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e-Recruitment: Is it Delivering?

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Report 402

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Executive Summary

This report is aimed at senior managers and HR practitioners responsible for resourcing and recruitment in their organisations. It will be of particular interest to those developing strategies for e-recruitment, but equally so for those already committed to e-recruitment by reflecting on whether the approach is delivering the benefits for them.

The IES study — aims of the project

E-recruiting, embracing the term web-based recruiting, can be described as any recruiting processes that a business organisation conducts via web-based tools, such as a firm's public Internet site or its corporate intranet. We use the terms online recruitment, Internet recruitment, and e-recruitment interchangeably.

The aim of the e-recruitment project was to carry out evidence-based research to answer the following questions:

- What are the overall trends in e-recruitment use and practice? We examine which parts of the system are web-enabled and what are the related benefits and challenges.
- What is happening in practice? What are the e-recruitment methods that are being used, and what are the real experiences from organisations attempting implementation?
- Does it work? How do organisations evaluate the success of their e-recruitment initiative?

There were four main phases to the project: a literature review, a survey, an IES Research Network event on e-recruitment, and a series of case studies. The survey provided the overview of use, while the case studies illustrated more in-depth analysis of some of the issues organisations are facing.

Trends in e-recruitment

There is growing evidence that organisations are using Internet technology, and the World Wide Web, as a platform for recruiting and testing candidates. The IES survey of 50 organisations using e-recruitment reported that the primary drivers behind the decisions to pursue e-recruitment were to:

- improve corporate image and profile
- reduce recruitment costs
- reduce administrative burden
- employ better tools for the recruitment team.

Fifty-five per cent of respondents expected their organisation to reduce its use of other recruitment methods in the future. The key limiting factors to e-recruitment that recruiters most frequently reported were:

- the cultural approach of the organisation towards recruitment
- the lack of knowledge of e-recruitment within the HR community
- Internet usage by target candidates
- the commitment of senior management.

Issues raised as causing concern with e-recruitment included the quantity and quality of candidates applying using web-based tools (*eg* organisations being inundated with CVs attached by email, many of whom were not suitable for the post), the relevance of shortlisting criteria (*eg* the validity and legality of searching by keywords), confidentiality and data protection, and ensuring diversity of applicants.

The trends in e-recruitment use suggest a changing landscape whereby in future, the candidate is connected to the central system and there is involvement of the line manager in the process. In addition to the reported benefits such as cost efficiencies, the role of HR in this model is viewed as more of a facilitative role, in theory allowing time for recruiters to become involved in the strategic issues within resourcing.

e-Recruitment methods

Advertising job openings, tracking the source of applications and online enquiry forms, were the most frequently used methods for attracting candidates. In many cases, web-based technology in selection and assessment is only being used by the most selection-sophisticated organisations that can afford the high start-up and maintenance costs. The IES survey reported that, out of the 50 organisations surveyed:

- a large proportion were using online application forms (67 per cent)
- only four per cent were using psychometric tests online.

There was wide variety in the extent to which online applications were structured, and also in how they were screened, *eg* electronically by keywords, or manually. There exists a great deal of variation and less maturity in this part of the e-recruitment process in terms of application and use, than in the application of Internet technology at the attraction stage of the process.

In terms of applicant tracking and workflow systems, of the 50 organisations surveyed, 78 per cent received CVs and application forms online, 49 per cent used email response letters, with 39 per cent using progress-tracking systems. Only nine per cent provided status reports to hiring managers.

Evaluating impact

The experiences of IES members suggest that the emergence of fundamentally new e-enabled recruiting processes not only increases the opportunities, but also the risks associated with the resourcing process. Hence, evaluation of those risks and benefits becomes more important. It is claimed that current measures of impact in this area focus on efficiency (input and output measures), as opposed to measures of effectiveness and quality of output. The evidence from the IES survey, which asked organisations to indicate which evaluation measures they currently use, suggests that the former is true. Number of successful applications, cost per hire and Internet/intranet site traffic analysis, were the most frequently used measures in our

sample; all input-output measures. Measures of quality were less evident.

Working with a small number of the case study organisations, a framework was developed and used as a mechanism for exploring the availability, and validity, of the data each organisation held on their staffing processes. The intention was to determine the usefulness of a supply-chain approach to measurement in making optimal investment decisions in e-recruitment systems, and in measuring the value of e-recruitment. The categories of measurement we explored with the participating companies were:

- cost of recruitment and selection activities
- time taken to fill
- volume/yield
- diversity and legal compliance
- candidate and employer satisfaction
- quality/value of the recruit.

IES case study members shared our conclusion that better information about the end-to-end process should lead to better decisions about any investment in e-recruitment. An evaluation approach linked to the staffing process, as 'value chain' we argue, is the way forward if organisations are going to truly understand the value of e-recruitment.

Implementation challenges

The findings from the survey indicated that the key implementation challenges were the cultural approach of the organisation towards e-recruitment, and the lack of knowledge within the HR community. This has implications for training within HR to develop the capability to deliver e-recruitment, and also elsewhere within the organisation (*eg* at line-manager level). Further implications of e-recruitment are that it may allow a more strategic role for HR. A compelling argument why online recruitment should be integrated sooner rather than later is that it will serve to move the recruiter up the value chain, allowing them to be far more strategic. Finally, cultural and behavioural change was reported as the significant challenge in ensuring that e-recruitment delivers.

Assessing your organisation's e-recruitment strategy

The experiences of Research Network members reported here, underline the complexity of considerations and possibilities of e-recruitment. The final section of the report offers a series of self-assessment questions, which if answered specific to your organisation and its HR function, provide the basis for an e-recruitment agenda.

Conclusions

What are the key messages from our research? In examining the findings, the key message for recruiters is to acknowledge that the adoption of e-recruitment is about more than just technology. It is about the recruitment system being able to attract the right candidate, the selection process being based on sound and credible criteria, and the tracking process being able to integrate with existing systems. Perhaps most significantly, e-recruitment is about cultural and behavioural change, both within HR and at line management level. From our evidence, we suggest that for e-recruitment to deliver, it is about developing the capability of HR to facilitate the system and to view the staffing process as an end-to-end process, similar to that of a supply chain.

1. Introduction

Effective recruitment policies and practices are recognised as making a significant contribution to an organisation's success. It is not simply about placing suitable candidates into jobs, it is also about building and developing a flexible and adept workforce to suit the organisation's changing and demanding needs (Plumbley, 1990).

In an attempt to explore pioneering and efficient ways to attract the interest of suitable candidates at a time when competition for talented staff is fierce, organisations have been quick to explore and adopt an 'e-approach', and have applied Internet technologies in the hope of gaining a competitive advantage. However, many organisations have entered a commitment to e-recruitment with limited understanding of what benefits and problems it might bring. This has posed some opportunities and challenges, which we explore in this report.

The Institute for Employment Studies (IES) has a number of Research Networks (RN) that deal with emerging issues for HR and related areas. One research network, Resourcing and Organisation, offers a focal point for those interested in how working patterns are changing, the implications for employee resourcing, the HR function, and for organisational design and development. The Resourcing and Organisation Research Network commissioned this project on e-recruitment in order to understand the associated challenges and opportunities.

1.1 Project aims and objectives

Feedback from member organisations suggested that they would like to have an independent overview of the issues in e-recruitment. Much of their interaction in the field has been with suppliers or vendors of IT-related equipment that have a vested interest in promoting the adoption of e-recruitment methods. What they felt was needed was an overview of what is known about e-recruitment in terms of trends and practice, but also a more in-depth analysis of how organisations are implementing some of the e-recruitment methods in practice. This would enable a better understanding of how their organisation should be positioned in responding to this approach.

The aim of the e-recruitment project was to carry out evidence-based research to answer some of the following questions of concern for senior managers and HR practitioners:

- What are the overall trends in e-recruitment use and practice? We examine which parts of the system are web-enabled and what are the related benefits and challenges.
- What is happening in practice? What are the e-recruitment methods that are being used, and what are the real experiences from organisations attempting implementation?
- Does it work? How do organisations evaluate the success of their e-recruitment initiative?

1.2 Research methods

We were keen not to rely solely on published accounts of experiences of e-recruitment, as they often portray only the success stories. We still reviewed the published evidence, but developed our own survey and case-study approach to gather our own evidence of practice. The survey provided the overview of use, while the case studies provided more in-depth analysis of some of the issues organisations are facing. There were four main phases to the project.

Literature review

A literature review was carried out to provide the project team with the most up-to-date information regarding e-recruitment.

As with many topics linked to new technology, the advances in practice often occur at a faster rate than the accompanying literature, in particular the more academic literature. As such, the literature review included academic and practitioner journals, as well as more up-to-date Web-based discussion boards and papers.

Survey

A survey was carried out with the aim of gathering baseline information regarding:

- the drivers for using e-recruitment
- the use of e-recruitment methods
- the importance of this in relation to traditional methods
- the process of e-recruitment
- how e-recruitment methods are evaluated.

The sample of organisations for the survey was drawn from an internal mailing list and administered to 300 organisations between June and August 2002. Follow-up calls were made at the end of July to encourage those who had yet to return the survey.

Fifty organisations returned the survey, and represented a wide range of industries, such as:

- banking (six)
- IT/telecoms (five)
- manufacturing (eight)
- HR/recruitment (three)
- public sector (six)
- science/pharmaceutical (eight)
- transport (six)
- others (*eg* retail) (eight).

Almost one-third of the 50 participants were recruitment managers, 16 per cent were graduate-recruitment managers, while 18 per cent of all the respondents were engaged in online recruitment project management.

Research Network event

A Research Network event, in October 2002, presented some of the preliminary findings to members of the Research Network. The event provided delegates with an opportunity to discuss and provide comments on the initial findings, and let us know about further issues that they would like us to explore. The outputs from this workshop helped to shape the case study interviews and visits.

Case studies

The aim of the case studies was to provide an in-depth analysis of what an e-recruitment process looks like in practice. What are the key ingredients, and what are the advantages and disadvantages over other forms of recruitment? The aim was to provide some detail for the issues raised in the survey, and also some other themes that we wished to pursue, *eg* harnessing human capital, comparisons with traditional methods, and evaluating success. The case studies were concerned with providing more focused accounts, and were directed by central research questions. Organisations were selected on the basis that they illustrated different strategies for using e-recruitment and broadly represent different sectors.

Six case studies were used, these included two financial service organisations, one telecommunications company, one media organisation, one public sector, and one pharmaceutical organisation. The case study organisations were visited and followed up with telephone interviews between June and September 2002. A brief description of their business context, involvement in e-recruitment, and whom we visited, is given below.

Pharmco

Pharmco is one of the world's leading pharmaceutical companies, employing over 54,000 people worldwide, of whom some 10,000 are in the UK. Some 1,700 appointments were made in the 12 months prior to interview.

Vacancies are posted on the corporate website, a job board, and several industry-specific sites. The company is currently extending its attraction techniques to include candidate mining and proactive

searches. Prospective applicants can look for jobs using a 'Looking for Opportunities' section located on the career pages of the corporate website. They can search for positions by location or category. Applications can be submitted online by completing the relevant sections of an application form. Alternatively, applicants can complete the 'personal section' and attach their CV. There is no online assessment at present, however there are clear statements of the required job competencies for each position. Applicants are encouraged to review themselves against these competencies to ensure the vacancy is a good fit with their skills.

A major review of all HR transactional processes has just been completed. The development of e-recruitment is an important element of the wider global transformational change of HR service delivery.

Interviews were conducted with the director of global staffing.

Mediaco

Mediaco's total UK employment is approximately 35,000. Approximately 5,400 appointments were made in the 12 months prior to interview. The range of opportunities is wide, and there is no general entry to Mediaco. Jobs are advertised in the national and regional press, or in specialist magazines, and online at the corporate website. All advertised jobs also appear on CEEFAX.

In 2001, a newly created recruitment support centre was created. In its first year, the centre handled over 110,000 telephone calls at an average of 500 per day. They received over 45,000 speculative enquires — 42 per cent of which arrived electronically. A new website attracts over 45,000 individual users each week.

Applicants can apply online using an HTML-coded form. Applicants cannot save a copy of the completed form to their local computer, and are advised to print off and post their application should they have any concerns about the security of submitting personal information over the Internet. All applications are manually screened; however, trials of context-recognition software and other pre-screening tools are in place or planned. The company expects to significantly increase its use of online recruitment in the near future, and is investing in new IT infrastructure.

Interviews were conducted with the head of recruitment, and a recruitment consultant.

Government Office

This central government department runs four main entry schemes at set points throughout the year. Traditionally, the department has relied upon career fairs. However, a drive to improve diversity within the Civil Service has prompted a review of job posting sources. A wider range of advertising is now used, across a mix of media. All adverts refer applicants to the website of a third party for full details of any current vacancies and/or entry schemes. Here, they can download a copy of the application form and information pack in PDF format, or submit a request for a printed copy by post. The department is looking to move to a continuous entry process running throughout the year. There are no plans to enable online applications at present.

An interview was conducted with the head of recruitment services.

Financial Services 1

A company in the financial services sector employing approximately 30,000 people in the UK. It was one of the first UK employers to adopt an online sifting process for two key customer service roles.

The processes used are innovative because applicants are given a realistic expectation of the roles using a series of job 'previews' on the site itself. This has been designed to reduce early staff turnover, and be compatible with the company's brand value. A measure of 'fit' against the core competencies required for the role is collected using a short online questionnaire. Shortly, the recruitment function hopes to be able to import the candidate data from the third-party hosting the recruitment website, into their own HRIS. The effectiveness of online pre-screening and its suitability for other job roles within the company, is the subject of a continued review.

Interviews were conducted with a HR strategy consultant, and a senior recruitment manager.

Financial Services 2

This is a financial services company employing some 60,000 people in the UK. In the last 12 months, some 6,000 appointments were made using a wide variety of recruiting methods, including commercial job websites and the company's corporate website. The company does not currently accept applications online for any posts, with the exception of the graduate entry scheme.

In 2002, the company centralised the work of 13 regional recruitment teams into a single HR shared services team. The second phase of this transformational change of HR service delivery is the development of an online recruitment service. The total recruitment system, including a job site, external advertising, and applicant tracking system, has been awarded to a third-party ASP.

Interviews were conducted with the HR consultant project managing the change, and a senior HR services manager.

Telecomco

This global organisation comprises 23 business units and 500,000 employees. There are some 30,000 employees in the UK, and over 1000 appointments were made in the 12 months prior to interview. Online recruitment is considered very important, and is used for all levels of appointment — from senior management to clerical.

In 2002, the company implemented a fully automated, workflow-based, online recruiting tool, provided by a European ASP software vendor. The key drivers for doing so were to reduce high 'agency' costs and to enable the sharing of a consistent applicant management process across business units. The system itself is technologically simple, *i.e.* on a PC with standard Internet architecture; hence no hardware investment has been necessary.

The shift to a new recruitment approach, with an emphasis on proactive candidate search and employee referral, has demanded a significant change to the role of the recruiter, and to that of line management.

Interviews were conducted with the UK personnel manager, and the online recruitment manager.

In addition, a number of informal discussions were held with Research Network members and other UK organisations, at IES events and at a conference hosted by the Internet Recruiters' Network and Association (IRNA).

1.3 Structure of the report

This report outlines the research findings, and is structured to achieve the objectives of the project by balancing our report between an explanatory guide to e-recruitment (which will be of use to those new to the area) and a more detailed analysis of some of the technical issues, which more sophisticated users of

e-recruitment will be interested in. We aim to achieve this balance by clearly explaining the technical aspects throughout, and we assume a minimal knowledge of the issues and methods in the first few chapters. This provides a basis for the more detailed analysis in the final two chapters, and in particular the challenges that face all adopters of e-recruitment in the future.

The structure of this report is as follows:

Chapter 2: Trends in e-recruitment: What do we know? What are the benefits and challenges of using e-recruitment? Which part of the process is web-enabled? What is the evidence from the IES survey?

Chapter 3: e-Recruitment methods: Application in practice? What are the experiences from organisations' use of e-recruitment methods at each stage of the recruitment process, *ie* attraction, selection and assessment, and applicant tracking?

Chapter 4: Evaluating impact: Measuring success. We examine whether e-recruitment works for organisations. How do organisations evaluate the success of their e-recruitment initiative, in order to demonstrate benefit and added value?

Chapter 5: Emerging challenges: Lessons from the bleeding edge. After reviewing the project findings, we set out a series of challenges that organisations will face in implementing e-recruitment in the future. We suggest a series of questions of practical use for current and future adopters of e-recruitment, in developing an effective strategy and focusing on issues away from just the technology and cost.

