

THE 2003 ACS ICT EMPLOYMENT SURVEY



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January 2004

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ICT Professionals Shaping Our Future

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Abstract

The 2004 ACS ICT Australian ICT employment survey

The ACS carried out its first employment survey in 2002. Its findings generated much discussion. However, at the time the ACS management team stressed that the real value of this type of analysis was in seeing how trends in ICT employment are changing over time. As such, the ACS committed to undertaking the study on an annual basis. Responses to the second survey were gathered in the second half of 2003. These findings are the basis of this report. In particular, the report compares responses in 2003 with those gathered twelve months earlier to see what differences are highlighted.

The survey was specifically designed to assess changes in ICT skill sets and training as well as employment and unemployment levels. Some of the insights sought from this data were:

- How does ICT unemployment compare with the national average?
- What is the relationship between skill sets and employability? What do industry professionals see as the best source of ICT training?
- Is ICT unemployment higher among certain age groups or in different parts of Australia? Are there any gender differences in the ICT unemployment figures?
- What do local ICT professionals regard as the best source of training to embellish their skill sets?
- Do ICT professionals feel they are working excessively long hours or, alternatively, is there any evidence that work in the industry is becoming increasingly casual or part-time?

From analysing the survey responses the ACS seeks to draw conclusions to some of the questions above. Moreover, these answers will highlight priorities where the ACS can gain the maximum advantage for its members from concentrating its energies and resources. Furthermore, the data will help underpin any arguments that the ACS makes when it is lobbying governments and business and developing policies.

Executive Summary

Twelve months ago the ACS generated much discussion when we released the findings of our first survey examining the state of the ICT employment market in Australia. These results revealed that among those surveyed, ICT employment was running at about twice the national average. To most in this industry, the survey highlighted what many had long suspected. There was a serious issue with unemployment in the ICT marketplace.

The ACS is committed to providing detailed information on employment prospects for ICT professionals. We intend to undertake the survey on a regular basis as a way of highlighting changes in the employment prospects for ICT professionals in Australia. The 2003 employment survey continues that tradition, providing a wealth of information which is simply not possible to obtain through ABS surveys. The Society regards the value of our survey methodology is in showing ICT employment trends over time. This report summarises the trends in the local ICT employment front between the 2002 and 2003 ACS Employment surveys.

The level of ICT unemployment

The first thing to highlight is that there has been a very noticeable reduction in the number of ACS members reporting they are unemployed. In the 2002 study this figure stood at 12.4% of respondents. In 2003 that figure fell to 10.6%. This represents a fall of 1.8 percentage points in the ICT unemployment rate in the intervening 12 month period. This fall in the level of unemployment is much more pronounced than the national unemployment rate as a whole. Australian Bureau of Statistics figures show that the fall in unemployment between October 2002 and October 2003 was 0.4 percentage points. Nevertheless, the ACS survey still shows that the rate of ICT unemployment is significantly higher than the overall unemployment rate for the country. In fact, it is currently 86% higher than the national unemployment average. Last year it was more than double.¹

The questionnaire asks respondents to specify in months how long they have been under or unemployed in the last five years. The aim is to track whether this time is growing. In the latest study there was a decline in the numbers who said they had never experienced unemployment. This went down from 57% in 2002 to 53% in 2003. However, the time spent either under or unemployed in the last five years, as a median average, has also dropped between the two surveys. This fell 5% and is now 8 months.

¹ The ACS definition of unemployment is not strictly comparable with the ABS measure. ACS respondents were asked to identify if they considered themselves to be unemployed. This could, for example, include people who are not in the labour force according to the ABS, but would look for work if they thought there was a better chance of finding a job (discouraged job seekers), or people who may work a few hours a week (and so be defined by the ABS as employed), yet consider themselves to be unemployed. Thus the ACS unemployment figures provide a broader measure of the number of people who are not currently employed in the ICT sector, but would like to be.

One noticeable change between the 2002 and 2003 surveys was the significant drop in the number of female ACS members reporting they were unemployed. Last year this figure stood at 12.3%. In the latest survey this had dropped to 6.3%. As with last year's survey, there were also noticeable peaks among those unemployed by age. Unemployment increased noticeably for those in the age bands 46 to 50 and for those aged over 56 and for those aged under 25.

These high peak age ranges for ICT unemployment are different from twelve months ago. Then the trouble spots were in ACS members aged between 36 and 40 and over 50. This year it appears that the industry upturn has overcome the mid-life crises of ICT workers, although there was growth in the age range 46 to 50. However, the 2003 results saw the emergence of greater than average unemployment among those in the industry aged under 25. Since these people are likely to represent new ICT graduates this must be troubling among those who are concerned for the future well being of the local technology marketplace. Twelve months ago, only 7.4% of these respondents identified themselves as unemployed. This has now grown to 12.1%, which is an increase of almost two-thirds. This supports anecdotal evidence the ACS has heard from contacts in tertiary institutions about the difficulty new ICT graduates are facing in securing employment. In an otherwise fairly encouraging set of survey results, this does indicate a major potential problem that the ACS needs to lobby to address.

One other interesting statistic to emerge from the 2003 survey was a noticeable rise in full time technology employment. In other parts of the economy there has been criticism that job growth has largely been in the area of part time or casual work. The employment survey indicates that this is not the case in the area of ICT. Last year 60.8% of survey respondents reported their employment status as full time. This has risen to 64.7% this year. While there was a slight increase in those identifying their employment status as part time, there were falls in those classifying themselves as either self-employed or hourly contract workers. The evidence appears to show that the drop in ICT unemployment has been through an uptake in new full time ICT job positions.

Job skills

Another examination of changes in ICT unemployment in the last 12 months can be made through the aspect of job positions. Last year those most likely to be unemployed had development skill sets. This is not the case this year with the results showing a significant fall in the percentage of those unemployed identifying their main skill sets as being business analysis. Last year they made up 13.3% of respondents who were unemployed. In 2003 they were only 5.4% of the ICT unemployed. There was also a fall in programmers amongst the unemployed although the figure was nearly static for project managers at 19.6%. In interpreting these figures it seems to indicate that while there may have been something of an upturn in local development activity the work has probably been of a prototyping or embryonic nature. It is likely that because project managers appear unaffected by this development activity the work is probably of a small scale or niche nature. Alternatively, it is possible that this may indicate that the development activity is happening prior to the

systems roll out and that we may expect to see an upturn in the employment prospects for project managers in the 2004 study.

A final look at local ICT unemployment can be made through examining it via the industry experience of those who are out of work. In the 2002 survey there was a higher than average representation in the unemployed among those who had spent most of their working lives in either the public sector, or in the financial arena or else in consulting. This year there was a dramatic drop in the numbers of people with public sector experience reporting they were without work. However, there was a growth in the percentage of unemployed respondents with predominantly finance sector experience. Furthermore, those with consulting industry experience were still over-represented among the ICT jobless. This probably indicates that the employment growth in ICT has happened in the public sector, possibly with the growing movement to insource IT responsibilities.

The working week

Last year the survey consciously examined both unemployment and under and over employment. The ACS was aware of several members reporting that they were either working many more hours each week than they wanted or else they were unable to obtain as many hours work as they required.

The 2003 findings show an increase in the percentage of respondents who are satisfied with the length of their working week. In 2002, 31% of survey participants nominated their existing working week as their ideal. This increased in the latest survey to nearly 34%. Nonetheless, over 57% of participants reported working more than 40 hours per week and over 50% of these respondents would have preferred to be working up to 10 hours less per week.

There is also evidence that for the majority, the working week may be declining slightly. In 2002, just over 48% of respondents were working 40 to 49 hours per week. In 2003 a little more than 41% were working these hours. On the other hand, in 2002, just under 19% were working 30 to 39 hours per week. This had increased to 24.33% in 2003. In addition, there was an increase in those reporting their working week as over 50 hours, up from 12.7% to 15.3%. Nevertheless, by and large, the data from 2003 seems to indicate that ICT professionals appear to be getting better balance between their working and personal lives.

Attitudes to training

The survey also examined the attitudes of ICT professionals towards training. Encouragingly, there was strong growth in the number of respondents who reported they had recently undertaken training. In the 2002 study 57% of respondents had undertaken ICT related training via courses, conferences and seminars in the last three years. In the 2003 survey this had increased to over 67% of respondents. There were also increases in those who had undertaken business related training (up from 31% of replies to 47%) and personal development (up from nearly 27% to over 57% of respondents). It is generally acknowledged that the ICT marketplace has been in the doldrums for the last couple of years. However, this growth in reported training might well indicate the industry

professionals believe that things are on the mend and that they need to position themselves for the new market opportunities that are likely to eventuate.

This openness to training was particularly evident among those who classified themselves as unemployed. The numbers of these respondents who signalled they had undertaken personal development courses doubled in the last 12 months to over 56%. The author finds this particularly encouraging, as surveys elsewhere have highlighted that it is often personal attributes, rather than industry specific skill sets, which are the reason candidates are selected at job interviews. Nevertheless, there was also an increase in the number of unemployed ICT executives reporting they had undertaken both industry specific training (up from 60 to 70%) and business related courses (up from 29 to nearly 40%).

Last year the most favoured training among respondents was that provided by ICT vendors and suppliers. While in this years' study roughly the same level of respondents nominated this avenue of education, (about 26%), it was superseded by training provided by conferences and seminars. Nearly 28% of replies indicated that this was their preferred means of learning. There was also growth in those favouring tertiary education courses (over 25%). Clearly ICT vendors are still regarded as an important source of training. However, the growing popularity of conferences and tertiary institutions may highlight that respondents feel they desire a broader education than the typically product specific courses given by suppliers.

As with last year's study, time, followed by cost, was identified by respondents as the main impediment preventing them from undertaking further ICT training to enhance their job skill sets. However, as was the case in 2002, replies to this question were markedly different among those ACS members classifying themselves as unemployed. Over 46% of such respondents gave the cost of courses as the main obstacle to undertaking training compared to only 32% for the survey as a whole. Similarly, nearly 40% gave uncertainty over whether the training would enhance their job prospects as their main reason for not doing further education. This compared to only 21.3% of replies for the survey as a whole.

Favoured sources for new ICT positions

The employment study also seeks insight into what ACS members regard as the best source of new ICT positions. Last year the most favoured source was identified as word of mouth and networking with 34% of replies. The response rate for this option increased to 35.3%. However, the Internet has superseded it, being selected by 39.4% of respondents this year. On the other hand, there was still only a modest 12% response for the combined options of recruitment and employment agencies.

This low appreciation by ACS members of these organisations as a source of potential jobs is in stark contrast to local findings by the research organisation IDC Australia. Its annual Forecast for Management survey has revealed for the last three years that over 50% of local IT Managers use such agencies as their preferred method of obtaining new recruits. The agencies may well feel aggrieved by the attitude to them among ICT professionals. They

would undoubtedly argue that ICT positions advertised in newspapers or the Internet are largely as a result of their endeavours.

Nevertheless, since in effect these agencies could well be gatekeepers to new positions, the ACS employment survey asks respondents to classify their experiences with them on a five-point scale ranging from excellent to abysmal. This year there was some encouragement in the replies for those working in recruitment. Those identifying their dealings with employment agencies as excellent grew from 1.5% to nearly 2.5%. There was also a more noticeable growth in those regarding their experiences as average, up from 38.5 to 42.5%. Those who believed their interactions had either been poor or abysmal dropped slightly from 40.4 to 39.5%. While that does leave a majority of respondents either ambivalent or heartened by their dealings with the recruitment agencies these findings do show that the ICT employment industry as a whole needs to do more to lift its game in the eyes of those whose services it wishes to market.

