Quality in Higher Education: An international perspective

The views of transnational corporations

by

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October 2000

Centre for Educational Research

Clare Market Papers No. 17

Funded by bp

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ISBN No: 0 7530 1428 9

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Executive Summary

The aim of this comparative study is to provide insight into the views of transnational corporations about higher education. Little appears to be known about how employers based in different countries perceive higher education in their countries, what skills and attributes they are seeking in their graduate recruits, what the aims of higher education should be and what changes are needed to the higher education system to meet the needs of employers. The increasingly globalised economy means that such a perspective can enhance our understanding of employers as a major stakeholder in higher education. This report provides the findings from a qualitative survey of transnational corporations and other major companies from different employment sectors in four countries – Australia, Malaysia, the UK and the USA.

Qualities and attributes sought

Employers identified a range of attributes sought in graduates and commented on the perceived shortcomings of higher education institutions in encouraging their development. The skills and qualities sought by respondents comprised 'hard skills' such as knowledge, excellence in field and/or technical expertise together with a range of 'soft skills' – key skills and personal attributes. 'Soft' skills were sometimes explicitly given priority over technical skills. Several respondents suggested that universities failed to promote the development of these skills. Employers also reported that they valued business experience very highly as many recruits found the transition from higher education to employment difficult.

Most frequently mentioned 'soft skills'

Key skills
- Team work
- Analytical/thinking skills
- Communication/presentation skills
- Interpersonal skills

Personal attributes
- Motivation/drive
- Business awareness
- Independence
- Creativity/innovation
- Leadership/management

Other
- Work experience

Aims of higher education

Employers had diverse views of what they felt that the aims of higher education should be. Many of the issues raised were related to the development of key skills. These skills need to be acquired in addition to and certainly not at the expense of intellectual rigour. For some employers a crucial aim for higher education should be preparation for the world of work.

Recruitment of graduates

Almost all respondents targeted specific universities or departments in their recruitment process. However, in one case the company had examined the relationship between institution of origin and graduate performance and had found no relationship. In another, individual characteristics were always given priority over the institution from which an applicant had graduated.

The vast majority of respondents referred to targeting universities for recruitment rather than targeting particular faculties or departments. There were two notable exceptions to this. For example, one respondent based in the USA was able to list a total of 70 individual departments that were visited for recruitment purposes in one year. For several companies the institutions named as target universities offered courses of particular relevance or courses of a specific type.

Companies thus used a range of techniques to encourage applications or recruitment from particular high status institutions, while not actively discouraging or avoiding applications from elsewhere. No respondent reported avoiding certain higher education institutions when recruiting students.

Information sources

Past experience and practice, over and above external sources of information such as league tables or quality evaluations, provided the primary source of evidence for respondents. Most often, it was the companies' experience of the academic standards achieved by students of different institutions that influenced their decisions to target particular institutions.

The perceived academic standard of an institution was not the only criterion used for targeting universities for recruitment purposes. Some companies wished to recruit foreign students to work for the company in their home country. They therefore targeted universities with more international student intakes.

Other reasons identified for targeting particular institutions were universities' proximity to company offices, especially when the company was attempting to build up good community relations by hiring locally, and also universities having high proportions of ethnic minority students as this enabled the company to improve the balance of its employee profile.

What is a 'quality' higher education?

Respondents understood the concept of 'quality' in different ways. Some saw quality as relating to outcomes (e.g. employability), some to output (e.g. traditional academic standards) and a few understood it in terms of the quality of the educational process and to the value added by higher education for a given set of inputs.

While some respondents saw an unproblematic relationship between entry requirements and educational outputs or employment outcomes, others were more guarded. Respondents were split as to whether high entry requirements tended to enhance or diminish the quality of the educational process.

Most respondents reported that 'reputation' was a useful indicator. Only a minority said that it was not. A small number noted that reputations tend to lag behind reality, making it unreliable as a sole indicator of institutional quality.

Satisfaction with the recruitment of graduates

In virtually all cases, respondents reported that they were satisfied with the quality of graduates that they had employed in recent years. However, graduates were sometimes reported to lack certain key skills. The importance of work placements emerged as an important positive factor in terms of employers' satisfaction with graduates recruited.

Quality in higher education

A high quality university education was identified in terms of inputs to the system (e.g. selection of students), process (e.g. teaching, learning, research) and outcomes (e.g. in relation to employability). Themes to emerge included self-learning, high quality university academics, innovation and research, sometimes with an explicit link to preparation for entry into the workforce.

Proposals as to how quality in higher education could be assured in a global economy included two broad themes – more communication between employers and universities on the one hand and indicators of achievement on the other.

Universities and the needs of employers

When asked if they felt that there was anything that universities should be doing to ensure that the needs of employers are met three main categories of responses emerged – improving links with employers, providing more practical experience and improving advice to students. Innovative practice was also identified in terms of business-university collaborative exercises and placement exercises.

Conclusions

A number of conclusions emerge from our study of transnational corporations:

- Employers want 'soft' skills integrated into higher education degree courses.
- Employers tend to target institutions by perceived quality of graduates.
- Employers identify suitable institutions by past experience.
- A range of innovative practices have been identified including business courses with placements and courses designed collaboratively between employers and universities.
- International recruitment by transnational corporations appears limited, although examples of innovative practice have been identified that may provide a model for other employers.

1 Introduction

The aim of this comparative study is to provide insight into the views of respondents in transnational corporations about higher education. Little appears to be known about similarities and differences in employers' perceptions of higher education across countries, what skills and attributes they are seeking in their graduate recruits, what the aims of higher education should be and what changes are needed to the higher education system to meet the needs of employers.

The increasingly globalised economy means that such a perspective can enhance our understanding of employers as a major stakeholder in higher education. We need to know, for example, whether issues and processes raised in one country are similar to those raised in another. In relation to higher education, are employers seeking similar skills and attributes? What do they understand by 'quality' in higher education? Do they feel that the system of higher education needs to change to meet their needs and if so, how?

This report provides the findings from a qualitative survey of respondents from transnational corporations and other major companies from different employment sectors in four countries – Australia, Malaysia, the UK and the USA. Section 2 provides a brief résumé of recent selected studies. Section 3 provides an outline of the methods that we used and Section 4 presents the main findings. Section 5 discusses the main findings and presents recommendations for employers, governments, universities and students.

2 Recent studies

Economic globalisation and technological change have resulted in an increasing focus on human capital. The level of educational attainment in a population is a 'commonly used proxy for the stock of 'human capital', that is, skills available in the population' (OECD, 1998). There is considerable variation between countries in terms of the highest educational level attained by the population. Table 1 shows the percentage of the population having completed higher education[1] in the countries of the European Union, Australia, the USA and Malaysia (a non-OECD country).

There are clear differences between the countries in terms of the percentage of the population having completed higher education, but to some extent this is due to differing education and training systems (see West, 2000). Nevertheless, in most of the countries, a significant minority of the population has completed higher education.

[1] Higher education refers to levels 5, 6 and 7 in the International Standard Classification of Education (ISCED).

Table 1 Percentage of the population aged 25 to 64 having completed higher education

Country	Percentage
Australia	**25**
Austria	8
Belgium	24
Denmark	22
Finland	21
France	19
Germany	22
Greece	19
Ireland	23
Italy	8
Luxembourg	11
Netherlands	23
Portugal	10
Spain	18
Sweden	27
UK	**22**
USA	**34**
Malaysia	**7**

Source: OECD (1998)

The European Roundtable of Industrialists (ERT) (1998) highlighted the need for a highly skilled population for a knowledge-based economy: '**A knowledge-based economy cannot be separated from the skill-sets of its citizens**'. Along with 'hard' skills there is a need for other types of skills - interpersonal and problem solving skills – together with attributes such as responsiveness, innovation and entrepreneurship. The ERT also explicitly recognises the role that industry has to play in higher education. A particular concern however relates to the **'persistent mismatch between the skills required by employers for new vacancies and those offered by entrants into the labour market'** (European Roundtable of Industrialists, 1998).