2. Trends in e-Recruitment: What do we Know?

2.1 What is e-recruitment?

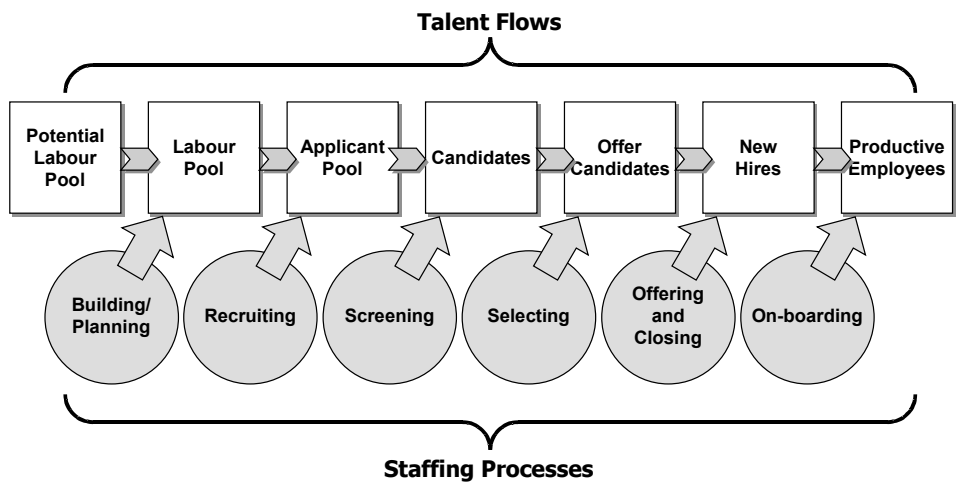
The relatively recent emergence of online, Internet or e-recruitment, is suggested to have the potential to bring radical change to corporate recruiting. E-recruiting, embracing the term web-based recruiting, can be described as any recruiting processes that a business organisation conducts via web-based tools, such as a firm's public Internet site or its corporate intranet. We use the terms online recruitment, Internet recruitment, and e-recruitment interchangeably.

As Lievens and Harris (2003) point out in their review, there are a number of approaches to Internet recruitment. They outline a number of common methods, but acknowledge that approaches are evolving regularly. The approaches they describe include:

- company websites
- job boards
- e-recruiting itself (the recruiter searching online for job candidates)
- relationship recruiting (developing long-term relationships with 'passive' candidates).

Figure 2.1 illustrates the staffing process and talent flows involved in recruiting staff. E-recruitment can be involved in any or all of the main processes of attraction (building/recruiting), selection and assessment (screening and selecting), and onboarding (offering and closing, induction), as well as supporting applicant tracking and workflow systems. Organisations will

Figure 2.1: Staffing processes and talent flows



Source: Boudreau and Ramstad (2001)

differ in the extent to which, or how far down the recruitment and staffing process, they apply web-based tools. Strategy, resources, culture, or knowledge of such applications, may influence this. For example, some may have invested solely at the planning and recruiting stage by developing a corporate website advertising vacancies, and allowing candidates to find out more information (eg job descriptions) and apply online. Others may have moved further down the process and introduced selection and assessment online.

In summary, we consider the whole recruitment process in this report, including any testing and assessment carried out at the selection stage. This area has specific issues of concerns for practitioners, for example, in compliance with legal requirements regarding test taking and best practice. Some of these issues are discussed in this report, and are currently being explored in practitioner and academic conferences (eg British Psychological Society Test Users Conference, June 2003; Society for Industrial and Organisational Psychology, 2002, 2003).

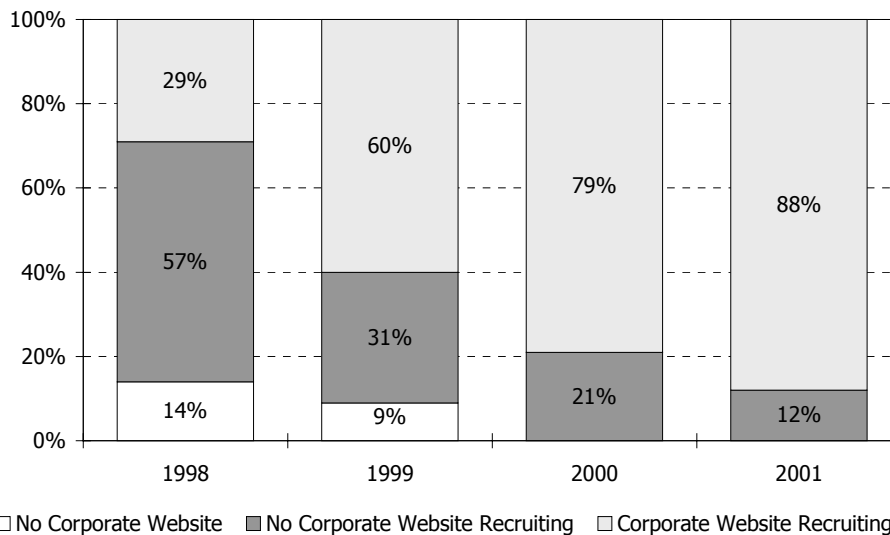
2.2 Who is using e-recruitment ... ?

The reported growth of e-recruitment has been phenomenal over the last few years. There is a multitude of online employment

services dedicated to job and CV postings. Corporate websites seem to attract most employees, and are becoming the focus of Internet recruitment campaigns for most large organisations. According to a survey conducted by iLogos research (2002), 91 per cent of the Global 500 companies used their corporate websites for recruitment in 2002, a percentage that has been growing steadily since 1998. Figure 2.2 demonstrates the tendency over the last five years to invest in this new recruitment channel.

As such, there is growing evidence that organisations are using Internet technology and the World Wide Web as a platform for recruiting and testing (Greenberg, 1999; Harris, 1999, 2000). Cappelli (2001) notes in the *Harvard Business Review*, that the use of the Internet for recruitment and testing has grown rapidly in recent years. However, as Bartram (2000), Lievens and Harris (2003), and Anderson (2003) note, usage and adoption of Internet-based recruitment is mainly restricted to larger multi-national organisations recruiting large numbers of employees (eg graduates), or to those with national/international pools. There is some optimism by these authors that smaller organisations will follow suit, but it is unclear what the trend will be outside of this larger sector. Anderson (2003) also notes, in his analysis of

Figure 2.2: Who is using e-recruitment?



Source: *Global 500 Web Site Recruiting 2002 Survey*, (2002)

the adoption of new technology in recruitment and selection, that there is ‘undoubtedly considerable variation between organisations and HRM departments in their level of technical sophistication’. This will have an impact on what they view as being radically innovative in adopting new technology in a selection context.

Dineen *et al.* (2002) reported that 90 per cent of large corporations in the USA use net-based recruitment (Cappelli, 2001; Martin, 1998), and 12 per cent now use online screening methods (Cober *et al.*, 2000), all of which illustrates the extensive exposure of applicants (at least in the US) to Internet-based modes of delivery.

2.3 ... and at what level?

Table 2.1 illustrates at what level the respondents to the IES survey were using e-recruitment. The results reflect previous surveys on level of use, identifying the graduate market as the main area where e-recruitment is being used. This is unsurprising, given that this is the most highly-resourced recruitment area for many large multinationals, that can justify the up-front investment in the technology and supporting roles.

2.3.1 The graduate market and e-recruitment

In 2000, the Association of Graduate Recruiters in the UK (AGR, 2000) reported the results of a survey of 65 members that showed

Table 2.1: At what level are companies using e-recruitment?

| Level | % |
|-----------------|----------|
| Graduates | 93 |
| Junior managers | 86 |
| Middle managers | 70 |
| Clerical staff | 67 |
| Senior managers | 58 |
| Manual workers | 26 |
| Board members | 14 |

Source: IES Survey, 2002

the number of recruiters recruiting online doubled between 1999 and 2000, from one-third to two-thirds of them all. In another AGR survey of graduates (N=118), they reported that nearly 90 per cent of respondents are now seeking their first jobs on the Internet, and nearly 50 per cent are applying online (AGR, 2000). An interesting point made was that employers report that the quality of applicants who apply online is higher than those who apply by traditional methods. The objective evidence for this observation is not evident or reported. IES research on the AGR report in 2001, asked further questions around the usage and usefulness of online recruitment techniques. Responses from graduate recruiters concluded that:

'... the valuable role that the Internet now plays in the recruitment process is reflected in the finding that it was the most frequently used technique and almost all members (95 per cent) used the Internet to describe/advertise vacancies. Receiving application forms from the Internet and using the Internet to describe and advertise vacancies were also voted the second and third most useful technique. In addition, employers believe that they have benefited from being able to cast their net in a much wider pool as they now receive a range of applications via the Internet – from both within and outside the UK.' (IES/AGR 2001 Half-Yearly Review)

2.4 Spend on e-recruitment

The Electronic Recruiting Index (ERI 2000) showed a substantial increase in spending on e-recruitment in the US in 1999. For 1998, the total was about \$US4.5 billion, while in 1999 it jumped to over \$US15 billion. The ERI forecasts steady growth from around \$US18 billion in 2000 to nearly \$US40 billion by 2005. Spending on website development is expected to level off at \$US15 billion per annum by 2003, with the major source of growth being in job posting fees (rising from \$US1.425 billion in 1999 to \$US15 billion by 2005). Some estimate that while only 14 per cent of recruitment budgets were spent on online job boards in 1998, the figure now is likely to have risen past 30 per cent, with newspaper advertising dropping from 70 per cent to 52 per cent (Laurence, 1999). In the UK, IPD survey results of 269 organisations found that use of the Internet for recruitment had risen from 14 per cent in 1997, through 19 per cent in 1998, to 32 per cent in 1999.

A final point worth making here is our lack of understanding of cross-national differences in the use of these different technologies by organisations. Most of the existing research has originated in the USA, which may be well ahead of other countries in Europe and the rest of the world in terms of organisational take-up of technologies in this area, in particular within the selection part of the process (Anderson, 2003). Indeed, there is a large split between the growth in Internet-based recruitment usage in recent years in the attraction arena, and the isolated examples of organisations using the technology for assessment and evaluation. We examine this further in the report, and consider some of the reasons why recruiters may be less willing or able to adapt e-recruitment to the selection and assessment phase of the process.

2.5 What are the perceived benefits of e-recruitment?

2.5.1 Drivers in implementing e-recruitment

The IES survey asked organisations to identify the key drivers for using or introducing e-recruitment. That is, the reasons and benefits that they felt they would gain from such an approach, over traditional forms of recruitment. Table 2.2 indicates that the primary drivers behind the decisions to pursue e-recruitment were: to improve corporate image and profile (80 per cent), to reduce recruitment costs (78 per cent), to reduce administrative burden (62 per cent), and to employ better tools for the recruitment team (62 per cent).

These reasons reflect other evidence (*eg* Anderson, 2003; Reynolds and Sinar, 2001), that shows that Internet-based selection procedures can have a positive impact on perceptions of the organisation (*ie* company image) amongst potential applicants.

The increasing popularity of the Internet as a recruitment channel can, therefore, be attributed to several key perceived advantages. Much of the evidence accentuates the time and cost effectiveness of e-recruiting. The speed at which several steps of the recruitment process are carried out reportedly leads to a shorter recruitment cycle (Hogg, 2000). Applications can be processed and delivered within minutes rather than weeks, saving both companies and jobseekers valuable time. Additionally, companies can save

Table 2.2: Drivers in implementing e-recruitment

| Reason for pursuing e-recruitment | (%) |
|--|------------|
| Improve employer profile and corporate image | 80 |
| Reduce recruitment costs | 78 |
| Reduce administration burden | 62 |
| Better tools for recruitment team | 62 |
| Shorter recruitment cycle | 56 |
| Expectation/preference of candidates | 51 |
| Better fit (screening large pool) | 33 |
| Pan-European/global recruitment | 24 |
| More effective skills deployment internally | 18 |
| Recruitment difficulties | 11 |

Source: IES Survey, 2002

considerable amounts of money when recruiting online, as it has been estimated that:

'... it costs only about one-twentieth as much to hire someone online as to hire that same person through ... other traditional methods.' (Cappeli, 2001, p. 139)

However, it should be noted that the cost savings are only realised if the whole the recruitment process is online for everyone applying. Where there are parallel traditional processes occurring, any savings in time-to-hire, for example, are lost, as recruiters have to wait for the offline applications. A question for many recruiters is do they go all online or not?

Other benefits include the fact that as there are no severe space constraints when advertising online, companies can develop comprehensive adverts with links to job descriptions and person specifications, and can 'pass far more information in a much more dynamic and consistent fashion to candidates than was the case in the past' (Lievens & Harris, 2003, p. 4). Through intranet systems, information can be updated quickly and efficiently in accordance with a company's changing recruiting needs (IDS, 2000). Thus, organisations are provided with the opportunity to promote themselves to potential candidates and improve their corporate image.

The Internet is also recognised as being able to provide the scope for local, national and international recruitment, presenting companies with the unique opportunity to reach a wider audience (IDS, 2001). Some reports also support the claim that e-recruitment attracts a higher quality of candidates, better educated and web-literate, and Internet awareness is a skill that is appreciated by companies (iLogos research, 1998).

A more detailed example of some of the drivers behind implementing e-recruitment is illustrated by one of the case studies. The Online Recruitment Manager outlined the key drivers behind why the organisation had embraced e-recruitment. These included:

- a lack of a single recruiting tool across business units
- little sharing of recruitment/applicant information across units
- the complexity of existing manual reporting facilities
- to reduce costs of recruitment
- to make available best practice recruiting techniques to business units without fixed recruitment assets/personnel
- to help develop cultural shift within the line management/senior management community to new recruitment thinking.

One key advantage that is often promoted as a benefit in comparison to traditional approaches, and hence a driver to adopting e-recruitment, is that future reliance on external agencies and other recruitment methods will be reduced. The IES survey reflected this belief:

- fifty five per cent of respondents expected their organisation to reduce its use of other recruitment methods in the future
- twenty five per cent reported no reduction
- twenty per cent did not know.

This supports other surveys, for example the Cranfield Recruitment Confidence Indicator (RCI), where 49 per cent of their respondents (N=200) expected to reduce other recruitment methods in the next five years.

On the whole, there is some consensus about the perceived benefits of e-recruitment over traditional methods, but many of these seem to be taken for granted, based on little evidence that

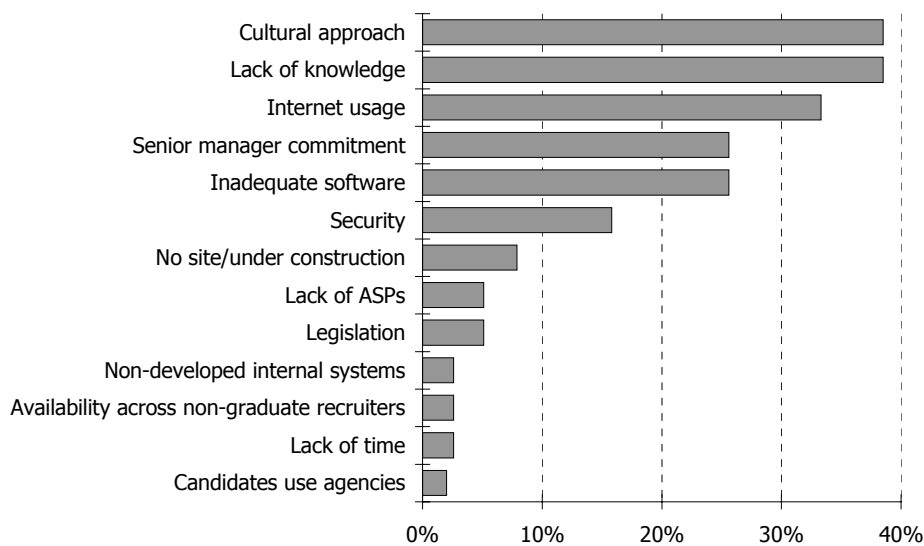
these benefits are actually realised. As we will see later in this report, one of the major difficulties in this area is a lack of sound metrics and processes to assess these suggested benefits. We now turn to the limiting factors and implementation challenges that are reported from e-recruitment.

2.6 Limiting factors and implementation challenges

The IES survey asked organisations to identify limiting factors and implementation challenges that they faced when introducing e-recruitment. As can be seen from Figure 2.3, the key limiting factors that recruiters most frequently reported were the cultural approach of the organisation (39 per cent), the lack of knowledge within the HR community (39 per cent), Internet usage by target candidates (33 per cent), commitment of senior management (26 per cent), and inadequate software solutions (26 per cent).

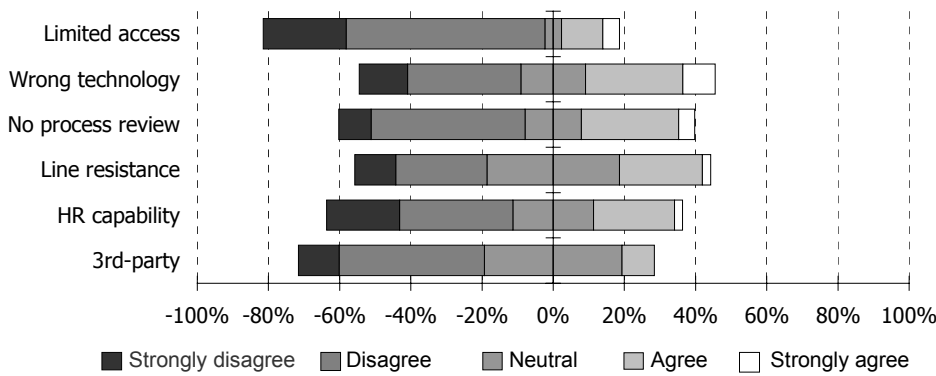
Security concerns, no site at the time/being constructed, lack of suitable application service providers (ASPs), and compliance with legislation were less frequently reported factors, possibly due to the focus of use at the attraction rather than the selection stage.