Another undercurrent in seeking work is the issue of discrimination against applicants. The ACS employment survey enquires whether job candidates have ever experienced any prejudice against them in terms of their gender, age or ethnicity. Over 60% of survey respondents reported they had never encountered any discrimination, a slight increase on the findings from the 2002 study. However, when they did, the most likely cause was discrimination against their age. This was encountered by nearly 21% of survey respondents. However, this ratio rose noticeably among those respondents who identified themselves as unemployed. Over 47% of these people reported they had experienced age discrimination when seeking work and this increased to more than 76% for such respondents aged over 50. Interestingly, only 25% of those who were unemployed and aged under 25 reported they had encountered any discrimination against their youth.

These results seem to indicate that while there has been an increase in unemployment among ICT professionals aged under 25 this probably reflects reduced entry level employment opportunities in the industry rather than a reluctance on the part of employers to give new graduates a chance. However, the feedback revealing the belief among many older ICT workers that they are being discriminated against because of their age is a matter of concern. The author feels that ways of overcoming this should be an important action item emanating from the survey.

Methodology

SCOPE

The purpose of the research comprising the 2003 ACS ICT Employment survey is to identify and assess trends in the ICT employment market in Australia. It was decided not to limit the study to unemployment alone, as this would not allow for comparison between those who were unemployed and those who were currently in ICT work.

With this research the ACS aims to pinpoint and measure what skill sets and training help or, perhaps, hinder ICT workers gaining employment. It seeks to spotlight employment challenges that may be facing particular groups of people (e.g. by gender, age, ethnicity, industry experience etc). Finally, the study explores whether there is any correlation between training and levels of unemployment.

METHODOLOGY

One of the biggest challenges the ACS faced in undertaking this study was to determine the population to survey. How could we reach all those people who might be classified as ICT workers? There is no flag to identify who these people are. Do you include telephone engineers, call centre operators, or retail workers in places like Harvey Norman, Dick Smith or Harris Technology? Even if you could identify who these people were, there was no guarantee that you could contact them.

As such, it was decided to limit the survey sample to ACS members within Australia. The logic behind this decision was as follows:

- These people have an obvious commitment to the ICT industry. They have joined the premier professional body looking after the interests of ICT workers.
- By joining the professional organisation representing ICT workers they are classifying themselves as ICT workers.
- By surveying the ACS membership on employment issues the Society is showing members that it is keen to understand the employment challenges they may be facing.
- ACS members make a sizeable ICT research sample that is representative of the wide skill sets within the ICT industry and can be reached through the Society's database.

The questionnaire was devised in June and July 2003 and included in the August edition of Information Age, the Society's bi-monthly magazine. In all 12,667 copies of Information Age were distributed in mid August 2003 to Australian resident members of the ACS. The ACS offered postage paid facilities to encourage responses. In addition, the survey form was also posted on the ACS web site where other parties interested in ICT could participate in the survey.

ASSISTANCE FROM ACCESS ECONOMICS

Access Economics provided the ACS with professional advice in how to interpret results from the 2003 ACS Employment survey. Access Economics was not involved in survey design or tabulation of results.

SIGNIFICANCE OF THE RESULTS

607 forms were processed, constituting a 4.8% response rate. This is significant when compared with the Australian Bureau of Statistics Labour Force sample share (number surveyed divided by population), which is 0.4%.

However, the survey was not weighted. This means that the ACS did not seek to ensure the survey was representative of the make-up of workers in the ICT industry in Australia as a whole in terms of the age, gender, location and skill sets breakdown. As such, care should be taken in interpreting the values produced. Rather than being too focused on the specific figure, it is best to view the data as an insight into trends between the 2002 and 2003 studies and to compare the employment challenges between various groups such as by gender, state or skill set.

STRUCTURE AND CONTENT

The 2003 ACS ICT Employment survey presents the results of this research under the following four chapter headings:

- **Unemployment insights.** This section examines where ICT unemployment is most prevalent, how long people have been out of work, what ICT skill sets are most prone to current unemployment and the industry sectors in which unemployed ICT respondents have spent most of their careers.
- **Finding work.** This section explores ICT professionals' views of recruitment agencies, where they think it best to look for work, whether they have experienced discrimination when applying for jobs and the willingness of ICT professionals to take any new ICT position.
- **Attitudes to training.** This section looks at how open ICT professionals are to training, what problems people have in undertaking ICT training and what ICT professionals believe is the best source of ICT training.
- **Views of the ACS.** This section explores the views of its members to a number of services provided by the ACS, especially CMACS certification. Moreover, the section examines whether respondents believe ACS membership enhances their employability.

DIFFERENCES BETWEEN THE 2002 AND 2003 SURVEYS

The ACS conducted the first local employment survey in 2002. In 2003 several new questions were included. These were:

- A question was introduced asking whether the respondent had completed the survey in 2002.
- There was interest expressed in tracking how successful the ICT industry has been in attracting people of Aboriginal descent. As such, a new question was included asking whether the respondent was of Aboriginal ethnicity.
- The ACS has been hearing concerns that the high levels of unemployment might be related to the significant influx of ICT skilled immigrants over the last few years. To assess whether this was the case the survey included two new questions. The first asked whether people had gained their ICT qualifications in Australia/New Zealand or elsewhere. The second asked how long respondents had worked in ICT in Australia/NZ. These were then cross-referenced against other questions in the survey to assess the percentage of recent immigrants who might be unemployed.

COMPARISON OF THE ACS EMPLOYMENT SURVEY WITH THE ABS LABOUR FORCE SURVEY

The ACS Employment survey examines the labour force characteristics of its members, an association of information and communication technology (ICT) professionals.

Some of the results from the survey can be compared with the Australian Bureau of Statistics (ABS) Labour Force Survey – a survey of labour force characteristics of Australian civilians aged over 15. Some information from the labour force survey is collected by occupation. The occupational categories of Information Technology Managers and Computer Professionals are the ones that appear to most closely resemble the professional workforce of the ACS membership (although the groups are not an exact match).

Some key features from this comparison are:

- The sample share from the ACS survey is much higher than the ABS equivalents. On that basis, the ACS can make some statements more confidently about its membership than the ABS can about the general population (though the ACS results are not applicable to non-members of the ACS).
- However, the ACS sample is not weighted to reflect broad population characteristics (as the ABS labour force survey is). It may therefore be more likely to be biased towards responses from members of particular ages or living in particular locations (although in terms of location, survey responses seemed to resemble membership locations reasonably closely).

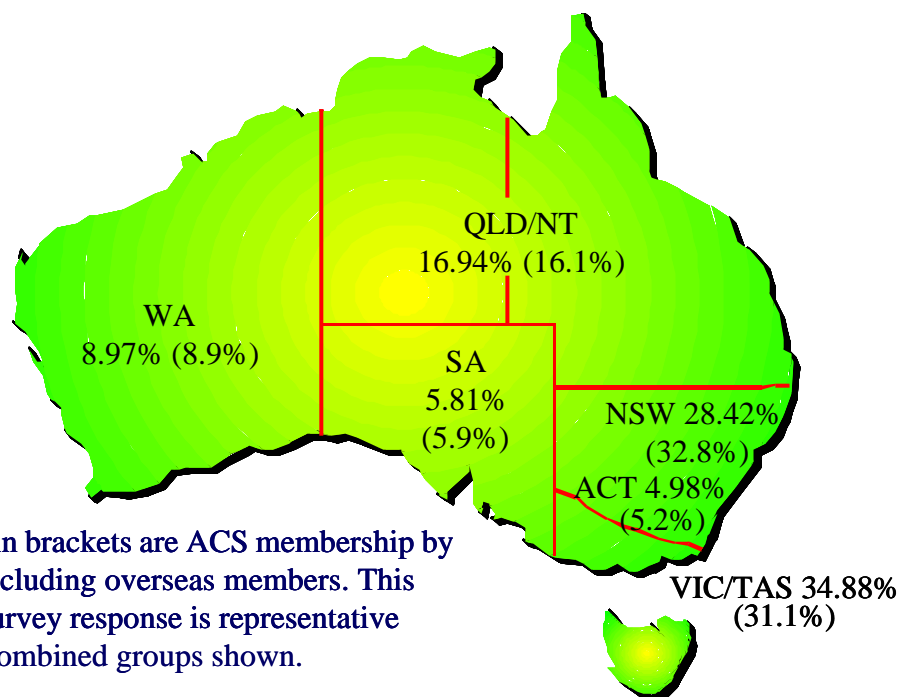
- Given that people self-select to be in the ACS sample (by responding to the survey), rather than being chosen at random, the ACS survey may have a relative bias towards over-reporting unemployment (given that those with more time and issues to address may be more likely to respond to the survey).
- However, unemployment rates for ICT professionals from the ABS labour force survey are biased downwards, as the unemployed only include those previously employed in ICT (so it does not include new labour force entrants or those looking for work in ICT who have previously worked in different occupations for example).
- Definitions of unemployment differ between the ACS and ABS surveys – the former is self-selected (the respondents class themselves as unemployed), while the latter is based on a standardised definition (but excludes anyone who worked for one hour or more in the survey week). Both definitions are valid and provide important information in their own way. It is certainly possible that someone could be counted as employed in the ABS labour force survey (because they performed a few hours contract work for example), yet they would regard themselves as essentially unemployed for the ACS survey (as the contract work may be minimal or not support them).
- Finally, the range of issues covered in the ACS survey is far broader than the ABS labour force survey, and gives a much wider insight into the characteristics of ACS members, by examining issues such as degrees of under- and over-employment, qualifications, training needs and methods of finding work.

Research demographics

GEOGRAPHICAL SEGMENTATION

The survey asked respondents to identify in which State they were based. Because of low response rates in these locations, replies for Tasmania were combined with Victoria and for the Northern Territory with those from Queensland. The biggest number of replies was from ICT professionals in Victoria/Tasmania, who submitted 34.9% of all completed forms. The next largest response was from NSW with 28.4% of responses followed by Queensland/Northern Territory with 16.9%. The State distribution of responses is shown in Figure 1 below:

Figure 1- Survey Respondents by State



Figures in brackets are ACS membership by State, excluding overseas members. This shows survey response is representative for the combined groups shown.

Source: ACS 'Employment survey' (2002 -2003)

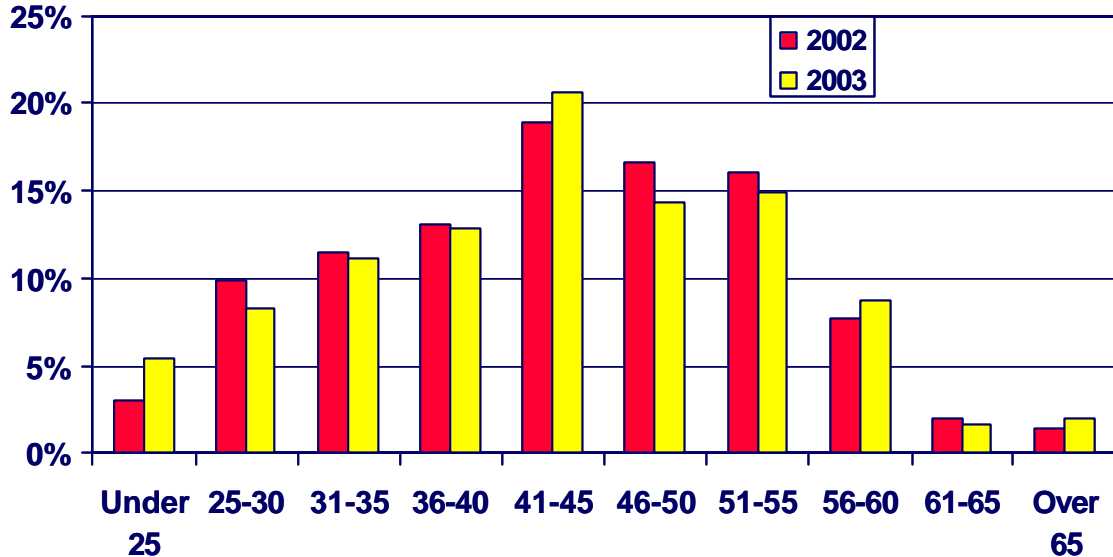
The survey also asked respondents to identify whether they came from the capital city in their State or from a regional centre. Just over 91% of respondents came from Capital cities, which is slightly down on last year. The largest regional responses were not surprisingly, given its greater number of regional centres, from Queensland and the Northern Territory. Here 13.9% of those replying came from outside Brisbane or Darwin.

