



Attitudes to ICT careers and study among 14 to 19 year old Victorians

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Foreword



Despite challenging economic conditions over the last 12 months, the information and communications technology (ICT) sector continues to grow.

And Victoria remains the centre of the nation's ICT sector, employing almost 85,000 people in the industry – over a third of Australia's total ICT workforce – and contributing \$26 billion annually to the state's economy.

Many businesses see ICT as fundamental to their future competitiveness and productivity and there is increasing demand for ICT products and services across all industry sectors.

For these reasons, ICT is one of the most promising technology career paths for young people entering the workforce. The Brumby Labor Government recognises the crucial importance of the ICT sector to the state's economy and is committed to ensuring this sector has access to a skilled and professional workforce.

Victoria continues to have the highest proportion of university

students studying ICT across Australia (35 per cent) and recently recorded a 12 per cent increase in first preferences for undergraduate ICT study in 2009. However, industry projections indicate the current level of enrolments still remains below that needed to meet future demand.

This research report, *Attitudes to ICT Careers and Study among 14 to 19 year old Victorians*, suggests that young people may still lack an understanding of the many diverse opportunities offered by a career in ICT. This lack of understanding, combined with some persisting negative perceptions of the ICT industry, is the main contributor to a national decline in ICT enrolments. By understanding these reasons, we can work better with industry and education providers to address students' reservations about ICT, highlight the benefits of a career in ICT and encourage more young people to pursue ICT studies.

Our careers awareness campaign, *ICT: Start Here. Go Anywhere*, uses findings from this report to help correct common misconceptions about ICT courses and careers. The campaign features young professionals working in a variety of ICT roles, demonstrating that ICT careers can be dynamic and fast-moving, and offer the chance to work at the forefront of new technology. The campaign also provides information to those who influence young people's perceptions of ICT and their career decisions – parents, peers, teachers and media.

The Victorian Government's attitudinal research suggests our campaign has had some success, reporting an increase in young

people's knowledge of what ICT means and in the number of students intending to study ICT in the future. This result is encouraging and shows a growing appreciation of ICT opportunities, but we need to continue to provide these positive messages.

In light of ICT's continuing importance to our economy in driving productivity and the expected increases in demand for ICT skills, it is critical that we understand young people's views on courses and careers, and continue to promote the diverse and exciting range of opportunities available through ICT.

I encourage ICT businesses, training providers, school teachers and careers advisers to use the findings from this report to inspire today's students to pursue the challenging and cutting-edge career opportunities Victoria's ICT industry has to offer.

A handwritten signature in black ink that reads "John Lenders".

John Lenders MP
Treasurer
Minister for Information and
Communication Technology and
Financial Services



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1. Background

This report summarises the findings of the latest research commissioned by the Victorian Government exploring how Victorian students aged 14 to 19 years perceive the ICT industry, and their attitudes towards ICT as a career choice. The research sought to identify if student attitudes had changed since the previous study in 2007, and pinpoint factors that may have contributed to a change in attitudes. The research also examined options to promote ICT to young Victorians in the future.

Since 2001, the Victorian Government has maintained a specific focus on developing the state's ICT workforce by promoting ICT as an industry of choice to young Victorians. A key component of the government's ICT Industry Plan 2005–2010 is building a sustainable, world-class local ICT workforce to ensure that Victoria continues to realise the economic and social benefits of ICT.

These efforts have been made in recognition of the fact that enrolment in tertiary ICT courses peaked in 2002 for both Victoria and Australia. While Victoria continues to record the highest proportion of undergraduates enrolled in ICT courses (with 35 per cent of nationwide enrolments), the past few years have seen a significant decrease in total ICT enrolments. From 2002 to 2008, ICT enrolments decreased by 38 per cent across Australia, and by 35 per cent in Victoria.