The need for skills that are conducive to innovation has also been raised explicitly by the European Commission (1997) in its publication 'Towards a Europe of Knowledge': '**The emphasis should be ... on a set of skills (technological, social and organisational) which are conducive to innovation'.**

Figure 1 Knowledge and skills proposed by the European Round Table of Industrialists

- Europe … needs a highly knowledgeable workforce with a constantly evolving palette of skills and aptitudes … Today we need to train people to be able to adapt to future jobs in areas that have not been identified yet.
- Our aim is all-round individuals with strong interpersonal skills, capable of living with uncertainty, keen to search for innovative solutions to complex problems, and committed to Lifelong Learning.
- All too often the education process itself is entrusted to people who appear to have no dialogue with, nor understanding of, industry and the path of progress.

Extracts from: European Round Table of Industrialists (1998)

As employers are key stakeholders in the education system, their role is of major importance, for a number of reasons, not least because they are major recruiters of graduates. However, whilst we have information from surveys about employers' behaviour in relation to recruitment, we have little detailed information about the skills perceived by transnational corporations to be needed in a globalised economy, the recruitment process, attitudes towards university education, perceptions of quality and so on.

Within the UK, Harvey with Green (1994) found that employers wanted graduates who 'not only add value but are likely to take the organisation forward in the face of continuous and rapid change'. Five broad areas of graduate attributes emerged in their research as being of major importance to employers, namely, knowledge, intellectual ability, ability to work in a modern organisation, interpersonal skills and communication. One area of particular interest in the current study is on 'core skills'. Harvey and Green suggest a range of generic or core skills and attitudes as shown in Figure 2.

Figure 2: Attributes in addition to knowledge identified by employers in the Quality in Higher Education Project

Generic or core skills

- Team work
- Communication skills
- Problem solving
- Analytic ability
- Logical argument
- Ability to summarise key issues

Personal attributes

- Commitment
- Energy
- Self-motivation
- Self-management
- Reliability
- Co-operation
- Flexibility and adaptability

Source: Harvey with Green (1994)

The concept of core, generic or key skills has been part of the policy agenda in the UK for much of the past decade. However, in recent years, they have become central to education policy in England especially, but not only in relation to secondary education, with six key skills having been identified:

- Communication
- Application of number
- Information technology
- Working with others
- Improving own learning and performance
- Problem solving

Dench et al. (1998) in their study of employers' perceptions of key skills reported that employers themselves felt that there were several groups of skills that were also important, namely personal and interpersonal skills and abilities, customer service and understanding quality, business awareness and personal and staff management.

In this context it is useful to consider the distinction made between 'hard' and 'soft' skills. 'Hard' skills include literacy and numeracy at one end of a continuum and job specific technical skills at the other. 'Soft' skills include communication and people skills, teamwork skills, demeanour, motivation, flexibility, initiative, work attitudes and effort (see Moss & Tilly, 1995). The term 'skills' may be 'a misnomer, though employers most definitely conceptualize these attributes as skills' (Moss & Tilly, 1995).

Clearly, the skills – 'hard' and 'soft' – may not be identical to those sought for those without a higher education qualification. Nevertheless, the various conceptualisations of skill areas provide a valuable framework for the present study. This is particularly important as recent research by Pearson et al. (2000) in the UK indicates that the major graduate recruiters still cannot get all the good graduates they want and that qualifications may provide little guidance as to capability.

3 Methods

The study reported here involved seeking the views of respondents from transnational corporations and other major companies based in the UK, the USA, Australia and Malaysia about higher education by means of interviews and questionnaires. Preliminary interviews were carried out to inform the design of the interview schedule/questionnaire and links were then made with selected companies. Information from respondents was gained by means of interviews in the UK and Australia and from semi-structured questionnaires with respondents in all four countries. The advantage of this method was that it enabled us to gain more detailed and in-depth information about employers' attitudes, policies and practices and about their perceptions of higher education than would have been possible with a quantitative survey.

Information (obtained by interview and/or questionnaire) was obtained from a total of 20 respondents from 14 transnational corporations and other major companies in four countries. The companies covered, in the main, the sectors of oil extraction, manufacturing (motor vehicle, other transport, chemical, pharmaceutical, petrochemical), financial services. There were 7 responses from the UK, 2 from the USA, 10 from Australia and 1 from Malaysia. The post held by the respondent differed from company to company (e.g. Managing Director, Manager of International Graduate Training, Personnel Development Manager, Head of Human Resources, Head of Management Recruitment and Training).

4 Main findings

Qualities and attributes sought

Respondents were asked what qualities and skills they looked for in graduates. They identified a range of attributes and commented on the perceived shortcomings of higher education institutions in encouraging their development.

The skills and qualities sought by respondents comprised knowledge, excellence in field and/or technical expertise together with a range of 'soft skills'[2]. The main 'soft skills' (we have sub-divided these into key skills and personal attributes) mentioned are presented in Figure 3.

Figure 3 Most frequently mentioned 'soft skills'

Key skills	*Personal attributes*
Team work	Motivation/drive
Analytical/thinking skills	Business awareness
Communication/presentation skills	Independence
Interpersonal skills	Creativity/innovation
	Leadership/management

In addition to these frequently mentioned 'soft' skills were others: problem solving, personal development, managing risk, multicultural awareness, ambition, resilience, honesty, integrity, being mobile and having an international outlook, together with 'hard' key skills such as numeracy and information technology literacy.

More than half of all respondents referred to technical skills (by which we mean the skills required by particular types of employment) and one respondent stated explicitly that 'soft skills' were of primary importance and technical skills only secondary. However, for other posts employers clearly needed recruits with specific technical skills.

Inevitably the mix of skills and qualities sought varied according to the recruit's initial job and the company's aspirations for their recruits, as is reflected in the following responses from different companies in the same sector:

> We recruit specific disciplines for certain parts of the organisation, for example, chemical and electrical engineers for refineries, accountants for finance, lawyers for legal and so on, generalists for other areas such as marketing … Those who excel in all-round terms in their initial positions in the company tend to become generalists over time and move increasingly through a range of general management roles without returning to their field of expertise necessarily, although obviously some do but in a general management capacity. There are those who, on the other hand, wish to move only within their respective discipline and aspire to becoming true experts in their field by moving through a sequence of increasingly senior jobs, but within the discipline only. We require both sorts (Australia[3]).

[2] It should be noted that we sought responses from individuals in different positions in companies. There was variation in terms of the responses given by those in human resources and in other positions, for example, but it did not prove possible to systematically analyse this.

[3] The country in which the company is based is given in brackets.

> All parts of [the company] assess on the same competencies and are seeking roughly similar profiles. The key difference is that some groups may wish to hire only graduates who they believe may become the future leaders of the company, while other groups may be interested in hiring someone who they believe will be (and likely remain) a highly competent individual contributor (USA).

Even for those requiring specific technical skills, many employers referred to 'soft' skills that were also essential. Thus, while respondents referred to a wide range of technical competencies (e.g. in software engineering, pharmacology or forestry) and specific forms of knowledge (e.g. finance), they also referred specifically to key skills such as **teamwork, communication** and **presentation skills**. Key skills, and in particular **interpersonal** skills, were a recurring theme in many of the responses yet they are often neglected in university courses.

Not surprisingly **analytical skills** were also identified by recruiters as a key skill. As noted by a respondent from the financial services sector:

> Learning by rote is not a lot of use to businesses. We need people who have the ability to investigate, analyse and report succinctly on complex issues, who have the ability to work in small teams and maintain composure under pressure. A grounding in all of these requirements, together with other life skills should be an integral element of all university courses (UK).

The final characteristic identified by employers as particularly valuable in prospective recruits was **work experience**. As one respondent from the financial services sector explained:

> We see a marked difference in the capability to learn at the business pace – rather than an academic pace – between people who have no previous work experience and those who have worked or who have undertaken industrial or sandwich placements in business/industry. Many undergraduates with no previous work experience are still very naïve about the 'real world' and the transition period is very painful for many of them. As an employer we take the view that time at university is to help prepare young people for their working career e.g. management, but this is lacking in many areas (UK).

In summary, respondents identified a range of key skills and other attributes that they sought in graduate recruits. These included technical skills but employers also emphasised core competencies such as teamwork, presentation skills and analytical skills. **Indeed, these key skills were sometimes explicitly given priority over technical skills. Several respondents suggested that universities failed to promote adequately the development of these key skills.** In addition they sought personality traits which universities are perhaps less able to affect. **Employers also reported that they valued business experience very highly as many recruits found the transition from higher education to employment difficult.** It was suggested that many graduates did not have a clear idea of the type of employment they wanted and that they were not prepared for the requirements of working life.