RESPONSES BY AGE

The survey form had ten age groupings. These were: under 25; 25 to 30; 31 to 35; 36 to 40; 41 to 45; 46 to 50; 51 to 55; 56 to 60; 61 to 65

and over 65. As can be seen in Figure 2 below, most responses came from people in the age range of 41 to 45. This was also the case in the 2002 survey. Response levels by each grouping are shown below:

Figure 2 – Survey Respondents by Age



Source: ACS 'Employment survey' (2002-2003)

ICT EXPERIENCE OF THOSE RESPONDING

The survey asked respondents to state, in years, how much experience they had as a computing professional. The median average response for the survey as a whole was almost the same as in last year's survey at 17 years. However, those replying from South Australia had an average ICT industry experience of just under 25 years of work.

INDIGENOUS EMPLOYMENT IN ICT

The survey included, for the first time, a question asking respondents whether they were of Aboriginal descent. The intent was to see if the ACS could devise some metric to assess how successful the ICT industry has been in recruiting indigenous Australians. However, only 1% of respondents identified themselves as being of Aboriginal origin.

Employment insights

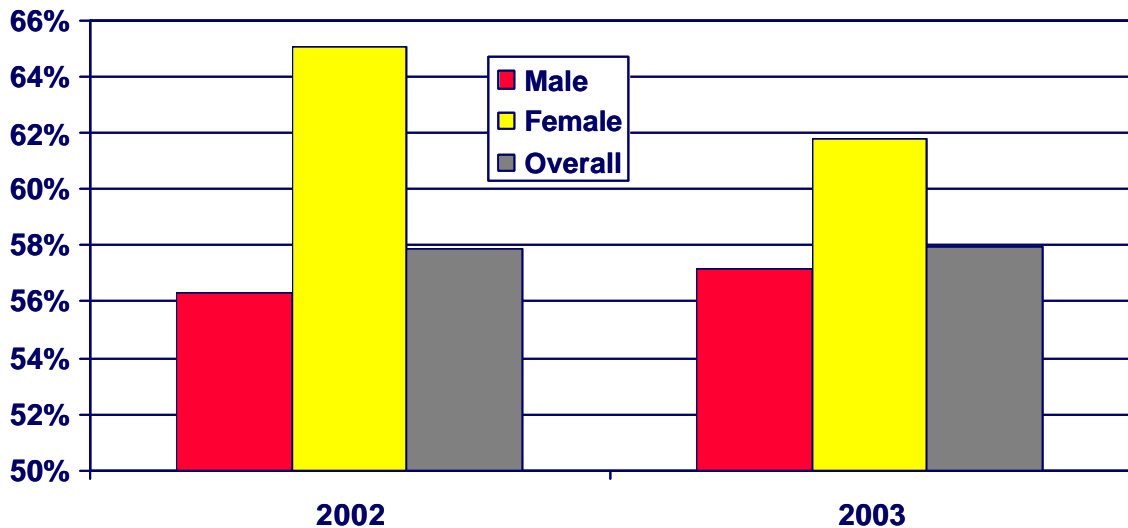
It was decided early on that the survey should be about more than just ICT unemployment. There was a need to gather data also about where ICT professionals were employed in Australia and to contrast this information with data about those who were unemployed.

USE OF ICT SKILL SETS

One of the first questions asked in the survey was whether respondents felt their ICT skill sets were being adequately utilised in their current employment. As was the case last year, more women than men answered this question in the affirmative, (62% compared to 57%). However, men were slightly more positive about this question in the 2003 survey and this was responsible for the slight increase in job satisfaction among ICT workers that was evident in the most recent survey results.

On the other hand only 44% of respondents over 60 and 52% of respondents under 30 believed their ICT knowledge was being properly harnessed in their existing work. This may reflect the difficulties that mature ICT professionals have in finding work commensurate with their industry knowledge and a certain youthful impatience with having to learn the business ropes.

Figure 3 – Do you believe your ICT skill sets are being adequately utilised in your current employment?



Source: ACS 'Employment survey' (2002-2003)

EMPLOYMENT STATUS

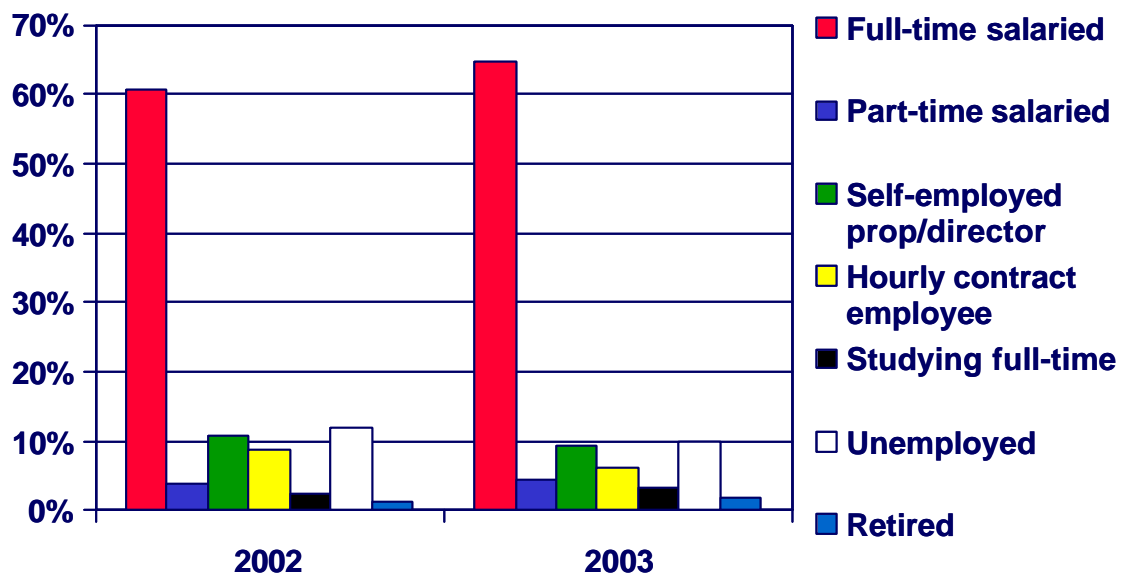
The survey gave respondents seven options for their occupation. They could classify themselves as: full-time salaried; part-time salaried; self-employed proprietor/director; hourly contract employee; full time student; unemployed or retired. In determining

unemployment rates, responses from people identifying themselves as either full time students or retired were excluded from the numerator and denominator. Under Australian Bureau of Statistics definitions these people would not be included in the employment/unemployed population as they are not actively seeking work.

Nearly 65% of respondents identified their employment status as full-time salaried. Surprisingly perhaps, given the popular perception that they favour more flexible working arrangements to help balance family and work commitments, this was higher among female respondents at 68.8%. Interestingly, these full-time levels are higher than they were 12 months ago. Then the percentage of respondents in full-time salaried employment stood at 60.8% while the female response rate for this option was 58.6%.

In other parts of the economy, there has been criticism that job growth has largely been in the area of part time or casual work. The results from the employment survey indicate that this has not the case in the area of ICT. While there was a slight increase in those identifying their employment status as part time there were also falls in those classifying themselves as either self-employed, (down from 10.7% in 2002 to 9.3% in 2003), or hourly contract workers (down from 8.8% in 2002 to 6.3% in 2003). All this evidence appears to show that the percentage point drop in local ICT unemployment has been through an uptake in new full time ICT job positions.

Figure 4 - Employment status of respondents



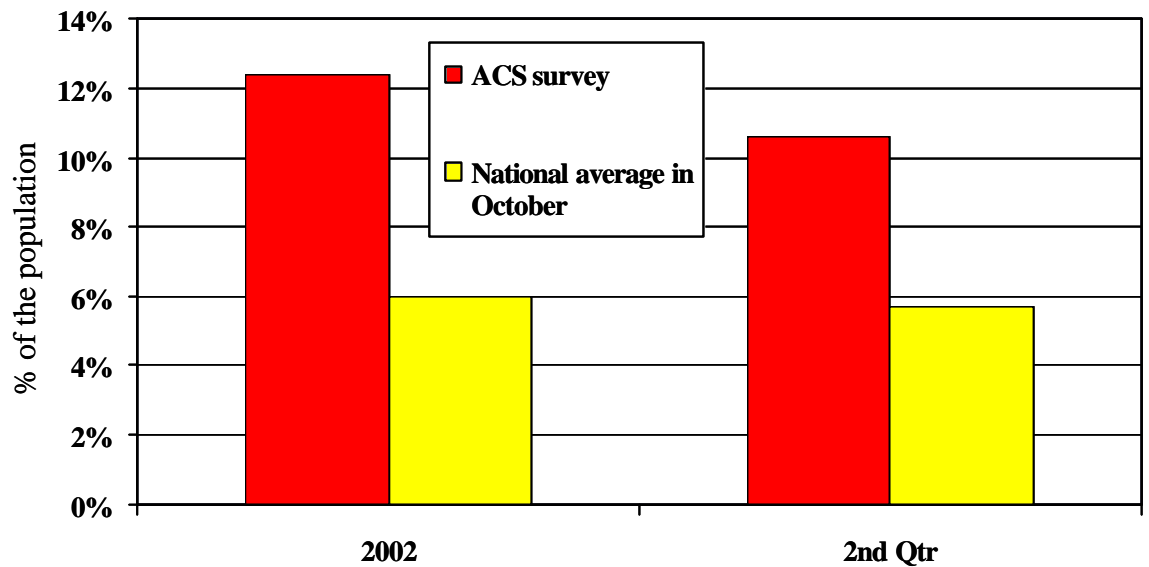
Source: ACS 'Employment survey' (2002-2003)

UNEMPLOYMENT

In the 2002 survey 12.4% of respondents reported they were unemployed. In 2003 this had fallen to 10.6%. This represents a 1.8 percentage point fall in the unemployment rate among ICT workers over that 12 month period. Interestingly, over the same timeframe, the national unemployment rate fell from 6% in October 2002 to 5.7% in

October 2003. This is an overall percentage point fall of .03. Moreover, while reported ICT unemployment was over double the national average in 2002, it is now 86% higher. Clearly, this indicates that employment in the ICT industry is picking up at a greater rate than in other parts of the economy. Nevertheless, it also highlights that there is still work to be done in addressing the above-average unemployment levels that are adversely affecting many local ICT professionals.