Figure 2.3: Limiting factors in implementing e-recruitment



Source: IES Survey, 2002

Figure 2.4: Implementation challenges



Source: IES Survey, 2002

It is useful to highlight here some of the perceived barriers reportedly limiting the application of e-recruitment. Recruiters were asked to what extent they agreed or disagreed with statements relating to implementation challenges. The results presented in Figure 2.4, illustrate that on the whole, they felt that candidates had reasonable access to web technology, but approximately half of the recruiters felt that there were some problems in the investment in the technology. There was also a mixed response to whether resistance from the line to having more responsibility for recruitment was an implementation challenge. While some had felt some resistance, in our interviews, this was an area where recruiters expected future resistance as the new processes were embedded within the organisation, and line managers began to realise the impact on their work roles and responsibilities.

Quality of information

A reported downside stemming from the Internet's global dimension, is the reception of an abundance of applications from unqualified candidates. Nonetheless, Internet technologies and new HR software aim to enable HR professionals to deal with huge volumes of applications, by screening candidates' CVs and applications automatically. The deployment of these new tools for streamlining the application system and the recruitment administration overall, is suggested to lead to a reduced administrative burden for recruitment teams. However, the jury

is out as to whether this is realised. As Bartram (2000) reports, for many organisations receiving CVs online means they have to 'kiss even more frogs before finding the princes'! Even where screening tools are used, it is often on purely demographic criteria and checks on relevant experience, much of which is open to faking.

Relevance of shortlisting criteria

Of concern here are the chosen criteria upon which CVs are screened, and whether these are valid and related to job performance and specifications. Where it is keywords, for example, are they valid? As Bartram rightly identifies:

'... the future lies in developing structured assessment that can be completed online by job seekers and that can be shown to be job relevant.'

Without doing this, organisations are faced with dealing with an abundance of irrelevant applications, or worse, in danger of applying unfair and biased screening methods to reduce the shortlists. This is particularly crucial to avoid, given the impact it might also have in the recruitment of diverse and innovative employees. We explore this further in the next chapter, when we discuss in more detail methods used for e-selection and assessment.

Confidentiality and data protection challenges

Recruiting through the Internet may be fraught with difficulties, and has raised a number of issues, including security and confidentiality, particularly with testing and selection online. A great proportion of the people looking at jobsites are passive jobseekers, not actively looking for a job. Confidentiality of the information they provide is essential in order to ensure that they are not exposed to their current employers. Most of the employment sites display privacy statements detailing how they store and use information. However, security is a major concern for many organisations. The phenomenon of 'scraping' (Coleman, 2001) describes the practice of copying listed vacancies from a site and posting them somewhere else.

The Data Protection Act (1998) came into force on 1 March 2000. It regulates the use of personal data, and gives effect in UK law to the European Directive on data protection (95/46/EC). In March 2002, the Information Commissioner issued a new code on recruitment. The codes are intended to assist employers in complying with the Act, and to establish good practice benchmarks for handling personal data in the workplace. It is not legally binding, but will be taken into account by tribunals and courts.

There are concerns amongst the e-recruitment industry about the future legality of their websites. The scale of the problem was recently highlighted in a survey of 200 websites, which found that less than one per cent of recruitment websites met the guidelines. Most websites failed to meet the guidelines in at least two separate areas and, in the majority of cases, many more (IRNA, Autumn Newsletter, 2002). IES corporate member companies are unlikely to use recruitment agencies that do not meet the guidelines.

The Act gives individuals certain rights in respect of processing of personal data that takes place during the recruitment process. For example, the benchmarks given of relevance to e-recruitment include:

- Consistency in the way personal data are used in the process of shortlisting candidates for a particular position. If an online pre-screening tool is used for online applications, an appropriate alternative will have to be used for applications received through traditional means.
- Similarly, there is a recommendation to inform all applicants if an automated shortlisting system will be used as the sole basis for making a decision. Provisions should be made to consider representations from applicants about this, and to take these into account before making a final decision. All of this requires careful wording on the relevant web pages.
- More organisations are looking to maintain a 'talent database' of prospective future employees. Under the code, they are required to advise all unsuccessful applicants that there is an intention to keep their names on file for future vacancies (if appropriate), and give them the opportunity to have their details removed from the file. For those with the systems to do it, the implications appear straightforward. For those without, it potentially represents an unwanted administrative burden.

'We'll program the applicant tracking system to email past candidates with a request to keep their details on file every six months. This is the same procedure we're going to have to follow for all our employees anyway — if we truly consider them prospective candidates for future roles and want them in the talent datapool.'

Online Recruitment Manager, Telecomco

Diversity

Hogler *et al.* (1998) noted that 'technology ... may have a disparate impact on certain groups of workers' (p. 149). e-Recruitment has been criticised for its limited demographic scope and for posing a threat to equal opportunities, especially for disabled candidates and those without Internet access. Furthermore, it has been recommended to use the Internet in combination with more traditional sources, to avoid any legal implications (Flynn, 2000).

However, there are also opportunities with e-recruitment whereby it opens up jobs to a broader field. This 'two-sided coin' to the impact on diversity issues is further discussed in Chapter 4, when we examine how the threats and opportunities of e-recruitment are evaluated.

2.7 Recruitment as a supply chain

The implementation of e-recruitment and the ability of the technology to integrate the process, has prompted organisations to look at the end-to-end staffing process as a 'supply' and 'value chain' linked to the talent flows (see Figure 2.1). This perspective of recruitment as analogous to a supply chain, can help us to understand the adoption of e-recruitment methods.

2.7.1 e-Recruitment and the supply chain

A supply chain is the set of links between the individual steps, in an overall end-to-end business process. In manufacturing, the supply chain encompasses the business steps from order to delivery. Supply chain management oversees the flow of materials, information and money between the various steps on the chain (Kerrin and Icasati-Johanson, 2003). The goal is to improve the performance of a supply chain while deploying the same or fewer assets. The role of information technology in

supply chain management is to co-ordinate all players, by instantaneously propagating information concerning levels of supply and demand up and down the supply chain.

Traditionally, hiring managers, recruiters and candidates, as well as the processes of posting the vacancies, data gathering, reference checking *etc.*, all operate independently. With the application of e-recruitment, the recruiting process can bring better connections, enabling a direct link between the candidate and the recruiter/hiring manager. This can significantly reduce the cost of a staffing agency, and reduce advertising costs. The status of requisition and candidate can be tracked, and the gap between supply (candidate) and demand (recruiter) can be closed.

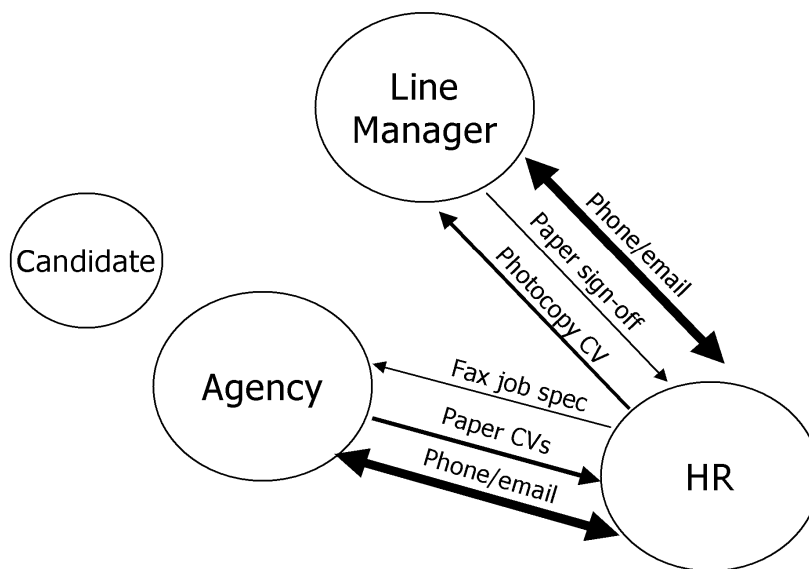
In bridging supply with demand, supply chain management always starts with demand, and seeks to drive supply to match it. Matching supply with demand in staffing requires a common platform on which to define job requirements and talent in terms of skills and competencies. Starting with demand means that the information necessary to access a match with the job requirements can be pulled from candidates as required.

Another key aim of supply chains in the retail or high-tech sectors is the reduction of cycle times and inventory obsolescence. Here too, there are important parallels for recruitment. Qualified candidates are not available for long, and the likelihood of availability of a qualified candidate diminishes with time. Each new candidate has an associated sourcing cost. Being able to react quickly to establish contact with the candidate and conduct real-time assessment, increases the return on recruitment spend.

2.8 The changing landscape of the recruitment process

The traditional landscape of the recruitment process positions HR as the pivotal role between agencies and the line manager. Figure 2.5 illustrates this, and also shows the candidate on the periphery of the activity, often communicating through an agency or third party. The figure also identifies some of the inefficiencies in the system that have been a source of frustration for recruitment and HR managers, such as duplication, heavy HR workload, and poor candidate communication. These

Figure 2.5: Previous landscape of e-recruitment



Source: IES, 2002

inefficiencies, advances in technology, combined with changes in how the relationship with the candidate is now perceived, have all contributed to the changing recruitment landscape. It is worth considering the role of candidate relationship management (CRM) in this change.

Candidate relationship management

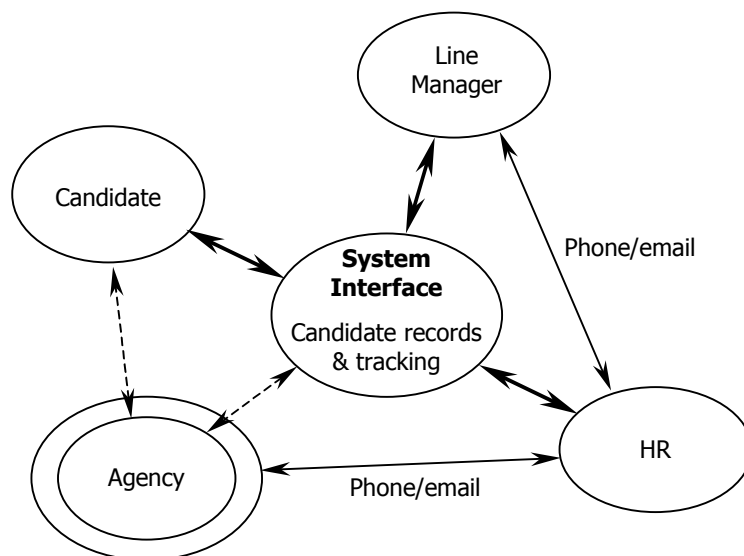
The application of technology within other HR services, such as e-HR (Kettley and Reilly, 2003) has also expected an increase in improved internal customer relationship management. In terms of recruitment practices, the focus has been on a shift towards improving *candidate* relationship management (CRM) with the applicant. Organisations focusing on the development and improvement of CRM are seeking to do this through the decentralisation of many HR operations, with responsibilities for many aspects of the recruitment process being given to staff at business unit, departmental, or line management level. Where this shift in responsibility for recruitment has been given to the line management, it has seen a changing role for HR practitioners towards a facilitator role. In these cases, HR practitioners are no

longer the highly trained specialists brought in to control the recruitment process. Instead, much of this process is devolved to line managers, with the HR function facilitating it and providing the support to make it work effectively. One of the reported benefits is that e-recruitment enables better relationship management of employees from attraction, through recruitment, to onboarding, and facilitates this decentralisation process.

A new landscape for e-recruitment?

Therefore, a shift has occurred, with a desire to involve line management in the process. As with other HR processes (eg online learning and development), it was not long before the potential of the Internet within recruitment was realised, in particular as a way of involving line managers and integrating and streamlining the recruitment process. Figure 2.6 illustrates this changing relationship and landscape with the introduction of e-recruitment processes. As can be seen from the figure, the candidate is now connected to the central system, and there is involvement of the line manager in the process. In addition to this are benefits such as cost efficiencies, reduced HR workload, and others detailed above from the IES survey.

Figure 2.6: Landscape of e-recruitment



Source: IES, 2002

Broadly, this forms the strategic and tactical interface that many organisations implementing e-recruitment want to reproduce. As we will see in the next chapter, we argue that achieving this involves more than the adoption of technology and software applications.

2.9 Conclusion

Our evidence from the literature and practice suggests that there is a growing trend towards adopting e-recruitment, even though its application within organisations has focused on the graduate labour market. There is some consensus over the perceived benefits amongst those organisations implementing e-recruitment, and also over the limitations and implementation challenges. One of the major attractions in comparison to traditional approaches is that e-recruitment is well placed to facilitate candidate relationship management, and that e-recruitment is contributing to changing the landscape of the recruitment process.

Our survey and research has provided an overview of the trends in the field, but this is not where we wanted to finish the research. We felt that reporting survey results on the methods used would not provide us with the whole picture of what adopting e-recruitment was like in practice. In fact, the survey and our research network event raised more questions for us, in particular about the use of e-recruitment methods in practice and how the impact is evaluated. We therefore set out to achieve two more things with the research in our case studies:

1. to explore the use of e-recruitment methods in practice at each stage of the recruitment process (attraction, selection and workflow)
2. to examine if e-recruitment works, and how our organisations know its value.

The next two chapters deal with these questions.

3. e-Recruitment Methods: Application in Practice

In the IES survey, we were interested in establishing for which aspect of the recruitment process our sample were using e-recruitment. We asked participants to indicate whether they used the Internet for posting job vacancies and attracting applications, for streamlining recruitment administration, and/or for the selection process. The results show that:

- ninety-eight per cent of the sample used e-recruitment processes for posting job vacancies.
- forty-seven per cent of the sample used e-recruitment for streamlining recruitment and administration.
- thirty-seven per cent of the sample used e-recruitment for the selection process.

In this chapter, we draw upon the experiences of IES Research Network members and our case study organisations, and consider the reality of the impact of web technology at these various stages. Does e-recruitment really enable the transformation of the resourcing process and position it further up the value chain? Can we see examples in the choices employers are making? What does it mean for the HR function and the role of the recruiter?

3.1 Candidate sourcing/attraction

IES Research Network members are using e-recruitment technologies to attract and source potential candidates. The survey findings outline the extent of use of certain methods, and are illustrated in Table 3.1. Advertising job openings, tracking

Table 3.1: Use of e-recruitment methods for candidate attraction

| Candidate Attraction | (%) |
|---|------------|
| Advertising job openings | 96 |
| Tracking the sources of applications | 53 |
| Online enquiry forms | 47 |
| Establishing candidate profile | 40 |
| Re-use of candidate information for multiple job applications | 31 |
| Candidate search, <i>ie</i> cyber-hunting | 16 |

Source: IES Survey, 2002

the source of applications and online enquiry forms, were the most frequently used methods.

Below, we outline some of the key themes emerging from using these methods, which have been gathered from research with the case study organisations.

3.1.1 Internet advertising

Specific efforts to attract qualified candidates were evident, such as posting vacancies on Internet job boards and the use of Internet advertising, *eg* banner adverts. IES members are using a variety of job boards, with a marked trend towards using more specialist, niche sites.

'It is part of our overall strategy to reduce the amount of money, time and effort we spend on traditional forms of recruitment and to become one of the best online recruiters. At least 50 per cent of all vacancies are advertised online. We currently have an e-recruitment team of nine people specialised in Internet recruitment. In addition to our own corporate website we use a combination of generalist and niche sites. We will post our own branded vacancies with them, and in addition, search their databases. All vacancies, *ie* scientific, head office, IT and graduate, are posted on the multi-sector recruitment sites TotalJobs and Monster. But we'll also use specialist recruitment sites like Pharmajobs for our medical sales vacancies and NewScientistJobs.com for science roles. We've found the search facility to be easy to use and the quantity and quality of responses has been fair.'

Director of Global Staffing, Pharmco

Banner adverts appear far less popular. Several members commented that they would only use them as part of a broader campaign to establish a presence in the market. The key to success, it seems, is targeting the websites that your potential candidates visit, and placing them there. If successful, they can offer a highly cost-effective solution. One IES Network member had recently recruited two corporate lawyers – a role for which they would normally pay head-hunter fees – as a result of a £600 spend on a banner advertisement in the online version of *The Lawyer* magazine.

3.1.2 Corporate website

Traditional advertising routes, *eg* in print media, are being used to ‘drive traffic’ to the career pages of corporate websites. The adoption by Fortune 500 companies of a dedicated careers website devoted to meeting corporate staffing goals, reached 92 per cent in 2002 – up from 89 per cent in both 2000 and 2001 (iLogos, 2002). Amongst the IES Research Network members, there were at least three who have won industry awards for the design and functionality of their websites. Their experience would suggest that the key features of corporate websites indicative of good practice, and likely to grow in popularity, include the following.