Figure 4 Characteristics/competencies sought by two transnational corporations

Company in the financial services sector

Australian Office	*USA Office*
▪ Interpersonal skills	▪ Team work
▪ Problem solving skills	▪ Problem resolution
▪ Analytical skills	▪ Innovation & creativity
▪ Presentation skills	▪ Multicultural awareness
▪ Writing skills	▪ Communications
▪ Ambition	▪ Technical expertise
▪ Resilience	

Company in the petrochemicals sector

USA Office
▪ Technical understanding
▪ Business/commercial awareness
▪ Growth potential (openness to new ideas, 'outside the box' thinking, demonstrated personal development etc.)
▪ Abstract thinking/creative problem solving
▪ Communication/persuasion/relationships
▪ Teamwork
▪ Bias for action (decision making/results orientation)
▪ Leadership

However, even within the intellectual abilities sought by employers there were certain skills – both 'hard' and 'soft' – that certain respondents found were absent in some applicants. One listed several such deficits:

> First, numeracy – in many candidates this lets them down. There is a real concern as to the quality of numeracy in candidates leaving university – especially with business degrees. Second … complex problem solving – engineering, project management skills… There is a lack of practical skills available. Third, presentation skills – these need to be polished. The universities do not prepare them for this. Fourth, most applicants have no idea as to what a career is. This is defined … as the application of skills in the market place. The 'world' requires a core set of competencies. Can they manage other people? Can they manage a budget? They need intellectual rigour and the ability to apply practical skills (Australia).

The issue of application of practical skills is one that needs to be stressed and pervaded the responses made. Tied in with the issue of the skills and attributes of graduates sought by employers is that of the aims of higher education.

Aims of higher education

Overall aims

Employers' views of what they felt that the aims of higher education should be were diverse, but many of the issues raised were related to the development of key skills. These can be seen to be outcomes of the higher education system, having a bearing on the future employability of graduates. One respondent suggested that good universities provide an environment in which these 'soft' skills may develop and flourish:

> Universities should provide a strong technical foundation for graduates within their given discipline, and should also provide an environment where they will develop skills that they will need in business e.g. interpersonal communication, teamwork, leadership etc. (USA).

One respondent explicitly rejected what was perceived to be an overemphasis on technical skills:

> Many courses are becoming too specialised and graduates tend to have a limited focus ... [Universities] need to understand organisations vary and their needs will therefore vary also. Quality higher education [comprises] solid grounding [in] the technical fundamentals, industry exposure/link [and] thought provoking and insightful learning (Australia).

However, almost all other respondents raising this issue also emphasised that universities should incorporate 'soft' skills into formal study rather than relying on extra-curricular activities for their development. For example, one respondent, from a company in the financial services sector suggested that the aims of higher education should be:

> First, to provide an individual with an enjoyable, stimulating and challenging environment in which to further their knowledge of topics of their choice, and to ensure this is tested against a nationally/internationally recognised standard … Second, as part of the above, [universities should] prepare graduates for a working career i.e. provide them with some life skills as part of their mainstream curriculum and not rely on this being undertaken through extra-curricular activities (UK).

This point was echoed by the respondent from another company in the same sector who also highlighted the importance of higher education being able to meet the needs of a global economy:

> The education also needs to include the opportunity to develop 'people skills'. It must focus on the present and anticipated needs of a global economy (UK).

This comment chimes in with two others:

> The aims should be wide ranging. They should include provision of vocational training as well as academic education. They need to be in tune with a global economy (UK).

For one respondent (based in Australia) the importance of higher education contributing to the economy was of paramount importance as the aim of higher education. For him the aim of

higher education should be 'to produce graduates who can contribute to [the] economic growth of the country and can be internationally competitive'.

It was also emphasised by another respondent that 'soft' skills must be acquired in addition to and certainly not at the expense of intellectual rigour:

> The key aim in my view should be to maximise the intellectual capability of individuals. Universities should encourage and facilitate the development of other competencies but not at the expense of the intellectual rigour of courses (UK).

For some employers a crucial aim for higher education should be preparation for the world of work with 'hard' and 'soft' skills being important:

> To fit people for work. We don't want clones. They need to be good citizens. Work is part of that. [They] need knowledge to work effectively. [We have an] industrial mathematics programme for [our] employees, also literacy classes. This is not unique to us. It is the same everywhere (UK).

> To prepare people for entry into the work force. To provide both theoretical knowledge and the ability to apply it to real life situations. To encourage people to become lifelong learners (Australia).

> To prepare the student to cope with the ever-changing workplace and to be 'thinking problem solvers' (USA).

> To produce a well-rounded graduate with current academic knowledge of the discipline pursued, a well-developed social conscience, self-reliance, curiosity and preparation for either further education or the work force (Australia).

Another respondent stressed the importance of higher education preparing young people for the world of work, when she commented that one of the aims of higher education should be to 'assist in the provision of basic skills to enter the work force' (Australia).

One respondent (based in Malaysia) noted that one of the aims should be even more explicitly linked to the world of work. It should provide 'an opportunity to explore the various possibilities in the business environment and select the career based on their interests'.

Two respondents (both based in the UK) focused on the aims of higher education being to meet the needs of society more broadly:

> To provide research into issues for society's development [and] provide society with a continuous flow of bright minds open to new ideas.

> To add value to school leavers for business and society, by educating students to learn, become professional and work in teams.

The combination of developing the skills, experience and insight of the graduate, and the ideal confluence of the graduate's and the employer's interests were perhaps best summarised by the following employer:

> Universities should focus [on providing] the best tertiary education, not only... technical skills but also to provide for the changing business environment in terms of the skills needed. Universities must be conscious of the growing needs of business and to generate graduates who can fulfil these needs. Universities should also focus on providing the graduate with knowledge of the 'real working environment', i.e. team work, coping with stress, interacting with others, etc. Universities should also provide counselling for graduates to realise their strengths and their interests to ensure that they are ... preparing themselves for [working life]. Programmes ... must be an avenue for graduates to explore the various possibilities and not pursue a programme which 'others are doing' or 'will make them lots of money'. Most graduates start the job search unable to determine what they want to do. Graduates tend to find themselves doing things they are not comfortable with. Though they may be good, organisations do have difficulty in increasing their productivity, as the interest is not there (Malaysia).

Should all universities have the same aims?

We wanted to establish the extent to which employers felt that all universities and higher education institutions should be attempting to achieve the same aims. The responses were mixed, with a majority saying that they should not:

> It is not possible. Some universities are better able to train students for careers, others are stronger in research and a traditional academic education. We should not attempt to make all universities the same (UK).

A small number thought that the aims, in general, should be similar:

> In the main yes – that's what industry and commerce seek. What is more important, however as a principle, is for universities/faculties to understand the needs of their customers, defined by me the end user ('the potential employers of their students'), in some depth and work backwards to produce an outcome or a 'product' that is 'fit for purpose' within given industries (Australia).

> In the maintenance of overall degree standards – yes. In providing mainstream curricular opportunities for the acquisition of life skills – yes. In continuously improving the standard of teaching within faculties – yes. In encouraging self-learning rather than learning by rote – yes (UK).

Others had mixed views:

> Yes and no. The above outcomes [universities aiming to produce graduates with the ability to adapt their learning into the workplace and ensuring that courses are continually reviewed to maintain industry relevance] are relevant. However, due to the diversity of courses and industries, other goals would vary (Australia).

We now move on to look more specifically at how transnational corporations and other major companies recruit graduates.

Recruitment of graduates

Here we examine a number of issues related to the recruitment of graduates. First, we explore the extent to which employers target universities; second, we explore internal and external information sources used; third, we examine how the concept of quality is understood by employers and how it ties in with reputation; and fourth, we examine employers' satisfaction with graduates recruited to the company.

Targeting of institutions

Respondents were asked how they recruited graduates and which institutions, if any, they targeted. Only two respondents reported that their companies did not target specific universities or departments. One explained that their company (the Australian office) had examined the relationship between institution of origin and graduate performance and found no 'significant correlation'. The other (based in Malaysia), suggested that individual characteristics were always given priority over the institution from which an applicant had graduated. This, however, was the only occasion on which this was raised, and is likely to be a function of the higher education system in Malaysia.