Figure 5 - ICT unemployment levels compared to the Australian national average



The ACS Employment survey (2002-2003) + Australian Bureau of Statistics

Unemployment by age range

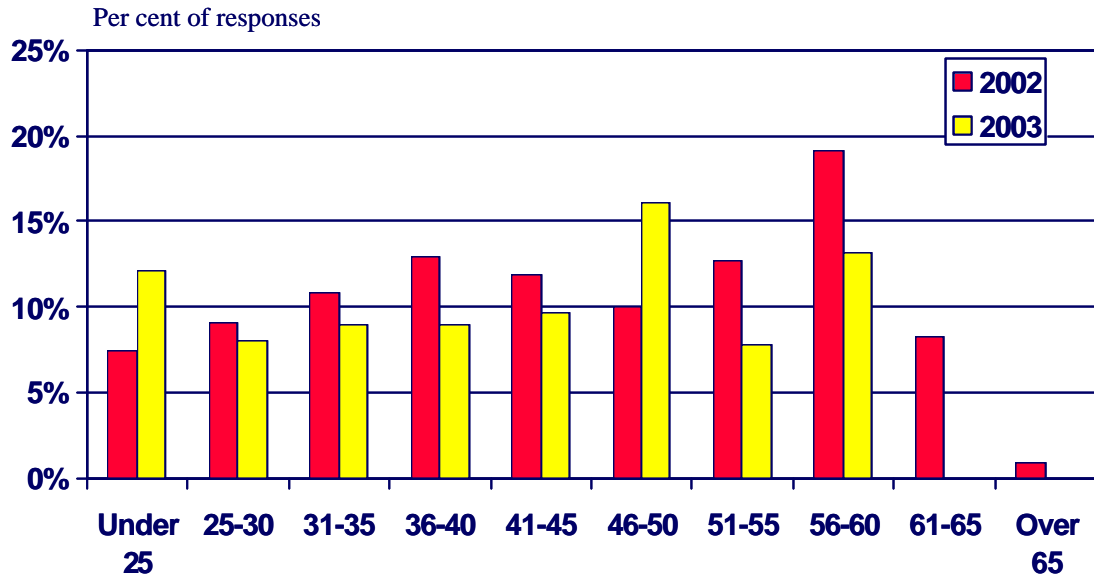
By cross-referencing the age ranges of respondents and those identifying themselves as unemployed, it is possible to examine whether any age group is significantly over-represented in ICT unemployment.

As figure 6 below shows, there are noticeable peaks among those unemployed by age. In this years study, unemployment increased noticeably for those in the age bands 46 to 50, for those aged over 56 and for those aged under 25. However, these high peak age ranges for ICT unemployment are different from twelve months ago. Then the trouble spots were in ACS members aged between 36 and 40 and over 50. This year, it appears that the industry upturn has overcome the mid-life crises of ICT workers, although there was growth in the age range 46 to 50. However, the 2003 results saw the emergence of greater than average unemployment among those in the industry aged under 25.

Twelve months ago, only 7.4% of these respondents identified themselves as unemployed. This year, 12.1% of respondents under

25 reported they were unemployed, which is an increase of almost two-thirds. This supports anecdotal evidence the ACS has heard from contacts in tertiary institutions about the difficulty new ICT graduates are facing in securing employment. Since these people are likely to represent new ICT graduates, this must be troubling among those who are concerned for the future well being of the local technology marketplace.

Figure 6 - ICT unemployment levels by age range



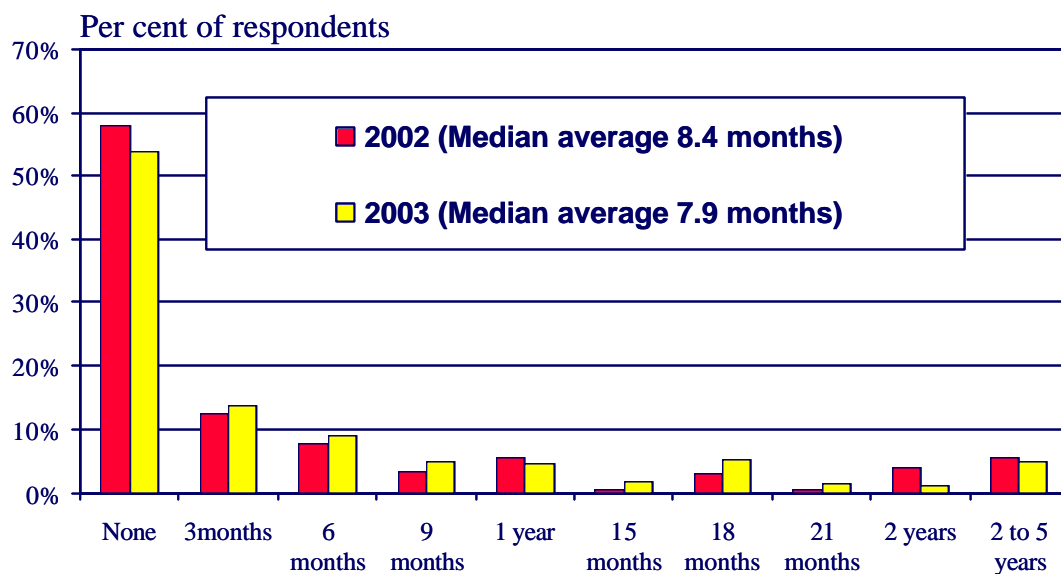
Source: ACS 'Employment survey' (2002-2003)

Periods of under or unemployment

The questionnaire asks respondents to specify in months how long they have been under or unemployed in the last five years. The aim is to track whether this time is growing. In the latest study there was a decline in the numbers who said they had never experienced under or unemployment. This went down from 57% in 2002 to 53% in 2003. However, the time spent either under or unemployed in the last five years has also dropped between the two surveys. This fell 5%. It is now a median average for survey participants of just under eight months.

Nevertheless, there is evidence that periods of short term under or unemployment are increasing. Between the 2002 and 2003 surveys, there was a small increase of those who in the last five years had experienced under or unemployment periods of three months, six months and nine months. However, there was a reduction in long term under or unemployment, with a fall in the percentage of respondents reporting they had been under or unemployed for greater than two years.

Figure 7 - Comparison between 2002 and 2003 surveys of periods of under or unemployment for ICT professionals



Source: ACS 'Employment survey' (2002-2003)

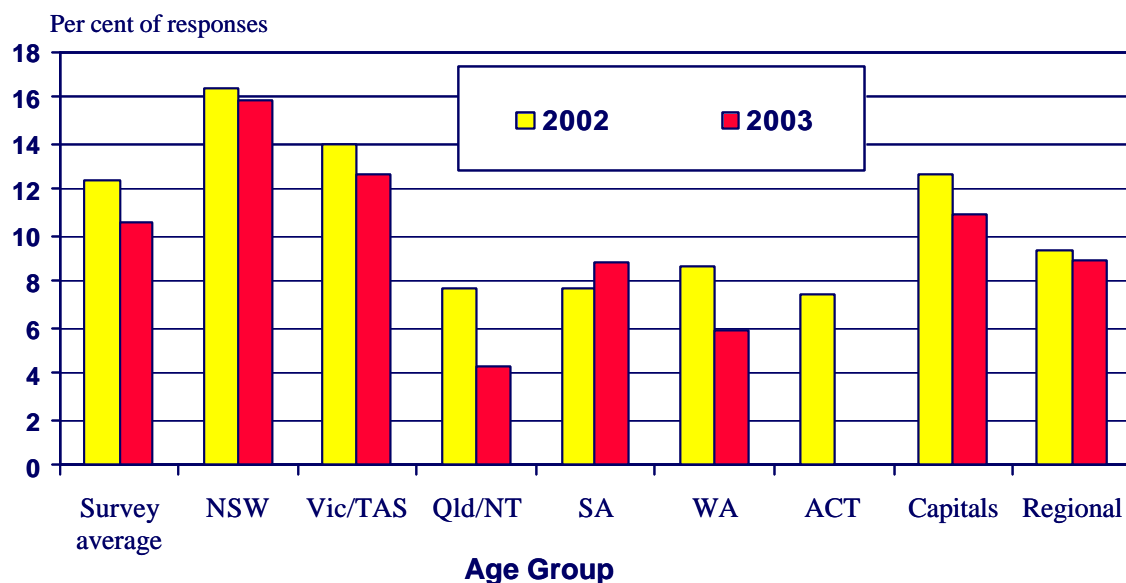
ICT unemployment by location

The next area that the survey studied was employment by location. The questionnaire captured both the State in which the person replying lived as well as whether they lived in a Capital city or regional centre. Compared to the survey average of 10.6% unemployed, a greater percentage of respondents from NSW (15.9%) and Victoria/Tasmania (12.7%) reported they were out of work. On the other hand, as figure 8 below shows, in Queensland/Northern Territory (4.3%), South Australia (8.8%) and Western Australia (5.9%) ICT unemployment was far lower than the average. These results may reflect the volatility of employment in the more dynamic working environments of Melbourne and Sydney. However, the Queensland figures are particularly encouraging given its heavy dependence on tourism and the global downturn in this sector after the events of September 11.

Interestingly, no respondents from the ACT reported they were unemployed. This might indicate that the growing moves among Federal Government departments to regain control over some aspects of their ICT service delivery through insourcing are having a positive influence on local employment opportunities.

As with the survey last year, ICT unemployment was again lower in regional Australia compared to the capital cities. However, this may reflect the fact that with fewer ICT positions, and with less volatility in the employment market, there is greater employment stability for ICT workers in regional Australia.

Figure 8 – ICT unemployment by location



Source: ACS 'Employment survey' (2002-2003)

ICT unemployment by skill sets

Besides age, sex and location, the survey also asked respondents to identify their academic or industry computing qualifications and their practical ICT skill sets. The aim was to see if there was any link between qualifications/skill sets, industry experience and employability.

As can be seen in figure 9 below, which shows the qualifications of those classifying themselves as unemployed, over 47% of those stating they were unemployed had some form of undergraduate degree. While this compared with 52% of respondents in the 2002 study, it is still clearly a very high figure. It may even lead the more cynical to question whether a degree in ICT is a passport to unemployment, however the reality is that the very nature of ICT work is likely to attract a disproportionately higher percentage of people with a tertiary qualification. The decline in unemployment for this category of respondents between the 2002 and 2003 surveys is further evidence of an improvement in the employment prospects for ICT professionals over this period.

Perhaps more worrying is the number of ICT unemployed who have some form of postgraduate qualifications. Just under 20% of those identifying themselves as unemployed had diplomas and nearly 23% had graduate diplomas. As with the 2002 survey, 13% had a Masters degree. Over 3% even had an MBA, but unlike last year, no one with a PhD reported they were unemployed².

² Note that those identifying themselves as unemployed may possess more than one type of qualification.