- Employers are expanding the amount of information given on the company’s culture and values, *eg* policy on diversity, benefits *etc.* to increase the likelihood of best fit in the self-selection stage (see also Dineen *et al.*, 2002).
- More employers are keen to ensure that they make the online recruitment experience as positive as possible, and increasingly have the facility for the candidate to offer feedback, or to email the site or vacancy details to a friend.
- Indicative of the move to establish a relationship with prospective candidates is the growth in websites that save the candidate’s profile for future reference in a database. Candidates are invited to register to receive further information on future vacancies. Subsequently, there is also an increase in the provision of statements regarding the organisation’s privacy policy and data protection.
- Features that make it easier for the candidate to navigate around the site, such as a link from the corporate website’s homepage, a

single click to apply, a searchable database of job positions by function and location *etc.*, are also beneficial.

3.1.3 Employer branding

e-Recruitment also increasingly encompasses less direct activities, such as promoting the employer brand in such a way as to attract candidates, and modifying the corporate website to induce passive or future job seekers to 'stay in touch'.

'Recruitment isn't just a process to get people on board; it's how we manage our reputation as an employer. With a global employer brand just launched, the technology allows us to communicate a single employer proposition. We've had a programme in place for some time to promote ourselves as an employer of choice, and this has led to a number of changes from the encouragement and recognition of creative ideas, to our diversity training and our introduction of a flexible benefit scheme. e-Recruitment will help us pull what all this means together. Employer branding is not just a marketing exercise — it's the beginning of an employment relationship.'

Director of Global Staffing, Pharmco

3.1.4 Candidate searches

A small but growing minority of employers also use the Internet for proactive candidate searches. Several of those member companies who did not possess the in-house capability themselves to search the Internet in this way, were increasingly being offered the service by their advertising agencies.

There are a variety of strategies and technologies available. Most, according to the Corporate Leadership Council, involve the following basic steps:

- use search engines and keywords to identify potentially related sites (*eg* an industry site correlating to the position)
- identify a contact that may lead you to a group of potential applicants (*eg* someone involved in an industry chat group)
- actively recruit individuals identified as qualified candidates; this may involve going 'behind the firewall' of other companies.

'Being cost conscious but ignoring quality means we are likely to only attract the easy-to-attract, active candidates. In our industry it's the 'in demand' folk who are always working that we want. In the past we've paid any price necessary to the head-hunters to find them, and in reality we'll probably still do that. But the Internet gives us other options for proactively seeking them out and building a relationship over time. We now know the online communities they are in, and we make sure we have a presence there.'

UK Personnel Manager, Telecomco

3.1.5 Internal vacancy filling

Finally, the internal vacancy filling process can be web-enabled. Previous research by IES (Hirsh, Pollard and Tamkin, 2000) highlighted the stark realities of many internal vacancy arrangements. Managers are used to choosing people and putting them where they want, based on who they know and what they know about them. This is a real power that open internal advertising of jobs takes away from them.

Posting vacancies on an intranet is now commonplace. Many IES members know the careers pages of their corporate websites to be amongst the most visited by existing employees. Key issues raised included the consistency with which vacancies are presented across the whole organisation, and their accessibility by all employees. Surprisingly few employers currently have provision for internal candidates to apply online.

'Currently, internal vacancies are promoted by functions (*eg* Finance, Operations, IS) and by country or site. This is attractive for two main reasons: it is faithful to the concept of a local intranet site being the place to find information, and employees are only presented with the vacancies most relevant to their current function/location. However, several issues have been raised with the existing system:

- it is more difficult to find opportunities beyond the immediate function or location
- there is a lot of rework required to post vacancies on different sites, and a risk of inconsistencies in vacancy details
- there is no consistent branding.

The plan is to move to a central recruitment component for use on local intranet sites, which allows vacancy posting and displays local vacancies, as well as allowing all vacancies to be viewed. Vacancy

details are to have a clearly identified owner who is responsible for content, and will not be duplicated in different formats. They will be removed as soon as they are closed.'

Director of Global Staffing, Pharmco

Interestingly, when the survey asked which methods organisations perceived to be the most successful, the highest responses were for the corporate website, followed by internal recruitment, closely followed by commercial job boards. All of these methods relate to the attraction phase, but what are the practical lessons regarding selection and assessment online?

3.2 Selection, assessment and testing online

With their promise of immediate cost savings, better candidates, and measurable results, screening and assessment tools – particularly online tools – are looking to many like the quickest path to the best candidates, at the lowest cost possible. But assessing and implementing new candidate online screening and assessment tools is a difficult process. The potential cost savings are certainly enticing, but the potential pitfalls are daunting. Questions still abound: What kind of screening tools are right for your company? Which tools make sense for large companies and which for small? How does a company even begin to implement these tools online? Are they legally defensible? Most importantly, do they even work and how will you know?

The use of new technology in selection and assessment is not new. In the area of selection, computer-based testing (CBT), telephone-based assessment procedures (*eg* interviews), computer-based realistic job previews and multimedia simulation tests, are all examples of uses of new technology in selection over the last decade or so. Computer-based testing has a long history of administering and scoring assessment for selection, a point which Bartram (2000) and Anderson (2003) make strongly. They are keen for recruiters and researchers not to lose sight of what we know from the research on CBT. The benefits reported with CBT in selection are also reported within Internet testing, and include test administration and scoring efficiencies (McBride, 1998).

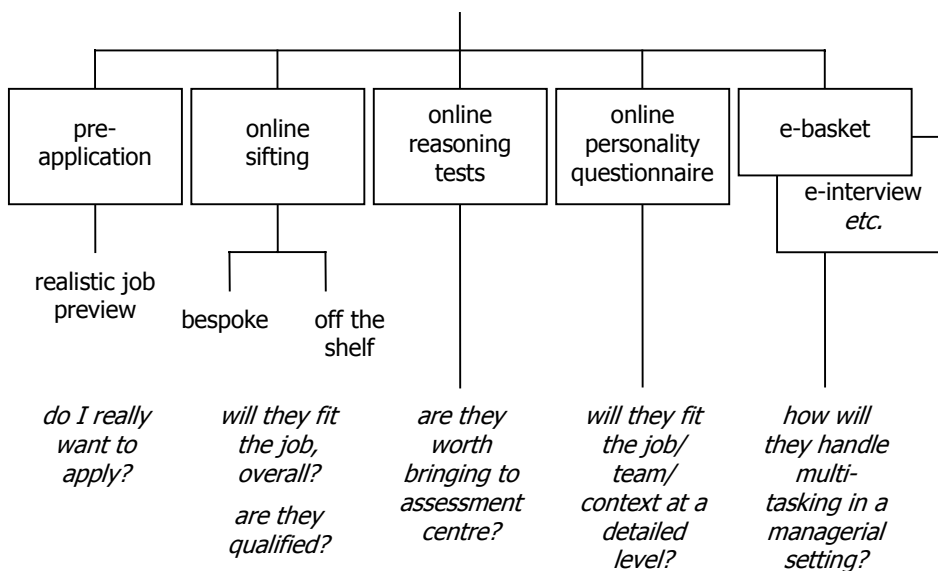
3.2.1 Options for selection and assessment online

So, what are the current options for recruiters in providing assessment and selection online? Figure 3.1 maps the various options available, from pre-application self-assessment, sifting and screening (eg online structured application forms), psychometric tests (eg ability and personality tests), interviews and simulated assessment centres. We consider each of them here.

Pre-application self-assessment

Organisations using online tools for self-assessment in the pre-application phase, are doing so for two main reasons. First, in order to increase the likelihood of a better 'organisational culture fit', and second, to decrease numbers likely to apply, based on candidates 'knowledgeable self-selection out of the system' (Bywater, 2002). Realistic job previews can be carried out where candidates complete an assessment and are provided feedback, all online. This is not part of the selection process, but many organisations hope that candidates will take notice of the

Figure 3.1: Options for selection and assessment online



Source: adapted from Bywater (2002)

feedback as an indicator of how well they would perform in the job. Examples of these are evident on the career pages of organisations such as KPMG (www.kpmg.co.uk/careers) and Abbey National (www.yourfinancialcareer.com), and have been reported elsewhere (IRS 2002). While these forms of self-assessment may also exist with traditional approaches, the ability to have them on the corporate website means that they are instantly accessible to candidates, and the feedback can be automated.

However, it is unclear what types of candidates are dropping out of the selection process at this stage, and for what reasons, as there is little evidence of follow up. The danger here is that you may lose applicants for other reasons, although it appears to be an increasingly popular approach to reducing the number of unsuitable candidates applying (Dineen *et al.*, 2002). This point was highlighted by one of our case study organisations.

'A really nice-to-have measure would be to see how many people drop off after the realistic job preview questions online. We have a feeling that it's working in terms of improving the 'fit' of candidates — retention at 12 months is improving and requests from managers to extend probation periods have fallen too. We've asked our ASP to create a tenure predictor for applicants to give us an indication of how long they expect to be in the job. It's looking promising, but we can't really do all the social desirability stuff (the extent to which candidates responses are due to how they wish to be seen, rather than how they actually are) because it would be so hard to reproduce the equivalent for paper-based applications — some 30 per cent of the total.'

Recruitment Consultant, Financial Services 1

Online sifting

If or when application forms are structured and designed appropriately, and linked to job requirements, sifting and screening online can allow the collection of information that is really needed and related to the job, rather than the 'padding' that is often found in CV applications. Advantages include automating the process through the technology being able to sift thousands of applicants based on pre-defined criteria. The dangers here involve the choice of criteria for the automated sift. Where this is based on certain words or phrases, organisations have had some concerns in this area as to what the screening is

picking up. However, there is more reported success for criteria such as education levels, qualifications and visa requirements, for example.

'One top twenty accountancy firm recruits 15 graduates each year in a competitive recruitment market. Since introducing e-recruitment, overall graduate recruitment costs had been reduced by 67 per cent and the recruitment time had been dramatically cut from 11 months to four months. This had primarily been achieved by moving the traditional proven selection criteria and sifting process, which consisted of manually screening and processing candidates in a two-stage group testing model, to an online system. The system collected biographical and screening data, as well as having an online 'organisational fit' questionnaire and numerical reasoning test. The head of HR said 'screening determines unsuitability as much as suitability — therefore applicants lacking minimum criteria should be rejected as soon as possible. Interviewing unsuitable applicants is a waste of valuable resources. Of 600 applicants for 15 positions in 2001, 54 per cent were screened out on basic criteria, *eg* a UK work permit, 22 UCCA points.'

Speaker, IRNA Conference 2002

This example highlights the importance of using validated or 'proven selection criteria' in any sifting process. Just because technology enables you to sift by any keyword, it is important not to lose sight of proven criteria.

As identified by Bartram (2000), the best approach to sifting and screening online are those that measure core competencies, are consistent, job relevant and easy to score. The importance of the design of the application form becomes paramount with this approach, particularly given the legal implications of defending the criteria in such a sifting process. This is an area where many organisations are focusing their research and development to ensure that they have the appropriate application form which elicits the best quality information from the candidate, so they can screen effectively. The technology that online applications bring is redundant unless there is an appropriate design to the application form.

However, there are still concerns over the validity of the screening process. That is, the extent to which the process is doing what it was developed to achieve, fairly and effectively. Questions are being raised regarding the appropriateness and relevance of the sifting criteria being used, and recruiters'

confidence in the results they are producing was at times low. Where organisations have tracked the effectiveness of the criteria, via 'validation studies', there have been mixed experiences. Even where criteria are accurate (*ie* in being able to differentiate between good and poor performers on the job), there are question marks over the extent to which they will save costs by eliminating traditional approaches at this stage (*eg* Milk Round, Open events, *etc.*).

'A recent validation [of the screening measure] has highlighted some alarming issues with different recruitment markets (*eg* North and South) yielding different perceptions of the scores. We went to the hiring managers at three points after hire — *ie* at one, three and six months, to understand this further, and we did a brief interview with some of those candidates we had rejected. There wasn't a correlation between the higher scores on the pre-screen and performance in the job. The result of all this is I don't think we can trust the automatically generated scores — we're telephone interviewing everyone who scores 4 and above now. The return on our investment in pre-screening is likely to remain under scrutiny for some time. To be honest, I think the quality of the candidate experience is becoming so important in one or two of our recruitment markets that even if we get the assessment right we are still going to increase spend on open evenings and promotional interviews.'

Recruitment Consultant, Financial Services 1

Online testing

Along with the design of appropriate and valid application forms and sifting criteria, the use of psychometric testing online has created the most amount of debate and uncertainty for many HR practitioners and line managers. The debate centres around concerns over the security of the test score key and system security, such as:

- 'How do I know the tests are secure?'
- 'How do I know each candidate is completing the same level of test?'

There are various methods evolving to overcome these concerns, with test publishers developing tests from large item banks that mean that each candidate receives a unique combination of questions, and so prevents the problem of candidates passing on tests to others. However, there is little published evidence of the equivalence of these item banks, and organisations need to be

more demanding of publishers to demonstrate equivalence in item banks.

The candidate identity is also a concern here:

- *'How do I know they have not got someone else to complete it for them?'*

With candidate identity, most organisations provide security codes for candidates to input as they take the test, but most realise that this will not prevent someone else taking the test. Most organisations that we spoke to emphasised the 'honesty contract' as part of the selection process – *ie* that the tests reflect the job, that they will struggle in the role if they perform poorly in the tests, and the real deterrent that they will be given a second part of the test at a later stage under supervision (either all candidates or a selection). This approach is felt to deter a large proportion, but is obviously still open to abuse from candidates.

Finally, there are questions around the candidate reactions:

- *'How did the candidate feel about the process?'*

This question is particularly important given the virtual nature of the process and the different relationship with the recruiter. With candidate reactions, organisations have developed online feedback forms for those who wish to provide feedback on any stage of the process, but many are sceptical about the honesty of the feedback here, given that people are providing it within a selection process. The only real way around this is to conduct independent reviews with those who drop out of the system (if you can track them) or those who are rejected (who may have a biased opinion), or do regular internal audits of those coming through on the system.

'The company operates a 'red, amber, green' categorisation for scores on the online tests. All applicants are informed that if they proceed to the next stage, they may be re-tested in supervised conditions. Item banking [a large bank of question items that are the same level of difficulty] helps to eliminate cheating. The tests are timed and a browser compatibility test within the system ensures that applicants are not able to reset the timer. Borderline applicants are telephoned to evaluate further.'

HR Strategy Consultant, Financial Services 1

Interviews and simulated assessments

Interviews and simulated assessment centres are also being used where exercises, traditionally used at assessment centres, have been adapted to an online environment. Personality measures are also administered at this point prior to the assessment centre, to save time and to allow better use of the information. However, the uptake in this area is limited, as organisations are still bringing shortlisted candidates to an assessment centre.

Legal issues and IT infrastructure capacity are key concerns that our members have fed back to us in choosing online selection and assessment tools. Some of this we have already discussed in Chapter 2. For example, what is the impact on data protection, where is the data held and which law applies, particularly with international organisations? What level of network security does the organisation need? There are some excellent guidelines being developed by the International Testing Commission (ITC) and the British Psychological Society (BPS), through the recently launched Psychological Testing Centre. However, there is an inevitable delay between the discussion of these key issues from the ITC and the BPS Test Users Conference, and best practice reaching a wider audience.

3.2.2 Extent of use

In many cases, adoption of web-based technology in selection and assessment is only being used by the most selection-sophisticated organisations that can afford the high start-up and maintenance costs. The IES survey reported that out of the 50 organisations surveyed:

- a large proportion were using online applications (67 per cent)
- only four per cent were using psychometric tests online.

There was wide variety in the extent to which online applications were structured, and also in how they were screened, *eg* electronically by keywords, or manually. There exists a great deal of variation and less maturity in this part of the e-recruitment process in terms of application and use, than in the application of Internet technology at the attraction stage of the process. Anderson (2003) highlights that in the selection and assessment area, where it is being used, the popularity of using

the technology in practice appears to have outstripped the pace of developments in the research base. That is, there is little published evidence of whether these online selection and assessment methods are fairly selecting a similar or better quality of candidate. While many organisations are conducting such evaluation and research, little of it is accessible to the wider community. Until independent research in this area is carried out and published, we are reliant on case study examples.

3.2.3 Future issues for online assessment and selection

The focus of the IES research, and of this report, is not solely around Internet assessment and selection. However, progress in this area will have a significant impact as to whether web-based applications are involved at all stages of the recruitment and staffing process. The four major areas of concern – particularly in relation to testing on the Web – surround applicant reactions to tests online, equivalence of tests, adverse impact of Internet testing, and general concerns regarding legal implications and security. An approach towards, or at least some attempt at, evaluation of the impact in these areas is required before we can consider the added value of online selection and assessment over traditional approaches.

3.3 Managing the recruitment process

3.3.1 State of your back-end

Researcher: *'Do you recruit online?'*

Recruiter: *'Yes, we have a website.'*

For many organisations, the move to e-recruitment has ended with the above scenario, some describing it as *'a bit of a horseless carriage'*. A corporate website might have eliminated a mailing address and printed application forms from recruitment advertisements, but many have replaced this with a very busy fax machine and a permanently in-use scanner. Incorporating the technology required in e-recruitment with other existing systems has proved challenging.