The vast majority of respondents however referred to targeting universities for recruitment rather than targeting particular faculties or departments. There was one notable exception to this in that a respondent based in the USA was able to list a total of 70 individual departments that were visited for recruitment purposes in one year. A different set of departments was selected for each of the six disciplines from which graduates were most often recruited. This included, for example, separate lists of institutions for recruitment from undergraduate and postgraduate chemistry courses. This level of sophistication, differentiation and the level of resources undoubtedly associated with such institutional targeting was not reflected in the responses from other companies.

For several companies the institutions named as target universities offered courses of particular relevance (e.g. pharmacology for a drugs company based in Australia) or courses of a particular type. For example, one respondent commented:

> The Royal Melbourne Institute of Technology [is targeted] because the graduate is very practical, but we need also a proportion (say 20%) of theoretical engineers from say University of Melbourne.

This was echoed by another respondent who noted targeting the accountancy department at Monash University, but recruiting generalists from the Universities of Melbourne and Sydney. In contrast to the examples above where courses were targeted so that recruits could be guaranteed to have particular technical skills, for several companies target universities were identified without reference to specific departments or courses. Thus one respondent, for whose company the degree subject was 'mostly immaterial', explained:

> We target 15 universities because the vast majority of our successful applicants attend these institutions. The target universities are Strathclyde, Edinburgh, Durham, Manchester, University of Manchester Institute of Science and Technology, University College Dublin, Trinity College, Dublin, Leeds, Birmingham, Loughborough, Warwick, Nottingham, Oxford, Cambridge, Bath, Bristol, Imperial College London …

> We do not avoid any institution in the sense that we would not accept applications from them. But we put no effort at all into marketing our graduate scheme in about 75% of all UK universities. The single most important reason is that only a small handful of applicants from these universities meet our required level of intellect (UK).

Targeting prestigious institutions in this way was very common. Thus, for example, the Australian respondents as a whole made 23 specific references to individual universities, 21 of which named either one of the Group of Eight 'leading research intensive universities' or the Royal Melbourne Institute of Technology (RMIT). Interestingly, the other two institutions named were offering courses specifically geared to the needs of the employers concerned.

While some companies carried out the entire recruitment process themselves, others used recruitment agencies, especially for the earlier stages of the selection process. Methods of institutional targeting reported by respondents included awarding extra points to graduates of specific institutions at the short-listing stage of recruitment, participating in graduate recruitment fairs or building up relationships with the relevant careers offices. Thus, for example, two Australian respondents reported targeting in the following ways:

> The main universities are Melbourne, Monash, RMIT, Sydney, NSW, Queensland … We don't actively avoid any but do recognise where, through experience, it's best to concentrate our finite resources in the area of attraction and recruitment … We advertise on most university campuses in Australia and part of the selection process for curriculum vitae awards more points to certain universities or faculties than others.

> [We don't target] specifically – though we do actively participate in on-campus information days at the 'major' universities i.e. Melbourne University, University of NSW, Monash, RMIT etc.

Similarly a UK respondent explained:

> We do not canvass applications from the former polytechnics or institutes of higher education [now 'new' universities] … However, we accept unsolicited applications from graduates at these institutions.

Thus the picture emerging was of companies using a range of techniques to encourage applications or recruitment from particular, high status institutions while not actively discouraging or avoiding applications from elsewhere. In fact, no respondent reported avoiding certain higher education institutions when recruiting students.

When asked what information they used to choose which institutions to target, one respondent (based in Australia) replied, rather succinctly 'generally, we don't discriminate formally, we just know'.

Clearly this begs the question as to why those particular institutions were targeted and what precisely employers knew about them. We asked further questions about the institutional characteristics they were interested in and the sources of information used to assess which institutions should be targeted.

Information sources

Internal sources of information

Respondents were asked what information they used to identify those universities producing the most suitable graduates. One, from the UK, stated simply, 'Our own track record of recruitment' while another suggested that:

> We read the [reports produced by the UK quality assurance bodies] but they don't really influence us. We have our own records and experience.

Indeed, for most companies, past experience was the key source of information. One respondent explained:

> The only guide we use is experience over a prolonged period, given we've been recruiting here in Australia for some 20 years at least. We have good contacts with academic staff in the selected faculties or universities referred to earlier and monitor carefully trends in respect of successful recruitment and subsequent retention rates in particular. [We are] not great believers in league tables etc as they tend to focus on relative academic achievement rather than a balance between this and producing focused practical employable graduates who 'hit the ground running' in an age where no corporate can afford to 'carry' staff (Australia).

It is worth noting a distinction here between decisions being informed by *past experience* (reported as a key factor by almost all respondents) and being informed by *past practice* (reported by two UK employers). Whether this is a real distinction or simply a matter of idiom is impossible to say on the basis of our data.

However, if there is a real distinction then this would clearly have implications for both universities and prospective students. To put the matter bluntly, if employers target institutions because of their experience of variation between the quality of previous graduate recruits from different institutions then we might expect greater responsiveness to emerging variation in the quality of graduates from different universities. However, if decisions as to which universities or departments to target are made on the basis of past practice (and, obviously, satisfaction with that practice) then we might expect recruitment sources to change more slowly. These two scenarios would clearly have different effects on the incentives for students to attend different institutions.

Thus past experience and practices, over and above external sources of information such as league tables or quality assessment by government or other agencies, provided the primary source of evidence for respondents. And most often, it was the companies' experience of the academic standards achieved by students of different institutions that influenced their decisions to target particular institutions.

For example, one respondent (based in the UK) referred to the 'required level of intellect'. Others, both from Australia, mentioned 'comfort with the academic level of [particular] institutions' or universities that 'excel in academic excellence'. The latter respondent, when asked where they recruited graduates, replied as follows:

> From Melbourne and Monash – rarely from [X and Y universities]. Candidates from the latter universities usually fall at the assessment stage, they do not have the necessary intellectual skills.

However, the perceived academic standard of an institution was not the only criterion used for targeting universities for recruitment purposes. Some companies wished to recruit foreign students to work for the company in their home country. Thus several respondents reported that they targeted universities with more international student intakes. Respondents from a company in the financial services sector in both the US and UK explained that they targeted institutions with large numbers of foreign students. For example, a UK respondent, who recruited for an international graduate recruitment programme, explained:

> We specifically target universities which have overseas graduate populations for the countries on whose behalf we recruit.

Similarly, if slightly more parochially, one of several reasons for targeting specific institutions in the USA was as follows:

> We visited several 'cold weather' schools last year because we were having difficulty attracting students from 'sun belt' schools to work in Alaska.

Further reasons identified by this respondent for targeting particular institutions were universities' proximity to company offices, especially when the company was attempting to build up good community relations by hiring locally, and also universities having high proportions of ethnic minority students as this enabled the company to improve the balance of its employee profile.

External information sources

Having described some of the lessons which respondents suggested they had learned from their own experience, it is interesting to examine how, if at all, external sources of information were used. In particular we consider the role of university league tables, entry requirements and reputations in decision-making.

It is useful to consider the response received from a company without a long track record of recruitment. The respondent (from Australia) suggested that as the company had only been operating for six years they were unable to comment on whether or not they were satisfied with their graduate recruits. This was also one of only three respondents to state that the company made use of league tables for recruitment purposes. For one company making use of league tables they were only a small element of a battery of information sources. As the respondent explained:

> We use … published lists, reputation and experience. We also rely on our managers and employees working in a specific discipline for their opinions on the quality of discipline programs at various universities (USA).

A third (based in the UK) used both league tables published by a quality daily newspaper together with 'university statistics'. Another reported making use of league tables though only to assure the quality of their own recruitment practices. As he explained:

> We only use league tables as a means of quality control for *our* recruitment practices. We would expect to recruit graduates from the best universities (UK).

Thus, our findings suggest that league tables do not, at least directly, affect the recruitment practices of most of the transnational corporations participating in this study.

What is a 'quality' higher education?

In attempting to unpack some of the differing interpretations of these sources of information it is important to begin by discussing the notion of a 'quality' education. It is implicit in the data that respondents understood 'quality' in different ways. This lack of a consensual notion of 'quality' is reported in the academic literature (e.g. Pollitt, 1992).