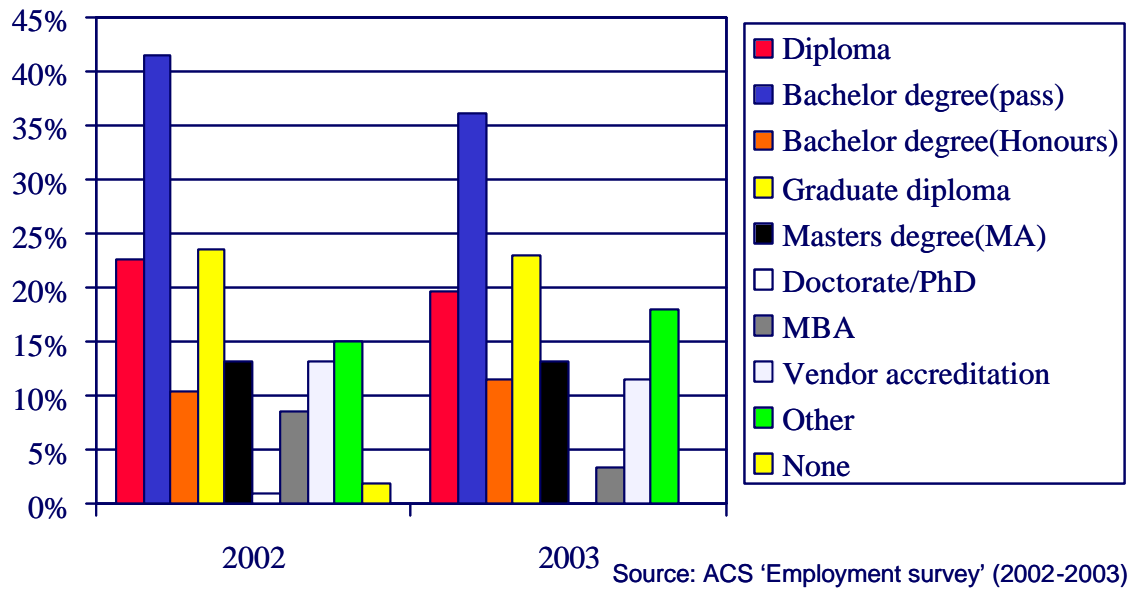


Figure 9 - Qualifications of the ICT unemployed

Another insight from the figure above was a modest decline in unemployment among those with vendor accreditation. This is in line with data in figure 10 below, which shows a reported decline in unemployment levels among those who identified their main ICT job responsibility as support.

As with the 2002 data, the highest unemployment levels were among those whose main job responsibility was either programming or in project management. Interestingly, there was a significant drop over the year in the unemployment rate among those classifying themselves as business analysts. Given that there was a more modest drop in the unemployment rate among those identifying themselves as programmers, it is probable that there has been an increase in proposed systems development activity between the 2002 and 2003 surveys. This may account for the uptake in work opportunities for business analysts as they scope the proposed new systems. The small decline in unemployment among programmers may highlight some of this development activity has begun. Hopefully, as these systems start to roll out, we might see a reduction in unemployment among project managers in the year ahead as they start to oversee these new implementations.

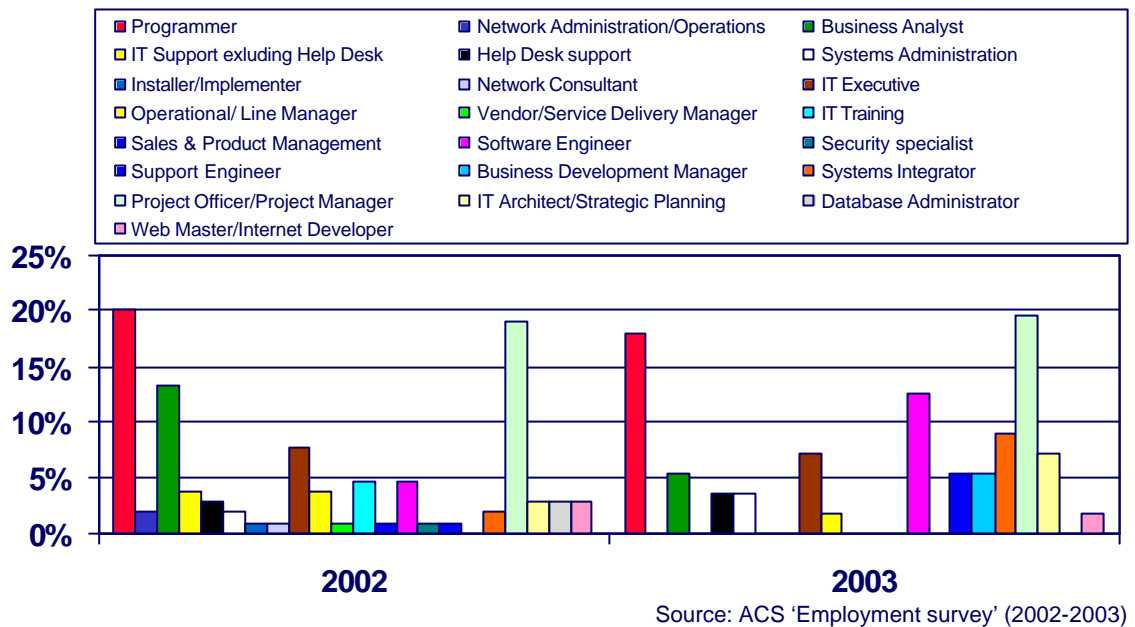


Figure 10 - Unemployed by main job responsibility

The final area to examine in the area of unemployment and ICT skill sets is how it relates to industry experience. The questionnaire asked respondents to identify the industry sector in which they had spent most of their working lives. This was then cross-referenced against those identifying themselves as unemployed to see what trends were revealed.

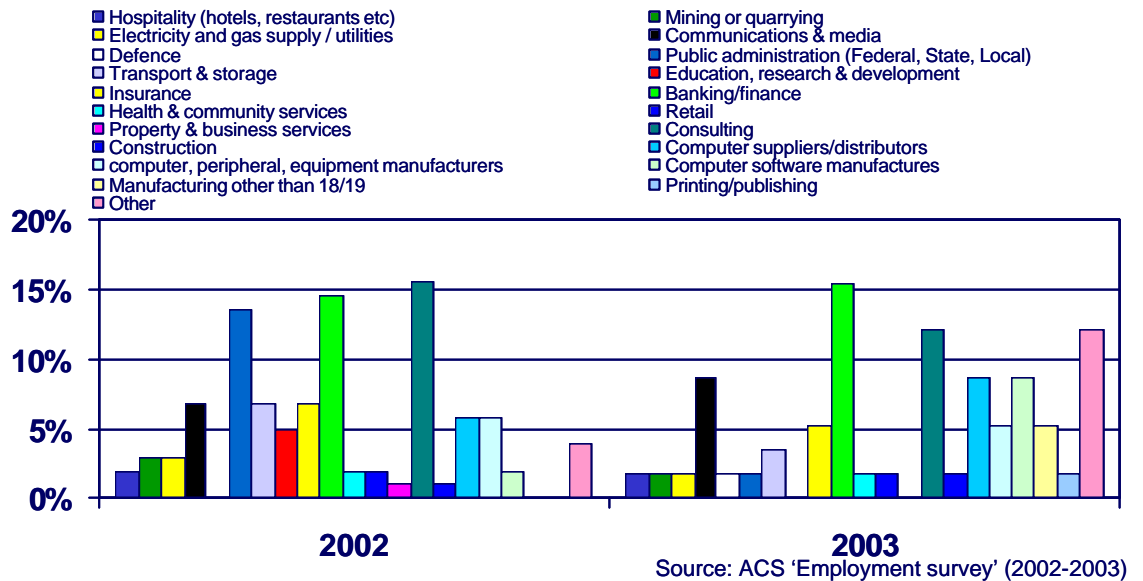
Last year, there were significantly higher unemployment levels recorded from respondents who listed finance, public sector and consulting as the industry sectors in which they had the most experience. The conclusion seemed to be that a downturn in traditional white-collar industries was behind the high levels of ICT unemployment.

This year, there was a dramatic drop in those identifying themselves as unemployed who also selected the public sector as the industry sector in which they had spent most of their working life. In 2002, 13.6% of unemployed respondents were from the public sector. This year it was only 1.7%. Notwithstanding the small sample sizes involved, this fall in unemployment in the public sector is still very apparent. This might well reflect a boost in internal public sector ICT employment following increasing disillusionment with the results of the major ICT outsourcing exercises of the late 1990s.

However, the results were not quite so impressive for those whose primary experience was in the consulting and finance sectors. There was actually an increase in the numbers of respondents with

banking/finance experience who reported they were unemployed (up from 14.6% to 15.5%). There was a decline in the percentage of unemployed with mainly experience in the consulting industry. This went down from 15.5% to 12.1%, but is still a higher unemployment level than the average for the survey as a whole. The other noteworthy rise was in the communications/media sector where the percentage of unemployed with this industry experience grew from 6.8% to 8.6%.

Figure 11 – ICT unemployment rates by industry experience



THE IMPACT OF IMMIGRATION ON ICT UNEMPLOYMENT

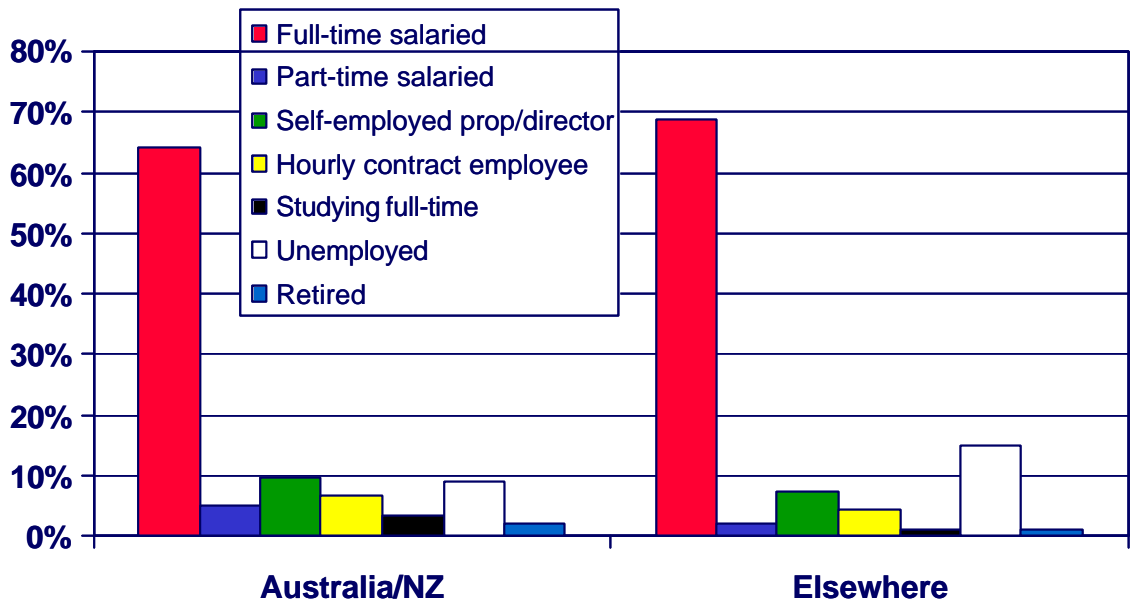
Probably one of the most sensitive issues in Australia today is that of the impact of immigration on unemployment. One group argues passionately that immigration stimulates the economy and creates employment. The other side argues equally vehemently that immigration reduces the value of labour and fosters unemployment. While not able to address this issue specifically the ACS set out through the survey to see whether there was any evidence that recent immigrants were more likely to be among the ranks of the ICT unemployed.

To do this, two new questions were introduced in the 2003 survey. The first asked whether the respondent's initial ICT qualifications had been obtained in Australia/New Zealand or elsewhere. The second asked how long the respondent had worked in ICT in Australia/NZ. These responses were then cross-referenced by two other questions: whether the person was unemployed and what periods in total over the last five years they had been under or unemployed.

Unemployment levels among ICT professionals

As can be seen in figure 12, a greater percentage of immigrant ICT workers were in full time salaried positions (68.5% against 64%) and fewer were part-time workers (2.2% against nearly 5%). This may be surprising given the general perception that immigrants often find part time work is the only way they can initially break into employment. However, the evidence was that more migrant ICT professionals were out of work, (15.2% as opposed to 9.1%). It will be interesting to assess in 12 months what percentage of those migrant ICT workers who responded to this survey are still out of work.