The 2007 study into student attitudes found that young people were sometimes discouraged from pursuing a future in ICT because of their perception that it involved 'sitting in front of a computer all day', that it was boring, and that it allowed limited human interaction. Another important issue cited by students in the 2007 study was a lack of information about ICT career options.

Meanwhile, the supply of labour with ICT skills has continued to decline at the same time that demand for employees with these skills has increased. The latest ICT industry research found that 48 per cent of Victorian ICT companies nominated access to skilled employees as a barrier to their future growth. High-end innovative skills remain in demand, as are employees with diverse skill sets, in particular the combination of technical and business skills. The greatest demand for ICT skills is in the professional and technical service industries, followed by the information media and telecommunications sectors.

In 2006 the Victorian Government launched the *ICT: Start Here. Go Anywhere* campaign. This initiative brought together key stakeholders, including Victorian universities and TAFEs and ICT industry representatives, to dispel the myths about ICT careers, provide an insight into ICT work and studies, and ultimately improve students' perceptions of ICT.

There have been encouraging signs that this and other government initiatives are helping to reverse the negative trend in ICT enrolments: in 2009 Victoria experienced a 12 per cent increase in first preferences for ICT university courses, an increase largely driven by a rise in female applicants and one not mirrored in enrolments in other states.

This study provides insights into the various influences that shape young people's perceptions of their career options, and indicate how to continue highlighting the wide range of future opportunities available to ICT graduates.



2. Key findings

This report summarises the results of research undertaken in May and June 2009 exploring the attitudes of 14 to 19-year-old Victorian students towards the ICT industry. The study examined the students' perceptions of the ICT industry and whether ICT featured in their future study and career intentions.

The report compares its results with those of a similar study released in 2007 to identify any changes in student attitudes. It also seeks to identify any emerging factors that have influenced young people's study and career choices since the previous research was undertaken.

2.1 Overview

Since the 2007 study, there has been a significant increase in the percentage of young Victorians interested in working in the ICT industry – rising from 25 per cent of students in 2007 to 35 per cent in the current study. This makes ICT the most popular career choice for students, ahead of other industries such as health care and social services; arts, sport and recreation; and education and training. Among secondary students, 13 per cent reported a 'strong interest' in an ICT career, an increase on the 2007 figure of 10 per cent.

The study also found that more students were at least partly aware of what the term 'ICT' meant – increasing from 12 per cent in 2007 to 35 per cent. However, this increased awareness of the term 'ICT' did not necessarily translate into an increased understanding of the ICT industry or ICT career opportunities.

As in the previous study, many students reported that they lacked sufficient information about the ICT industry.

Students still tended to associate ICT with only the more traditional information technology-related vocations such as programmer or IT manager. This strong association with the IT industry means that many students see ICT careers as 'boring', and associate them with 'being stuck in front of a [computer] screen all day' and a lacking human interaction.

Students with family working in ICT at Year 9 or above held more positive views of the industry; had a broader understanding of ICT career possibilities (ie that ICT included vocations such as graphic designer and games developer); were much more positive about the industry; and were more interested in studying or working in ICT in the future. This suggests that exposure to and experience of the full range of ICT careers, including the more creative and cutting-edge occupations, helps foster positive attitudes towards the industry.

The study also identified significant gaps between what students consider important in a future career, and what they believe an ICT career has to offer.

When choosing future careers, students place most importance on jobs:

- that suit their areas of interest
- they are good at
- that are secure
- they can be proud of.

Of concern for the ICT industry is that students generally did not agree that an ICT career would deliver on these important career considerations.

Consistent with the previous study, students felt that work placements/ work experience with ICT companies and scholarships were the two most effective means of promoting ICT careers in schools. An additional promotional option was presented to students in the 2009 study – expos allowing students to explore different ICT technologies. This was a popular suggestion with students, and rated third of all the options presented.

“Being in games and stuff like that would be cool, but I don't think that's ICT”.