Some of our respondents saw quality as relating to the outcome of higher education (for example, the employability of graduates and their ability to thrive in a business environment) while others understood quality to pertain to educational output (for example, relating to traditional academic standards). A few respondents understood quality in the sense in which it is used in the UK higher education sector, that is as the quality of the educational process and to the value added by higher education for a given set of inputs. (The terms outcome, output and process were not necessarily used by respondents with the same meaning as they are used in this report.) Yet even taking account of this threefold distinction, respondents still interpreted entry requirements and reputations in very different ways. **In short, the concept of quality is understood differently by different respondents.**

Those for whom quality was simply a matter of educational output saw a clear and unproblematic relationship between entry requirements and quality. For example, when asked 'Do entry requirements for a particular course or a particular university tell you anything about the quality of the education provided?', a respondent replied:

> Of course. The more difficult admission is, the better will be the students taken in. In the American context, the brightest graduates come out of the universities with very demanding entry requirements such as Harvard, Yale, MIT [Massachusetts Institute of Technology], the University of California at Berkeley and Stanford as opposed to state universities which have an obligation to accept state residents provided they pass the most basic entry requirements (Australia, educated in the USA).

But for other respondents, quality of traditional academic output arising from high entry requirements was no guarantee of good recruits - that is, of a good employment outcome. One respondent (based in Australia) stated this bluntly when asked whether high entry requirements signalled a high quality education: 'Yes, but that does not guarantee a good fit into the company'. Yet another respondent made a similar point at greater length:

> While the entry criteria may be stringent and/or a course tends to be popular, causing competition for the number of places on offer (or indeed the reverse [regarding] less popular courses) this is not necessarily an indicator of the quality of the education. Quality is about producing 'fit for purpose' students … I have seen some highly intelligent, yet hopelessly impractical, students produced by faculties/universities regarded as the best in the land. Best at what? (Australia).

One respondent, this time from the USA, saw academic standards as part of a package of characteristics which tended to come together in good quality universities:

> Generally, if a [university] has stringent entry requirements, it is an indicator that its graduates will have rigorous training in their coursework and will have to prove their knowledge and understanding of the chosen major prior to graduation. High standards to gain entry into a university tend to foster high expectations on the part of the faculty and the students to maintain those standards. Generally such institutions also require evidence of extra-curricular activities, and require those to be sustained throughout enrolment. This enables the institution to build and maintain a reputation for providing a high quality education and for producing the type of well-rounded individual, with demonstrated leadership skills, that we are seeking to employ.

This response, linking entry requirements with a set of process (raised expectations, extra-curricular activities), output (rigorous standards) and outcome (well-rounded individuals with leadership skills) effects brings us on to a set of responses which focused not on educational outputs or outcomes but directly on the effects of high entry requirements on the educational process.

One respondent, from Australia, suggested that high entry requirements provided a beneficial challenge to students and a motivating peer group, in short, 'the greater the difficulty of entry, the harder the student will try'. Others focused instead on potential positive effects on university staff rather than students. Two suggested higher requirements might ensure a greater rigour in teaching:

> [High entry requirements] facilitate the process of determining the 'level' of accomplishment required (USA).

> They … suggest … there is likely to be a greater degree of academic rigour to the course (UK).

Two others, both from the UK, reported that high entry requirements could make teaching better: 'High entry requirements suggest to me that the course is likely to be of high quality' and: 'The inference we draw is: good [GCE] A levels equals good points score equals acceptance onto programmes where quality of teaching is related to the capability of students'. However, the latter then put in a caveat due to uncertainty as to whether this educational process benefit necessarily meant a higher quality outcome. That is:

> However, we do not know enough about the correlation between the above [relationship] and performance/success in the first few years of work.

Another respondent was more guarded about the potential positive effects of entry requirements on the quality of the educational process. This respondent, from Australia, suggested that a high entry requirement:

> Tells us something about the initial quality of the students entering and as a consequence may impact on the standard of education provided.

While this respondent did not make clear whether this might be a positive or negative impact on the standard of education provided, others were more certain that high requirements could actually have negative effects on the quality of the educational process. For example, one

(from Australia) suggested that some universities with higher entry requirements had failed to update their courses or to keep them in line with industry requirements. Another, from the UK, suggested the relationship in general was, 'probably negative. Those with the best reputations are most complacent'. This respondent went on to suggest that some courses in less prestigious institutions provided more added value and were therefore of higher quality though acknowledging that the 'peer group is not as interesting'. He also suggested there may be a negative relationship between research quality and teaching quality. Similar sentiments were expressed by another respondent from the UK:

> Some of the old polytechnics [now 'new' universities] have got superb teaching – students there don't reach the same standards but that's separate. In 'old' universities they're so busy in research.

In summary then, while some saw an unproblematic relationship between entry requirements and educational outputs or employment outcomes, others were more guarded. Respondents were split as to whether high entry requirements tended to enhance or diminish the quality of the educational process. Nevertheless, as employers are obviously interested in absolute standards rather than the value added by particular institutions, they still recruited graduates from institutions with higher entry requirements. Clearly we would only expect to see such a phenomenon in countries with a hierarchy of universities and competitive entry for students as in Australia, the UK and the USA, but this may not be the case in countries where there is more parity of esteem across institutions, such as for example, Germany.

Academic credentials and 'quality'

It is important to note that UK degrees are not seen as comparable across institutions either by employers or by universities (Higher Education Quality Council, 1997) and this was reflected in responses. One company, however, had found a link between GCE A level[4] performance and job performance. Consequently, as access to GCE A levels is very wide, the company felt happy targeting universities with high entry requirements. Similarly, another company (in a different sector) looked for consistency between GCE A levels and degree result rather than relying solely on degree results, and another company in the same sector also required good results in both GCE A levels and UK degrees. The lack of comparability of degrees in the UK was reflected in the comments of a representative of the UK Council for Industry and Higher Education:

> We are concerned about quality and particularly, I think, our employers' view is that there is no such thing as comparability of degrees, and that makes it very difficult. I don't think there ever was a gold standard, but the increasing plethora of degrees and different courses and modules has made it even more difficult for employers, and it confirms that there is no such thing as comparability. Also, I think employers would say there is no such thing as comparability of degree standards even within an institution (cited in Holdstock & West, 1997).

In contrast to the UK, where GCE A level certification provides the 'gold standard' for academic comparisons, comparable national systems of assessment at the end of secondary

[4] General Certificate of Education (GCE) Advanced (A) levels are generally taken in around three subjects at the end of upper secondary education (age 18). They are the normal entry requirement for higher education in England, Wales and Northern Ireland.

education do not operate in either the US or Australia where education is primarily a state rather than federal responsibility. Respondents in these countries therefore referred to university-based assessments for making judgements on academic credentials. Interestingly, one Australian respondent explained that they did not differentiate between a pass degree and an honours degree (requiring an extra year's study) as the additional year was not perceived to add any value.

We have thus suggested that employers tended to target universities rather than departments and that they primarily (though by no means solely) referred to academic standards as their key criterion for selecting institutions. In addition, we have suggested that, in the UK, GCE A levels were seen as the 'gold standard' for making comparisons. It is therefore interesting to examine which universities employers actually targeted for recruitment. We focus here, specifically on the UK.

Universities targeted in the UK

We examined the average entry requirements for courses from which they reported recruiting graduates (namely all forms of engineering, chemistry, physics, maths, business/management and accountancy/finance). Not surprisingly, the universities named by respondents were among those with the highest entry requirements in the relevant subjects. Large, high profile, civic, 'redbrick' universities (such as Birmingham and Manchester) tended to be targeted by each of the employers as well as Oxford and Cambridge.

In contrast, some smaller, newer and lower profile universities with comparable entry requirements (such as Lancaster and Sheffield) were omitted. And in view of the importance attached by employers to business experience, the absence of the University of Surrey (combining high entry requirements with a history of providing courses involving industrial experience) was perhaps most notable.

Several explanations might be proposed to account for this pattern of institutional targeting. First, our analysis of entry requirements was undoubtedly crude and recruiters may make their decisions on the basis of qualitatively different information. Second, as we noted earlier, entry requirements were by no means the only criterion for targeting institutions. It is possible, for example, that higher profile, traditional universities may attract different types of students who appeal, in turn, to particular employers. Third, we might suggest that rather nebulous institutional reputations play a part in the targeting process.

Reputation and quality

The concept of 'reputation' has many different connotations, but was characterised by the respondent from one UK company in the following way:

> [Reputation] refers to eminent alumni, research record, the number of people with Nobel prizes, the place in society of that institution, and where the students are highly regarded and prized.