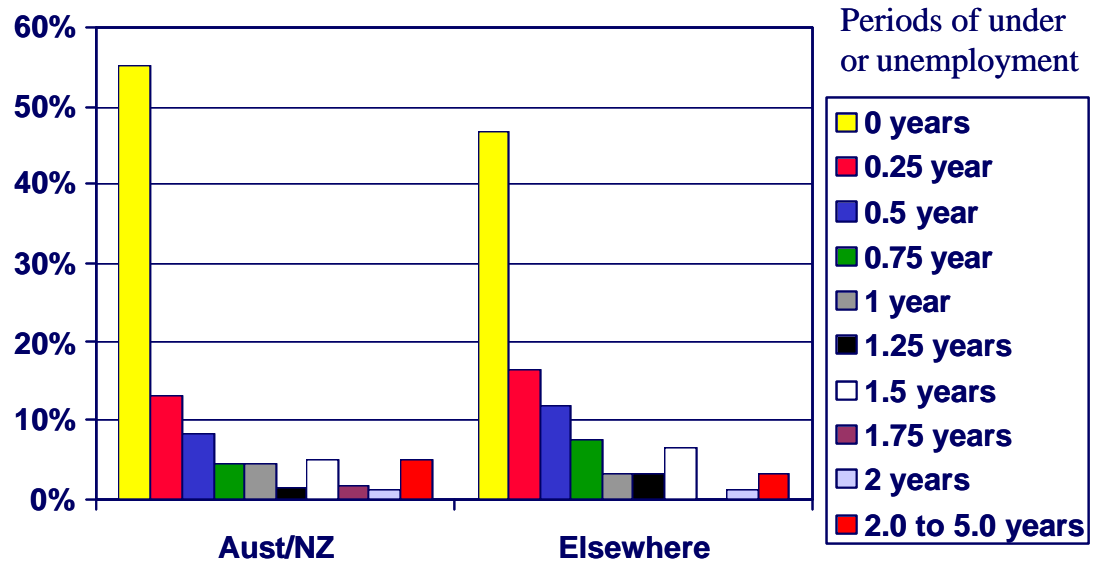
Figure 12 - Unemployment among those whose initial ICT qualifications were gained overseas



Source: ACS 'Employment survey' (2002-2003)

The next analysis examines whether migrant ICT workers have spent longer periods of time out of work or under-employed. Interestingly, the results reveal the opposite. The median average period in the last five years where ICT migrants were under occupied was 7.1 months compared to 8.2 months for respondents who had gained their initial ICT qualifications in either Australia or New Zealand.

Figure 13 - Under employment among ICT migrants



Source: ACS 'Employment survey' (2002-2003)

THE WORKING WEEK

When examining the state of the ICT job market, the ACS was conscious that unemployment often only tells part of the story about the difficulty of finding work. A growing phenomenon in modern society is the challenge of under employment. This is where people who want to work full time find the only work available is part time. This means that while they may be ostensibly classified as employed, their income is insufficient. Conversely, the ACS was also aware of the growing problem of unpaid overtime or over employment. This is reflected in employees who feel the only way they can feel secure in their jobs is to work excessively long hours.

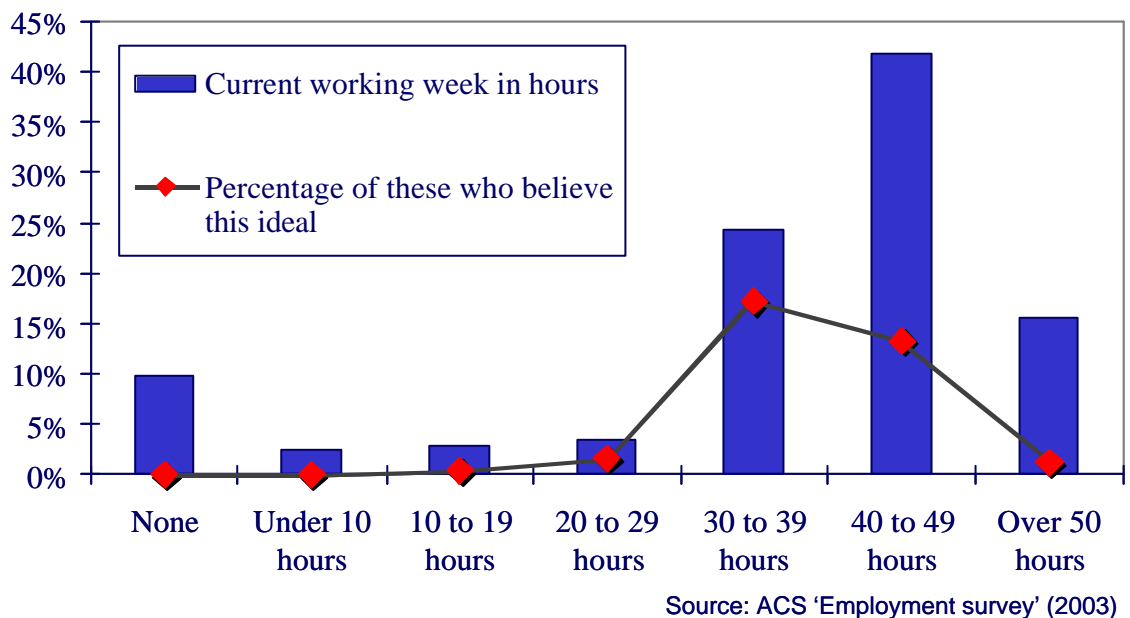
The survey explored these issues by asking those replying to identify how many hours per week they typically worked and how many hours per week they would want to work. Six options were given in the ideal working week. These were: under 10 hours per week; 10 to 19 hours per week; 20 to 29 hours; 30 to 39 hours; 40 to 49 hours and over 50 hours per week. It was then possible to compare the ideal with the reality.

The dominant working week for most ICT professionals in 2003 was 40 to 49 hours and 41.8% of respondents marked this as their existing working week. However, the preferred working week for the majority of respondents was 30 to 39 hours, with 54% of respondents marking this as their ideal working week. Unfortunately, only 24.3% of respondents were currently working these hours, although this was up from 19% in the 2002 study. Moreover, over 70% of those working these hours also nominated this as their ideal. This was by far the largest match between actual and ideal working week among those responding and follows similar positive support for these working hours in the 2002 survey.

Furthermore, 57.4% of those who stated they worked in the 40 to 49 hour range would have preferred to work in the 30-39 hour week range. Interestingly, this was also the preferred time slot of 41.3% of those claiming to work over 50 hours per week. The majority of these (47.8%) though nominated 40 to 49 hours as their ideal working week. In addition, over 57% of participants reported working more than 40 hours per week and over half of these respondents would have preferred to be working fewer hours.

Nevertheless, the 2003 findings show an increase in the percentage of respondents satisfied with the length of their working week. In 2002, 31% of survey participants nominated their existing working week as their ideal. This increased in the latest survey to nearly 34%. There is also evidence that for the majority, the working week may be declining slightly. In 2002, just over 48% of respondents were working 40 to 49 hours per week. In 2003, a little more than 41% were working these hours. On the other hand, in 2002, just under 19% were working 30 to 39 hours per week, rising to 24.3% in 2003. While there was an increase in those reporting their working week as over 50 hours, by and large, the data from 2003 seems to indicate that ICT professionals appear to be getting better balance between their working and personal lives.

Figure 14 - Links between ideal and actual working week



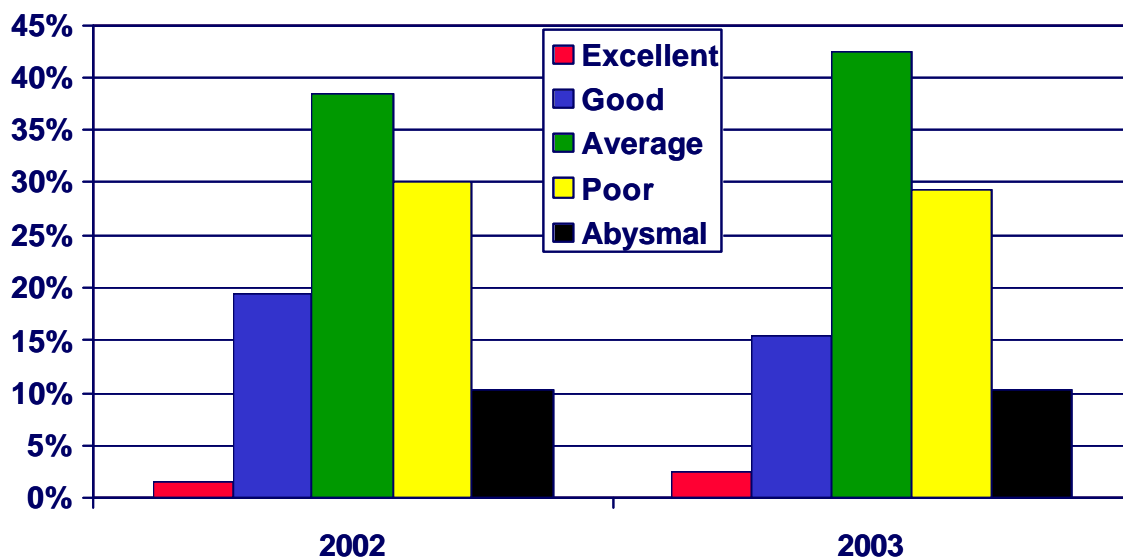
Finding work

The survey then explored the challenges ICT workers face in finding work. What are their experiences with recruitment agencies? Where is the best place to look for work? What discrimination have people encountered when they have been looking for work? How willing are people to take an IT position that involves new skill sets?

Views on ICT recruitment agencies

The strong antipathy members expressed last year towards recruitment agencies has not dissipated. Respondents were asked whether their experiences with these agencies were excellent, good, average, poor or abysmal. As figure 15 below shows, nearly 40% of those replying regarded their encounters with recruitment agencies as either poor or abysmal. While there was some modest improvement in the numbers reporting their experiences as either excellent or average, overall there was remarkably little change in response levels between 2002 and 2003.

Figure 15 - Views of recruitment agencies



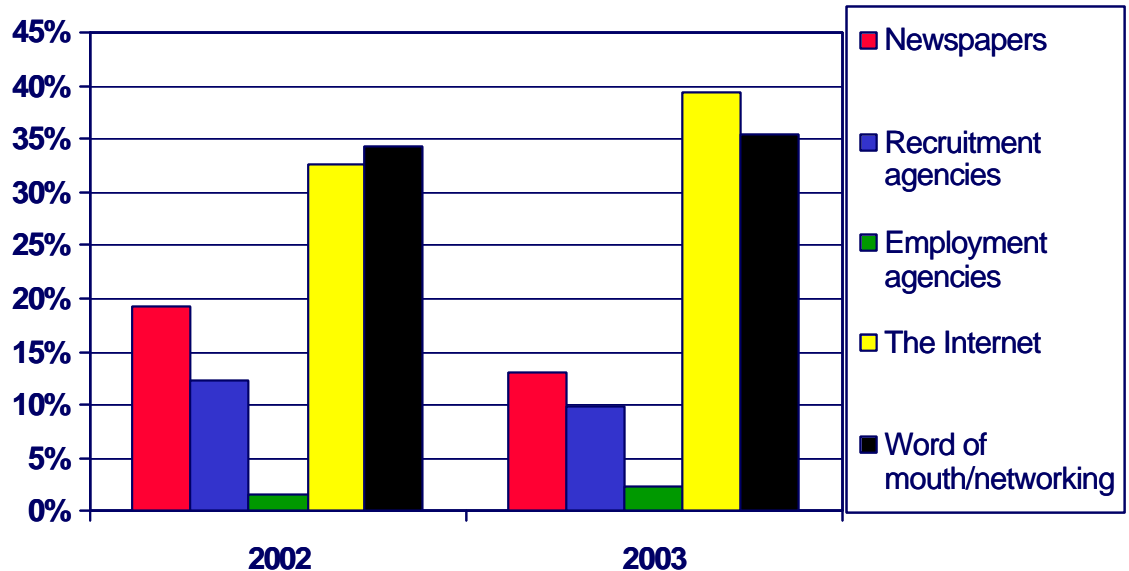
Source: ACS 'Employment survey' (2002-2003)

Best source of new IT positions

As with last year's survey, perhaps the biggest concern for recruitment agencies is that most ICT workers looking for a job do not regard them as the best source of new CT positions. In fact there was a decline in this rating between the 2002 and 2003 studies, down from 12.2% to 9.8% of respondents. Newspapers and magazines were again not well regarded in this respect with only 13% of respondents regarding them as the best source of new employment opportunities. Instead, the most favoured sources for new work

prospects among respondents were word of mouth networking and the Internet. It is noteworthy that despite the fact many of the ICT jobs advertised on the Internet are obviously the result of the activities of recruitment agencies, the industry professionals give little recognition for their endeavours. This may well reflect a deep held scepticism about their abilities, which has possibly bred reluctance among ICT executives to give credit where credit is due.

