

# Careers Services: Technology and the Future



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Information and communications technology is a powerful agent of change in higher education careers services. Web sites are of particular strategic significance in shaping the relationship of the service to its users and stakeholders.

This Briefing examines the impact of ICT - and especially the Web - on careers services, including:

- increased visibility and exposure to market forces;
- analysis and recording of routes of resource delivery;
- approaches to web-site design;
- managing email as a new medium for interacting with clients at a distance;
- on-line open-learning approaches to the delivery of careers education in the curriculum.

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## CONTEXT

The context of careers education, information and guidance (CEIG) in higher education is rapidly changing. More people than ever before study in higher education. The student population is more diverse and the number of mature and part-time students has increased, as has the number of full-time students who, when not studying, are at work in temporary jobs. Graduates are going on to a wider spectrum of opportunities, often taking longer in transition. Careers services in higher education, always short of human resources, are under corresponding pressures as they respond to these changes.

### THE HARRIS REPORT

The recent Harris Report on *Developing Higher Education Careers Services* included seven recommendations specifically addressing the use of information and communications technology (ICT). These included:

- making access to advice and support available 24 hours a day, 7 days a week;
- using email to improve communications with students in key target groups;
- developing a single national portal web site on career planning;
- considering the needs of careers services when higher education institutions fund investment in ICT.

### POTENTIAL OF ICT

- It makes careers services *visible* as never before, in particular on the World Wide Web.
- It opens the services up to *competition and comparison* from outside.
- It *connects* existing services, their resources, partners, stakeholders and clients in new ways.
- It makes it possible to *target* clients and stakeholders much more effectively and efficiently.
- It offers highly *interactive* resources, and enables its human advisers to interact with clients independently of time and place.
- It provides an environment for *open and distance learning*, including off-campus, experience-based learning.
- It makes it possible for careers services to *track and record* the routes users take through the service's resources.
- It offers unprecedented *access* to career-related resources.

### STUDENT USE OF THE INTERNET

98% of final-year students use the Internet.  
 62% use it every day.  
 84% of maths/IT students use it every day.  
 44% of arts/humanities students use it every day.  
 83% of final-year students who are actively looking for careers information use the Internet to do so.  
 75% say they will use the Internet to access careers advice and information after they graduate.

(MORI, 2001)

### STRATEGIC QUESTIONS

- *Competition/co-operation*: Who is the competition and what partnerships should be developed at local, regional, national and global levels for the greatest benefits to clients and stakeholders?
- *Managing the flow*: If the resources provided by careers services are conceived as a system, how do users typically move from one place in the system to another? How is this affected by the introduction of ICT-based provision? How does this reflect the service's strategic priorities?
- *Web design*: Is the careers service web site based on the identified needs of users, offering a way to avoid overserving some and underserving others? Or is it resource-based, leaving it to the customer to identify what they want from it?
- *A social technology*: What do the new relationships between adviser and client (or between client and client) via ICT and at a distance, in particular by email, demand of a service? How can these relationships be effectively managed?
- *Distance learning*: Where careers services support the learning of career management skills on-line, what implications does this have for the position of the careers service in the university and with academic colleagues? Can taking a lead in this area be a way of enhancing careers service influence and diffusing careers education more widely within the higher education curriculum?

## COMPETITION/CO-OPERATION

The commercial services offered on the World Wide Web are becoming more substantial. Technology has exposed the market nature of the placement and guidance process, challenging the structures based on client-centred and public-service values which have previously to some extent shielded it.

Responses include:

- *Partnership and collaboration.* The choice of partner at local, regional, national or international level is crucial, especially in the area of placement and employer services. Public/private partnerships in this area could make services more vulnerable to market forces, via takeover and rationalisation in the private sector.
- *Niche markets.* While national labour-market and learning-opportunity data are provided by national web sites, local web sites can make the overload of information on the wider Web more meaningful and manageable.
- *National co-ordination.* A national graduate careers gateway on the Web could co-ordinate access to a multitude of national, regional and local initiatives. Strategic decisions need to be made about the most appropriate level at which information should be stored and specific services delivered.
- *Self-confident professionals.* All staff should be able to access, use and help others use effectively the ICT resources available. Careers services are then more likely to be equipped to develop proactive plans for capitalising on technological developments, and to attract interest and co-operation from computer service departments and others in their universities.
- *Critical users: an educational strategy.* The aim of careers services has long been to enable users to think critically about what is offered to them and to act autonomously in their own best interests. Career management skills courses can help to equip students by including the skills of critical use of web-based career planning materials.