When we asked explicitly whether reputation was felt to be an indicator of quality, most respondents reported that it was a useful indicator, with a minority saying that it was not and a small number noting that reputations tend to lag behind reality and so it would be unwise to use reputation as the sole source of information when trying to identify institutional quality (see Figure 5). Reported attitudes to institutional reputations were thus more straightforward than

attitudes to entry requirements although perhaps, paradoxically, more difficult to interpret. In general, responses to our question about the importance of reputations are summed up by a respondent based in the UK: 'There's no smoke without fire'.

Figure 5 Is reputation a useful indicator of quality?

Reputation is a useful indicator

Yes, but often misleading (Australia).

Not a total guarantee, but a fair indicator (UK)

Yes, people will always form views based on the perception of the quality of those entering and graduating from a course (UK).

Reputation can be problematic

I think a reputation is earned. Therefore, if an institution has a reputation as a high quality school, it probably is. However, I also believe that reputation should not be the sole criteria used in determining a school's quality. A school may undergo a change in faculty or leadership that changes the quality, and it may take a while for its reputation to catch up with the change. Therefore, to rely on reputation alone can be a mistake (USA).

Reputations are based on the past – we are much more concerned with the present/future. University reputation was frequently based on anecdotal evidence with little empirical data available. Faculty reputations are now being proved or disproved through government reports into quality of teaching … Therefore some reputations have been proved to be well-founded and vice versa (UK).

'Reputation for what' is the critical question … If the reputation of a certain university/faculty is to produce the 'fit for purpose' individual … then the concept of 'reputation' will count for something (Australia).

The perception of a university's standing is often taken as a measure of the quality of output but the reality can be very different. For example, I'm not sure we get anything extra out of Oxbridge [Oxford and Cambridge] (UK).

On the basis of our analysis of universities targeted by companies; information used by companies, including entry requirements; and the importance attached to the concept of 'reputation', it is clear that employers are seeking to attract the highest calibre graduates to their companies. However, it is *not* clear that sufficient information is available for them to make the most effective choices about which universities and faculties they should seek to recruit from. We now move on to examine respondents' satisfaction with their recruitment of graduates.

Satisfaction with the recruitment of graduates

We wanted to establish whether the graduate recruitment process was perceived by employers to be a success. In virtually all cases, respondents reported that they were satisfied with the quality of graduates that they had employed over the past five years:

> Overall, [we are] very pleased with the results: we work hard at retention, given the high cost associated with the premature loss of graduates. Our process (focused on assessment centres, structured interviewing techniques etc.) is robust and has stood the test of time since its inception some 7 or 8 years ago, not just in Australia, but throughout the [group] (Australia).
>
> We are very satisfied with the calibre of new hires. We are, however, disappointed by the turnover experienced over the past 5 years or so due to our corporate downsizing efforts (USA).

However, in spite of overall satisfaction, there were concerns about skill gaps:

> Fairly satisfied, although they tend to have a higher level of technical skill and not so many 'soft' skills (Australia).
>
> Very satisfied with those employed but we do go through a great deal of effort to select these. There are still skill gaps in many of those we see (UK).

One comment from a respondent in the financial services sector related to the success of graduates who had undertaken industrial or 'sandwich' placements in business/industry:

> Very satisfied … We go to great lengths to recruit only high-calibre people onto our international programme. The results to date are most encouraging. We regard our international recruits as the core group of future managers … Because of the success of integrating students who have undertaken sandwich degree courses, we believe there is more scope for institutions to extend this option to students – but much would depend on businesses making places available (UK).

Clearly, the employers who responded to our survey felt that the recruitment process, on the whole, was working well although on the supply side the graduates were sometimes reported to lack certain key skills identified earlier. The importance of work placements again emerges as an important positive factor.

This ties in with the next issue that we address, namely employers' views of what constitutes a high quality university education.

Quality in higher education

From our earlier analysis it is clear that 'quality' has different connotations for different respondents. However, when we asked explicitly what made for a high quality university education, a rather different set of issues emerged. These related to inputs to the system (e.g. selection of students), process (e.g. teaching, learning, research) and outcomes (e.g. in relation to employability).

Whilst in many cases a high quality university education was felt to be one that achieved the aims respondents had identified for higher education as a whole, in several instances other issues emerged, often directly related to the core functions of higher education – teaching, learning and research – but in the context of future employment. The importance of self-learning was highlighted in a number of cases:

> One that selects from very high quality candidates and the depth, breadth and quality of teaching substantially stretches students. The emphasis should be on self-learning with tutorial support, but within small groups as well as individual learning. People who join us having been 'taught' in large groups numbering between 50 [and] 100 struggle with small group/syndicate ethos within business. Therefore in some way, [universities] should mirror typical business behaviour (UK).

The importance of high quality university academics was implicit in some responses, as the following comment demonstrates:

> Consists of high quality academic study in the chosen subject(s), led by acknowledged leaders in their respective field, which focuses not on study in its own right but seeks to understand the practical impact of theory in the 'real life' international or global business world (Australia).

Other respondents focused on innovation and research, sometimes with an explicit link to preparation for entry into the workforce, for example:

> Preparation for entry into the workforce, solid theoretical understanding based on expanding research and the ability and willingness to apply it to competitive situations. Students who graduate are committed to lifelong learning (Australia).

We also sought the views of respondents as to how quality in higher education could be assured in a global economy. Some felt that it was not possible: 'Too many institutions, consistency of standards in the UK is already difficult (impossible?)'. However, some positive proposals emerged, covering two broad themes – more communication and indicators of achievement. One mentioned 'global conferences with university personnel' and another commented:

> Employers and educators need to communicate better with each other to ensure that what the educators are producing is in fact what the market place is seeking. If educators and employers agree on a definition of 'quality' higher education, universities will be better positioned to provide it (USA).

The use of indicators and international comparisons of achievement and qualifications to assure quality were also mentioned. Indicators such as the quality of research and the quality of teaching in terms of 'value added' were mentioned by one respondent (based in the UK); a 'central' body which oversees educational qualifications and compares one or the other against a 'neutral' standard was mentioned by another (based in Australia) and 'global guidelines for minimum achievement levels at the end of the educational experience' were suggested by another (from the USA).

More generally, one respondent focused on universities working with potential employers overseas to assure quality:

> Universities need to recognise that they must work together with potential employers overseas, not just within the boundaries of the respective country, to understand the total needs of the market place. Even more importantly, tertiary institutions need to focus on attracting the best students onto their courses on an international, or at least on a zonal basis e.g. Australian universities are now working hard to attract the best from South-East Asia as well as from Australia, recognising the important links this forms

over time and helps to assure the quality of higher education in this country by ensuring its continuing relevance in South-East Asia, not just Australia.

International experiences of education systems

A minority of respondents had experienced other education systems as part of their own education or during their working life. However, there was no unanimity about the 'quality' of education in their responses, with some preferring the US model with what was reported to be 'a greater emphasis on achievement and excellence' and others preferring the European model which was felt to produce 'better quality candidates'. Other observations included the following:

> Often times, foreign educational achievement is undervalued in the US market (USA).
>
> UK engineers seemed to have more depth in mathematics/sciences but less practical engineering (UK).
>
> I like the broader education provided at secondary school and the much greater emphasis on work experience as an integral part of many courses [in Germany and the Netherlands]. I am less convinced about the strong vocational bias of courses which would prevent, for example, a philosophy graduate from joining a graduate training scheme (UK).

One respondent provided details of the recruitment of graduates for the company's international graduate training programme (see Figure 6). This is a particularly interesting case as it provides a clear example of international recruitment and it also provides a comparison of 'quality' based on evidence and direct experience.

Figure 6 International recruitment in a UK-based transnational corporation

The UK office of this company in the financial services sector recruits graduates for an international professional foundation programme that lasts six months. This includes UK, EC and foreign nationals who have attended university in the UK and who will work in either the UK or one of 16 overseas countries.

Graduates for the programme must be good communicators, be analytical and numerate with an international outlook and have lived/worked/been educated in a country other than their home country. Most of the graduates have finance, accounting, business, economics or engineering degrees and a small proportion have a law or arts background.