Figure 16 - Best source of new ICT jobs



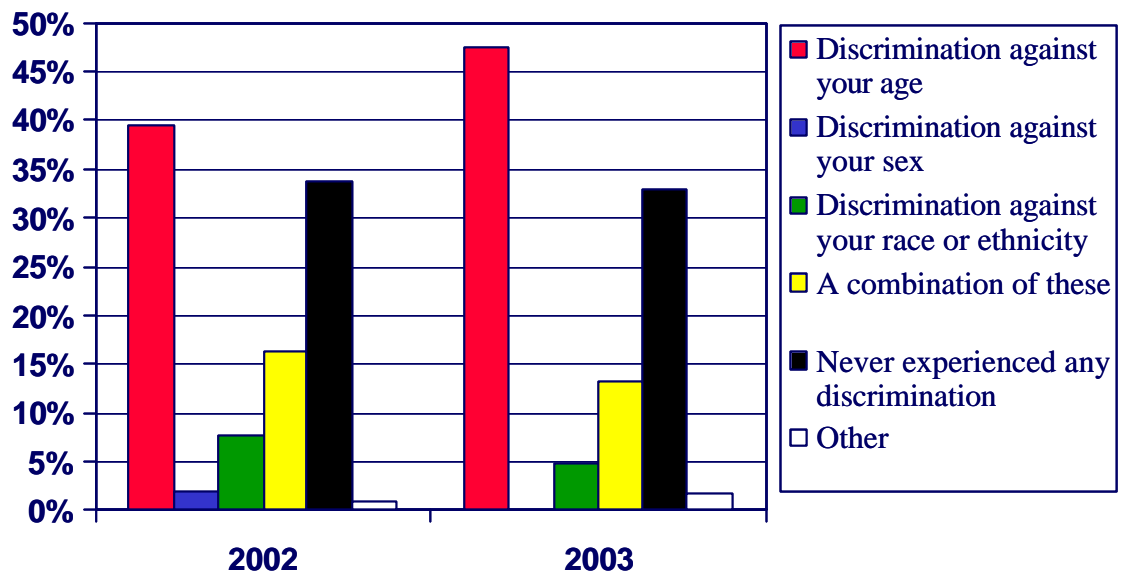
Source: ACS 'Employment survey' (2002-2003)

Experience of discrimination

Another undercurrent in seeking work is the issue of discrimination against applicants. The ACS Employment survey enquires whether job candidates have ever experienced any prejudice against them in terms of their gender, age or ethnicity. Over 60% of survey respondents reported they had never encountered any discrimination, a slight increase on the findings from the 2002 study.

However, when they did, the most likely cause was discrimination against their age, which was experienced by nearly 21% of survey respondents. However, this ratio rose noticeably among those respondents who identified themselves as unemployed. Over 47% of these people reported they had experienced age discrimination when seeking work and this increased to more than 76% for such respondents aged over 50. Interestingly, only 25% of those who were unemployed and aged under 25 reported they had encountered any discrimination against their youth.

Figure 17 - Discrimination experienced by unemployed ICT workers



Source: ACS 'Employment survey' (2002-2003)

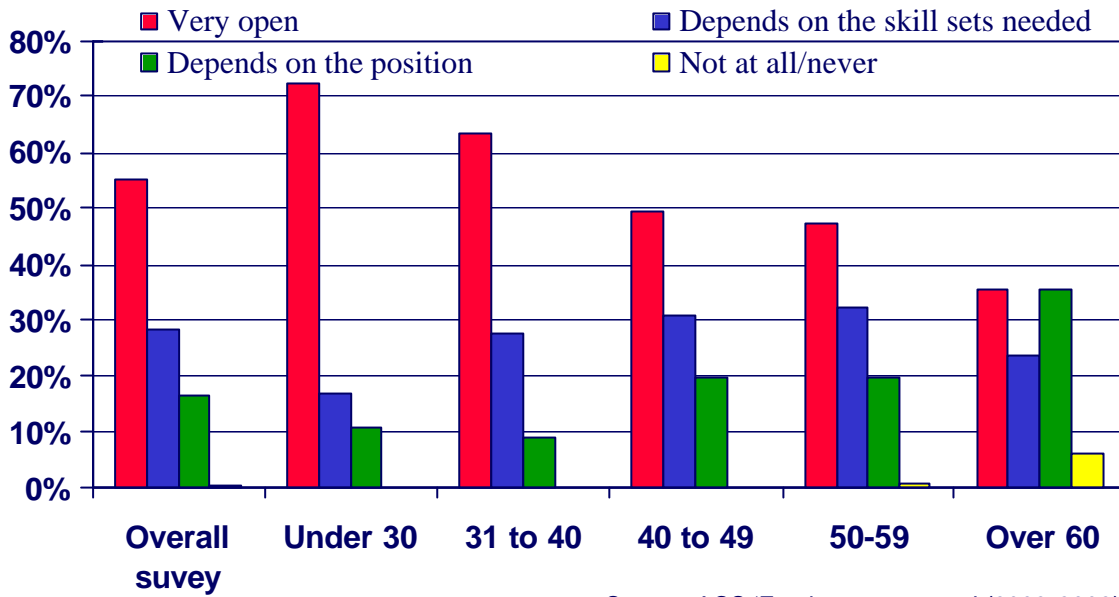
These results seem to indicate that while there has been an increase in unemployment among ICT professionals aged under 25, this probably reflects reduced entry level employment opportunities in the industry rather than a reluctance on the part of employers to give new graduates a chance. However, the feedback revealing the belief among many older ICT workers that they are being discriminated against because of their age is a matter of concern. The author feels that ways of overcoming this should be an important action item emanating from the survey.

Openness to taking a new ICT position

Roughly the same percentage of respondents as last year (55%) identified themselves as very open to taking an ICT position that involved them acquiring new skill sets. The real difference over the last 12 months was that people seemed more discerning about the skill sets inherent within that position. In 2002, only 22.7% reported their attitude depended on the skill sets needed. In the latest survey, this has increased to 28.3%. Conversely, the number of respondents influenced by the position itself has declined from 20.8% in 2002 to 16.4% in 2003. This may indicate a growing recognition by ICT professionals that in the modern turbulent corporate world, future employability has more to do with work skills and responsibilities rather than status.

Those most open to taking a new position were those under 30 (72.3%) which was up from 64.6% last year for the same group. It is probable that this increase is further evidence of the challenges recent graduates are facing in breaking into the industry. Men were also more open than women on this matter, although female respondents were more discerning about the skill sets required for a position than their male counterparts.

Figure 18 - Openness to taking a new ICT position by age



Source: ACS 'Employment survey' (2002-2003)

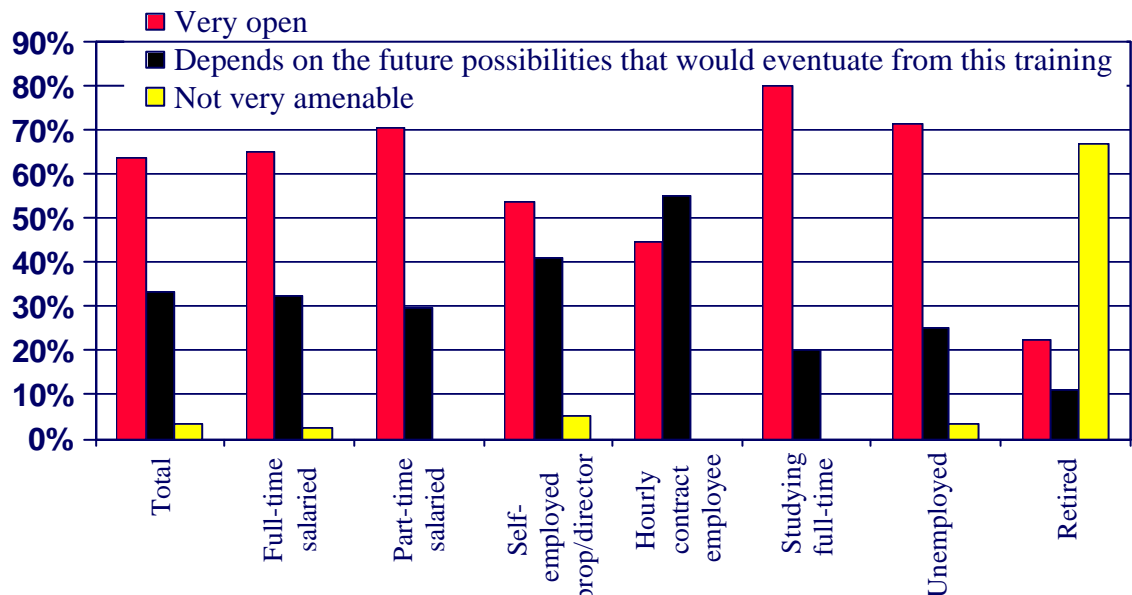
Attitudes to training

In designing the original questionnaire last year, thought was given to seeing if there was any correlation between respondents' attitudes to training and their employment status. Were people unemployed because they had refused to update their skill sets? How amenable were those surveyed to undertaking new training or retraining? What courses had they recently completed? What did they think was the best source of ICT training? In all, there was a number of surprises in these replies.

AMENABILITY TO TRAINING/RETRAINING

As with last years survey, it is intriguing that those most open to training are not the unemployed, but rather full-time students. Then again, if you are already immersed in a mindset of being educated, further training may seem just like water off a duck's back. Nevertheless, a greater percentage of the ICT unemployed in the latest survey was now amenable to undertaking training, (71.9% compared to 68.8% in 2002). In ranking respondents' enthusiasm for training/retraining by current employment status the unemployed now ranked second compared to fourth last year. Nonetheless, it is noteworthy that nearly 30% of unemployed people still express some reticence to enhancing their skill sets. Perhaps this reflects an extreme self-confidence in the marketability of their ICT skill sets or an apprehension about being found wanting if they had to be students again.