'The biggest cost we just didn't take into account when putting the business case together is the failure to interact seamlessly with our HRIS. Having a vacancy number or some other unique profile for an individual in our system is the key for us to be able to proactively source candidates. With a recruitment site hosted by our advertising agency, an online application process hosted elsewhere, and our own corporate career pages, there are too many stools to fall between. We have to come up with intermediary steps such as the request we now post on the recruitment site asking people if they'd like us to register their details in case of future opportunities. We ran a manual review of the 75 individuals who had done that, and 40 per cent resulted in a hire.'

Recruitment Consultant, Financial Services 1

This highlights the potential of e-recruitment for automating the application process. There are a variety of other decisions employers looking to streamline the recruitment process have to take regarding the end-to-end process. The holy grail for e-recruiters is a fully integrated, end-to-end solution. This means that the solution links the front end (candidate experience of applying) with the back end (the applicant management capabilities). If achieved, this would mean a position posted on the career pages of the corporate website would be instantly available for internal and external candidates to apply to.

Major considerations include the choice of staffing management solution (often called an Applicant Tracking System), and integration with the core Human Resource Information System (HRIS).

3.3.2 Applicant tracking/workflow systems

The applicant tracking systems currently available to employers each share a range of similar features. They typically enable the recruiter to:

- store information on candidates, and on each vacancy, in a searchable database
- forward documents to colleagues. Examples include the forwarding of applicants CVs to the hiring manager, and the acknowledgement to applicants that their application has been received.

Table 3.2: e-Recruitment methods for applicant tracking

| Applicant Tracking | (%) |
|---|------------|
| Reception of CVs/application forms | 78 |
| Emailed response letters | 49 |
| Progress tracking | 36 |
| Interview scheduling | 22 |
| Automatic status report to hiring manager | 9 |
| Reference checks | 2 |

Source: IES Survey, 2002

- plan and schedule interviews for the candidate and the hiring manager. This may include automatic reminders or an in-built escalation if, for example, a return date is missed.
- post new vacancies and archive old ones
- analyse and report.

Table 3.2 illustrates the methods used for applicant tracking, from the IES survey. The findings from our case studies also demonstrate how organisations recognised the importance of the back end of the online recruitment process.

'We realised that we needed to move to a real-time, continuous process for recruitment if we were going to stand a chance of winning the talent our competitors want. We've done away with batch-type processes when we'd collect in a stack of applications and then move them to the next stage. This isn't simply tracking in the sense that we date stamp applicants as they move through the process — this is real workflow.' There are prompts to move recruiters and the line along. The system is supporting the recruiter in determining how to manage a candidate's application. The system will have flagged the vacancies' cost-centre code and builds up, over time, a profile of which hiring managers should interview for those given positions. The preferred selection method is available on screen, *eg* first and second interview plus X test. The system enables the recruiter to automatically forward applications and test results to the specified hiring manager for review.'

Online Recruitment Manager, Telecomco

3.3.3 Candidate relationship management

As discussed in Chapter 2, candidate relationship management (CRM) refers to the way the organisation handles candidates via the online recruitment process. It is similar to the notion of customer relationship management in that it helps to stress the importance of seeing the candidate as a customer, for example in terms of employer branding. Online CRM techniques can create a personalised experience which provides a level of service that makes candidates think that they are not just a number.

'We've learnt from the mistakes made in our US operations. In the excitement of what the technology could do, they just forgot what was sensible. Candidates applying online would receive an email notification of their result minutes after applying. We can at least look as if we've given their application some consideration and leave it a couple of days — even if it is pre-screened out.'

IES Research Network event

Some of our Network members told us of their facility to keep in touch with potential candidates in their 'talent pool' by:

- sending invitations to candidates to apply for jobs as they become available, which is known as a 'job agent'
- inviting candidates to a seminar or open day relevant to their background
- simply contacting candidates who haven't visited the corporate website in a while, encourage them to update their profile or CV.

Candidate relationship management parallels with consumers purchasing a product.

'We have found that it is important to tailor the whole experience of applying online to the target group. We make it as easy as possible for the highly-skilled applicants to pursue an opportunity with us. If an agency doesn't refer them, they can send a CV, request a hardcopy application form, or apply online if they wish. Similarly, we'll accept applications from any route for our low-skilled, high-turnover roles. It's in the middle, where we have high volumes of vacancies for call-centre operatives and customer service staff, that online applications have the real potential.'

Recruitment Services Manager, UK Transport Company, IES Research Network event

3.3.4 Importance of candidate profiling

The challenge to making all this work, it seems, is largely down to whether or not the system is profile-based. This means that each candidate has one unique file in the system to which all of his or her job-specific applications and history are attached. In a non-profile based system, each time a candidate applies, a new record is created, so that over time there might be multiple records for each candidate. The kind of CRM communications mentioned earlier, and searching the talent database for candidate profiles, would obviously become a nonsense with such duplication. For example, candidates would end up being sent a correspondence for each time they were recorded in the system, something which would make the organisations look very unprofessional, and not portray the right image.

3.4 e-Recruitment strategies in practice

In Bartram's (2000) review of the trends and practices in Internet recruitment and testing, he summarises the cycle of events involved in the recruitment and selection process. These are:

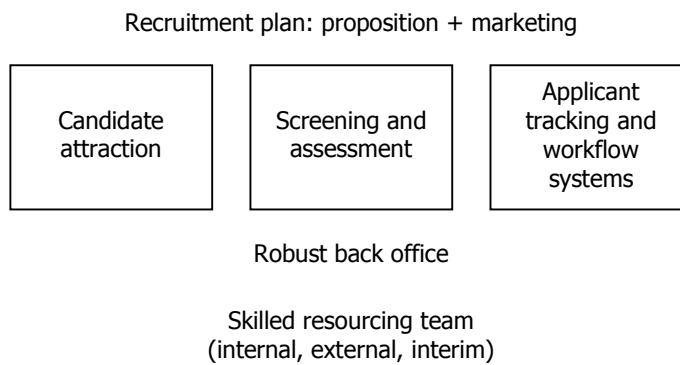
- drawing applicants into a large pool
- filtering the number down by selecting out the applicants who fail to meet the basic requirements
- selecting-in those candidates with the best potential for success in the job, with the use of various assessments.

In the evidence available, the methods organisations are using in the Internet recruitment and selection process has been mainly in the first two activities: attraction and recruitment.

As Figure 3.2 illustrates, in practice, the application of web technology to the e-recruitment process enables:

- new methods of candidate sourcing/attraction
- online selection and assessment
- process management and automated administration.

Figure 3.2: e-recruitment



Source: IES Survey, 2002

However, there are other important considerations in any e-recruitment strategy, including:

- recruitment planning, which might include the definition of an employers brand, *ie* a clear, concise message it wishes to give about itself and the differentiated propositions it offers target groups of candidates
- the robustness of the 'back-office' which manages the processing of applications by any combination of manual, photocopy, fax, email and integrated links with the core Human Resource Information System (HRIS)
- the capability of the resourcing team – be they internal, external, or interim staff.

Our case study evidence illustrates some of the issues that have emerged for organisations using various e-recruitment methods. At the attraction phase, organisations have gone through the process of working out which media best suits their needs for the jobs they are advertising. For many, this has meant having a better understanding of what the job boards, corporate website, and candidate searches offer them in achieving their objectives. With online selection and assessment, there are fewer adopters, although the opportunities are available to transfer much of the selection process online. The lack of adoption by recruiters in this area may be influenced by many factors, both internal and external to the organisation. Finally, the experiences of the case study organisations in integrating a system that supports the attraction and selection and assessment stage, has been challenging.

So, is it all worth it? What is the value and realised benefit of adopting such methods? Will those who have been slower to adopt actually lose out in the 'war for talent', or have they saved themselves money in sticking with the traditional tried and tested approaches? The next chapter addresses the value of e-recruitment and how organisations know what this is, before the final chapter concludes with some future challenges and practical insights.

4. Evaluating Impact: Measuring Success

Despite the dramatic growth of e-recruitment and the perceived benefits associated with the Internet as a recruitment channel, little systematic evidence is available to evaluate the impact across the whole of the recruitment process. The limited evaluation in this area has primarily concentrated on immediate applicants' perceptions and reactions to the Internet. This individual perspective concerning applicant reactions, equivalence to traditional forms and adverse impact is reviewed in the Appendix. However, an organisational perspective of impact analysis of e-recruitment has been largely ignored in practice and in the published literature.

We set out to review some of the key approaches to the evaluation of e-recruitment at the organisational level. We consider the metrics organisations might need to consider collecting if they are to make informed judgements about the value of their e-recruitment process to the business. The argument we put forward here is that traditional approaches to organisational-level analysis of impact on the recruitment process (*eg* time-to-hire *etc.*) are insufficient. With such heavy investment in technology, the opportunities are increased, but so are the risks associated with the management of the staffing process. Therefore, a frank approach and look at evaluation processes is required. The first question we addressed however, was why bother measuring impact?

4.1 Importance of measurement in e-recruitment

Demonstrating the value of any HR intervention is increasingly important in organisations. In recent years, the HR function has come under renewed calls to prove its contribution to the bottom line and to corporate performance. Likewise, HR professionals aware of the pressures on their budgets have been keen to understand the relative 'fruits of their labour', and are measuring more and more.

The experiences of IES members suggests that the emergence of fundamentally new e-enabled recruiting processes not only increases the opportunities, but also the risks associated with the resourcing process. Hence, evaluation of those risks and benefits becomes more important. There are several factors that determine an organisation's commitment to the measurement of its e-recruitment efforts. These include:

- **Human capital** – More organisations are recognising the contribution of intangible, human assets to their future capability and market value. The identification and acquisition of talent is seen as a key element of the talent or human capital management process. Research by Watson Wyatt, for example, found a positive correlation between a company's Human Capital Index (HCI) score and its financial results: the better an organisation manages its human capital, the higher its shareholder value. The same research identifies excellence in recruitment and retention associated with a 7.9 per cent increase in market value.
- **Return on investment** – Few organisations would be willing to support the necessary investment in the enabling IT infrastructure and software for e-recruitment without a firm business case. In order to compile one, recruiters are required to illustrate proposed cost savings and process efficiencies as a return on investment (ROI).
- **Third-party management** – The majority of organisations' e-recruitment initiatives (large hightechs such as Cisco, IBM, Oracle being the exceptions) are largely dependent upon a range of third party suppliers, *eg* Internet job boards, software suppliers, ASPs *etc.* Who they choose to use, and for how long, will be determined by the confidence the organisation has in the solution offered and in the performance measures achieved.

- **Automatic reporting** – We reviewed earlier the potential for software (applicant tracking systems) to automate large elements of the recruitment process. More recruiters will be involved in the collation and analysis of performance measures simply because they can.
- **Repositioning of HR** – In addition, thinking of staffing as a supply chain, as discussed in Chapter 2, has for some moved its resourcing activity to a more strategic model. The expectations of senior management of evidence of impact are consequently higher. Senior HR professionals increasingly see the use of metrics as a critical tool that can help staffing attain the level of business partner, and help to align the recruitment function with business objectives.

To what extent do existing staffing measures and metrics provide organisations and HR departments with the information required to feed into decisions on the above factors? The next section examines issues with existing measures, and suggests an alternative approach (supply chain measurement) to be used with e-recruitment. The final section considers the evidence from practice taken from the case study organisations.

4.2 Why supply chain measurement?

4.2.1 Traditional staffing measures

The vast majority of today's HR measures focus on efficiency, such as training hours per employee, benefit costs per employee, HR functional costs per total costs, *etc.* (Corporate Leadership Council, 2001). This is understandable because of the dominance of accounting-based measures. But relying solely on such input-output measures risks the danger of striving only for the lowest-cost or fastest delivery of HR programs. 'Effectiveness' and 'quality of impact' are not readily captured by cost-based measures, so without a point of view that clearly articulates all three elements, efficiency will get the attention and action.

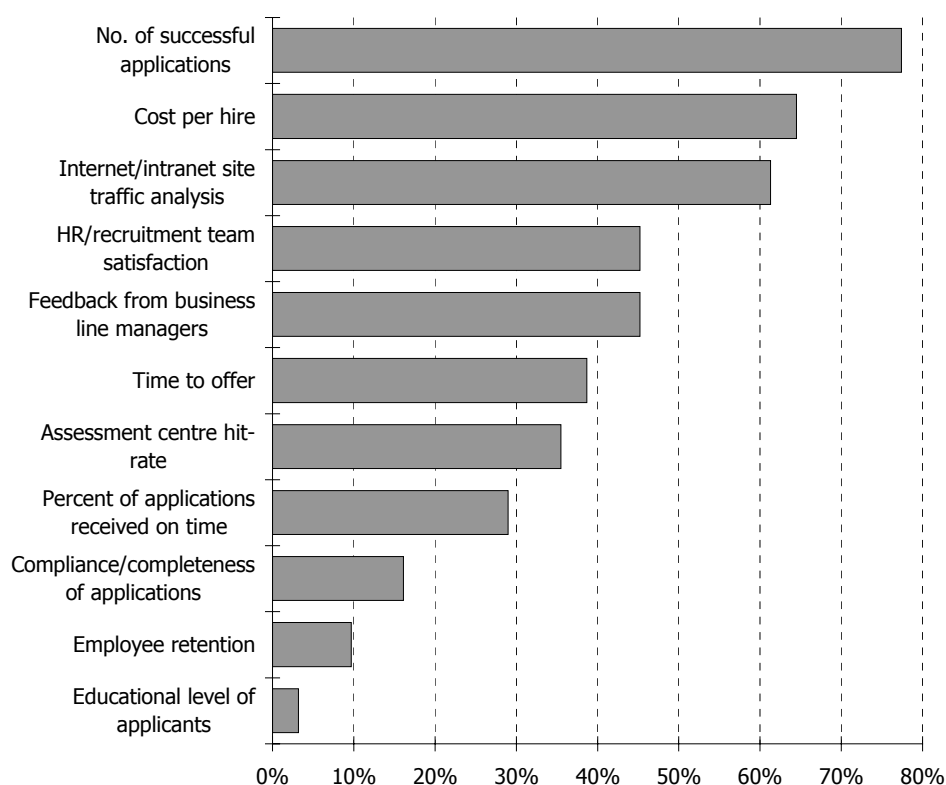
Previous research (Boudreau and Ramstad, 2001) argues that existing staffing process measurement systems typically fail to provide the information necessary to understand, evaluate and make rational decisions about investments in the staffing system, and fail to support decisions about staffing HR professionals, line managers, applicants and employees. As a result, organisations

often base decisions about their staffing systems solely on information about the volume of applicants or new hires, or the costs and time involved in staffing activities.

4.2.2 Impact and evaluation measures

How accurate is the claim that current measures of impact in this area focus on efficiency (input and output measures), as opposed to measures of effectiveness and quality of output? Figure 4.1 illustrates the evidence from the IES survey, which asked organisations to indicate which evaluation measures they currently use. The findings suggest that the former is true. Number of successful applications, cost per hire, and Internet/intranet site traffic analysis, were the most frequently used measures in our sample; all input-output measures. Measures of

Figure 4.1: Evaluation measures used



Source: IES Survey, 2002

quality were less evident. Some of the reasons for this are explored below.

4.2.3 Peeling back the onion

As discussed in Chapter 2, the implementation of e-recruitment is prompting many organisations to look at the end-to end staffing processes as a 'supply' or 'value' chain. 'Hard to fill' positions may justify high cost, for example. But what if the hiring managers are rejecting too many suitable candidates on inappropriate criteria, or the job specification to the recruiter is not right? These are issues with the effectiveness of the internal process, disguised as spending issues. Similarly, users of new sources of recruitment advertising, *eg* the Internet, may well generate more applicants of high enough quality to justify receiving offers. But a large number of offers does not necessarily guarantee the same or better acceptance rates. The ROI on online recruitment might look pretty poor if only cost per hire metrics were used. But looking more carefully at the root cause of fewer hires than with the traditional recruiting methods, pinpoints problems with the 'offers' themselves, or potentially the ability of the hiring managers to 'land' talent.

What is needed, therefore, is a framework that provides an overview of the measures required at each stage of the staffing process. We review such an approach here.

4.2.4 Staffing supply-chain measurement grid

The staffing supply-chain measurement grid illustrated in Figure 4.2 (adapted from Boudreau and Ramstad, 2001) plots the staffing process presented in Chapter 2 (Figure 2.1) against a variety of metrics (*eg* cost per hire, time to fill, quality of hire). The grid provides a supply-chain measurement framework for evaluating where staffing measures are sufficient, and where they may be lacking, at each stage of the recruitment and selection process.