The company specifically targets universities which have overseas populations for the countries on whose behalf it recruits, e.g. Singapore, Hong Kong, Ghana, Zimbabwe. However, unsolicited applications are accepted from graduates from 'new' universities – particularly from nationals of those countries which are under-represented in other universities.

Information used to determine which universities produce the most suitable graduates is largely based on past practice. The company goes to universities that have previously produced high quality people. Surveys are conducted to check recruitment and graduate performance against the latest government information on faculty teaching standards. In terms of reputation, it was noted:

> Reputations are based on the past – we are much more concerned with the present/future. University reputation was frequently based on anecdotal evidence with little empirical data available. Faculty reputations are now being proved or disproved through government reports into quality of teaching … Therefore some reputations have been proved to be well-founded and vice versa.

The company reported that the quality of university in Singapore and Hong Kong and certain Indian establishments was very good. The company also accepts graduates who have been educated in these countries onto its international programme and they have been found:

> to compare extremely well in academic performance … We regard our training programme as a key measure of the quality of education and the work ethic of the individuals. We are informed that the entry standards into the Singaporean universities and the best Indian universities are higher than those for overseas nationals in some UK universities. Postgrads from USA business schools also show up well on our programme.

The company ensures global quality through a common recruitment process which includes: criteria based interview, reasoning tests, personality questionnaire and assessment centre for all short-listed applicants. Because the company recruits people from such a wide variety of backgrounds, institutions and degree programmes the only way we can measure global quality is through [the common recruitment process] together with the application of our own academic standards on the six-month training programme. This has found that some nationalities are 'slightly less academically inclined' than others, but the maturity and work experience of the former 'are invaluable assets in their early appointments'.

Universities and the needs of employers

We wanted to find out whether respondents felt that there was anything that universities should be doing to ensure that the needs of employers are met. Responses fell into three main categories – improving links with employers, providing more practical experience and improving advice to students. Often these three categories were combined in the responses made by employers.

Improving links with employers

Respondents frequently referred to improving links with higher education institutions as demonstrated by the following example from a petrochemical company based in the USA (Figure 7).

Figure 7 Sharing talent

> Employers and educators should do more sharing of talent and should provide more opportunities to interact with each other, e.g. business presentations on campus, faculty and student involvement in companies' research projects, internships for students, work/study abroad programmes etc. As technology continues to make the world 'smaller', we should capitalise on the ability to share information and experiences, and should work together to identify and resolve the issues surrounding higher education … I believe that more partnering is appropriate between universities and businesses. Neither can operate in a vacuum, assuming that the other is aware of what its goals and accomplishments are. Businesses have certain ideals that they expect new graduates to possess. Universities must be aware of these if they are to ensure that their graduates possess them. Additionally, businesses could much more effectively utilise the talents available at universities to assist with research, projects etc.

Other suggestions made by respondents similarly stressed closer links:

> Understanding their future needs more clearly. 'Secondment' of lecturers and researchers into organisations where poor performance is not acceptable (Australia).

A rather different suggestion was for business advisory panels to assist in 'programme content and design' (USA) or for universities to form committees consisting of 'industry personnel and lecturers to communicate what is being taught and how. People from different industries can then provide feedback on the content' (Australia).

One respondent focused on the university acting as a broker for students to assist them in gaining employment:

> Universities have no responsibility to employers. The universities' responsibility is to their students and to their community. To assist their graduates in locating desired employment, universities should work with employers in establishing and organising recruiting programmes through placement offices as a part of the university organisation (Australia).

Whilst many respondents reported that there should be more links between employers and universities, in two cases innovative practice in this area was already well underway, as shown in Figures 8 and 9.

Figure 8 Innovative company/university involvement (UK)

The company's involvement with universities involved three main elements: the joint provision of courses; research funding; and conventional 'milk-round' recruitment at universities. The company spends $1m per day on education and training world-wide and $100m at universities. The examples of collaboration involved differing levels of involvement; from company-designed courses to those on which the university took the lead.

First, courses had been developed based on the company's in-house training programmes. Examples included:

- a research Master of Science (MSc) in Engineering Quality Improvement based at Bradford University, developed from in-house quality courses, which is open to company staff world-wide and to employees at supplier companies;
- a sales and marketing degree for dealership employees at Loughborough University building on in-house training and on established National Vocational Qualification (NVQ) level 4 courses;
- a Bachelor of Arts (BA) in Automotive Retailing and a part-time Master of Arts (MA) by research for dealership principals.

Second, joint led courses had also been initiated such as a Loughborough University MSc programme involving a common first year and then modules led either by the university or by the company.

Third, university-led courses to which company staff were sent, such as an undergraduate engineering degree at the University of East London.

It was suggested that participating universities benefited in the following ways:

- funding for university posts (e.g. two professors at Bradford university are funded by the company);
- innovation driven by the needs of the scheme (e.g. international university partnerships for running global courses or the use of video conferencing for supervision) and the concomitant kudos, perceived quality assurance and multi-lingualism linked with internationalisation;
- company-funded research opportunities for staff.

The company also benefited in a variety of ways. These included reduced staff turnover among course participants. Turnover rates of participants stood at 2.0% compared with 7.2% for sponsored graduates studying at other universities and at 13.2% for graduates recruited via the conventional means described in this report.

Cash savings were also reported. For example, savings accrued from a redesign of a transmission crank that had followed from an undergraduate engineering project at the University of East London. This had saved the company £2.4m per year.

Figure 9 Innovative company/university scheme (UK)

The company's recruitment experience had suggested that formal training in engineering did not adequately prepare graduates for work. Consequently the firm developed six-month placement programmes in collaboration with different universities and, in doing so, reduced their participation in conventional methods of graduate recruitment.

For example a course is run at Brighton University which is geared to the purchasing function. Work placements enhanced the education provided and international links had resulted in the company recruiting students from elsewhere in Europe who had come to the company on such a placement.

In addition the company has established courses at Warwick University, not just for company staff (the manufacturers group involved in the design and provision of courses has more than 400 member companies), up to PhD level. A recent innovation, driven by the need to bring UK skill levels up to German standards, was to integrate Further Education Colleges' NVQ provision with degree courses at Warwick University by ensuring that vocational qualifications were accepted as entry qualifications.

In total the company spends £1 million per annum at Warwick and the company was also involved in setting up an Advanced Technical Centre with an engineering company that is now funded through research contracts.

It is interesting that the respondent from this company explained that the company had been involved in attempts to co-ordinate provision of engineering courses to ensure that courses across the higher education were complementary and comprehensive. However, the scheme had been unsuccessful largely, he suggested, as a result of suspicion between institutions within a highly competitive higher education system. Indeed, co-operation between universities in different countries had been easier to co-ordinate than within the UK only. For this employer the provision of work placements had also, clearly, been a useful indirect method of recruitment.

Practical training and experience

Linked with the desire for more links between employers and university is the notion of more practical training:

> Inclusion of skills training and careers education as core elements of degrees would assist employability of the widest pool of applicants (UK).
>
> Building more practical training into courses to better prepare students for the work force and seeking more employer feedback on course content/suitability (Australia).

Others focused on more work experience placements:

> Continue to maintain close links. Further establish significant work experience placements for all students on all courses.

One respondent reported on an innovative company/university placement scheme as shown in Figure 10.

Figure 10 Innovative company/university placement scheme in Australia

The company is involved in a Bachelor of Business Accounting scheme run at Monash University, Australia. The course is sponsored by large international accounting firms and other large enterprises and involves students taking three 14-week placements in sponsoring businesses. The respondent explained that the placements were intended to provide:

> The correct mix of academic insights combined with a real understanding of the contribution they're expected to make pretty quickly in eventual jobs. Industry can no longer afford the lengthy settling in and 'growing steadily in the job or career' approach of the past. Quick results are needed to justify the very sizeable up-front investment costs companies make these days in graduate and first/second career staff.

The respondent emphasised the need for a fast return from graduate recruits in order to justify training costs. The course was a generic business course that focused on core, transferable skills. However, transferable skills obviously make for more transferable employees so it is perhaps unsurprising that the respondent emphasised the need for a rapid return. Importantly, when the company's finance director was questioned about the reasons for participating in the scheme he answered as follows:

> First, for practical reasons, we want to recruit from a pool of ability – we are represented on the curriculum development committee of the accounting degree at Monash and take students from there for work experience. In this way we can create a bigger pool of ability and some of the students feel a loyalty to the company. Second, we want to be seen as good citizens.