## MANAGING THE FLOW

In the traditional careers service, the hub was usually a reception desk linked to a careers information room. Here users' needs were identified and they were signposted to appropriate resources, including interviews or group events.

The Internet injects a new turbulence into this flow, and at the same time offers a chance to review existing assumptions and traditional pathways.

### PARALLEL SYSTEMS

The creation of a web site sets up a new access point to the service, and requires thought about where users go next from this alternative "reception desk". Parallel systems can be overlaid on each other, and links set up between them. The web site can:

- Funnel users into off-line services.
- Divert them to other on-line resources.
- Deliver on-line versions of off-line resources, so that the user does not need to come physically to the careers centre.

### HUBS AND GATEWAYS

A key question is where the hub of the resource system lies - the point from which the flow of users emerges and to which it returns when in need of rerouting. It might be:

- The on-line career management skills module.
- The work placement and employer databases.
- Prospects Planner.

This choice will affect the subsequent progression routes of users, and also implies differing models of what the careers service is mainly about - e.g. finding a job, learning career management skills, or supplying information.

### TRACKING AND RECORDING

Technology offers ways of tracking and recording a user's pathway through the resource system, from the use of web-tracking software to swipe-card technology. There may however be data-protection issues here.

### RECORDING PROGRESSION

A client-centred alternative is for users to record their own progression through the system, linked to a student portal or on-line personal portfolio. Such progress files can:

- Make negotiation with users into a guidance contract.
- Help with the identification and acquisition of key skills and career interests.
- Merge with the student's record.

## WEB DESIGN

### NEEDS-BASED V. RESOURCE-BASED

Good web-site design should enable the user quickly to:

- perceive who would potentially benefit from using the web site;
- develop a mental model or schema for site navigation;
- locate resources and services that meet their needs;
- understand what to do with the resources and services they receive.

Most careers service web sites are *resource-based*. They usually contain lists of resources and/or external links, with or without accompanying descriptive statements, which users must match to their self-perceived needs. Resource-based web sites are most appropriate for expert or experienced users who can quickly find their way to what they need. For others they may not be so helpful.

The process of assessing and matching user needs to resources, in order to maximise learning potential, can take a skilled careers adviser several years of training and practice to develop. Yet web-site users are often expected to master it in a matter of seconds. This can result in frustration, or in random linking and site hopping.

The *needs-based* web site is organised on the basis of a three-level hierarchy:

- The index (level 1) is a list of potential types of users.
- There is then a link (level 2) to potential needs associated with each type of user.
- For each user need, one or more resources (assessments, information or instruction) are identified (level 3) to potentially meet the need.

Each resource is described, along with the outcome the user will get from it. External links are treated in much the same way. Links are prescreened for quality, and the number of external links is limited in order to avoid overloading the user. Effective use is regarded as more important than comprehensive access. Questions to be asked in developing a needs-based web site are:

- Who does, or should, the web site serve?
- What are the needs of these users?
- What resources exist, or should be created, to meet each of the identified needs?

An additional question may explore the phase of the career choice process which the user has currently reached: e.g. whether they are ready for CV writing or job search, or have no idea about what they want to do. The model of guidance underlying the design needs to be transparent.

Most web sites should work at the self-help level for at least some users, but how might “support” be offered via the design of the web site for the remainder? Examples include:

- offering an email enquiry service to those underserved by the site;
- a carefully designed set of frequently asked questions (FAQs) that users can relate to;
- an on-line self-help needs identification exercise, with recommendations as to what to do next.

This process provides a series of *filters*: at each stage, another tranche of users moves off to find the resources they now know they need, and hopefully only a small number remain to seek the full specialist professional one-to-one service. This type of approach can *divert* extra users from an already overloaded service, since more of them can help themselves on-line. At the same time, it can identify those who potentially need individual face-to-face guidance, and *funnel* them in this direction at an early stage.

