

Department of Employment, Education, Training and Youth Affairs

**Research on Employer Satisfaction
with Graduate Skills
Interim Report**

Government and Social Research Team
ACNielsen Research Services

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Executive Summary

Background

This is the interim report to the Department of Employment, Education, Training and Youth Affairs concerning the satisfaction of employers with new graduates. This report covers the first stage of the project which has primarily consisted of focus group discussions with employers and graduates, supplemented by interviews with representatives of industry associations.

Objectives

The overall aim of the project will be to conduct a valid and reliable survey of employers to measure their satisfaction with new graduates recruited from both the higher education and vocational education and training sectors.

The objective of this stage was to obtain qualitative information from employers. Specifically, we wanted to seek from them their own views as to the skills they seek when recruiting new graduates, why these skills are important and what skill deficiencies, if any, they perceive.

Research Undertaken

The research was preceded by a comprehensive literature review which is included in this report as an appendix.

The research itself consisted of twelve group discussions. Eight of these covered three sizes of employer, categorised as large, medium and small, and split between Melbourne and Sydney. A further discussion was held with recruiters of graduates to Federal Government departments (in Canberra). Three further groups were held with graduates themselves. Both the higher education and vocational education and training sectors were represented. All the discussions were audio- or video-recorded, and the analysis is based on these recordings and transcripts of them.

These group discussions were supplemented by one-to-one interviews with representatives from industry associations.

The research presented here is thus qualitative in nature and any conclusions should at this stage be regarded as hypotheses, to be confirmed, or otherwise, by the final quantitative survey.

Overview of Findings

Reasons for Recruiting Graduates

There appear to be three major reasons for recruiting new graduates:

- to provide a sufficient pool of future middle and senior managers;
- to fill the need for trained and educated people in areas requiring professional or highly skilled personnel; and
- to introduce new ideas and techniques into workplace organisations.

These reasons may vary somewhat with size of organisation, with large companies, for example, having more interest in the need to recruit future business leaders, whilst small businesses are much more concerned to obtain skilled people whom they can use in the short term.

Skills Sought in New Graduates

The research suggests that the following skills may be sought in new graduates through the recruitment process:

- academic achievement in a suitable discipline;
- literacy;
- numeracy;
- basic computer skills;
- time management skills;
- written business communication skills;
- oral communication skills;
- inter-personal skills;
- teamworking skills;
- problem solving skills; and
- comprehension of business processes.

Two further skill areas are sometimes, though not always, important:

- research and analysis skills; and
- leadership skills

Of the skills listed above, three skills would seem to be ones that should, ideally, be developed at school. These are basic literacy, numeracy and computer skills.

The majority of the remaining skills are general skills which are sought in all graduates entering industry or Government departments. However research and analysis skills are not always sought, although these skills are important in the public sector and certain professional jobs. Nor are leadership skills always

important, since organisations generally recognise that they need a mix of ‘leaders and followers’.

The criterion on which employers put most weight in recruitment, other than certain personal attributes, is academic achievement. Whilst this usually needs to be in a relevant subject area, high academic achievement is taken as indicative of intellectual capability, capacity to learn, and motivation to pursue and achieve high goals.

Personal Attributes

Employers mentioned also a whole range of personal attributes which they look for in recruiting new graduates. These include: enthusiasm, motivation, ambition, maturity, and personal presentation, including grooming and dress. Also important is evidence of interest in the actual position the graduate is being considered for—it is important for a recruit not to appear to have sent out numerous identical applications.

Skills for the Future

In the future Australian business is expected to be more international in operations and focus; and the world of work is expected to change rapidly in response to changing social and environmental conditions and technological change. The need for graduates to demonstrate adaptability and flexibility in order to cope with these future changes is important to some employers. New graduates also need to be aware of the need for continuous learning and re-training throughout their careers.

Satisfaction with Skills of New Graduates

In general satisfaction with the skills of the graduates that are successfully recruited appears to be high. We hypothesise however that it is higher in large organisations (those employing 500 or more) than in small organisations (employing less than 50), with medium sized companies in between. The reasons for this difference lie in the effort and expense put into recruitment by large companies, their more realistic expectations of new graduates, and their ability to ‘cream off’ the best graduates.

In saying that recruiters are satisfied, however, we should note that there is an apparent over-supply of graduates, and employers can pick from among them. Many graduates appear to miss out on job opportunities because of the lack of skills in basics such as literacy or numeracy.

If there is dissatisfaction with graduate skills as such, it probably lies in the area of written communication, because the majority of students are not taught to write in a manner appropriate to business communications.

In regards to course content we found very few complaints by employers, except in regards to certain more advanced areas of information technology and electronic communications.

TAFE Colleges

Granted that this research has mainly focused on higher education graduates, the following comments are made in relation to TAFE colleges.

First, we think there is unlikely to be any major difference in the skills sought by employers from students from the vocational education and training sector. Second, some employers have an active preference for TAFE graduates, believing them to be likely to be more mature and 'streetwise'. Third, some TAFE degrees are highly practical and hands-on in nature (for example, such topics as graphic arts, design etc.). Employers taking graduates from such courses may have high expectations that the graduates can make an immediate impact in their organisations. Fourth, whereas we heard few criticisms that universities were not up to date with the latest advances in industry, there was some feeling that this may not be so in regards to some TAFE courses.

Implications for Educational Institutions

At this stage we have drawn the following general implications for educational institutions.

First, students who have taken 'co-op' or 'sandwich' degrees seem to have major advantages when it comes to obtaining employment. Institutions which do not offer such options need to consider carefully how they can confer the same advantages to their students.

Second, certain skills that are valued by employers, in particular the ability to work in teams, and oral communication skills, are not perhaps well developed through traditional university teaching approaches, based on students receiving lectures as a one-way flow of information. Again institutions that rely on this approach should consider how well they are fitting their students for their future working lives.

Finally, all institutions need to give some consideration to the skills of the future; that is the need for adaptability and flexibility in the workforce and for continuous training and learning throughout a graduate's working life. Degrees need to be regarded as one step in the continuous learning process, not the end of formal education. This is certainly recognised by many of today's graduates.

Introduction and Objectives

1.1 Introduction

This document is the interim report to the Department of Employment, Education, Training and Youth Affairs concerning the satisfaction of employers with graduates. The final study will consist of a major survey of employers of both higher education and vocational education and training graduates.

This report covers the first part of the project which has consisted of focus group discussions with employers and graduates, and one-to-one interviews with representatives of industry associations. This first stage has also included a comprehensive literature review, which has already been supplied to the Department of Employment, Education, Training and Youth Affairs. This literature review is contained here as an appendix so that cross reference can be made to it.

1.2 Objectives

The overall objective of the research program is to establish the extent of employers' satisfaction with the skills of new graduates entering the labour market, and areas of dissatisfaction. Within this it is necessary to establish:

- what are the skills sought by employers of graduates;
- how much importance do they attach to different skills; and
- how important are such skill deficiencies as may exist?

The objective of this stage was to obtain qualitative information from employers. Specifically, we wanted to obtain from them their own views as to the skills they seek when recruiting; why those skills are important and what skill deficiencies, if any, they perceive.

Research Undertaken

In order to obtain the information from a range of perspectives, we undertook focus group discussions not just with human resource representatives of employers, but also with line managers and graduates themselves. We also collected the views of important industry associations and these are detailed below.

The focus group discussions were moderated by the Reark Research consultants working on the project (Dr John Fidler, Jeanette Johnson and Gabrielle Zeraja). They were recorded either by audio-taping, video-taping or both, and the analysis which follows is based on notes made from the recordings. The one-to-one interviews were conducted by Dr John Fidler and Jeanette Johnson.

The research thus consists of the following:

A. Focus Groups

	<i>Location</i>	<i>Employer Type¹</i>	<i>Size²</i>	<i>Respondents³</i>
1	Melbourne	Mixed	Large	HR Managers
2	Sydney	Mixed	Large	HR Managers
3	Canberra	Federal Government	Large	HR/Graduate Recruiters
4	Melbourne	Mainly Engineering	Large	Line Managers ⁴
5	Melbourne	Mainly Professional	Medium	HR Managers
6	Sydney	Mixed	Medium	HR Managers
7	Sydney	Professional/Government	Medium	Line Managers ⁴
8	Melbourne	Mixed	Small Business	General Managers
9	Sydney	Mixed	Small Business	General Managers
10	Sydney	Mixed	Mixed	HE Graduates
11	Canberra	Federal Government	Large	HE Graduates
12	Melbourne	Mixed	Mixed	VET Graduates

B. Interviews

Interviews were conducted with the following organisations:

¹ State and local government employers were included in the Melbourne and Sydney groups.

² Within the above framework the definitions for large, medium and small employers were:

Large 100 employees or more

Medium 50–99 employees

Small <50 employees

³ All employer representatives had to have recruited graduates within the last two years.

⁴ It was not always possible to recruit suitable line managers, and in some cases human resource or similar managers attended these groups.

- Australian Association of Graduate Employers (AAGE);
- Australian Medical Association (AMA);
- National Institute of Chartered Accountants (NICA);
- Metal Trades Industry Association (MTIA);
- Association of Professional Engineers, Scientists & Managers, Australia (APSEMA); and
- Institute of Engineers Australia (IEA).

We are grateful to all the representatives of both individual employers and industry associations for their participation in this study.

Why Do Employers Recruit Graduates?

Generally speaking, despite some reservations about the quality of graduates, satisfaction with graduates appears to be relatively high (see Section 8). Because of this, graduate recruitment is self-reinforcing and employers are generally motivated to continue to recruit graduates.