Working with a small number of case study organisations, IES used the framework as a mechanism for exploring the availability, and validity, of the data each organisation held on their staffing processes. The intention was to determine the usefulness of a supply-chain approach to measurement in

Figure 4.2: Staffing supply-chain measurement grid

| | Cost | Time | Volume | Diversity | Satisfaction | Quality | Value |
|----------------------|------|------|--------|-----------|--------------|---------|-------|
| Planning | | | | | | | |
| Recruiting | | | | | | | |
| Screening | | | | | | | |
| Selecting | | | | | | | |
| Offering/ closing | | | | | | | |
| Induction | | | | | | | |

How completely do our measures cover the grid?

Source: IES, 2003, adapted from Boudreau and Ramstad, 2001

making optimal investment decisions in e-recruitment systems. This was a first attempt to present an approach to measuring the value of e-recruitment, applying the supply-chain analogy to the staffing process via the grid presented in Figure 4.2.

The following section of the report summarises the outcome of this exercise.

4.3 e-Recruitment measures in practice: working the chain

The categories of measurement we explored with the participating companies were as follows:

- cost of recruitment and selection activities: *ie* all those measures that assign pounds to the resources used in the recruitment process
- time: *ie* the time taken to fill vacancies and the elapsed time between stages (*eg* the time from interview to offer acceptance)
- volume/yield: *ie* the number of job applicants passing through the staffing process, distinguished by whether they were on or offline. Data on retention rates were included where available.
- diversity and legal compliance: includes measures relating to the volume of candidates at each stage according to their ethnic origin, age, gender, disability *etc.*
- candidate and employer satisfaction: includes judgements about the effectiveness of the process from the perspective of the

candidates, the line managers, recruiters, and any market perspective of the employer brand

- quality/value of the recruit: includes any measures relating to the predictive quality of the candidate (*eg* performance in assessment tests) and concurrently new recruits' performance on the job *etc.*

The question we asked our case study organisations was how completely did their current measures cover the grid, and what were the priority measures for them? This was an exploratory exercise to gain initial feedback on how usable the grid might be for organisations, rather than requiring each of them to fill it in. Any future research in this area would aim to take a smaller group of organisations and ask them to fill in the grid and report back in some detail. At this stage, the aim was to explore the application of such a grid to the evaluation process.

4.4 Costs

4.4.1 Cost per hire

Cost per hire is the critical measure used by most organisations to determine the effectiveness of their recruitment spend. At least two of our member organisations were using the Saratoga Institute measure of cost per hire in order to benchmark their costs relative to others.

The Saratoga Institute measure includes six basic elements to calculate cost per hire: advertising; agency and search firm fees; referral bonus paid to employees; travel costs incurred by both recruiters and applicants; relocation costs, and the recruiter's salary costs (pro rata according to proportion of time spent).

A more typical measure of cost per hire amongst IES members appeared to be advertising, agency fees and direct costs associated with recruitment fairs. Interestingly, it was those organisations that had had to complete a cost-benefit analysis as part of the business case for the purchase of applicant tracking or other major system changes, that had the most complete data on the true costs.

An average across all hires doesn't enable recruiters to determine, for example, which positions are costing the most to

fill and why. To do this, a better measure is the cost per hire for a group of like positions (*eg* sales managers, lawyers). A higher cost may be justified in the harder to fill positions, with skill requirements that are harder to find.

4.4.2 Cost per advertising medium

With the exponential growth of job boards on the Internet, recruiters want to know where to spend their money most effectively.

In the past, the amount of traffic to a job site (page impressions or otherwise) has been used as a proxy for its effectiveness. A more popular performance measure is **applications per job posting**. This is the number of candidate responses for each time a specific job is posted to a specific job site. There are providers, such as HP Portal, who offer analysis of job sites using this measure. The data are held at a low level, meaning that it can analyse job site performance by specific job title, level of experience, salary and geography.

A high volume of applications per posting is no guarantee of success in recruiting quality candidates. Hence, a preferred performance measure of a job board by one of our RN members is **the cost per qualified candidate**. Measuring the number of actual hires over a given period from a job board is dependent upon too many other factors in the process, *eg* the speed with which the employer responds to an application. A better indicator of comparative job-board effectiveness would be whether or not they are consistently referring a flow of candidates who the employer would wish to pursue further, *etc*.

4.5 Time to fill

It is not in any way unusual for organisations to measure the total length of the cycle time from requisition to job offer. Many recruitment departments have had service-level agreements with explicit targets, and many in turn establish them with external agencies.

The adopters of e-recruitment methodologies typically expect to see reductions in time to fill, and had made their business case for investment on that basis.

'The time an important post is left unfilled within the company has a greater impact on our business units' performance than anything else. We'll continue to spend what we need to in order to get key posts filled quickly with the right people. An important part of the business case for e-recruitment was that by reaching a wider pool of possibles and processing their applications more efficiently, we'd have a positive impact on business performance. We only had to include some preliminary figures on the potential loss of sales without a regional sales director to win that argument.'

Online Recruitment Manager, Telecomco

One member reported the benefits of having time-to-fill metrics for each stage of the process as a means of emphasising the shared accountability between the recruiter in HR and the line manager.

'We've had in the past, line managers who will hold onto CVs for weeks at a time and then complain about how long it takes 'personnel' to come up with the goods. Now we can show them just where the hold-ups are.'

Others were placing more emphasis on reducing the amount of time it took them to respond to applications.

'Our own research with our graduate intake tells us that if people apply online they expect a fast response. We can use the system to generate a response immediately if we choose, but the value for us is in improving the quality of the relationship we've got with anyone who applies.'

Director of Global Staffing, Pharmco

4.6 Diversity

4.6.1 Importance of diversity measures

There are many reasons why the measurement of diversity data is important. It may be a case of simply seeking to ensure the organisation is meeting its record-keeping requirements with regard to equal opportunities legislation. Organisations with a presence in the US, for example, have to comply with an agreed percentage of identified demographic groups compared to their representation in the population. Through the public sector in the UK, many organisations have become very good at this

particular aspect of staffing measurement, and have sound data on the numbers of protected groups at virtually every stage of the recruitment and selection process.

There are other, more strategic business drivers for systematically diagnosing which aspects of the staffing process contribute positively or negatively to the representation of key groups. A diverse organisation is well placed to develop its reputation as a socially responsible employer. An employer needs to work hard to attract and retain talent and, as competition for the best increases, businesses that do not have a good reputation as an employer will find themselves at a disadvantage. Being an employer of choice in an environment with an increasingly diverse and ageing population, means ensuring that employment policies and practices are attractive to all groups.

It is not unusual for organisations to be taking positive action within their traditional recruitment strategies to encourage diversity. Initiatives undertaken by IES members included:

- targeted advertising to increase applications from black and minority ethnic groups, women and those with disabilities
- recruitment fairs and events in local communities, universities and colleges
- roundtable events with black and minority ethnic professional associations
- the use of diversity advisers in the shortlisting process, and the provision of recruitment training.

But what impact is the move to e-recruitment having? The experiences of Research Network members suggests there are both opportunities and threats that are influencing what they measure. We review some of these below.

4.6.2 Online opportunities ...

The positive opportunities enabled by e-recruitment technologies include:

- targeted advertising via the proliferation of niche job boards catering for, or promoted by, minority, ethnic, voluntary and community organisations

- the use of the corporate website to convey the organisations policy on diversity and to visually demonstrate, via photographs and job profiles, the value placed on a diverse workforce.

'Our website, for example, includes a section entitled 'Getting to know us' in which a young black woman is featured as saying 'two years ago I became a mum and found it difficult to work full time. I was lucky enough to have the option of job-share which I have now been doing for the past eighteen months.'

Head of Recruitment, Mediaco

- The Internet has opened up a greater variety of candidate sources. Complying with legal obligations doesn't mean ignoring the need to proactively source and locate the best potential applicants. What it does mean is that you want to make sure you are reaching candidates from a variety of places. Capturing the candidate source, aids employers in that effort.
- Good practice amongst those using online applications is to enable candidates the opportunity to self-identify online. Capturing equal opportunities online is generally favoured because the chances of obtaining that data is increased.
- The theoretical possibility is that, with an applicant tracking system, recruiters can more easily capture the progress of candidates and applicants through the recruitment and selection process automatically, by simply moving a candidate through the workflow and documenting reasons when not selected. This automates the candidate flow log, complies with record-keeping requirements, and can provide extremely useful information in any equal opportunities audit, *etc.* However, none of our participating organisations had yet put this to the test.

4.6.3 ... and threats

There are concerns however, that employers that rely heavily on the Internet to create applicant flow could open themselves up to disparate impact and/or discrimination claims. The key areas in which organisations share a growing concern with their ability to evaluate practice include:

- **Digital divide:** Research evidence suggests that not all sections of society have equality of access to the Internet (Lievens and Harris, 2003; Anderson, 2003). For some, this concern has led to a clear decision not to limit applicant response methods to the Internet for any position, and to always use other media for

advertising and other options for applying. As discussed in Chapter 2, this has had an impact on cost savings on time-to-hire efficiencies for any e-recruitment application. Others have adopted a piecemeal approach where, for example, for positions where the ability to use the Internet (such as webmaster), is a necessary job function, the use of exclusively online advertising and application is appropriate.

- **Automatic screening:** As discussed in the previous chapter, the technology is being used to screen applications on set criteria. As highlighted, there are dangers in this approach if it is poorly designed. For example, few organisations actually measure the accuracy of their screening process – even though there can be serious legal consequences if you can't prove the job relatedness and lack of adverse impact. When the screening is moved online, it is not clear whether the risks are reduced or increased, as highlighted by some of our members. The only way to avoid this is to have better designed application forms, and ensure that sifting criteria are soundly linked to job performance.

4.7 Quality of hire

One might imagine that the primary measure of hiring success should be the quality or performance of the successful recruit or hire. After all, not all new recruits will perform the same, and an effective recruitment process will want to ensure it is recruiting those who are the most productive.

In practice, very few organisations regularly and systematically measure the quality of their recruits, for example in assessing later performance on the job. In some organisations, quality-of-hire evaluations are restricted to all but the most senior appointments. After all, these are the most expensive recruits, and poor quality hires or terminations at the top will have an immediate impact on market value. In others, quality-of-hire evaluations are made for high-volume recruitment campaigns (for example, for customer service operators in call centres).

In a traditional recruitment environment, measures of the quality of hire would be used to identify, for example:

- from where the highest performers come
- whether there are factors in the selection process that predict success (*eg* scores in assessment tests)

- possibly the hiring managers or recruiter responsible for recruiting high quality hires, so that they can be rewarded/used again.

4.7.1 Quality of an online hire

The quality of the successfully hired applicant is of particular importance to any evaluation of e-recruitment.

An early criticism of the Internet was that it opens the floodgates to high volumes of unsuitable and poorly qualified applicants (Bartram, 2000). In response, as discussed in Chapter 3, an increasing number of organisations are investing in automatic pre-sifting tools and online assessment methods to lower the volume and increase the number of higher quality candidates. The return on this investment should be a smaller, more manageable volume of higher quality candidates. As we saw in a previous chapter, e-recruitment has enabled more use of tools to assess fit earlier on in the recruitment process.

'We used to aim for the largest and most-qualified pool of graduate applicants we could. We know now how costly that was. Putting them all through the process was just one set of expenses. It's the cost of losing them straight after qualifying that really hurts. We're striving for 'optimum' numbers and quality now. e-Recruitment is helping us to bring down the numbers of applicants in the pool with our online selection tests before we have to spend anything. It's the first class honours maths graduates that are falling at the first hurdle. We're confident we'll get a better 'fit' — they won't necessarily be the most qualified on paper but we can give them the early year's development they need and they'll stay longer.'

HR Director, Professional Services Company, IRNA 2002

With so many more possible means of attracting applicants, and squeezes on advertising and agency costs, organisations cannot hope to adequately select among them if they don't assess the quality and performance of the recruits their systems produce.

Similarly, the adoption of e-recruitment methods has, for many organisations, corresponded with devolving greater responsibility for resourcing to the line manager. Metrics provides another way of reinforcing the line's responsibility for assessing the quality of applicants.

In theory, there are a variety of approaches to measuring the quality-of-hires (Sullivan, 2002). The main categories of measurement used in practice by IES Research Network members are:

- individual performance metrics, *eg* performance appraisal scores, on-the-job performance as seen in sales volume, performance in training and development programmes, number of weeks before reaching the preset minimal acceptable level of productivity, and higher percentage salary increases (as a percentage of salary, where salary is related to performance)
- retention rates of new hires, *ie* the percentage of new hires that are still with the organisation after a given period
- line manager's satisfaction with the quality of a recruit, *ie* a subjective judgement normally collected via survey at a set point following recruitment, *eg* six months.

4.8 Satisfaction

4.8.1 Candidate feedback

Every organisation will have lost excellent candidates as a result of a bad interview or an offer that didn't meet their expectations. A valuable source of data for improving any recruitment process is getting feedback from the candidates themselves.

In the e-recruitment environments of IES case study organisations, the need for candidate feedback has largely been driven by two factors:

- making the careers pages on the corporate website attractive and easy to use
- improving the quality of service, or 'candidate relationship'.

Gathering candidate feedback can help identify basic problems and issues, or it can help quantify what candidates actually think about the careers site. These are two distinct functions, calling for two different approaches. On the one hand, it is a relatively simple matter to allow those candidates who have experienced a problem on your site to let you know about it. However, if you would like answers to questions concerning candidates' likes and dislikes about the careers site, their informational needs, or related topics, a more careful approach using good survey design

and sampling methods is required (Snell, 2003). Most organisations implementing an online application process had commissioned some form of usability testing under laboratory conditions, to check factors like ease of navigation.

The simplest form of 'real' candidate feedback mechanism is to implement an email link. Although simple, it is not a preferred option for recruiters, as analysing and quantifying feedback received by email is laboriously slow, since each email must be read and classified according to the type of feedback. Some organisations are reluctant to include an email address because of the risk of candidates using it to attach their CVs or to make general enquiries regarding an application.

'Initially we just monitored the traffic flow patterns to the careers pages and that was OK. But the candidates are the most important users of our website. By asking them for feedback we've uncovered unforeseen technical problems, instructions that just aren't clear, and missing information people want.'

Director of Global Staffing, Pharmco

Several of our Members were experimenting with a simple 'suggestion-box' web form with a preset list of feedback issues, as a way of labelling or summarising comments. Guiding candidates to limit their feedback to one of a list of predefined topics helps to make the intentions of the feedback mechanism clear, and is easier for recruiters to analyse.

A more sophisticated feedback mechanism, used by one Research Network member, includes a survey-type mechanism in which the topics and possible responses are largely predetermined. It includes a small number of closed-ended questions with multiple-choice or yes/no responses, and answers on a numerical scale (*eg* 1 = not at all important; 5 = extremely important). In addition there is an 'open-ended' question giving candidates the opportunity to add any additional feedback they might have about the application process or the website in general. The latter is not mandatory. There are concerns about the reluctance of candidates to put the required amount of time and effort into a feedback section, and scepticism that an eager candidate would give anything other than a glowing account of their experience.

One participating organisation had extended their candidate feedback beyond the use of the website.

'It became clear after a few months of using the system, that having put the majority of applications online we were having to answer a number of phone calls and emails from candidates wanting to know whether we'd received their form. We decided to do something about this 'black hole' syndrome. Now we measure the volume of complaints and follow-up calls from candidates and our time to acknowledge (with a personalised response). If they are called in for interview, we distribute a short feedback questionnaire for them to complete at that time.'

Online Recruitment Manager, Telecomco

4.8.2 Brand image

The corporate website is being used as a shop window in which to present the organisation as an employer of choice. By automating some or all aspects of the recruitment process, the brand is put to the test. As soon as a candidate applies for a job with the company it is critical how they are treated – if they have a bad experience it will have a negative impact on the employer brand.

Understandably, there is growing interest in how to measure employer of choice brand. Advertising agencies have been doing this for years, and have models for doing so (Sullivan, 2002). Typically, the dimensions of employment brand measured are:

- **awareness:** *ie* the degree to which those potential applicants who you want to know you realise you exist. Awareness measures are helpful to recruiters because they help determine whether or not employment communications are reaching the target audience.
- **differentiation:** *ie* the degree to which those you want to attract to the organisation make positive distinctions between you and their other employer options. For example, a typical differentiation measure might be whether or not this organisation is one that the candidate would trust.
- **perceived quality and popularity:** *ie* the degree to which your organisation is recognised for growth and reputation.

Companies report that e-recruitment has had a positive effect on how it is perceived as an employer. Interestingly, in many organisations the evidence is owned by the employee communications function, and not necessarily HR, which has

implications for the role of HR in understanding and integrating this information into the recruitment process. For some organisations, the connection may never be made.

'The website provided a very straightforward and clear process from initial application to acknowledgement, invitation for interview and regular updates on the progress of an application. The design of the online application process gives our applicants a real sense of what we value and how we use cutting edge technology for their benefit and not just to automate processes.'