However, when asked which of these was more important, he suggested that the second reason was the real reason for participating.

Careers guidance and transition to work

Another key issue for employers is the transition from education to work. Two respondents suggested that the transition from formal education to employment could be particularly problematic for graduates from higher status institutions. As one, based in Australia, stated of graduates from one prestigious university:

> [They] have difficulty in adjusting to the work environment – they take longer to settle and their expectations are higher.

He went on to explain that the company attempted to facilitate a smooth transition from education to employment as far as they were able:

> We tend to start graduates … in their area of study/expertise where possible to minimise possible 'trauma' in the transition between tertiary education and first-time employment, rather than take them straight from university and put them to work in unfamiliar territory … In other words, we try and provide them with a 'soft landing' where feasible.

Difficulties in managing this transition appeared to have three facets: enabling the graduate to identify what he or she wanted; enabling the graduate to find suitable employment in the chosen field; and adjusting to a working environment.

For some, improving these aspects of the transition to work involved a more prominent role for university careers services:

> Do a lot more to encourage students to think about, and prepare for, life after university. Significantly upgrade the role and status of careers advisory services (UK).

Another employer, based in the UK, noted:

> As an employer we take the view that time at university is to help prepare young people for their working career – e.g. management, but this is lacking in many areas. Fortunately, some universities have recognised this and are now offering hybrid degrees e.g. engineering and management.

Thus the preparation for work was not always only presented as a matter of maximising the value of graduates to employers as several respondents also emphasised the need for graduates to have more idea of what kind of career they wished to pursue.

5 Discussion and recommendations

Discussion

With increasing economic globalisation, transnational corporations can be seen to provide international benchmarking for the needs of employers. Moreover, students are mobile, recruiters are mobile and jobs are mobile. It is thus important to gain a perspective on international quality.

In our survey of transnational corporations, we asked about valued skills and other attributes. In terms of the perceived adequacy of higher education institutions, respondents were not critical of technical skills but they wanted 'soft' skills in addition. These included teamwork, analytical skills, interpersonal skills and communication/presentation skills. They wanted these to be integrated into courses rather than 'add-ons'. A range of other personal attributes were also sought - such as motivation/drive, independence and leadership.

Respondents reported that they valued practical experience. Our study thus confirms the broad findings of a study carried out in the UK by Pearson et al. (2000), who noted that the possession of a degree is 'not a sufficient indicator of competence for particular jobs or careers'. In their analysis they reported that graduates needed to develop employability skills in terms of their assets (knowledge, skills and attitudes), their career management skills (awareness of strengths, weaknesses and adaptability) and their self-presentation skills.

Respondents reported that they mostly targeted universities rather than departments. In general, the university was seen as an indicator of academic standards. High standards were reported to be identified mostly by past experience though some made reference to past practice.

The use of external sources of information (league tables, university entry requirements and reputations) by respondents in our study was found to be secondary to experience, with the use of league tables being largely restricted to those with limited experience of graduate recruitment. We found that implicit conceptions of quality differed – for some it was quality of outcome, for others output, and for others process.

Company experience was found to be the key factor reported in the decision to recruit from particular universities. The reasons for this were not clear from responses that emerged. It could be that they are seeking characteristics not reflected in entry requirements, or that they go on the nebulous concept of 'reputation'.

In this context, comments made by Pearson et al. (2000) are noteworthy. They reported that an overemphasis on targeting particular institutions restricts 'the pool of talent seen' and maximises competition 'from other recruiters'. Harvey et al. (1997) in the UK also make the point that 'too much recruitment procedure is guided by prejudice, preconceptions and bureaucratic pragmatism'. And as noted in the Times Higher Educational Supplement (1999): 'Employers say they want people with experience and skills, people who can work in a team and take the lead whatever their background. But what they actually recruit are clever young people from old universities'.

The importance of work experience was a recurring theme amongst employers in our study, a finding that chimes in with research carried out in the UK by both Harvey et al. (1997) and Pearson et al. (2000). The latter reported that it can 'help improve the supply and act as a filter, simplifying the recruitment and selection process'.

We found that transnational corporations recruit for essentially national labour markets, although in some cases there is 'international recruitment' in the sense that international students are recruited to companies with the clear intention that they will work in offices of the company in their home country. These students are accessible to the companies and, if the universities are perceived to be of higher quality, then these internationally mobile students have an advantage over their compatriots who have been educated in their home country. The discussion in the report has generally assumed that educational input, quality and output are the only issues to take into account. Clearly this is not a wholly accurate picture as employers want, for example, foreign nationals to work in their home countries. Finally, co-operation between companies and universities was found in our study, with innovative mutually beneficial examples in existence.

A number of conclusions emerge from our study of transnational corporations. First, employers want key skills integrated into higher education courses; second, they tend to target institutions by perceived quality of graduates; third they identify suitable institutions by past experience. A range of innovative practices have been identified including business courses with placements and courses designed collaboratively between employers and universities, that are mutually beneficial. Finally, whilst there is some international recruitment by transnational corporations this is limited, although examples of innovative practice have been identified in this area that may provide a model for other employers.

Recommendations

On the basis of the responses from the transnational corporations involved in this study a number of recommendations can be made:

- Employers and universities need to develop strong, ongoing links, from course inception to delivery, to enable innovation in teaching and research and development. Such links already exist in some disciplines and in some universities, but there is scope for further involvement – and indeed funding – by employers so that links become strong and

permanent. Some imaginative proposals have been presented in this report and have the potential to be adapted by individual employers and universities to their mutual advantage.

- Employers need more information about university programmes, so that they are knowledgeable about course content – particularly in relation to the promotion of relevant 'soft' skills – and course quality. They will then be able to make more informed choices about which universities they should foster links with so that their needs can best be met.

- Employers should consider establishing links with a wider range of universities /departments than at present. Furthermore, given that employers are seeking a much sought after 'commodity' it may be that a more diverse range of recruitment techniques needs to be utilised to try and ensure that they recruit suitable graduates.

- More research by companies about the progress made by graduate recruits needs to be carried out. One such investigation was reported. This challenges the notion that the university attended by graduates is positively related to performance in the workplace. More such studies need to be carried out to ensure that employers maximise opportunities for recruiting graduates with the skills and personal attributes that they are seeking and that graduates are not unnecessarily disadvantaged because they have not attended a university with a 'good reputation'. Some interesting examples of innovative practice are reported here that could be adapted to enable employers to compare standards of graduate recruits more objectively.

- Students make their choices for university courses with 'employability' being an important consideration (Pearson et al., 2000). They need to have better information about the skills and attributes that employers are seeking. Specialist knowledge is in itself insufficient. The importance of 'soft' skills for employability cannot be overestimated and information needs to be made available to students through careers services and by employers. Both are in a position to disseminate high quality information so that students can ensure that they have the necessary skills profile to maximise their opportunities in the labour market.

- Teaching in higher education should facilitate students working together in groups to solve problems so enhancing teamwork skills. Such an approach would also foster the development of interpersonal skills. Whilst these approaches are already in place on some programmes in some institutions, they need to be made universal. Different players have a role in this – governments, quality assurance agencies, universities, faculties/departments, individual lecturers and students can seek to influence methods of teaching and learning.

- Students need to be given opportunities to give clear, succinct, oral and written presentations during their university years to improve their communication and literacy skills. These presentations are likely to serve different purposes. They would differ from the traditional types of presentations made by students, but would foster skills that would benefit students in all walks of life once they graduate.

- Students need to be given greater opportunities to undertake work placements. These are more common in some disciplines than others, but these placements can enhance students' employability and also provide opportunities for improving their technical skills and knowledge. Employers would in turn have opportunities to communicate more with universities, helping to break down barriers between the world of work and academia.

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Acknowledgements

This study was financed by bp. We are very grateful for the support that we received. We would like to thank all those who helped with this study, including all those who were interviewed or completed questionnaires. We would also like to thank Claire Holdstock and Hazel Pennell for research support during the early stages of the study. Thanks are also due to John Wilkes for administrative support throughout the project.

We would like to thank the following companies for their co-operation in this study:

British Aerospace
BP
Colonial
Coopers and Lybrand (now Price Waterhouse Coopers)
Ford
Glaxo Wellcome
ICI
KPMG
North
Optus
Rover
Shell
Standard Chartered
Unilever