The reasons for recruiting graduates vary somewhat with the size of the company. In larger companies (major Australian or overseas multinationals) a major motivation is to provide a suitable pool of future managers for the organisation. Despite the accepted fact that many graduates move on to other organisations after 2–3 years in their first job, larger businesses still hope to retain enough to provide for their longer term middle and senior management needs. As a result, these organisations are prepared to go to considerable trouble in their recruiting processes, and to place newly recruited graduates in extensive (often 2-year) graduate development programs. Federal Government recruitment can be looked upon as similar in motivation to some extent.

Because large companies have this motivation, much of the discussion and comments coming from these relates to recruitment for this purpose, and has to be viewed in this light. Large companies may well recruit graduates for other roles in their organisation (i.e. not through their graduate recruitment schemes) but they took little account of these in their discussions.

Medium and smaller organisation are less likely to be looking to the long term. Their purposes in recruiting are:

- to fill the need for trained personnel (in the case of the professions); and
- to introduce new learning and new ideas into their companies.

In the latter regard, although there was much discussion about ways which university (or technical and further education) is not related to the actual world of work, it was accepted that university courses do cover the latest thinking. Hence, graduates can bring useful new ideas.

They very much challenge the ways things are done and they're not always right but in terms of the fact that they challenge and they make the people around them think as well, they're always looking at better ways to do things, I mean, they've got an in-built quality management process, most of them seem to have that in-built quality management in terms of, they look at something and think how can this be better, how can we do it better.

(Large business, Melbourne)

[I brought new things into the company] . . . simple things that I had learnt at Uni like how to simplify accounting tasks that they had been doing the long way.

(Graduate, Sydney)

Recruiting Processes

As one would expect, the larger the organisation the larger the numbers recruited. We found that the larger organisations would be taking from around 5–6 graduates through to around 60 per year, with numbers in the 15–30 range very typical (certain Federal Government departments vary well outside these ranges).

In the medium sized companies, respondents said they would take 3–6 graduates per year, whereas small sized companies would typically recruit only 1–2 graduates.

Correspondingly, the approach to recruitment varies greatly. To get the 15–30 graduate recruits they eventually employ, a major multinational company may well start recruiting in April/May prior to the year in which they employ people. A round of information visits to universities will produce applications from *1 000 or more potential candidates*.

These 1 000 candidates are processed through a series of stages. Typically the process might be to reduce the 1 000 to 500 or so on the basis of academic results at the time of application. Then literacy and numeracy testing (on-site at university or at other locations) may be used to reduce the 500 by half again. The 250 may then be invited to attend for further tests, interviews and interactive exercises (looking at teamwork, etc.). This may produce 70 candidates for interview with two or more interviews used to reduce the 70 to the final numbers required.

Large companies reported using the following methods in the course of graduate selection:

- academic results;
- interviews;
- literacy/numeracy testing;
- psychometric testing;
- leadership and teamwork exercises (usually conducted on-site at the company);
- judgment, based on resumes; and
- knowledge of students on ‘sandwich’ or ‘co-op’ programs.

Medium sized companies tend to go about things slightly differently. They tend to recruit later, and are much less likely to receive unsolicited resumes. Hence, although they may recruit direct at universities, they are more likely to have to advertise for graduates or use recruiting agencies. Medium sized businesses do not

appear to use the same range of testing and 'game playing' methods used by large businesses, relying instead on interviews and academic results in the selection process.

Small businesses almost always advertise for new graduates, using the major city newspapers (*Sydney Morning Herald/Age*). Again, they rely on academic results and interviewing for selection purposes.

Skills Sought in New Graduates

5.1 A Listing of Skills

The recruitment processes, and selection criteria adopted by employers, are ways to achieve the underlying goal: to pick those graduates who have the characteristics employers are seeking. As indicated, the purpose of recruitment may differ from organisation to organisation. Larger organisations are trying to find the business leaders of 10–15 years hence, whereas small companies are looking for graduates who can fit into the organisation and make a contribution straight away.

Nevertheless, the characteristics which organisations are seeking are remarkably consistent. They are listed below and show great consistency also with the characteristics culled from the literature review, or contained in previous studies.

A straight listing would be as follows:

- academic achievement;
- literacy;
- numeracy;
- computer skills;
- time management;
- written communication;
- oral communication;
- inter-personal skills;
- teamworking skills;
- problem solving skills; and
- comprehension of business processes.

These comprise the major skills required of graduates for industry, or commerce. They generally apply equally well to the professions and government employment. However, professions such as accountancy/law and government also have as a required skill:

- research (and analysis) skills.

A final skill set, although far from universally required but sometimes mentioned, was:

- leadership skills.

We now discuss each of these skill requirements in turn.

5.2 Academic Achievement

To call academic achievement a skill is clearly a misnomer; how can we equate achievement as a medical student with that of a chemical engineering student or a business graduate? Clearly many academic courses contain material which is directly relevant to the content of the job the graduate will take up.

Nevertheless, an issue in this regard is the claim made by both employers and graduates themselves that only a fraction of university learning is used in practice.

That students spend three or four years learning material of which 60 per cent is not used in practice would seem to be quite wasteful. However, there are reasons behind this situation, for example:

- university courses teach foundation subjects which are the basis of further learning (e.g. law includes constitutional law, economics includes economic history);
- many people in industry work in highly specialised fields, so no university course would ever suit everybody; and
- universities take a theoretical rather than a practical approach (may be particularly true of business courses, for example).

Still, if university learning is only partially used, and much that is needed in practice is learnt on the job, why do employers place so much emphasis on academic achievement?

From these discussions we can conclude that academic achievement is taken as an indicator of a number of *other* skills or attributes desired by employers. These are:

- natural intelligence/intellectual capability;
- problem solving skills/analytic ability/research skills;
- capacity to learn; and
- motivation to pursue and achieve high goals.

5.3 Literacy

By literacy, in this context, we mean the ability to write English using adequate standards of grammar, punctuation and spelling. Literacy can be distinguished in this respect from written business communication skills as such. It is disturbing to reflect that, according to anecdotal evidence here, up to half of graduates who are achieving adequate academic results, can be rejected by employers after testing for literacy and numeracy.

Poor use of grammar is one complaint of employers. Inadequate spelling is another. Use of word-processors has led to reliance on them, but this can lead in practice to the substitution of quite the wrong word in context. Employers tend to blame schools rather than the universities for inadequate literacy, perceiving grammar as something that is no longer taught.

It actually makes you wonder what they get passed for at Uni. So many applications are mis-written, wrongly spelled, grammatically incorrect.

(Large business, Sydney)

5.4 Numeracy

Numeracy appears less of a problem than literacy. However, managers make similar complaints about (potential) employees: that the use of the calculator has removed the ability to do even simple mental arithmetic.

5.5 Computer/Keyboard Skills

Ability to use a computer, certainly for everyday tasks such as e-mail, word-processing and simple spreadsheet work, is now being taken for granted by employers. Familiarity with the Internet will also become 'de rigeur' before long.

It is interesting to note that there were virtually no complaints about students' computer familiarity across our group discussions (except in relation to highly specialist information technology-based jobs which are discussed later).

In fact, something of a generation gap is evident between recruiters and graduates. Many recruiters appear to be of a generation that went through school before the advent of the personal computer. It is likely that most graduates are better trained than the recruiters themselves (and recruiters were aware of this) but, conversely, recruiters believe that many graduates lack the basics of literacy/numeracy. Sometimes recruiters perceived graduates as having replaced interpersonal skills with computer skills.

5.6 Time Management Skills

Research among business managers in the 1990s habitually indicates that the environment is perceived to be highly stressed and competitive, and that businesses everywhere are straining to get 'more from less'. (This applies as much to the public as the private sector.) As a result, managers feel themselves under severe time pressures.

Hence, time management skills are important at all levels of business. However they are difficult, of course, for recruiters to test formally. Hence, when graduates are interviewed, or curricula vitae examined, recruiters put importance on the

ability to achieve across a number of spheres of activity, not just academic. In a potential graduate recruit the ability to obtain a high distinction or credit at degree level, to take part in sport or drama, and to hold down a job (part-time) is rated highly by recruiters, not just because each of these individual activities is valued (which they are) but because the *combination* shows evidence of time management skills.

5.7 Written Communication Skills

The importance of communication skills in business is highly stressed in the literature, but these are not always clarified as to meaning.

Essentially, written communication skills refer to the ability to create documents that are written in appropriate business language.

Business language (ideally) is plain, clear, direct and concise. Documents range from a straightforward letter, to a proposal to customers, to an internal report to the board.

Business communication is probably the major area of dissatisfaction among employers, the problem being that the writing of student essays requires the production of lengthy documents where a student's knowledge is displayed. Business reports require the reverse: the ability to convey only the essentials.

I've had to unlearn everything I learnt at Uni. When you write law essays they have to be lengthy, in-depth, 5,000 word things. When practising law I found I had to forget all about that and go back to plain English so clients can understand.

(Graduate, Sydney)

The transition from 'academic' to 'business' writing is, of course, required in the public service where writing courses are available for new entrants.

I think you can go through Uni, without writing a paper, doing certain courses, and those people find it a real struggle when they get into the Department, because suddenly no one wants them to write anything, so that they don't write anything they can't put their name on it, no one gets to know who they are.

(Graduate, Canberra)

5.8 Oral Communication Skills

Oral communication skills parallel written communication skills but appear to be less problematic for employers. 'Public speaking' is *not* what is required, but again the ability to communicate clearly and concisely. Many jobs required some form of presentation to be made from time to time, and university courses in which

students have to present to their peers are valuable in this regard, in that they give the student the confidence to do this.

