluation of costs and benefits, and approaches to training and staff familiarisation would be effective support for the next phase of HEI adaptation to the potential of ICT. Support for institutions in the acquisition of procurement capability and the capacity to manage relationships with suppliers would be valuable, as would expert advice and support on key data security issues.

iv) and v) Who are the key institutional and sector stakeholders?

As mentioned earlier, the HE sector is well provided with professional bodies, associations with very specialist academic and technical foci, consultancies and, of course, regular access to the major providers of ICT systems themselves. ICT expertise is widespread and high-level, but inevitably fragmented.

The key institutional stakeholders will be those who have a direct interest in the academic and administrative processes that can be supported through these applications such as AuA, AHUA, BUFDG, UHRA, ALCIS etc. Professional associations such as ALT, SEDA and the HEA have clear interests in the field of developing staff competences in the use of existing ICT systems and creating the skill base to allow a better informed approach to the selection of future systems.