Internal Communications Manager, Financial Services 2

4.8.3 Line manager satisfaction

Changes to HR services has meant that line managers are the major customers, and there is more of a need to understand whether they are satisfied with the service HR provides and how it can be improved. The case study organisations that we spoke to reported that the feedback from line managers was poor as to the value that they were getting from the introduction of e-recruitment. Many of the line managers were reportedly resistant to change towards new e-recruitment systems, preferring instead to rely on the relationship that they had built up with recruitment agencies. While the feedback was not positive and adoption amongst line managers remained limited, many of the recruiters felt that this was down to a lack of knowledge and understanding of e-recruitment systems and what they could do for them. One case study organisation had poured resources into this by allocating an e-recruitment manager to help line managers identify how they could best use the new system. While they may be successful in getting the line manager to use the system while they were in support, once the e-recruitment manager returned to central office, the line manager resorted back to using recruitment agencies.

Much of the feedback had come through formal reviews of the e-recruitment system, or through visits to line managers to gather feedback during the recruitment process, or directly after. There was limited evidence of a systematic approach to obtaining information on line manager satisfaction.

4.9 The measurement challenge

IES detects a growing sense of unease among e-recruitment users about the divide between increased functionality on the application front, and reporting capabilities. The preceding pages have attempted to summarise the measurement practice of just a small sample of organisations who have implemented e-recruitment. None of them would claim to have adopted a systematic supply-chain or process-led approach to their evaluation. What then are the main inhibitors or enablers to a more strategic approach to evaluating an organisation's resourcing efforts?

4.9.1 Identifying source

As we have seen, the adoption of a fully online approach to candidate attraction, application, assessment, selection and relationship management, is rarely done in a single giant leap. Most organisations are evolving their e-recruitment strategy from online advertising, through the development of their corporate website to applicant tracking and integration with the back-end systems. With the process in such a constant state of change, and with a complicated mix of media and approaches in use for different posts in different business units, it is understandably hard to evaluate impact.

One of the more fundamental difficulties in comparing the effectiveness of off and online recruitment is that of getting a true measure of where a candidate originated, *ie* candidate source. The question remains, which Internet source leads to better or more qualified candidates?

'We won't be attempting that rigorous an evaluation because we simply don't know for sure where our candidates come from. When asked, most candidates do not remember where they saw the ad on the Internet, only that they saw it on the Internet. If a candidate responds directly from a job board, then the name of the job board will be in the response. If, however, candidates send an email directly to us they often won't include the name of the board. Even if you specify in the job ad that they should respond with a specific job identifier which indicates a code for the job board, not all will do so. Sometimes the candidate sees the opportunity on a job board, goes to our corporate website to find out more, and then submits an application directly on our site. We'll just be driving more and more

'traffic' to our careers pages and tracking them from the point they apply online.'

Senior HR Services Manager, Financial Services 2

4.9.2 Multi-source integration

'Our problem is not a lack of measures. We have statistics coming out of our ears on advertising spend and time to fill. We spend a lot of time and energy on compiling records for individual candidate's performance in selection tests and during early training. We have a culture that emphasises the importance of good performance appraisal, and we do our exit interviews. But all this information is held by different parts of the HR team that are responsible for that activity. We don't have a way to bring it all together easily and track it through.'

HR Director, Director of Global Staffing, Pharmco

The inability of an organisation's recruitment database to talk to the core HRIS is a source of some considerable frustration for recruiters wishing to use the data available in a strategic way. A two-way interface between recruitment and HRM systems would enable them to extract data on previous hires and the workforce, as well as import data on the new ones.

'All we'd like to be able to do is call up the details of our top performers and find out where their applications originated. We'd like to make a start by linking our information from recruitment with the information we hold on individual employees. The employee's record would tell us how they first heard about the job, their recruitment source, their selection ratings *etc.* Even if we could make this link on the system, we're not sure if we can legally — would we be in breach of data protection?'

HR Consultant, Financial Services 2

This approach would also rely heavily on the accuracy of the data and validity of doing this without the supporting rigorous research. In one case, the absence of an integrated back-end HRIS with any online pre-screening has seriously compromised the potential benefits.

'We have had to duplicate a lot of the effort, re-entering a new recruit's data onto the system once the application process is complete. Even then we don't have the data teams in the HRIS that

we'd like. When we needed to review the effectiveness of our very expensive online pre-screening tool, we had to run a manual exercise of matching 'performance of recruit by assessment score' and 'retention by assessment score'. It would be so much easier if that was on the employee's record in the first place.'

HR Strategy Consultant, Financial Services 1

4.9.3 Worth the effort?

Recruiters obviously have to keep things in perspective – metrics are guidelines, not answers. There are genuinely good reasons for avoiding measuring everything and falling into a state of 'paralysis by analysis'.

However, the best measurement system creates measures that can have the greatest impact on decisions, and are not cost prohibitive (Boudreau and Ramstad, 2001). Although not yet there, IES members share our conclusion that better information about the end-to-end process should lead to better decisions about any investment in e-recruitment. Meaningful data that can support key business decisions is the ultimate goal, and the measurement grid presented in this report is one way to structure this. An evaluation approach linked to the staffing process as 'value chain', we argue, is the way forward if organisations are truly going to understand the value of e-recruitment.

5. Emerging Challenges: Lessons from the Bleeding Edge

This final chapter summarises the main findings from the IES research into e-recruitment. We then go on to consider the implications of these findings for the role of the recruiter. In doing this we raise challenges in developing a strategy for e-recruitment, as well examining the capabilities needed within the HR function to deliver an effective e-recruitment process. We finish the chapter by suggesting a number of questions that organisations can ask prior to, or during adoption of e-recruitment, that can act as a practical checklist for HR professionals.

5.1 What does the research and practice tell us about e-recruitment?

5.1.1 Trends

A review of the published evidence to date, the IES survey, and the data from the case study organisations, all point to a shifting landscape within recruitment, whereby the focus is on developing the relationship with the candidate, and the involvement with the line manager. e-Recruitment can help to facilitate this, and brings with it other suggested benefits (*eg* improved employer profile, reduced recruitment costs) that make it an attractive proposition for many organisations. However, it is unclear how these benefits are realised, and there are without doubt reported challenges in implementation, including the cultural approach of the organisation towards e-recruitment and the lack of knowledge within the HR

community. The question also remains, to what extent such an approach will extend outside large multinational organisations. The differences in resources and level of technical sophistication between organisations will have an impact on the extent to which they adopt e-recruitment in the staffing process.

5.1.2 e-Recruitment methods

Evidence from our survey and case studies suggests that the predominant methods used with e-recruitment have been focused on the front end of the process, in the attraction phase (*eg* posting of adverts), and less on the selection and assessment area, or in developing the supporting systems. The concentration of activity also continues to be in the graduate market, although there is a steady use of e-recruitment in junior to middle managers.

Even though there are many options available for online selection and assessment, including self-assessments, online screening, psychometric testing online, and online interviews and simulated assessment centres, the uptake of these methods has been low. The advantages of online testing are standardisation, easy scoring and reporting, the possibility of using various tools (*eg* video, text, auditory questions) together, and integration with applicant tracking systems and Internet recruitment techniques. Potential disadvantages include test security concerns, equivalency of forms, technology driving the tests, and the impact on diversity. Guidelines for when to use Internet testing are being developed and disseminated (BPS Test Users Conference, 2003), but it may be some time before there is a clear understanding in the HR community about the transfer of some of these selection processes.

Recruiters' adoption of technology for selection and assessment

The willingness of recruiters to consider adopting emergent technological solutions for staff selection, will be a key factor in the progress of the e-recruitment cycle. The IES findings in the area of selection and assessment reflect concerns regarding a split in take-up of e-recruitment in all aspects of the process other than selection and assessment. Some of the influencing factors that may have an impact on recruiters' take-up of such

technology in selection have been identified by Anderson (2003) and include:

- 'organisational-level' variables
- 'individual-level' variables associated with the recruiter and their job role
- 'moderator' variables, which will influence final decisions as to whether to adopt new technology in the selection process. These might include, for example, labour market conditions, applicant characteristics.

The model being proposed is a general heuristic to explain and account for recruiters reactions to, and adoption of, technological innovations in staff selection. It can be used to help recruiters ask the following questions:

- What are the reasons as to why they might adopt new technology in selection?
- What are the factors that influence willingness to adopt and adapt to new workplace practices?

As part of a strategy for e-recruitment, organisations will need to begin to identify factors that may have an impact on whether they adopt e-recruitment and selection. For example, if the performance of the existing recruitment system is faltering and they are seeking new ways of managing recruitment and selection, but their organisational culture and climate for technological innovation is low, it is unlikely that they will turn to e-recruitment as a solution. Alternatively, if the expectations from candidates (*eg* graduates) is that there should be a facility to apply online, then this is likely to have a significant impact on willingness and HR strategy. Other agencies, such as job boards and newspapers, can also use this framework to help understand which part of their market is likely to adopt the technological approach. Viewing the uptake of technology within selection and assessment in this way helps to understand recruiter adoption decisions, and may be useful for both practitioners and researchers to consider when addressing barriers to adaptation.

Finally, challenges were also identified in the evidence from the case studies in effectively developing the back end of the e-recruitment process. Workflow systems, candidate relationship management, and the importance of profiling, were all identified as significant issues in this area.

5.1.3 Evaluating e-recruitment as a supply chain

Evidence from the research and practice of impact at the organisational level, tended to focus on traditional measures of time to hire and cost per fill. Given the increased risks and investment in e-recruitment, it was suggested that a more complete approach towards a measure of the value of e-recruitment was required. In particular, one which measures the quality, diversity and satisfaction of the e-recruitment process, based on a staffing supply-chain process. This approach was piloted in a small number of case study organisation, and helped to illustrate which parts of the process they were not assessing, and on which they would like to have more information.

In summary, the findings illustrate some considerable variation in use and practice in e-recruitment, and with a particular emphasis on one end of the process, with only very sophisticated organisations having adopted online selection. Similarly, most have adapted evaluation from traditional recruitment to their online process, although our proposed approach has offered a fresh framework for this.

A number of wider issues are worth considering, which have emerged as a result of the research.

5.2 Role of the recruiter and cultural change

5.2.1 A more strategic role?

A compelling argument why online recruitment should be integrated sooner rather than later, is that it will serve to move the recruiter up the value chain, allowing them to be far more strategic. When we queried IES Research Network members about what a more strategic role for recruiters would mean in practice, they frequently mentioned the freeing up of administrative time, enabling more time to be spent on, for example:

- face-to-face interviewing and assessment of potential candidates
- getting to know the needs of the hiring manager, and together building more effective job descriptions

- uncovering alternative, effective sourcing channels by trialing niche job boards, selling the role internally, and generating employee referrals *etc.*
- developing potential candidate relationships
- evaluation and continuous improvement.

'Traditionally, recruitment activity was agency driven. Recruiters were given short lead times from line manager communities and they were judged on their ability to respond speedily — pretty much all costs were acceptable. Going to an agency was an easy option for recruiters. Now, faced with a more challenging economic climate, business units across the organisation are more aware of frugal recruitment techniques such as web mining, free to advertise websites, online CV databases. Before they advertise externally, we now expect recruiters to post the vacancy details internally (12 per cent of posts are filled via employee referrals) and to proactively search out a talent pool from the database of speculative and previous applicants. The HR recruiters have not been used to combining different recruitment activities and managing them as a pipeline. There is some resistance to using the 'new' techniques, and closer management has become necessary in order to ensure they are given the appropriate time to reap rewards.'

Online Recruitment Manager, Telecomco

This latter point made by the e-recruitment manager relates to many of the emerging questions surrounding cultural change.

5.2.2 Cultural change

One of the significant findings to emerge from the survey and the case studies, was the impact of the change to e-recruitment on job roles, in particular, on those within the HR department. The findings from the survey indicated that a key implementation challenge was the cultural approach of the organisation towards e-recruitment, and the lack of knowledge within the HR community. Many discussed this in terms of seeing e-recruitment as part of a 'change programme', both in terms of a shifting external view of what the organisation offered, but also in terms of the roles and tasks that are now required of HR staff. In the same way that the role of the recruiter is changing as described above, there was an increasing need for a shift in the culture of recruitment, both in terms of how things are done by recruiters, and the relationship to line managers. For many, this meant changing recruiters and line management behaviours to move

away from relying on agencies, while at the same time developing new skills to be able to build and search databases, and develop new relationships with line managers.

While many recruiters were willing and able to do this, where there was a lack of support to move to the e-recruitment system, a dual system often operated, and many found they had increased workloads rather than freeing up time. For generalist HR staff, this was a particular issue, where only a small portion of their job was recruitment. In these cases, they found themselves having to spend a disproportional amount of time learning the new system. For them, time could be saved by going straight to the agency. Where these challenges emerged, they were often overcome by providing extra support and ensuring that the e-recruitment system delivered, in order to encourage its use in the future. 'Quick wins' and 'easy hires', through the use of the technology, was how many organisations were selling it internally.

In future, addressing these cultural change issues for HR staff and line managers may become more significant than the technology. For the moment, the focus is on the technology and the implementation of the system. However, long-term behaviour change in those that work the system will be more important if e-recruitment is to sustain itself and bring the benefits that are so often discussed.

5.2.3 Implications for training and development

Aligned with any introduction of new technology and culture change, is the requirement for new skill development. Training to build and search databases, and to become more aware of what the system can offer, was a priority for many case study organisations. In addition to this 'technology-related' training, courses or development as part of culture change, (eg induction for new staff members to include e-recruitment practices) are needed. As with any change programme, attitudinal and behavioural change to recruitment practices can effectively be brought about through training and development. While the focus has been on the technology training, our evidence suggests that the next stage for training and development will concentrate on the 'softer' issues of attitudinal and behavioural change.

5.2.4 Service delivery models

Even more dramatic a shift in the role and position of the recruiter is evident amongst those organisations for whom the implementation of e-recruitment is just one element of a change to the HR service delivery model. The introduction of employee self-service and e-HR is enabling more organisations to adopt any combination of call centres, shared-service centres, and outsourcing (Reilly 2003; Kettley, 2003).

A pharmaceutical company is currently adopting a four-tier aligned staffing model for recruitment:

Self-service: a hiring manager is able, through their desktop, to track the status of applications and to schedule interviews. Candidates can apply online, register for email alert of opportunities *etc.*

Assisted service: a first-level recruitment specialist is available by phone or email as a first point of call to the candidate. He or she will scan and process paper applications, conduct a manual screening and check references, organise medicals *etc.* They are responsible for monitoring the status of a vacancy, chasing actions and gathering candidate feedback on the recruitment experience.

Specialist service: a second-level recruitment specialist is accountable for the ownership, design and evaluation of the recruitment process. He or she will review and benchmark recruitment performance metrics, select vendors and manage contracts, develop the recruitment teams specialist capability and provide expert advice and consultancy.

Business partnering: a third-level recruitment specialist will act as the business partner to business units. Their responsibilities will include: determining the BU's demand for recruitment services, planning strategic manpower needs, managing recruitment budgets and ensuring alignment with global and local HR strategy.

5.3 Media mix

As people become more sophisticated with the Internet, and technological expertise increases, expectations for 'smarter tools' like e-recruitment increases. However, many want to know to what extent will it replace traditional recruitment methods? What is the right balance and media mix to use? In most cases, the Internet complements conventional recruiting, but what is the optimum balance, either for cost savings or time to hire?

Companies that have adopted an e-approach still use additional recruitment media, such as newspapers, professional magazines and selection consultants, but there is no prescription as to what the right balance is. Much will depend on the recruitment strategy, the target audience, and the volume of hires. However, for many organisations the link may be more to do with candidate relationship management, and using the technology to better target the candidate market. For many, the recruitment process has not changed, but there is just more choice and a cleverer mix of the media to get the message across to the target audience.

5.4 Assessing your organisation's e-recruitment agenda

There is no one right way to implement e-recruitment. Organisations are culture, process and operationally unique – with different ambitions, resources and circumstances. There is an enormous range of technological options or solutions, which are advancing rapidly and shifting from the generic to the customised. Perhaps most importantly of all, the workforce and the prospective workforce of your organisation are unique, with their own people-management policies and practices.

The experiences of Research Network members reported here underline the complexity of considerations and possibilities of e-recruitment. This final section offers a series of self-assessment questions, which if answered specific to your organisation and its HR function, provide the basis for an e-recruitment agenda. They are grouped around five basic themes:

1. How does resourcing strategy connect to business priorities, and how are service expectations of internal and external stakeholders changing?
2. What could HR do better in terms of the recruitment and resourcing process, policies, services and practices?
3. What contribution can web, voice and other technologies make to these questions?
4. Does HR have the capabilities to respond to current and future challenges, and how will the function's relationships change internally and with third parties?

5. How will the organisation know if changes to the recruitment process are effective? What are the key performance indicators or targets to be used?

5.4.1 Alignment of resourcing strategy and business priorities

- Is there a clearly defined HR strategy with explicit strategic aims for resourcing?
- Why should potential talent want to work for your organisation in comparison with industry competitors? How effectively is the employer brand communicated via your recruitment process?
- What should the impact of e-recruitment efforts and the delivery of resourcing services be upon talent management and the employment relationship?
- What are recruiters' reasons for adoption?
- To what extent does HR nurture future talent already employed, and how can e-recruitment innovations contribute in this respect?
- To what extent is HR leadership open minded about wider e-HR developments, and able to describe their potential to the business?
- How does the e-recruitment content fit with the employer proposition and building the employee relationship? What is the message the organisation wishes to give about itself and the differentiated propositions it offers target groups of candidates?