5.9 Interpersonal Skills

Employers look for graduate recruits to have the ability to get on with people on all levels within a business. In practice this can range from not being afraid to offer an opinion to a member of the board to being able to supervise the night shift in a factory.

Now and in the future what differentiates the superstars from the stars is the inter-personal skills. They really need to make a personal link with our clients to make that client want to come back to us. What really makes the difference is relationship building. And that is certainly a weakness, certainly in law.

(Large business, Sydney)

I think something that is pretty valuable and perhaps it was encompassed when we were talking about team work, is inter-personal skills. I think a lot of success and a lot of the failures I've seen this year, with just watching [other graduates], a lot of them really do crucify themselves with their lack of inter-personal skills.

(Graduate, Canberra)

These skills are hard to assess, other than in the interview situation. Once again, employers put great store on work experience that brings students into contact with a range of people. In particular, if graduates are to work in roles with direct customer contact then employers see great benefit in them being involved serving the public—on the check-out at Coles or Safeway, or in McDonalds.

What we were saying about McDonalds, we say we're looking for a good degree with a serving of chips and fries, because if they've stuck at McDonalds, for a few years and become a manager or whatever, or Myers or a factory, or working at Woollies or Coles for say 5 or 6 years, and they stick to it, they have to put up with a whole lot of things, so we do look at that.

(Federal Government, Canberra)

It's McDonalds doing the training, not the universities.

(Medium business, Sydney)

Graduates from certain disciplines, notably engineering and computer science, were said to have poorer interpersonal skills.

But the people skills that were evident in the engineering group the males had very limited, they were great academically, but very limited sort of people skills, so they'd probably get on with the boys at the boozers but in terms of sort of getting on with a whole group, and that's probably a harsh statement, but they didn't have it, the females had it all over them, and then . . . the psychology graduates as a group perhaps the females and males were a lot closer.

(Large company, Melbourne)

What we look for is people skills, because we find as far as the graduates who come out of university go for people skills, they tend to be very well trained in computer literacy and in being very well trained in their computer literacy they seem to lose this streetwise, or they're not taught street wise skills. And I had an example at Port Augusta two weeks ago, where this bloke who's been out of university for two years is excellent. But he only ever talks to his computer.

(Large business, Melbourne)

Interpersonal skills are important within organisations for *networking*, which is sometimes referred to as a skill in itself. However, we have not separated it out here.

5.10 Teamworking Skills

The ability to work cooperatively in a team situation is important in many areas of industry. Large employers test out graduates' abilities in this regard through the use of 'games' and specially designed team exercises. Employers without these resources use other evidence for the graduate's career, participation in team sports in particular being highly valued.

5.11 Problem Solving Skills

A skill area that is relatively frequently mentioned is problem solving skills, sometimes coupled with analytical ability. Although this has face validity, it has been difficult to pin down what problem solving actually refers to. The problems referred to, however, appear to be intellectual ones, rather than, say, labour relations issues or social dilemmas. However, some employers do test for this kind of ability. Others take academic achievement as indicative that this kind of ability has been developed at university.

5.12 Comprehension of Business Practices

We include one final skill, which is really an area of knowledge or experience—that is ‘comprehension of business practices’. We include it without comment as to whether it is *fair* to expect *new* graduates to have such a skill.

However, it is worth including because this appears as one of the areas of complaint in regards to new graduates. Sometimes the complaint is made even of business or commerce graduates.

The essence of the complaint is that new graduates do not understand how business operates and how different parts of a business organisation interrelate with one another. This can range from simple things, such as knowing that all post goes to the mail room, through to the more ‘technical’, such as the difference between accounts payable and accounts receivable.

. . . one of the criticisms of young graduates that we’ve had is they’re just not streetwise in terms of the business of dealing with people and just understanding the basic sort of cycle that a business takes in invoicing and despatching, and whatever, follow up etc.

(Small business, Melbourne)

They need general business knowledge, and I don’t think that educational institutions cover that enough. Even in business you have to be creative if you want to get that edge.

(Medium business, Sydney)

In contrast to these views other employers accept that university is a place for learning and for the development of intellectual abilities. Learning about how a business operates can and should start with employment.

5.13 Research Skills

Research skills, often referred to as ‘research and analysis’ skills, are not universally important. Nevertheless, they are important in some occupations. They are a specific attribute rated in public service selection, for example, and are important in law, accountancy and other professions.

Essentially, we take these skills to mean the ability to locate relevant information, both informally (networking, personal contact) and formally (i.e. library searches, Internet) and to synthesize it.

This skill can be tested, and employers put some weight on certain kinds of course content.

5.14 Leadership Capability

Leadership ability may or may not be sought by recruiters. It is *not* important to all employers, many of whom realistically expect that graduates will spend 2–3 years with them before moving on to another employer. Some recruiters are clear that they look for a mix among the graduates that they recruit.

We look for horses and mules, your horses are like your potential people, and the percentage of mules to carry the load who are probably going on to the lower levels of middle management.

(Large business, Melbourne)

Where recruiters are seeking leadership potential, it is again assessed on the basis of the curriculum vitae, the interview, and purpose-designed team exercises.

It should be noted that recruiters did not refer as such to ‘management skills’, which is a somewhat ill-defined term in any case. We would suggest that management skills are probably well encompassed by the other skills included here: leadership, communication, interpersonal skills, etc.

5.15 Other Skills

Employers mentioned other skills, some of which have been alluded to; however, in our view, they are not distinct enough, nor clearly enough defined to be considered separate skills. They include, for example, networking, analytic ability and project management.

5.16 Personal Attributes

Needless to say, simply possessing the skills listed above would not be sufficient to get a graduate a job. The employer representatives in our group discussions mentioned a number of personal attributes that they look for. These include, in no particular order, enthusiasm, initiative, goal orientation, motivation, ambition or ‘the fire in the belly’, maturity, and personal presentation. The latter includes grooming and dressing appropriately.

Practicality, and being willing to get stuck into the job, no matter how mundane the task, are also sought.

We look for people who are fairly practical and people who are willing to just demonstrate they’ll roll their sleeves and get stuck into whatever is given to them, so there’s that sort of [academic] result, but also a very practical sort of person who is prepared to immerse themselves in all of the business.

(Large business, Melbourne)

... I've heard of some graduates who basically won't do photocopying, because they believe themselves to be hitting management within three years, and I don't do that sort of menial stuff, so our hidden criterion is 'will this person do photocopying?'

(Federal Government, Canberra)

Also of major importance, although sometimes forgotten *by all parties*, is evidence of interest in the job for which the graduate is being recruited. Students need to be careful in this regard in their choice of course topics; because a subject is included in a course does not mean it is relevant in an actual career direction.

Employers were wary of curricula vitae which appeared to have been 'fired off to twenty organisations'; the tailor-made curriculum vitae is taken as evidence of genuine interest in the job/organisation. Resume preparation has become something of an art form, with many universities known, or believed, to assist students with this.

5.17 Skills for the Future

The world of work has changed dramatically in the last fifty years. The notion of a job or career for life is fast fading. Few, if any, occupations or professions offer security.

Employers recognised this in their discussions of the skills which graduates require. They emphasised that they would be looking for *adaptability* and *flexibility* in new graduates. These encompass the following:

- willingness to adapt to new circumstances (i.e. new structures, people relationships, working arrangements); and
- ability to be flexible in regards to working practices, geographic location, job demands.

For a lot of the stuff that we do the skills are transient. They will change dozens of times throughout their career. They need the flexibility go with that. [In computers] if you are specialised in one area by the time you come out of University it's gone.

(Large business, Sydney)

Another way in which organisations are changing is that many large organisations are contracting and out-sourcing activities they might previously have done in-house. Hence, managers in the future are envisaged as having to be 'contract managers' rather than managers of departments or functions. In this regard, 'project management' skills will be even more important. However, it is debatable whether project management is a skill to be sought in a new graduate.

Important also are open attitudes to peoples of other countries, races and gender. In addition, graduates need to be aware of the need for continuous learning and

training throughout their careers. Graduates themselves accepted this, and a number felt that their first degree would not be sufficient.

You do your first degree which is great. Now it's time to go back and do your real degree, which is your business management degree, before you can jump up the corporate ladder.

It's already happening. I feel my degree is not good enough anymore.

(Graduates, Sydney)

These thoughts are not as sophisticated as those of Coates (1995) or Winter (1995) cited in the literature review (see Appendix). Nevertheless, they do encompass some of the same strands of thought.

Skill Categorisation

The original brief to this project suggested that we should categorise skills as basic, generalised or job specific. We are not sure of the value or use of this categorisation. However, we do see the skills that we have listed above as falling into four groups as follows.

6.1 Skills Which Should Be Developed in the Schooling System

In our view there are three skill sets employers should reasonably expect in *all* graduates, no matter where they are to be employed or what eventual level they will reach in the organisation. These are literacy, numeracy and computer skills.

6.2 General Skills Required of the Majority of Business Graduates

Seven skill areas appear, on the basis of the evidence to date, to be sought by most employers in most graduates. The higher education and vocational education and training systems should give some attention to meeting these needs. These skills are:

- time management;
- written (business) communication;
- oral communication;
- interpersonal skills;
- teamworking;
- problem solving; and
- ‘comprehension of business practices’.

It is a moot point as to whether time management should be considered a skill to be developed by the schooling system or not. It is conceivable, for example, that in certain graduates in certain occupations (e.g. a computer programmer working solely on a single software development or a research and development specialist might need only very little time management skills). For the majority of graduates, they are essential.