The needs-based approach does not need to exclude resource-based features - e.g. site maps, indexes, and search facilities. Received wisdom is that unless users get to where they need within three clicks, they will exit the site. Needs-based designers believed that users are here led step by step in a process which engages them, so are willing to stay with it. In practice, the aim should be to combine the best of the two approaches.

### LINKS

A key design consideration is links to other sites. In needs-based design, links are accompanied by statements (e.g. in hover text) on outcomes or goals to be achieved through the link. Links serve a number of purposes:

- *Coherence* - connecting one part of the site to another and back again, or to off-line services and resources, or to other relevant sites.
- *Referral* - to other services or resources not provided on the site (e.g. Prospects Planner, or a self-help group or other student service).
- *User control and choice* - the user can make the choice themselves.
- *Focus* (when a link leads to a more detailed account of some aspect) and *scope* (when a link leads to alternatives or other ideas that may expand the range of options considered).

Design decisions about links may involve a relationship with the receiving site - perhaps partnership or team membership, or co-operation and shared principles. It may be one-way or reciprocal, depending on negotiations. It represents a significant choice, requiring a reason for the link and an explanatory context for the user, and needs to be regularly monitored.

## A SOCIAL TECHNOLOGY

Before the arrival of the computer, an individual could be helped individually by a careers adviser in a face-to-face interview, by telephone, or by post. ICT has added several new variants. CEIG can now be delivered (with decreasing personal immediacy): face-to-face, by videoconference, by telephone, by Internet chat, by email, on a web site, by CD-ROM, by print-based resources, in an Internet/intranet-based discussion forum, and by post.

Email is now a significant alternative to the telephone. Its advantages include:

- You cannot find the line engaged or be unable to “get through” (though a response may not come quickly).
- You can send an enquiry at any time of the day or night.
- Enquiries and replies can be thought out well in advance.
- There is a written record of what was said on each side.

On the other hand, some careers advisers see it as less spontaneous, and lacking the non-verbal qualities of face-to-face interaction.

Email can be used by a careers service in different ways. It can closely shadow the face-to-face interaction, with an exchange of personalised messages between adviser and client, perhaps with a picture of the adviser, and an ongoing relationship being built up. Or it can be an impersonal contact with any one of a team of advisers.

Replying to email is seen by some as a time-consuming activity which could take up more time than seeing people in person. Strategic thinking is needed on which target groups email is best suited to, and for what interventions. Strategies include:

- Setting up filters to ensure that those who send emails have tried other resources first. If they are sent from the web site, an enquirer can be asked to check their enquiry and situation against a number of headings, prompting them to think through and clarify the issues before sending their email.
- Developing a frequently asked questions (FAQ) facility on the web site. This saves time: common enquiries can be referred there for quick answers, or the answers can be cut-and-pasted into replies.
- Setting up a registration procedure before email interaction with an adviser takes place. This will be most appropriate where an in-depth conversation by email over a period of time is envisaged. It encourages users to think about their questions in advance. It can also help to separate casual or unserious enquirers from those who really need help.
- Keeping track of email usage: only by monitoring what happens can services learn to respond more effectively.

Email can also be used:

- For administrative purposes – to alert students to careers events, or to send information about job vacancies.
- To provide personalised information via mailing lists to which those interested in a particular topic can sign up.
- To network or keep in touch with alumni and others.
- To put mentees in contact with potential mentors.
- To support learners at a distance or on placements.
- To provide a forum for self-help exchanges, with or without moderation by a careers adviser.

## DISTANCE LEARNING

Although most services have been running career management skills (CMS) programmes for some years, delivery by ICT is more recent. Via the Internet it is now possible to deliver such programmes to more people, over greater distances, 24 hours a day, 7 days a week. This potentially offers economies of scale.

It also offers a shift of control to the learner. “Open learning” means that the student controls the pace, place and time of the learning. An on-line CMS programme can be used wherever a learner has access to the web, and at whatever pace or time they like to use it. It can also be written to leave the learner free to pursue a variety of routes through the learning process.