5.4.2 Reviewing the e-recruitment process

- How are recruitment and resourcing activities in your organisation currently delivered – from a unit/functional structure, or through a process arrangement?
- How is technology currently used to handle the administrative and transactional elements of resourcing? Are there any shortcomings with the system or process?
- What feedback mechanisms are used to understand the views of end users, recruiting managers and candidates, of the effectiveness of the resourcing services offered?
- Has HR conducted a review of the core/support recruitment processes? With which stakeholders and other experts? Do the findings suggest incremental process improvement or more radical redesign?

- Considering line management expectations, what does the HR function want to achieve in the short to medium term? Which process performance standards or benchmarks are being used as guidelines?
- Which function would own the e-recruitment technology (*eg* HR, IT, marketing)?
- Who is the process aimed at? Who will it not target?

5.4.3 What is the role of the new technology?

- How might web technologies improve the way attracting, recruiting and selecting talent is provided and managed? Which other related tools will be useful?
- How will technologies be procured?
- Is the recruitment process going all online? What will the mix of media be?
- What technology is already there and can be used?
- What is the functionality required from the technology, *eg* can the selection and assessment tools be supported by the technology?

5.4.4 HR capability

- Is there recognition that outsourcing can be an essential aspect of e-recruitment in addition to the deployment of new web technologies?
- What types of external support are required if HR needs to meet its e-recruitment goals and objectives? Basic products/services, customised solutions, wider consultancy?
- How does/will HR manage current third-party arrangements in resourcing? In what ways? Are formal service reviews conducted with suppliers themselves? How are shortcomings resolved?
- How will HR manage its future third-party relationships responsible for e-recruitment? What resource issues have to be taken into account? How many relationships can be simultaneously managed effectively?

5.4.5 Measuring success

- Is the organisation seeing improvements in tackling its top resourcing priorities?

- Which metrics are adopted for which key issues?
- How are the indicators or measures used for e-recruitment aligned with the organisation's business performance measurement?
- What is the ROI? How is it calculated?
- What measures are important to evaluate, *eg* quality, time to fill, *etc.*
- Are the e-recruitment tools in selection and assessment clearly linked to measuring performance on the job, *eg* competency-based application forms? If not, are they worth using?
- Do the selection tools work? How do you know?
- Is there a feedback facility (for HR and candidates)?

5.5 Conclusions

What is the key message from our research? In examining the findings, the key message for recruiters is to acknowledge that the adoption of e-recruitment is about **more than just the technology**. It is about the recruitment system being able to attract the right candidate, the selection being based on sound and credible criteria, and the tracking process being able to integrate with existing systems. As you would expect with traditional approaches, the selection processes are grounded in the future performance on the job rather than what the technology can allow you to do. Perhaps most significantly, e-recruitment is about cultural and behavioural change, both within HR and at line management level. It is about developing the capability of HR to deliver and facilitate the system and in viewing the staffing process as an end-to-end process, similar to that of a supply chain. In summary:

- e-Recruitment is more than the technology.
- e-Recruitment is about winning buy-in, and behavioural and cultural change.
- e-Recruitment means developing the capability of HR and line managers.
- The strength of the business case is in the potential to transform the end-to-end value chain.

References

- Anderson N (2003), 'Applicant and Recruiter Reactions to New Technology in Selection: A Critical Review and Agenda for Future Research', *International Journal of Selection and Assessment*, Vol. 11(2), pp. 121-136
- Association of Graduate Recruiters (2000), 'Going to work on the web: Web-based graduate recruitment.' *AGR Briefing* No. 11, July, Association of Graduate Recruiters
- Baron H, Austin J (2000), 'Measuring ability via the Internet: Opportunities and issues', paper presented at the *Annual Conference of the Society for Industrial and Organizational Psychology*, New Orleans
- Bartram D (1994), 'Computer-based assessment', in Cooper C L and Robertson I T (eds.), *International Review of Industrial and Organizational Psychology*, pp. 31-69, John Wiley and Sons
- Bartram D (2000), 'Internet Recruitment and Selection: Kissing Frogs to Find Princes', *International Journal of Selection and Assessment*, Vol. 8(4), pp. 261-274
- Boudreau J, Ramstad P (2001), *Beyond Cost per Hire and Time to Fill: Supply – Chain Measurement for Staffing*, Working Paper 01-16, Centre for Advanced Human Resource Studies, Cornell University, www.ilr.cornell.edu/CAHRS
- Breaugh J, Starke M (2000), 'Research on employee recruitment: So many studies, so many remaining questions', *Journal of Management*, Vol. 26(3), pp. 405-434
- British Psychological Society (2003), *Test Users Conference*, Oxford
- Bywater J (2002), 'Internet Recruitment and Selection Systems', *E-recruitment: Is it delivering?*, Presentation at the IES Research Network Conference, November

- Cappeli P (2001), 'Making the Most of Online Recruiting', *Harvard Business Review*, Vol. 70(3), pp. 139-148
- Cober R T, Brown D J, Blumental A J, Doverspike D, Levy P (2000), 'The quest for the qualified job surfer: It's time the public sector catches the wave', *Public Personnel Management*, Vol. 29(4), pp. 479-494
- Coleman A (2001), 'The web gets personnel', *Director*, Vol. 54(8), pp. 70-74
- Corsini S (2001), 'Wired to hire', *Training*, Vol. 36(6), pp. 50-54
- Dervous E (2003), 'Applicant reactions towards recruitment and selection', Symposium at the *European Association of Work and Organizational Psychology* Conference, Lisbon, June
- Dineen B R, Ash S R, Noe R A (2002), 'A Web of Applicant Attraction: Person-Organization Fit in the Context of Web-based Recruitment', *Journal of Applied Psychology*, Vol. 87(4), pp. 723-734
- Electronic Recruiting Index (ERI) (2000), 'Performance and the emergence of the middle market', Executive Summary, <http://www.interbiznet.com/2000ERI>
- Flynn G (2000), 'Internet recruitment limits demographic scope', *Workforce*, Vol. 79(4), pp. 85-88
- Greenberg C I (1999), 'Technological innovations and advancement for psychologists working within organisations', *The Psychologist-Manager Journal*, Vol. 3(2), pp. 181-190
- Harris M M (1999), 'Practice network: I-O psychology.com – the Internet and I-O psychology', *The Industrial-Organizational Psychologist*, Vol. 36(4), pp. 89-93
- Harris M M (2000), 'The Internet and industrial-organizational psychology: practice and research perspectives', *Journal of e-Commerce and Psychology*, Vol. 1, pp. 4-23
- Harris M M, Paajanen G, Blunt M (2003), 'Internet recruitment: How does it compare to other sources?', Symposium to the *Annual Conference of the Society for Industrial and Organizational Psychology*, April
- Hirsh W, Pollard E, Tamkin P (2000), *Free, Fair and Efficient?: Open internal job advertising*, IES Report 371

- Hogg C (2000), *Internet and E-mail Use and Abuse*, London: Chartered Institute of Personnel and Development
- Hogler L R, Henle C, Bemus C (1998), 'Internet Recruiting and Employment Discrimination: a legal perspective', *Human Resource Management Review*, Vol. 8(2), p. 149
- IDS Study Plus (2000), *Online Recruitment*, London, Incomes Data Services
- iLogos Research (1998), 'Achieving Results with Internet Recruiting', *Recruitsoft.com/iLogos Research*, Accessed August 2002: www.ilogos.com/iLogosReport1998/secure/medias/InternetRecruiting_1998.pdf
- iLogos Research (2002), *Global Web Site Recruiting, 2002 Survey*, accessed August 2002: www.ilogos.com/iLogosReport2002/secure/medias/Global500_2002Survey.pdf
- Kerrin M, Icasati-Johanson B (2003), 'Supply-Chain Partnering' Holman D, Wall T D, Clegg C W, Sparrow P, Howard A, (eds.), *The New Workplace: A Guide to the Human Impact of Modern Working Practices*, John Wiley & Sons
- Kettley P, Reilly P (2003), *eHR: An Introduction*, IES Report 398
- Kuhlen A (2001), 'E-recruiting: European Fortune Global 500 Corporate Recruiting Website Analysis', *Erecruitix Research*, Accessed August 2002, from: www.erecruitix.com/Andreas.kuhlen/EF500.htm
- Laurence S (1999), 'Employment sites', Iconocast, 10 June 1999, www.iconocast.com
- Lievens F, Harris M M (2003), 'Research on Internet Recruiting and Testing: Current Status and Future Directions', in Cooper C L, Robertson I T (eds.), *International Review of Industrial and Organisational Psychology*, Vol. 18, John Wiley & Sons
- Lievens F, van Dam K, Anderson N (2002), 'Recent trends and challenges in personnel selection', *Personnel Review*, Vol. 31(5), pp. 580-601
- Martin J (1998), 'Changing jobs? Try the net', *Fortune*, Vol. 137(4), pp. 205-208

- McBride J R (1998), 'Innovations in computer-based ability testing: Promise, problems and perils', in Hakel M D (ed.), *Beyond Multiple Choice*, pp. 113-129, Lawrence Erlbaum
- Mead A D (2001), 'How well does Web-based testing work? Results of a survey of users of NetAssess', Oswald F L (Chair), *Computers=good? How test-user and test-taker perceptions affect technology-based employment testing*, Symposium presented at the 16th Annual Conference of the Society for Industrial and Organizational Psychology, San Diego
- Plumbley P (1990), *Recruitment and Selection*, Institute of Personnel Management
- Reynolds D H, Sinar E (2001), 'Applicant reactions to Internet-based selection techniques', Oswald F L (Chair) *Computers=good? How test-user and test-taker perceptions affect technology-based employment testing*, Symposium presented at the 16th Annual Conference of the Society for Industrial and Organizational Psychology, San Diego
- Reynolds D H, Sinar E, McClough A (2000), 'Evaluation of a Internet-based selection procedure', Mondragon N J (Chair), *Beyond the demo: The empirical nature of technology-based assessments*, Symposium presented at the 15th Annual Conference of the Society for Industrial and Organizational Psychology, New Orleans
- Rozelle A, Landis R (2002), 'An examination of the relationship between use of the Internet as a recruitment source and student attitudes', *Computers in Human Behavior*, Vol. 18(5), pp. 593-604
- Silvester J, Anderson N, Haddleton E, Cunningham-Snell N, Gibb A (2000), 'A cross-modal comparison of telephone and face-to-face interviews in graduate recruitment', *International Journal of Selection and Assessment*, Vol. 8(1), pp. 16-21
- Snell A (2003), 'Methods of Career Site Feedback', *Recruiting News*, Vol. 5, Issue 3, January, Association for Internet Recruiting
- Society for Industrial and Organizational Psychology Conference (2001/2002)

- Stanton J, Rogelberg S (1999), Challenges and obstacles I conducting employment testing via the Internet, Oswald F L (Chair), *Computers=good? How test-user and test-taker perceptions affect technology-based employment testing*, Symposium presented at the 16th Annual Conference of the Society for Industrial and Organizational Psychology, San Diego
- Sullivan J (2002), 'Measuring your Employer Brand', *Electronic Recruiting Exchange*, www.erechange.com, October
- Sullivan J (2002), 'Quality-of-hire: What to measure and when to measure it', *Electronic Recruiting Exchange*, www.erechange.com, April
- Taylor C (2001), 'Windows of Opportunity', *People Management*, Vol. 7(5), pp. 32-36
- Weiss E, Barbeite G (2001), *Internet as a job source and job site preference*, Paper presented at the 16th Annual Conference of the Society for Industrial and Organizational Psychology, San Diego
- Zottoli M A, Wanous J P (2000), Recruitment Source Research: Current Status and Future Directions, *Human Resource Management Review*, Vol. 10(4), pp. 353-383
- Zusman R, Landis R (2002) Applicant preferences for Web-based versus traditional job postings, *Computers in Human Behaviour*, Vol.18(3), pp. 285-296

Appendix: Individual-level evaluation

Applicant reactions

There is a significant and growing amount of research on applicant reactions to various e-recruitment approaches, *eg* job sites, corporate websites (Weiss and Barbeite, 2001), and also growing understanding of applicant reactions to various stages in the e-recruitment process.

Applicants' reactions to the recruitment phase have been studied by Zusman and Landis (2002), who compared potential applicants' preferences for Web-based postings versus traditional job postings, and did not confirm a preference for Web-based job information. Rozelle and Landis (2002) compared reactions of undergraduate students to the Internet as a recruitment source and more traditional sources (*ie* personal referral, college visit, brochure, video and magazine), and found that the Internet was seen as more realistic than the other sources. They also reported that the Internet recruitment sources were seen as less formal than brochures. Anderson (2003) suggests that students, as younger applicants, are more likely to be more favourable to Internet media than older, less computer literate applicants, and suggests that care should be taken in generalising these findings to recruitment for permanent jobs in industry (Lievens, van Dam and Anderson, 2002).

Applicants' reactions to Internet-based testing have gained a lot of understanding from previous knowledge of computer-based testing (*eg* Alkhadher *et al.*, 1994; Bartram, 1994). The use of the Internet has promised much in the area of testing, but it is recognised that research is struggling to keep pace with the speed with which the Internet is being adopted by organisations (Lievens and Harris, 2003; Anderson, 2003). Research that exists

suggests positive applicant reactions to Internet testing (eg Baron and Austin, 2000; Harris *et al.*, 2003; Dervous, 2003), but this is mainly at the reaction level. There is a need to move away from the assessment of reaction levels to testing, toward better indicators of the impact on behaviour, eg remaining in the selection process, intention to take up the post, *etc.* (Anderson, 2003; Lievens and Harris, 2003). Mead (2001), and Reynolds, Sinar and McClough (2000), also found positive candidate reactions to Internet-based personality tests when compared to traditional pen and paper forms of administration. Studies have also found that Internet-based selection procedures can have a positive impact on perceptions of the organisation (eg company image) amongst potential applicants (Reynolds and Sinar, 2001).

Equivalence

There is a shortage of research comparing the equivalence of traditional forms of sourcing applications against the Internet forms. Questions that need to be answered here include: does the use of new technology produce the same quality and quantity of applicants? Does the technology impact upon applicant's decisions to self-select out in any different way to more traditional forms of recruitment. What is the potential adverse impact associated with this? (Breugh and Starke, 2000; Dineen, Ash and Noe, 2002). A review by Anderson (2003) failed to find any published papers as to whether predictive validities or adverse impact ratios in selection differ between paper and pen and Internet-based tests of cognitive ability or personality inventories. If test publishers are carrying them out internally, it is suggested that it is important for these to be published to inform practitioners with a better understanding of the impact of tests. It is more likely that these studies have not been carried out, and are perhaps unlikely to be, given the difficulties of executing them in practice and the current focus on the technology (Test Users Conference, 2003).

Adverse impact

It has been recognised that e-recruitment has the potential for bimodal outcomes, in that the use of the Internet can on the one hand exacerbate adverse impact against minority groups, while on the other hand it has the potential to remove bias against

minorities in this area. In recruitment, the latter effect stems from the potential for minority groups to being able to easily access the Internet via personal computers in the home or elsewhere. Indeed, research findings on selection methods administered by new technology have found that they can reduce or even negate minority-majority group differences (Silvester *et al.*, 2000). At the same time, there is serious potential for legal challenges against organisations who, in using e-recruitment, may be 'unwittingly operating an anti-diversity policy through differential access to the Internet' (Anderson, 2003), which is also suggested to have an impact on promoting workforce diversity (Stanton and Rogelberg, 1999). The imperative is now with organisations to ensure that sufficient proportions of minorities obtain access to their corporate recruitment websites in the first place.

Some of the points raised here reflect wider issues regarding the emergence of a 'digital divide', and concern around who it is that is becoming proficient in the use of computers. That is, some groups (females and older people) are thought to be disadvantaged by Internet applications. Concerns are paramount in the selection and assessment aspect of e-recruitment, and the challenge for practitioners consists of implementing tests that produce administrative and cost efficiencies, and at the same time ensuring fairness (Leivens and Harris, 2003; Stanton and Rogelberg, 1999). There are implications for the procedure and organisational testing policies within an Internet environment, in particular in relation to legislation and the administration of tests. These issues were reviewed in the BPS Test Users Conference in June 2003.

Summary

In summary, some researchers such as Anderson (2003) are critical of the current research in the area of individual evaluation of the impact of e-recruitment. He suggests a need to move away from reaction-level research and reliance on students as samples, to include other candidate groups. Lievens and Harris (2003) and Anderson (2003) criticise the lack of theory in this area, with the focus of research addressing descriptive-level questions. They draw an analogy with the training evaluation research, where the focus at the individual level is on immediate reactions rather than the longer-term learning outcomes. With e-recruitment, it is suggested that any future work on applicant

reactions needs to assess how reactions impact upon applicants' intentions to remain in the selection procedure, organisational commitment or applicant decision making as a result of exposure to methods.