6.3 Basic Work-related Education

It is important, of course, that where university courses feed direct into occupations the level of actual learning developed among graduates is adequate (e.g. that accountancy graduates learn sufficient accountancy, that engineers learn sufficient engineering).

6.4 Additional Skills (Sometimes Essential)

As indicated, two skills areas at least—leadership and research/analysis—are not necessarily required of all graduates. These skills can be developed through the higher education system, but through many other avenues as well.

Satisfaction with Skills of Graduates

7.1 Overall Satisfaction

Our hypothesis at this stage is that overall satisfaction with new graduates will prove to be high among large and medium companies, but will be lower (although it may not be low as such) among small businesses. The reasons for this situation lie in:

- the reasons that underlie recruitment;
- the methods of recruitment; and
- expectations of new graduates.

Basically, we can draw a contrast between the larger companies at the one extreme and small businesses at the other.

Larger companies recruit graduates for their long term potential. Graduate recruitment represents a major investment for them. As such, through their processes of recruitment they ‘cream off’ the best graduates (and medium and small businesses are aware of this). If applicants are defective in any substantial way then the rigorous processes adopted by large companies will generally weed them out. At the same time, large companies can afford extensive development programmes (often over a period of two years) and the use of mentoring systems to help graduates adapt to industry life.

There’s got to be an acceptance that there’s going to be some skills that the company has to take on board to train them and educate a recent graduate in . . . we’ve got a formalised programme of a 12 month period in terms of project work and then sort of sprinkle in more formalised training in certain areas, supervision training, leadership skills, team skills, some problem solving, all that sort of thing . . .

(Large business, Melbourne)

At the other extreme, small companies may recruit one graduate a year, often to fill a specific role. They rely extensively on personal interviewing for recruitment. Their expectations, however, of new graduates tend to be somewhat higher than in larger businesses. There is little time in a small business for explanations of how the business works. Often it is a case of ‘sink or swim’ as far as the new graduate is concerned.

Granted the extensive screening processes used by many businesses, we need to differentiate between *satisfaction with the graduates recruited* and *satisfaction with applicants*. These may be quite different, and the fact that some companies test for literacy indicates that applicants can fail for the most basic reasons.

We find that the graduate market is pretty depressed for the graduates. We are getting a really excellent calibre of graduates applying for jobs and we're picking the cream of the cream.

(Small business, Sydney)

7.2 University Course Content

We have found little complaint about the content of university courses, despite the claim that much that is taught is not used. Indeed, it seems to be accepted that graduates will emerge with knowledge that reflects the more advanced thinking of the occupation or profession. Indeed the major professions (law, accountancy and engineering) have in-built feedback systems to ensure that this is the case.

The exception to this seems to be certain areas of electronics, and in particular communications technology, where the content of university/TAFE courses lags current practice.

What can I say about them [graduates]. Not as broadly trained as I would have expected. They have a very narrow focus mostly on information technology which is not all the electronics industry . . . the discipline is not taught. The parts that we use are not taught at university level. The course curriculum doesn't contain it so we have to start from scratch.

(Small business, Melbourne)

. . . our engineering team has always told me that they take it for granted that no degree out there does what we do . . . and they take it as given that they have to start the basic training course the day they start with us, because no university would do what we do, it's so specialised.

(Federal Government, Canberra)

7.3 Written Communication

As already indicated, the most common complaint about new graduates appears to be that they cannot communicate in writing in a manner appropriate for business. The reasons for this have been discussed above (Section 6.7).

They come out with a lot of academic theory but they can't present, they can't write, they don't understand what business is about. While they are made to present assignments at University they are not actually taught how to do them. We find that we have to take them away for formal intensive training sessions for about three weeks to learn those skills.

(Large business, Sydney)

7.4 General Understanding of Business Practice

A further complaint about new graduates amounts to a criticism quite simply that they are 'new'—they simply have not worked full time in a business or professional environment. Students who have undertaken 'sandwich' or 'co-op' degrees have an enormous advantage in this regard, because they get to work during their degree. There is (apparently) greater tolerance for the naivety of a student than for a newly recruited graduate.

The criticism is voiced in different ways. In the case of engineering or science graduates, it is usually that they have theoretical or 'book knowledge' but do not know the practicalities. In the case of graduates recruited for sales or marketing roles, they are said to 'lack credibility', to not be 'streetwise'. Sometimes this can be due to courses being too narrow.

TAFE Graduates

This research has focused on higher education graduates and most of the groups concerned the recruitment of university graduates. Nevertheless, some recruiters of vocational education and training graduates were included. From the evidence here we would comment that:

- There is unlikely to be any difference in the skills sought by employers of TAFE graduates compared to those of higher education graduates. Some aspects which employers look for in higher education graduates (long term senior management potential) may be less emphasised but the overall mix will be the same.
- Some employers actively prefer TAFE graduates, believing them to be more likely to be older, more experienced, and therefore more 'streetwise'.
- Some TAFE degrees have a highly practical content (e.g. graphic design), and graduates find themselves in smaller companies. Perhaps because of this, there seems to be higher expectations that these graduates will make an impact on the organisation.
- Whereas university course content was thought to be up with advances in industry, there were some hints that TAFE lecturers may have fallen behind in some areas.

Each of the above four comments should be treated as hypotheses to be tested through the full survey.

Implications for Educational Institutions

We would draw the following implications for tertiary educational institutions.

The first of these is the enormous advantage conferred on students who have taken 'co-op' or 'sandwich' degrees. Both employers and the industry association representatives we spoke to emphasised the advantages of these. The extreme example is the University of Technology, Sydney (UTS), where engineering students spend six months of every year in industry and a degree takes six or seven years. Other courses include an industry year after the second year at university. Whilst many courses include a requirement for industry experience (including some accountancy and commerce courses), it is not seen as having the same value as a full 'co-op' or 'sandwich' course.

The value to employers of 'co-op'/'sandwich' students is that the recruit knows and understands the industry environment. They are immediately employable. The advantage to the student is that they can point to their experience as evidence that they have relevant skills, especially in regards to communications, time management, teamwork and so on. Furthermore, it is said that students who do a 'sandwich' year return to study with greater interest and commitment.

But you notice the difference from the guys who have come out of an engineering degree and not done any work experience, like they come from [University X] and the guy who's done 12 months co-op, so much of a difference. But also a lot of them find that when they get into the work place it adds so much to their education because a lot of their marks pick up afterwards . . . and if you're really thinking about co-op and universities need to be thinking about this, about work integrated learning, it is actually a wonderful way of boosting the education of these people because they're in the work place, they're learning so many things and they're actually gaining, you know, real capabilities.

(Large company, Melbourne)

Because of the advantages of these courses (99.9 per cent of UTS graduates are said to have jobs before they graduate), institutions which do not go this route may well need to consider their own approach very carefully.

Some of the other skills that employers look for in graduates have implications for the conduct of higher education as well. In particular, employers are looking for graduates who can work and cooperate in teams (and this links to the emphasis in management theory on the importance of systems thinking and cooperative effort).

Traditional university teaching/learning, however, is based on the premise of a one-way transfer of information from the lecturer to the student, who operates as an individual. However, some (newer) universities use approaches to learning that are based much more around group learning and the collective seminar approach. This type of learning may be more relevant to people entering a modern commercial environment.

[University X] approaches tuition in a group discussion manner like this . . . whereas at [University Y] you are lectured at. You don't develop communication skills in this way . . . you might develop one aspect [of communication] which is good listening skills."

(Medium business, Sydney)

Recruiters themselves saw, in some cases, a paradox. The 'traditional' older universities attract the brighter, better presented students—the ones their industry wants—but the newer universities offer the 'sandwich' courses, and cooperative learning which appears to produce better prepared students.

A final set of implications arises from the consideration of the 'skills for the future' that graduates will need. Accepting that Australian business will be increasingly international, and competing within a global economy, accepting also that the nature of many occupations is expected to change drastically over any new graduate's working life, then educational institutions have to meet the challenge of preparing graduates for the future. Among other aspects, they need to consider:

- the importance of double degrees (business and accountancy, engineering and languages) to produce more rounded graduates;
- the need for graduates to be adaptable, and flexible in their attitudes to work; and
- the need for graduates to expect their careers to involve continuous learning and re-training, and to be better prepared for this.

Clearly, the future work environment will be even more challenging than today's, and educational institutions themselves face challenges in preparing graduates for this future.

Literature Review

Summary

Over the past two decades the changing nature of technological development has resulted in an enormous perceptual and behavioural shift in both society and the individual. The workplace, the nature of work in general, and the relationships occurring within the workplace environment would have to be considered one of the primary areas influenced throughout this period.

This report seeks to identify the major changes which have occurred within the three aforementioned areas, their interrelationships and, most importantly, their influence upon the expected skill sets, and subsequent recruitment, of new graduates.

This summary endeavours to provide a brief overview of the major points distinguished throughout the literature review. It is organised into the area headings listed below, with the body of the report detailing all relevant factors and source material:

- the context of graduate recruitment;
- perceived recruitment selection criteria for new graduates;
- desired technical skill sets; and
- desired personal attribute skill sets.

The Context of Graduate Recruitment

Within the workplace there has been a substantial transformation in:

- the workplace ethos;
- organisational structures;
- work practices; and
- individual skill requirements.

Specific changes which have had a major impact within the workplace can be summarised as follows:

- movement toward unstable or constantly changing workplaces, whereby traditional skill sets become outmoded quickly over time;
- downsizing and rationalisation of corporate structures;
- a subsequent surplus of skilled workers, leading to recruitment of highly skilled people into increasingly lower positions and at lower rates of pay;

- recruitment of multi-skilled workers (within this context multi-skilled refers to holding both generalist and specialist skills);
- a preference for recruitment of experienced staff over new graduates (despite high numbers of new graduates being recruited);
- recruitment of new graduates from the top 10 per cent of their class; and
- recruitment of skilled workers (including new graduates) into lower paid positions.