2.2 Emerging trends and attitudinal changes

This most recent study identified some important emerging factors shaping young people's attitudes towards different careers and possibly influencing their career choices:

- Social networking and information online play a growing part in shaping young people's perceptions of careers. Students have access to, and are exposed to, more information than ever before.
- Students are aware that their job and career choices will one day form part of their online image (through social networking sites such as Facebook). Consequently, they want careers that will 'look good' to their online network of friends and contacts, and one they will be happy to include in their online profile.

- There is an increased focus within the media, or heightened awareness of such reporting among young people, on the importance of career choices in ensuring future financial security. Young people's perception of what constitutes 'happiness' and how 'success' is measured is increasingly tied to their ability to earn enough money to guarantee financial security. This has led to more students choosing courses based on potential career earnings, rather than the qualifications they would gain.

“You want to be around good people, be comfortable with life, and earn good money.”

“You need money for security and security is important.”

“You have to look at the pay, because you don't want to work in something for ages and then not have anything to show for it.”

The global financial crisis appears to have had little impact on students' career choices. Only 21 per cent of students considered the financial crisis likely to have a significant impact on their ability to get a job and more than half were unsure about which careers they would be less likely to consider because of the crisis. Overall, students tended to see the crisis as a relatively short-lived issue that would be over by the time they had finished tertiary studies.

2.3 Career aspirations

The study found that students place most importance on choosing careers that suit their areas of interest and offer jobs they are 'good at'. Other important factors included the potential of a career to offer security, the opportunity to make a good living, and jobs they can be 'proud of'.

Students' career choices continue to be influenced by a wide range of factors, in particular industry professionals, their parents, and personal knowledge gained through work experience. These factors were more influential than teachers, friends and the media.

The study found that students placed more weight on the opinions of those they saw as having authentic knowledge about certain careers than on the opinions of teachers. Importantly, while students didn't consider the media a strong influence on them, statements made by students in the qualitative research revealed that the way in which different careers were portrayed in the media did actually play a part in shaping students' perceptions.

More students are interested in a career in the ICT industry now than when the previous study was conducted. The research suggested that although students may not consciously choose to pursue a career in the ICT industry, they may, in any case, pursue studies that fall under the ICT banner. For example, areas such as multimedia and graphic design are gaining in popularity as students become more technologically savvy.

2.4 Perceptions of ICT studies at school and beyond

This study found that student perceptions of ICT studies at school and beyond remained extremely consistent with the results of the 2007 study.

Just under half of the students in the study (45 per cent) had studied ICT at Year 9 or above. Among those who had not, the most common reasons for not studying ICT were a preference for other subjects (42 per cent), not having an interest in the subject (39 per cent) and the subject not being offered at their school (31 per cent). The qualitative study found that unless students were participating in ICT they were less inclined to pursue ICT-related studies.

Consistent with the previous study, students rate the standard of ICT teaching quite highly, with almost two-thirds of students rating it as good, very good or excellent. Students attributed this positive rating to good teachers (46 per cent), good equipment and resources (45 per cent), the subject being interesting (44 per cent) or because they were getting good results (41 per cent).

While the standard of teaching was generally well regarded, almost one-third of students (31 per cent) felt that ICT was a very low priority at their school, with 29 per cent saying that no-one at their school communicated the benefits of ICT training or careers. Consistent with the findings of the 2007 study, only around half of the students felt that their school had provided them with

adequate information about ICT as a career choice, with 17 per cent of students reporting that the provision of information was well below adequate. Female students and those that had not studied ICT at Year 9 or above were the most likely to report that the information provided to them was well below adequate.

2.5 Perceptions of an ICT career

Students generally associate ICT careers with attractive wages, innovation and being at the 'leading edge' of technology. However, the qualitative research found that perceptions of ICT depended on how the term 'ICT' was understood – students equating ICT with information technology (for example, computer programming and IT networks) often associated it with boring and repetitive jobs, while students who understood that ICT included graphic design and games development saw the potential for interesting and cutting-edge jobs.