Figure 19 - Openness to training by current employment status



Source: ACS 'Employment survey' (2003)

THE CHALLENGES PEOPLE FACE IN DOING TRAINING

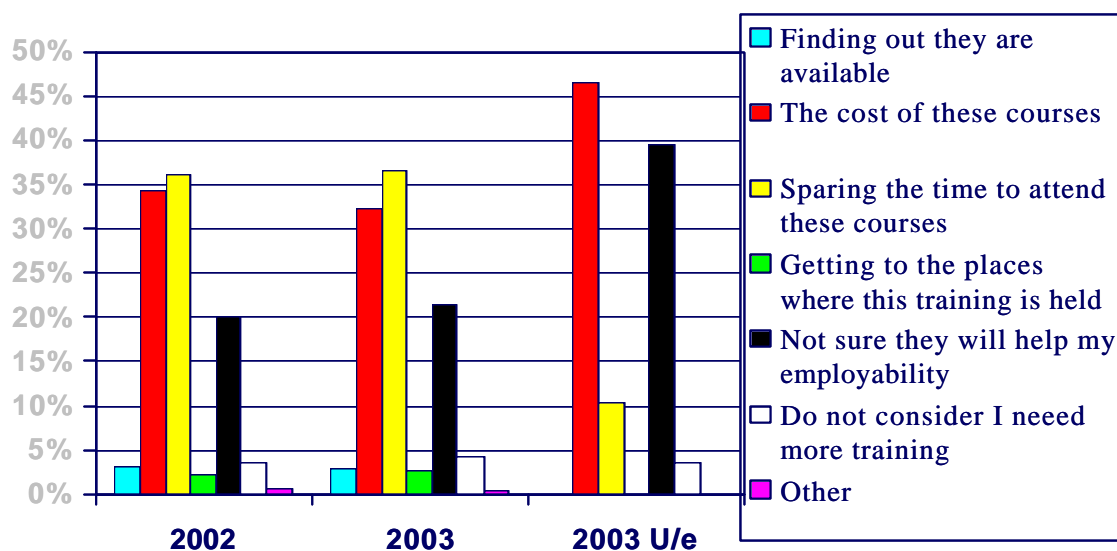
Another way of looking at this might be that unemployed people think it is too difficult to do training courses. To see if this is the case, the survey asks respondents to identify what they see as the impediments that prevent them undertaking training.

As with the survey last year, the predominant reason that unemployed ICT workers gave for not doing further training was the cost of these courses. However, the percentage response to this option has declined slightly over the last 12 months, from 49.1% to 46.5%. However, this does compare with a survey average of 32.1%, which indicates that many unemployed ICT workers might find themselves in something of a Catch 22 situation when it comes to training. (i.e. they cannot get the money to retrain until they get a job and they cannot get a job unless they retrain!).

It is also noteworthy that nearly 40% of unemployed respondents were unsure whether retraining would improve their employment prospects. This compares to a survey average of 21.2%. As the ACS observed in last year's report, these responses probably reveal the uncertainties and anxieties of unemployment. With funds at a premium, will you get a return on investment by undertaking training classes? How likely is training to boost your immediate employment prospects? Few unemployed can be certain of these responses before they have done the training and these doubts are likely to produce inertia.

As with last year's survey, the dominant reason given by respondents as the impediment to them undertaking training was sparing the time to attend these courses. Over 36% of those completing the 2003 survey marked this option. This is very slight increase on the response rate for this option in the 2002 study.

Figure 20 - Impediments to ICT training by employment status



Source: ACS 'Employment survey' (2002 - 2003)

TRAINING UNDERTAKEN IN THE LAST THREE YEARS

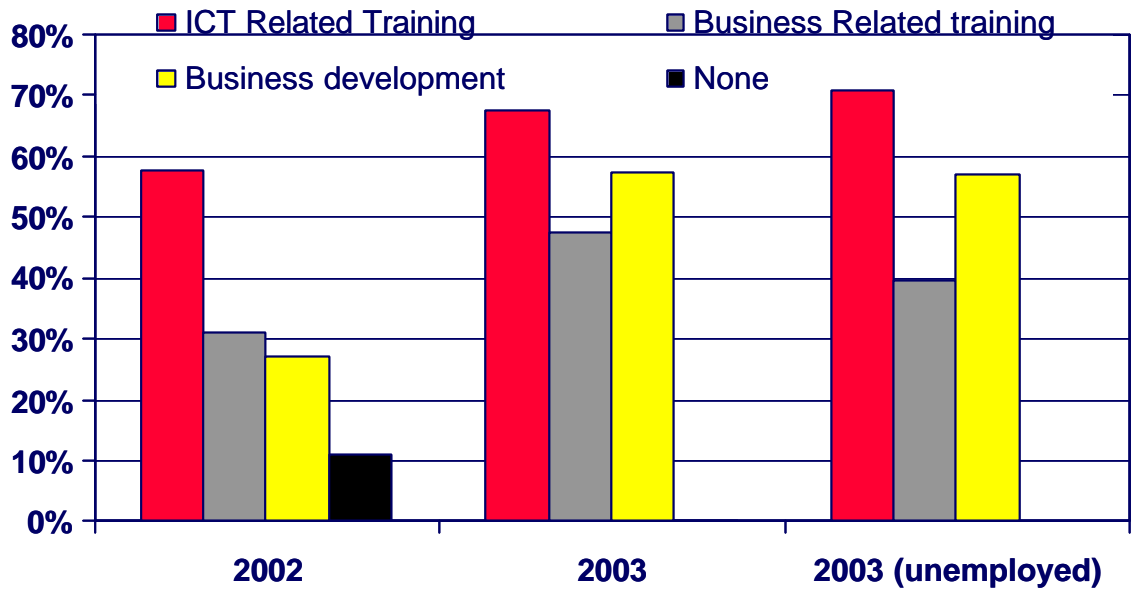
The questionnaire gave three options for potential training and asked which of these respondents had undertaken in the last three years. The choices were: ICT related training; business related training; and personal development.

Encouragingly, there was a strong growth in the number of respondents who reported they had recently undertaken training. In the 2002 study, 57% of respondents had undertaken ICT related training via courses, conferences and seminars in the last three years. In the 2003 survey, this had increased to over 67% of respondents. There were also increases in the number of those who had undertaken business related training (up from 31% of replies to 47%) and personal development (up from nearly 27% to over 57% of respondents). It is generally acknowledged that the ICT marketplace has been in the doldrums for the last couple of years. However, this growth in reported training indicates that industry professionals believe that things are on the mend and that they need to position themselves for the new market opportunities that are likely to eventuate.

This openness to training was particularly evident among those who classified themselves as unemployed. The numbers of these respondents who signalled they had undertaken personal development courses doubled in the last 12 months to over 56%. The author finds this particularly encouraging as surveys elsewhere have highlighted that it is often personal attributes, rather than industry specific skill sets, which are the reason candidates are selected at job interviews. Nevertheless, there was also an increase in the number of unemployed ICT executives reporting they had undertaken both industry specific training (up from 60 to 70%) and business related courses (up from 29 to nearly 40%).

In analysing this question by age group, significantly more people under 30 (64.5%) had undertaken personal development courses. This is an interesting statistic as it reveals recognition among young ICT executives that they need a broader set of skill sets to get ahead in their careers. Hopefully, this broader perspective may help boost the perception of ICT in the wider community beyond technological 'nerds' to business peers who understand the economic and social challenges that confront business today.

Figure 21 - Courses undertaken in the last three years

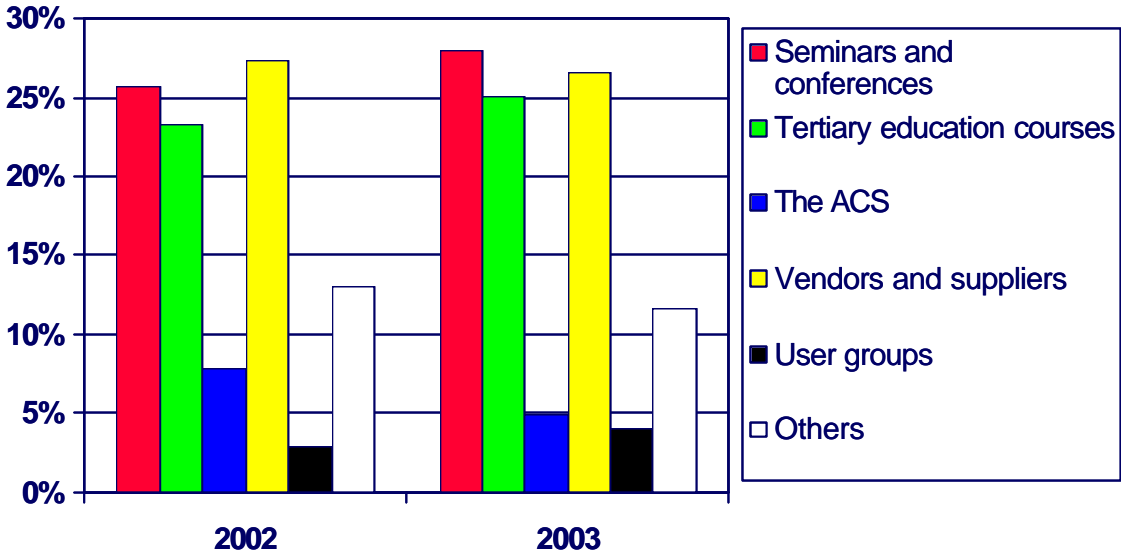


Source: ACS 'Employment survey' (2002 - 2003)

BEST SOURCE OF ICT TRAINING

Last year the most favoured training among respondents was that provided by ICT vendors and suppliers. While in this years' study, roughly the same level of respondents nominated this avenue of education, (about 26%), training provided by conferences and seminars has superseded it. Nearly 28% of replies indicated that this was their preferred means of learning. There was also growth in those favouring tertiary education courses (over 25%). Clearly ICT vendors are still regarded as an important source of training, reflecting the fact that with their intimate product knowledge they can best advise organisations on optimising any investment in new business systems. However, the growing popularity of conferences and tertiary institutions probably supports earlier evidence above that ICT professionals recognise the need to broaden their business skill sets if they are to get ahead in the modern corporate world.

Figure 22 - Best source of ICT training



Source: ACS 'Employment survey' (2002-2003)

Summary

The survey results do indicate that there might be some light at the end of the tunnel for those who have been hit hard by the downturn in the technology marketplace. ICT unemployment appears to be falling at a much faster rate than the Australian national average. Moreover, in contrast to other areas in the economy, it seems that the employment growth in ICT has been in full time work. Furthermore, survey respondents also report a greater contentment in the hours being worked. Underemployment does not seem to be a problem and there was an increase in the number of respondents who reported the length of their existing working week as their ideal. The apparent reduction in unemployment among those with business analysis and development skill sets could also indicate a renewed interest in business to the potential of ICT.

However, while there might be some encouraging signs, the 2003 employment survey also highlights that ICT is not yet completely out of the woods with its unemployment problems. The results show an emerging difficulty for new graduates in getting a start in the industry. Furthermore, technology professionals over 50 continue to be over-represented in the ranks of the industry unemployed and it is worrying that many of these people believe they are suffering age discrimination when applying for jobs.

Nevertheless, the ACS believes there are some, overall, very promising trends illustrated in this report, which support its belief that the ICT sector will continue to experience better than national rates of employment growth in the coming twelve months. In particular, it considers that the growth in public sector employment is very encouraging, and that the Federal and State governments should be applauded for the success of their public sector ICT employment initiatives. Furthermore, the training increases are also encouraging as they reveal young ICT executives recognise that they need a broader set of skills to get ahead in their careers.

The ACS plans to consider initiatives to help address some of the employment and training concerns in the coming 12 months. In particular, it is particularly concerned about the employment opportunities available to recent ICT graduates and will investigate forming forums to connect these recent graduates with existing job networks and provide introductions to reputable recruitment agencies.