Perceived Recruitment Selection Criteria for New Graduates

The increased pace of business and competition within the market in general have resulted in a change of focus for many businesses, both public and private sector. The need to have staff 'up to speed' and 'generating wealth' immediately has become an imperative. Furthermore, in seeking that competitive edge and dealing with the pace of technological developments, employers appear to be assuming technical skill levels held by new graduates (generally on the basis of their academic results), yet increasingly discriminating between potential new graduates as employees on the basis of personal attributes.

Employer perceptions of new graduate skills can be summarised as follows:

- although employable at a lower pay rate, new graduates cost time and money;
- they do not (and are not expected to) possess the creativity, flair, and sensitivity to build strong client relationships;
- they do not (and are expected to) possess basic comprehension, literacy and numerical skills, which are defined as being comparable with that of an eleventh or twelfth grade in 1950; and
- although stated as not being a primary requirement, technical skills appear to be a strong criteria for selection, determined through the strong employer reliance on academic results.

Desired Technical Skill Sets

Employment of new graduates appears to be considered as a future investment approach by employers, with greater numbers of new graduates employed during periods of economic stability and growth. Based on this assumption, employers are keen to ensure that they employ 'the right kind of person'. The late 1980s and early 1990s have been characterised by economic instability, resulting in a shift toward customer service, structural rationalisation within organisations, and a desire for multi-skilling among employees. Furthermore, new graduates have increasingly come into direct competition with experienced workers for entry-level positions. These factors, coupled with the generalisation of degrees, have left employers a wide choice of skill sets even amongst new graduates, resulting in greater skill sets expected of new graduates.

Overall there appear to be extremely negative perceptions of new graduates' skill sets, and these are focused primarily around communication skills, specifically oral communication.

Many employers are concerned at the decline of basic skills, such as oral and written communication, and numeracy, and directly relate this deficiency to declining standards of education.

It should be noted at this point that it was not within the scope of this literature review to determine whether the levels of basic skills have actually declined at the cost of increasing industry-specific skills among new graduates, or whether employers have developed unrealistic expectations of new graduate skills as a result of competition with experienced graduates, or simply that employers are basing their assessment of new graduate skill sets against their own developed skill levels.

It should be noted that there appears to be a contradiction between views pertaining to skill sets held by new graduates, with employers believing both that new graduates are deficient in technical skills sets, yet are professionally qualified and more likely to have up-to-date skills.

Desired Personal Attribute Skill Sets

The impact of all of these factors mentioned to date, but most specifically the continual outdateding of technical skills, has resulted in employers assessing new employees generally on the following criteria:

- development of personal attributes;
- greatest potential for wealth generation;
- least expenditure in time and resources; and
- greatest skill set (i.e. has at least two years work experience).

Overall, these changes translate into a new skill set required not only for workers in general, but specifically for new graduates.

As such, skills such as self reliance, client and peer relationship building, and the ability to learn have all become prominent discriminators between new graduates as potential employees.

It is felt that many of the skill deficiencies mentioned can be compensated, or attained throughout the first two years within the workforce. This explains why there is a strong tendency for recruitment to be focused at graduates with at least two years experience, and why the personal attributes of the individual (such as initiative) are so important in the ultimate selection criteria.

Most studies are reflective only of higher education skill sets, with vocational education seeming to be aimed most strongly at current employees, or new graduates within the first two years of their employment. Vocational courses appear to be an addition to a higher education degree, rather than standing on their own.

The gap between both higher education skills and employer perceptions of graduate skills is reflected most strongly in the prolific, and still growing, numbers of both bridging and vocational courses. This is further reinforced by the numbers of skill development initiatives being orchestrated by government, industry, and educational institutions (both private and public).

Whilst reading through the material provided within this paper, it is important to keep in mind the distinction that has made between *perceived* and *actual* skills sets and selection criteria by employers. 'Perceived' refers to what employers state they require from a new graduate, while 'actual' is what the decision for recruitment is based on. This distinction is most evident when assessing the relationship between desired technical skill sets and personal attribute skill sets. One example is that most employers state a compulsory standard of oral communication as determining recruitment, when in actual fact they are assuming a comprehensive technical skill set as being held by the individual as more important than oral communication.

Ultimately, employers appear to be *discriminating* between new graduates on the basis of basic skill sets, rather than *deciding* on the basis of basic skill sets, as they say they are.

It should also be noted that this literature review has focused on higher education rather than vocational education and training graduates, and this is largely the result of a general lack of material concerning employer perceptions of vocational education and training graduates.

Objectives

Reark Research has been commissioned by the Department of Employment, Education, Training and Youth Affairs to undertake a survey of employer satisfaction with graduates skills.

As stage one of this research, a comprehensive review has been undertaken of the (English language) literature relevant to this topic.

The purpose of this literature review is to gain an understanding of the gap between new graduate skill sets and employer expectations.

It should be noted here that our eventual study will cover both the vocational education and training, and the higher education sectors. However, the literature presented here generally refers to ‘graduates’ and in truth usually implies the higher education sector. Only one item has been found that deals specifically with the vocational education and training sector.

Materials

The materials used within this study were drawn from a range of sources, including newspaper and journal articles, published studies, and private and government Internet publications, all of which were compiled by Reark during October 1997.

All materials are available, and copies may be supplied upon request.

The Context of Graduate Recruitment

Technological change, competitive pressures, and the general instability of the economy have impacted heavily on business in the late 1980s and 1990s. Within the context of this literature review, five specific areas have been identified as having been most influenced:

- the workplace;
- graduate opportunities;
- required graduate skill sets;
- industry–university links; and
- vocational educational training.

This section seeks to define the changes and developments within each of the areas described above, as well as further outlining their interrelationships.

The Workplace

Many workplaces have experienced immense changes over the past ten years, affecting organisational structure, relationships between employees and the organisation, and the work conducted by employees.

- Winter’s study (1995, p. 12) assessing graduate skill needs in the 21st century, suggests that “down-sizing” and “de-layering” have left organisations leaner and more efficient, with responsibility passed down the organisation . . . They have also resulted in huge numbers of redundancies, overwork for the remaining employees and destructive effects on morale’.

- Coates (1995, p. 17), in a parallel study, echoed these sentiments, referring to ‘. . . the decline in certainty as to the value of traditionally successful and desirable careers and the awareness that the most critical variables—employers, job opportunities, income, educational requirements—have now become unstable and variable’.
- Winter (1995, p. 12), in his report argued that ‘. . . the deepest effect on the next generation has been the death of loyalty as a part of the employment equation’.
- Winter (1995, p. 12) later went on to relate the changed employer–employee relationship to the fact that ‘. . . some of the professional roles which graduates filled within large organisations in the past have now been given to small consultancies or self employed individuals’.

Graduate Opportunities

As a result of changes within the workplace, the recruitment and roles available to new graduates have altered significantly.

- An OECD study (1993, p. 7) found that ‘. . . since the beginning of the 1960’s and until the mid-70’s the evolution of employment structures had been very favourable to graduates’. It went on to conclude that the situation had changed due to increased enrolments leading to a surplus of graduates, compounded by changed economic structures and climate, leading to a saturation of specific industries which were traditional employers of new graduates, as well as constraints on public expenditure, and the uncertainty of future economic trends. The result has been a greater emphasis on vocational courses by employers, and aspects of vocational education being integrated into higher education courses.
- The study (OECD 1993, p. 7) also found that greater economic recovery during the 1980s led to a greater demand for new graduates despite unemployment trends in the early 1990s.
- A further variable identified within the study (OECD 1993, p. 8) suggested that ‘. . . the mere fact that higher education has expanded means that young graduates are occupying a much more diverse range of jobs than in the past’.

Industry–University links

The stated lack of basic skills held by new graduates has been considered so critical that numerous industry–university linkage initiatives have been implemented. Australia has had these types of schemes in place for several years, with many of the professional areas, such as law, medicine, etc., having strong formalised standards of practice. This formalisation of linkage is becoming more and more apparent within areas such as psychology, or chiropractic care.

- The study by Turpin and others (1996, p. 4) concluded that ‘The report finds that industry–university links in Australia:
 - rely heavily on both informal (personal networks) and formal (organisational structures) linking mechanisms;
 - are supported strongly by a continuum of government programs for stimulating and funding such alliances;
 - are currently focused on providing a structural and organisational basis for university–industry collaboration in research, research training, delivery of “enterprise-based” training;
 - have evolved significantly over at least 15 years, showing a trend toward formalised and structured arrangements for managing cooperation; and
 - are leading to new organisational forms that rely on the integration of research, teaching/training and technical cooperation’.
- Turpin (1996, p. 5) further stated that, ‘Industry–university research links are often developed in the Australian context through the activities of intermediaries—groups such as advisory bodies, funding bodies or joint committees for establishing future research directions and priorities which effectively combine industry, university and government interests’.
- Turpin (1996, p. 5) suggested also that ‘Co-operation in the traditional mode is typically associated with the professions (such as medicine, law, engineering, and nursing) where course content and delivery is to a significant extent set by the governing bodies of the profession, and there are monitoring and review procedures to ensure that these standards are maintained . . . New forms of cooperation are more far reaching, a response to industry’s call for the delivery of more “enterprise-based” university training . . . In many cases they represent a substantial transformation in the missions of universities, the objectives and importance of education in company planning, and in the nature and the relationship between the two players’.
- A recent study from the Institute of Engineers and others (1996, pp. 3–4), specifically aimed at skill needs for engineers, found that the lack of industry skills is ‘alarming’, subsequently calling for greater numbers of field trips to be integrated into course structures, but this has been inhibited by a lack of staff able to guide groups, and increased health and safety regulations. Furthermore, the engineering industry is calling for the greater integration of 12-week work experience programs into course curricula, potentially resulting in longer degree courses, but an inflexibility from the engineering schools has acted as an inhibitor to the expansion of any such programs.