ICT-based open learning can include high interactivity:

- With the tutor or adviser - by email or as part of a discussion forum, or via chat or videoconferencing. Inputs from others outside the university, whose experience or expertise is relevant, also become easier to manage.
- With other learners. Part of the rationale for learning in a group has always been that learners could learn and get useful feedback from each other rather than just from the group leader or teacher. ICT makes this possible without having to assemble a number of people in one room at the same time.
- With the material. Exercises and self-assessments can deliver feedback to the learner without additional human intervention. These can be purely motivational - to keep the learner “turning the page” - or can offer feedback on progress at key points.

A web-based CMS module can reach all parts of the university. A careers service can choose:

- To act as an expert consultant to those who deliver first-in-line services rather than to deliver these itself. Thus the careers service supports other staff, who in turn support the students. Despite the high start-up and front-end costs of developing such material, “supporting the supporters” in this way may be a rational option for services with limited staff resources.
- To develop team working with departmental staff, with materials customised for the department. This may be initiated from either side. Initiatives within individual departments can be incorporated into an overarching development on the web, or general CMS components can be customised for subject-specific use.
- To use web-based material as a means of reaching students directly, thus avoiding any potential resistance from academic staff. This may require risks of marginalisation to be tackled, especially where the material is not part of the assessment and credit systems.

The current tide seems to be flowing in the direction of a collaborative careers service working more closely with other academic colleagues. Taking a lead in this area can be a way of enhancing careers service influence and diffusing careers education more widely through the curriculum. This requires a clear strategy and a coherent account of learning outcomes and processes.

## CONCLUSION

The most creative way of approaching ICT in careers education, information and guidance is as an agent of change, providing opportunities to redesign careers guidance services as a whole. Technology is not just an add-on - another resource like the others in the careers room: it raises strategic planning issues at every turn. Failing to address these does not relieve a careers service of the consequences of change; it merely ensures that when change happens, the service is not in control and may be caught off-balance. A proactive response and emancipation from technophobia are more likely to keep the careers service in a position to influence the development of their own and others' future.

## RECOMMENDATIONS

1. Careers services in higher education should develop clear and specific strategic plans and objectives for their use of ICT in delivering careers education, information and guidance (CEIG) as part of their overall strategic planning. Among other benefits, a proactive approach in developing and presenting these plans is more likely to engage active technical support for development, than are simple requests for more hardware.
2. Careers services in higher education should be supported in critically reviewing the design and layout of their web sites and in engaging with a variety of needs-based approaches to this task. Templates and guidelines could valuably be made available to support services in developing web sites based on sound theoretical and practical standards, and customised to meet their needs and those of their target-groups.
3. The relationship between prospects.ac.uk, as a national UK gateway to CEIG for graduates, and local and regional careers service web sites, should be carefully considered by CSU, the Association of Graduate Careers Advisory Services (AGCAS) and individual careers services, to encourage links that are based on a clear strategic and guidance rationale and that facilitate student and graduate access to important information and resources. The totality of these national, regional and local sites should form a co-operative network of web sites.
4. Co-operative working relationships and links, such as those developed in the past between AGCAS, CSU and individual careers services, are a distinctive and valuable feature of the CEIG scene in UK higher education. They represent a combined resource which is envied by careers services in other parts of the world. Regional and localised technically mediated links have the potential to strengthen this national framework, and should be designed to do so.
5. Careers services in higher education should consider, where they have not already done so, the considerable possibilities which facilities such as email, chat and discussion forums offer for the delivery of guidance, and should develop strategic plans for using these facilities to reach out to appropriate target-groups and for integrating them with other resources and services. AGCAS and other relevant organisations should be encouraged to provide support for such activities, through training activities and relevant forums for sharing of experience, and through research into the activities' effects.
6. Careers services in higher education have already developed considerable career management skills learning material on-line. The use, adaptation or creation of on-line portfolios should be explored as one resource for career management. The expertise and experience of such work should be widely shared through a national network or on-line discussion forum, including attention to careers services' role in delivering support to teaching departments.
7. Careers services in higher education should monitor, track and evaluate, as carefully as is legally and ethically defensible, the use made of their services, both ICT-based and others, and should use the resulting data to review, clarify and amend their strategic plans, and the paths users take through their resources.

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## FURTHER INFORMATION

The report summarised in this Briefing is published as:

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