Vocational Education Training

Increased university enrolments appear to have led to a ‘generalisation’ of higher education degrees. The pace of technological development has meant that many industry-specific skills become outmoded in very short periods of time. As a result, new graduates have been seen to be deficient in industry-specific skills, and are in need of vocational training. As an industry in itself, vocational training has evolved

rapidly in both the public and private sectors, with many educational institutions implementing tailored courses for specific industries. The perceived shift toward this type of education has also resulted in universities competing for students, and introducing vocational subjects into degree courses. These courses appear to be highly desirable to employers, with most new graduates being enrolled at some point within the first two years of their employment.

- The study commissioned by the Organisation for Economic Co-operation and Development (1993, pp. 17–18) suggested that ‘The generalisation of degrees has led to a lack of demand for new graduates’.
- The study (OECD 1993, pp. 8–9) further stated that ‘During the late 60’s through until the early 70’s there was the introduction of vocational courses—these types of training have consolidated their position in the higher education system, to the point of bringing a redistribution of roles and functions’.
- The study (OECD 1993, pp. 8–9) went on to elaborate that this change resulted in ‘. . . post-secondary training is now itself having to compete with many other types of training, mostly the result of private initiative and very often run on a commercial basis, designed to meet the specific needs of the labour market’.
- The authors (OECD 1993, p. 144) further felt that ‘Vocational courses generally lead to earlier and easier employment primarily because of the network of contacts which have been better built by institutions’.
- An English group (ECE 1996) echoed these ideas stating that ‘Employers are encouraging key skills through Modern Apprenticeships and other training programmes’.

How and Why Employers Recruit New Graduates

Several studies assessing employer perceptions’ of new graduate skills have been conducted over the past decade. This section deals with two aspects:

- selection criteria which employers use in choosing new graduates, and
- the advantages of recruiting new graduates.

Selection Criteria Applied to New Graduates

There are apparent contradictions between the skills and attributes which employers state they require, and the assessment criteria actually applied in the selection process.

This is demonstrated in the following three charts (National Board of Employment, Education and Training 1992, p. 9) which show, first, the employment skills and, second, the personal attributes requested in advertisements for graduate positions and, third, the selection criteria actually applied in recruiting graduates. Notice the strong reliance on academic results as an indicator of skills and attributes. It is also interesting to note that there is a far

greater incidence of requesting employment skills rather than personal attributes within advertisements, and yet many of these personal attributes are the basis of selection criteria.

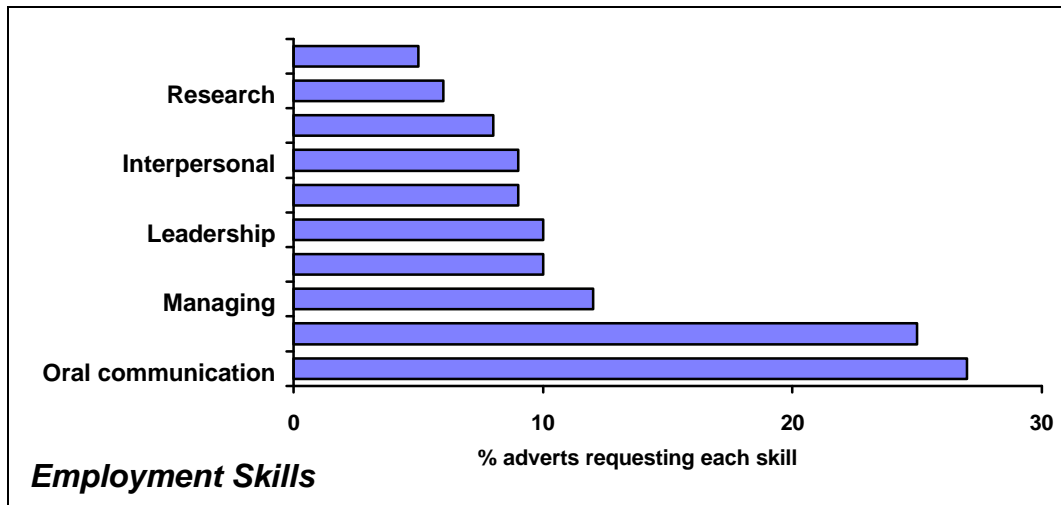


Chart 1 Employment Skills Desired by Employers (as demonstrated in recruitment advertisements)

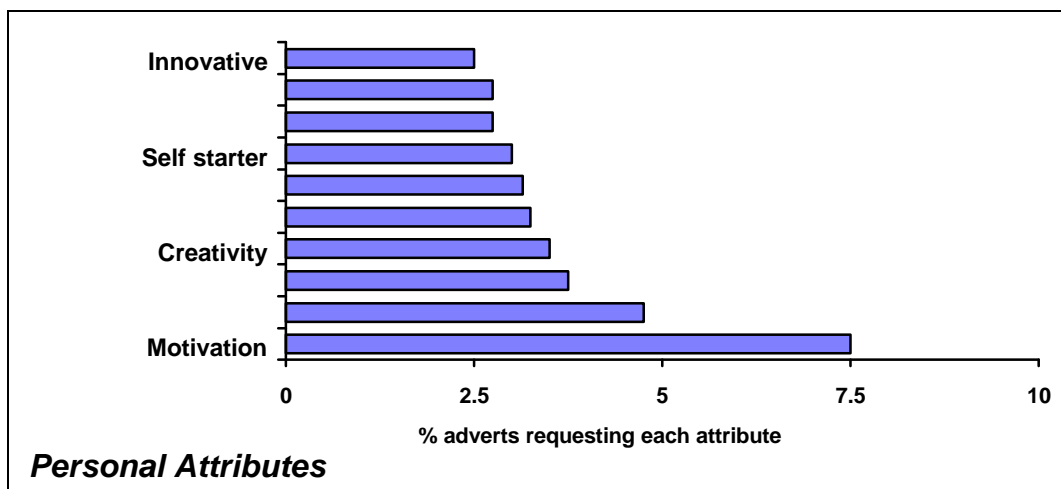


Chart 2 Personal Attributes Desired by Employers (as demonstrated in recruitment advertisements)

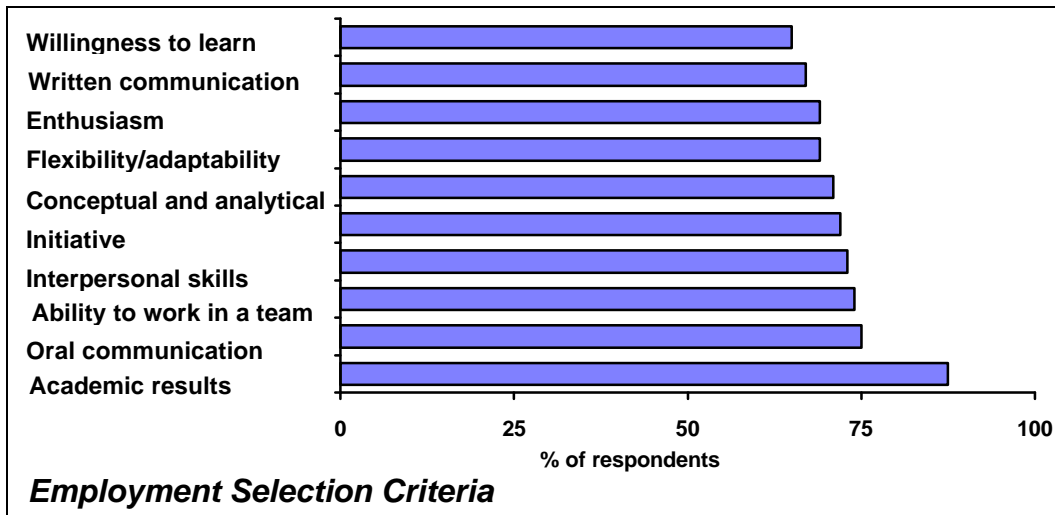


Chart 3 Criteria Used in Selecting New Graduates

The findings of the 'employment selection criteria' (National Board of Employment, Education and Training 1992, p. 19) used to assess graduates is further reflected in the table below. Both place academic results, oral communication, ability to work in a team, interpersonal skills and initiative as critical to obtaining a graduate employment position.

Selection Criteria Applied to New Graduates

<i>Selection Criteria</i>	<i>% of Respondents</i>
Academic results	90
Oral communication skills	75
Ability to work in a team	73
Interpersonal skills	71
Initiative	69
Conceptual and analytical ability	66
Flexibility and adaptability	61
Enthusiasm	61
Written communication skills	58
Willingness to learn	54
Achievement orientation	53
Presentation skills	51
Relevant work experience	36
Tenacity	35

Immediate productivity, future potential, experience and achievement appear important employer considerations when considering graduate recruitment.

- An article from HR magazine (Kaufman 1994, pp. 84–85) states that ‘Companies want to hire people who will contribute to the company’s profits and future growth in addition to having a college degree, good grades and intelligence’.
- Kaufman (1994, pp. 84–85) went on to say that ‘. . . companies look for college graduates who have acquired specific skills from course work, previous work experience and other sources that will make them productive members’.
- A study by Guthrie (1994, p. 6) found that ‘There was an almost unanimous view that our university graduates should have experienced a broad education, have high order intellectual skills, be liberal thinkers, and have attained international standards in their areas of specialisation’. These same people would have a high-level ability to communicate, would be able to decide on appropriate courses of action, and be able to evaluate the quality and effectiveness of those decisions.

Perceived Advantages in Recruiting New Graduates

Despite the frequently cited negatives associated with the skill sets of new graduates, several advantages in employing new graduates have been identified, namely their role as an investment in the future and, generally, their recent technical skill sets.

- The National Board of Employment, Education and Training (1992, p. 13) study found that ‘Professionally qualified’ was the most commonly stated reason given by employers for employing graduates.
- ‘[N]evertheless, more than half of the employers surveyed identified “Better analytical ability” as a perceived benefit of employing graduates . . .’ (National Board of Employment, Education and Training 1992, p. 13).
- The 1993 OECD study (p. 7) suggested that ‘There is a renewed awareness of the importance of education for economic and technological developments, so that ‘staff with post secondary education are considered to be a strategic resource for the preservation of each country’s competitiveness’.
- The table below is taken from a National Board of Employment, Education and Training study (1992, p. 13), and shows the reasons for hiring graduates as opposed to non-graduates. It is very interesting to note that 75 per cent of respondents employed graduates because they are ‘professionally qualified’. This carries several implications but, most importantly, the assumption that a specific set of technical skills are held by the applicant. Furthermore, the inclusion of ‘better analytical ability’ as the second highest attribute appears at odds with many of the skills outlined as deficient among new graduates.

Ranked Benefits of Employing Graduates as Opposed to Non-graduates

<i>Benefits</i>	<i>% of Respondents</i>
Professionally qualified	75
Better analytical ability	55
Current knowledge in field	40
More able to learn	39
More achievement orientated	33
More independent	28
Clear career orientation	25
More innovative	23

Inclusion of final selection criteria shows a strong emphasis on personal attributes. When considered in relation to the assumption of technical skill sets displayed in the above table, it would seem that the difference between getting the job and not getting the job are the strengths of the individuals' personal attributes.

Differences between Groups of Successful and Unsuccessful Candidates at the Final Selection Phase (National Board of Employment, Education and Training 1992, p. 19)

<i>Differences between Groups</i>	<i>% of Respondents</i>
Interpersonal skills	63
Presentation at interview	60
Oral communication skills	59
Academic results	48
Leadership	41
Enthusiasm	41
Interest in the organisation	36
Specific desired skills or qualifications	35
Flexibility/Adaptability	33
All round achievers	30
Willingness to learn	28
Written communication skills	20
Broad based skills	20

Desired Technical Skill Sets

The focus of this section is to gain an understanding of the overall technical skill sets required of new graduates.

Technical skills are defined as those attained through formal education, and include such things as oral communication, written communication, industry specific skills, and so forth.

Because of the broad range of skills, this section is organised into the following sections:

- communication skills;
- social skills;
- knowledge skills;
- graduate skills to be developed within the workplace;
- skills that are not required of new graduates;
- graduate skill deficiencies;
- the gap between employer/university skill priorities; and
- skills for the future.

Communication Skills

Communication skills, more specifically oral communication skills, were the most desirable skills cited throughout all the studies, and those most often cited as deficient amongst new graduates.

- The National Board of Employment, Education and Training skill requirements study (1992, p. 13) stated that ‘Employers in our survey indicated that oral communication is the criterion used most often to screen new graduates, after academic results are considered’.

Social Skills

Social skills were considered highly important amongst employers of new graduates, and encompass such areas as teamwork, client relationship building, understanding of position within the organisational hierarchy, and empathy with people from different cultures. Many new graduates were seen to be quite poor in these areas. This deficit was predominantly associated with a lack of empathy for both co-workers and people from other cultures.

- The National Board of Employment, Education and Training study (1992, p. 13) further found that ‘After communication skills, social skills were the group of skills most frequently requested of graduates by newspaper advertisements . . . leadership, interpersonal dealings, teamwork, supervision, negotiation and liaison’.

Knowledge Skills

The definition of knowledge skills is twofold, encompassing both general knowledge, obtained through broad interests, and industry specific skills, or basic knowledge requisites within specific industries. Many new graduates were seen to possess the majority of requisite skills, but were considered relatively poor in their general knowledge. This was particularly the case in relation to understanding international issues relevant to specific industries.

- The National Board of Employment, Education and Training study (1992, p. 18) concluded that 'Employers of new graduates stated that they would like them to have better general knowledge, commercial awareness, worldliness and ability to apply theory to practice.

Specific Areas for Graduate Skills to Be Developed

The table below (National Board of Employment, Education and Training 1992, p. 19) indicates a rank ordering of training areas generally undertaken by new graduates within the first year of their employment. This training is both formal and informal, or through an educational/vocational training program, and/or through on-the-job training. Although preferred, the first three areas are generally not expected of new graduates, with employers anticipating the need for the conduct of this training.

Development Aims for New Graduates during Their First Year of Employment

<i>Areas to Be Developed in New Graduates</i>	<i>% of Respondents</i>
Knowledge of organisation	84
Specific technical skills	76
Self-management skills	48
Oral communication	38
Written communication	36
Interpersonal skills	36
Business presentation skills	21

Skills which Graduates Are Not Expected to Possess

Two tables, taken from Guthrie's (1994, p. 50) *Graduate Labour Market Survey*, give some indications of skills which employers do *not* generally expect of new graduates.

Ten Sub-areas Least Often Mentioned as Being Necessary for All New Graduates

<i>Skill and Attribute Area</i>	<i>% Necessary for All New Graduates</i>	<i>Group</i>
Public speaking	22.7	Communication
Presentations to meetings	26.9	Communication
Able to do others' work	29.7	Interpersonal
Entrepreneurial flair	34.4	Work org./situation
Creativity and flair	37.5	Cognitive
IT literate	44.6	Communication
Generalisation & synthesis	47.6	Cognitive
Able to intuit solutions	50.8	Work org./situation
Evaluation and review	59.4	Work org./situation
Client sensitivity	61.5	Work org./situation

The Ten Sub-areas Most Often Mentioned as Not Being Expected of New Graduates

<i>Skill and Attribute Area</i>	<i>% Not Expected of New Graduates</i>	<i>Group</i>
Able to do others work	35.9	Interpersonal
Public speaking	16.7	Communication
Presentations to meetings	16.4	Communication
Entrepreneurial flair	12.5	Work situation
Able to work unsupervised	11.9	Work situation
Client sensitivity	10.8	Work situation
Understand position	10.8	Interpersonal
Creativity and flair	9.4	Cognitive
Able to intuit solutions	7.9	Work situation
IT literate	7.7	Communication

Graduate Skill Deficiencies

Changes to the workplace and greater competition for positions within industry have led potential employers to state their concern with the perceived lack of basic skills displayed by new graduates. Often employers will opt to employ a graduate with two years experience in preference to new graduates. It should also be noted on this point that competition within industry has meant that employers are seeking staff who are able to generate wealth immediately for the company, and do not require the training and nurturing required by a new graduate.

Several skill areas have been identified as being deficient among new graduates. The skills outlined within this section have been suggested by employers as in need of integration into higher education curricula, and compulsory for new graduates within the future. It is of special interest to note that many of these areas were

outlined within the previous section as ‘least likely to be mentioned as necessary for new graduates’, and ‘not expected of new graduates’.

- The Guthrie report (1994a, p. 6) on the Higher Education Experience survey stated that graduates were seen as frequently having:
 - ‘very poor oral and written communication skills
 - an inability to relate to others, especially those from a different background or working in a different area
 - a lack of empathy and understanding for other employees, especially those at trade level
 - a lack of training in logic and
 - a lack of ability to manage and facilitate others working in the same organisation’.
- The Coates (1995, p. 18) study states that the ‘. . . skills required are:
 - the ability to read, do mathematics, and write at the level expected of the eleventh or twelfth-grade student of 1950.
 - Communication skills, Communication is essential in an information society and involves both listening and speaking.
 - The ability to learn.
 - Creativity—ability to think outside of the box.
 - Interpersonal skills—teamwork.
 - A positive, healthy and enthusiastic attitude toward work’.
- Coates (1995, p. 18) goes on to state that ‘The terrible condition of basic skills further suggests that one of the growing staff functions within the corporation will be education and training in four areas. First will be compensation for the declining quality of the entry-level worker . . . Second will be for the usual move up in the organisational ladder. Third will be to respond to new technologies . . . Finally, changing business practices, such as the move toward customer orientation, requires extensive training’.
- Coates (1995, pp. 19–20) concluded that ‘Beyond basic skills, entry-level workers will need:
 - Computer literacy
 - Interpersonal skills
 - Language skills
 - Ability to think long term
 - Tolerance and multi-cultural understanding
 - Professional and technical skills
 - The broadest class for technical and professional skills
 - Judgement’.

- Swinburne University's study (1997) into generic skills suggested that in regards to written communication skills, 'They learn bad (verbose) writing habits and have to be taught to write (and think) clearly and concisely'.
- A study conducted by Turpin (1996, p. 5) and others found that ' . . . there is an epidemic shortage of basic skills. Abilities that a generation ago, were routinely expected are increasingly weak or absent among entry-level employees . . . company tested basic skills in math, reading, and reasoning of 57,000 applicants and 96% failed'.

The Gap between Employer and University Skill Priorities

The following tables, again taken from Guthries' work (1994, p. 7), describe a rank ordering of priority skills necessary for new graduates. Results were obtained from both industry and universities, and clearly verify the distinct gap between employer requirements of new graduates and higher education curricula outputs.

Ranking of Objectives for University Education in Order of Importance: Business and University Respondents

	<i>Business</i>	<i>University</i>
Learning thinking/decision-making making skills	1	1
Learning communication skills	2	2
Learning professional skills—practical studies	3	5
Learning professional skills—theoretical studies	4	3
Developing standards of personal conduct	5	6
Receiving on-the-job work experience	6	8
Learning about work and career choice	7	7
Learning a broad range of general academic subjects	8	4

Emphasis Given to Suggested Characteristics of University Graduates: Business and University Respondents

	<i>Business</i>	<i>University</i>
Communication skills	1	7
Capacity to learn new skills	2	5
Capacity for cooperation	3	8
Capacity to solve problems	4	3
Ability to apply knowledge	5	4
Capacity to work alone	6	6
Theoretical knowledge	7	1
Capacity to use computers	8	2
Understanding of ethics	9	12
General business knowledge	10	11
Specific work skills	=11	9
Broad background general knowledge	=11	10

Skills for the Future

Surveyed employers appear to be acutely aware of the educational needs of new graduates for the immediate future (the next two to three years). Skill sets appropriate to growth industry areas, future organisation structures and their structural needs, and anticipated business ethos shifts, have all been mentioned as preferable for employment within the future workplace, not only as a means of being employable, but also assisting employees to adapt to the changing workplace environment. This area is dealt with in further detail within the next section of this report.

- Coates' (1995, pp. 21–22) study concluded that for the future 'The new skills needed will be:
 - In communication, we are moving from text and argument to understanding images and perception. We are moving from the written word to understanding visual and aural images. We are moving from dependence on primarily logical relationships to increasing recognition of the value of intuitive insight.
 - Visual and acoustic design will become more important as people spend larger parts of their working and non-working lives indoors.
 - Noise management responding to an increasingly irksome, but treatable, nuisance in the domestic and occupational milieu will be a niche skill.
 - Information flow management, not only through computers, but also through organisations, will be a skill much in demand.
 - New and emerging technologies will automatically create demands.
 - Biological approaches'.

Desired Personal Attribute Skills Sets

This section seeks to draw a comprehensive personal attribute skill set relevant to all new graduates, as well as outline areas described as deficient by employers.

Personal attributes are defined as those personal qualities acquired outside of formal education, such as initiative, problem solving, interpersonal skills, enthusiasm, and so forth. They are skills which are focused on the personal needs of the individual to be able to adapt to the changing workplace, and to also obtain a skill set that will be transferable throughout specific industries and across industries.

This section deals with the following areas:

- self reliance skills;
- generic skills;
- perceived deficiencies with new graduates; and
- skills for the future.

Self Reliance Skills

Studies concerning the career needs of new graduates by and large point toward the need for the attainment of ‘self reliance’ skills. These skills are defined as ‘process skills’ rather than ‘function or technical skills’, and are necessary for the individual to be able to effectively manage both their workplace and educational career development. They are about the individual having clear ideas about where they want to go in their career, optional paths to attain their goals, and understand both their strength and weaknesses in relation to these goals. There is also the need to be able to obtain a workable balance between professional and personal needs, as well as creating and maintaining an overall satisfaction with their direction.

- Winters’ (1995, p. 18) ‘future skills’ work centred around the of an ‘Increasing desire for, and trend toward the attainment of ‘self reliance’ skills enabling people to manage the processes of career progression and effective learning.
- Winter (1995, p. 19) also premised his conclusions stating that ‘Self reliance skills are process skills rather than functional skills’ and include:
 - Self awareness—able to clearly identify skills, values, interests, and other personal attributes, able to pinpoint core strengths and ‘differentiating factors’, equipped with evidence of abilities, actively willing to seek feedback from others and able to give constructive feedback, able to identify areas for personal, academic and professional development.
 - Self promotion—able to define and promote own agenda, can identify ‘customer needs’ and can promote own strengths in a convincing way both written and orally selling benefits to the customer not simply features.
 - Exploring and Creating Opportunities—able to identify, create, investigate and seize opportunities, have research skills to identify possible sources of information, help and support.
 - Action planning—able to plan a course of action which addresses: where am I now?, Where do I want to be?, how do I get there? Able to implement an action by: organising time effectively, identify steps needed to reach the goal, preparing contingency plans; able to monitor and evaluate progress against specific objectives.
 - Networking—aware of the need to develop networks of contacts, able to define, develop and maintain a support network for advice and information, have good telephone skills.
 - Matching and Decision Making—understand personal priorities and constraints (internal and external) achieving a balance between work and home life, able to match opportunities to core skills, knowledge, values, interests, able to make an informed decision based on the available opportunities.
 - Negotiation—able to negotiate the psychological contract from a position of powerlessness, able to reach win–win agreements.
 - Political Awareness—understand the hidden tensions and power struggles within organisations, aware of the location of power and influence within an organisation.

- Coping with uncertainty—able to adapt goals in the light of changing circumstances, able to take myriads of tiny risks.
- Development focus—committed to lifelong learning, understand preferred method and style of learning, reflects on learning experiences good and bad, able to learn from the mistakes of others.
- Transfer skills—able to apply new skills to new contexts.
- Self confidence—have an underlying confidence in abilities based on past successes. Also has a personal sense of self-worth, not dependent on performance’.

Generic Skills

Generic skills are those skills which are, and which will continue to, determine recruitment of new graduates. Many of these skills have been referred to previously as technical skills, but which are also considered as reflecting personal qualities of the individual. An example is that of academic results. High academic results do show that the individual has a good grounding in the technical skills required by specific industries, but they also appear to be considered as representative of an achievement attitude within the individual. Furthermore, generic skills are skills which are perceived as reflecting an ability to continue updating and developing industry specific skills which continually become obsolete within many industries.

- An *Australian Financial Review* article (14 Feb. 97, p. 48) stated that ‘. . . looking for those with communication skills and qualities such as maturity and adaptability, as well as marks within the top 5%’.
- The article (*Australian Financial Review* 14 Feb. 97, p. 48) went on to quote ‘we’re really talking about the competitive edge. We expect our people to be part of a client-focused workforce . . . beyond solid academic results, the firm looks at initiative, ownership of decisions, adaptability and communication. Add to that relationship building skills . . .’
- The National Board of Employment, Education and Training (1992, p. 20) concluded that ‘Three main skills desired:
 - communication skills;
 - social skills; and
 - the ability to apply academic learning to a work environment’.
- Swinburnes’ study (1997, p. 1) concluded ‘Underlying this emphasis on generic skills is a rationale that discipline specific skills often become quickly obsolete, given the rapidly changing nature of technology and the workplace. Thus generic skills are more relevant, useful and durable, providing a basis upon which individuals can build; they are skills ‘that support learning throughout the lifetime’.
- The report (Swinburne 1997, p. 1) further defined that ‘. . . general category of “generic” includes such qualities as the capacity to learn new skills and procedures, decision making and problem solving abilities, capacity for critical thinking, effective communication and interpersonal awareness, ability to access

information and resources, and professional integrity, tolerance and ethical practice.

Perceived Graduate Skill Deficiencies

Basic work practices and knowledge, as a generic skill, are considered as deficient within new graduates. It is generally understood that this is a skill that is not part of the formal education system, and is obtained through work experience, hence the desire to employ graduates with two years experience.

- Another *Australian Financial Review* article (1997, p. 5) quoted ‘A survey has found that almost 85% of university graduates do not understand basic work practices’.
- The article (*Australian Financial Review* 1997, p. 5) stated that ‘To increase their employment prospects graduates must be up-to-date with work practices and industry standards’.
- The article (*Australian Financial Review* 1997, p. 5) detailed that ‘. . . 47% of the respondents rated graduates knowledge as “poor”, while only 38% of respondents thought that graduates had a level of knowledge that could be called “fair”’.
- Within the study (*Australian Financial Review* 1997, p. 5), employers felt that ‘The main reason for graduates’ inadequacy, according to 85% of respondents, was their inability to adjust from a university lifestyle to one of full time employment . . .’
- And that this ‘Stemmed from inadequate industry training and experience while still at university’ (*Australian Financial Review* 1997, p. 5).

Skills for the Future

The overall focus for new graduate skills for the future throughout the literature review has been on ‘personal attributes’ held by the individual. Traditional new graduate employers, specifically larger corporations and government, have very specific criteria by which they assess the future potential of individuals. Below are some of the areas considered as most important to employers.

- Winter (1995, p. 21) identified ‘The complete graduate needs four types of skills:
 - Self reliant—Graduates must be able to manage their career and personal development (e.g. Confidence, self awareness, action planning, political awareness).
 - Specialist—It helps to be an expert at something (e.g. Marketing, tax, accounting, family law, aerospace engineering, marine biology, organisational psychology).
 - Connected—Graduates must be team players (e.g. Management skills, meetings skills, negotiation skills, networking skills, presentation skills).

- Generalist—Graduates must have general business skills and knowledge (e.g. Finance/basic accounting, written communication, problem solving, use of IT)’.
 - The University of Sheffield (National Board of Employment, Education and Training 1992, p. 19) found that employers wanted graduates who:
 - had excellent communication skills (both oral and written);
 - were able to work effectively in teams;
 - were quick to take sound initiatives;
 - were adept at managing and organising themselves, their workload and others;
 - were enthusiastic; and
 - were highly self-motivated and able to motivate and inspire others.
 - A 1997 *Australian Financial Review* (1997, p. 48) article warned that ‘. . . the graduate recruitment drive has become something of a science in which ideal recruit profiles are mapped to the finest detail and relentlessly targeted’.

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