Games developer, graphic designer and web/multimedia designer or developer were the ICT jobs of most interest to students, while more traditional IT roles (ie network analyst, programmer or database administrator) were the least attractive roles.





3. Detailed findings

3.1 Future study intentions and careers

Future study intentions

Qualitative research found that little has changed since the 2007 study in terms of how students negotiate the sometimes daunting path from secondary school to post-secondary. In particular, the study confirmed that:

- most students try to delay decisions about course selection for as long as possible
- young people generally choose their future area of study based on what they enjoy and what subjects they are good at
- students feel their ENTER score ultimately determines the course of study they will undertake.

“There’s heaps of courses and not many of them mean much to me.”

“There’s all these new jobs now; this generation has heaps more options.”

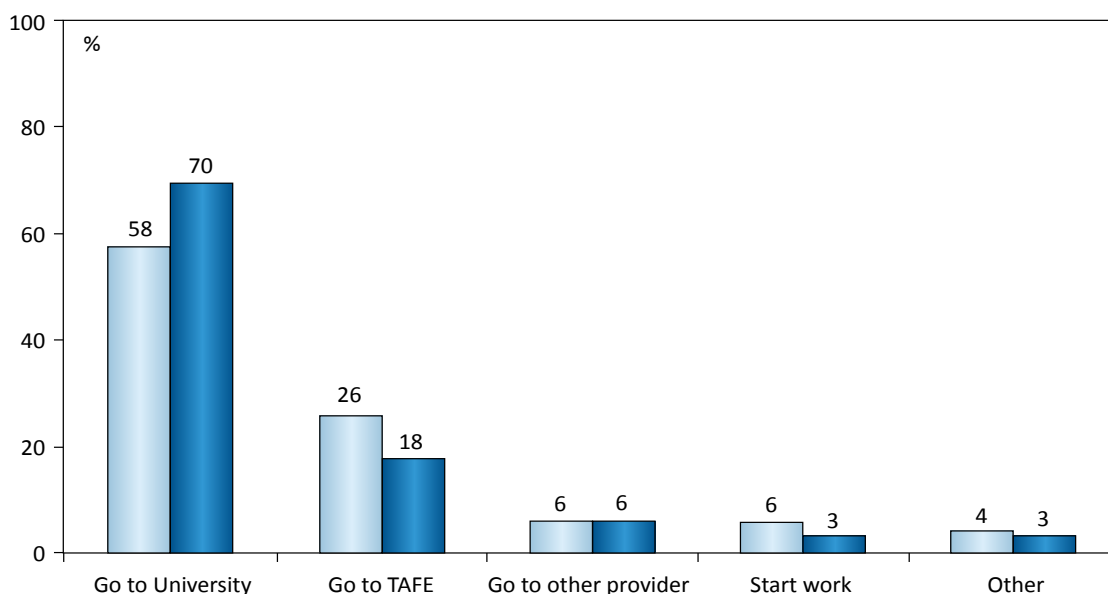
As in the 2007 study, all students in the quantitative study were intending to take up further study immediately after finishing school or at some point in the future:

- 70 per cent intended to go straight to university
- 18 per cent intended to attend TAFE
- 6 per cent intended to study with another education or training provider
- 6 per cent intended to work or had other plans prior to commencing tertiary study.

The 94 per cent of Year 9 to 12 students intending to continue studying directly after finishing secondary school represents an increase on the 2007 figure (90 per cent – see Chart 1). The qualitative research confirmed that students felt that some form of tertiary education was necessary ‘these days’. Many students were also considering apprenticeships with many considering the option of a gap year prior to undertaking further studies.

“I think I might take a gap year just to have a break from all the studying.”

Chart 1: Intentions when leaving school - 2007 vs. 2009



Q1a: When you leave school, are you planning to go to university, TAFE or some other education provider, or are you planning to start work or do something else?

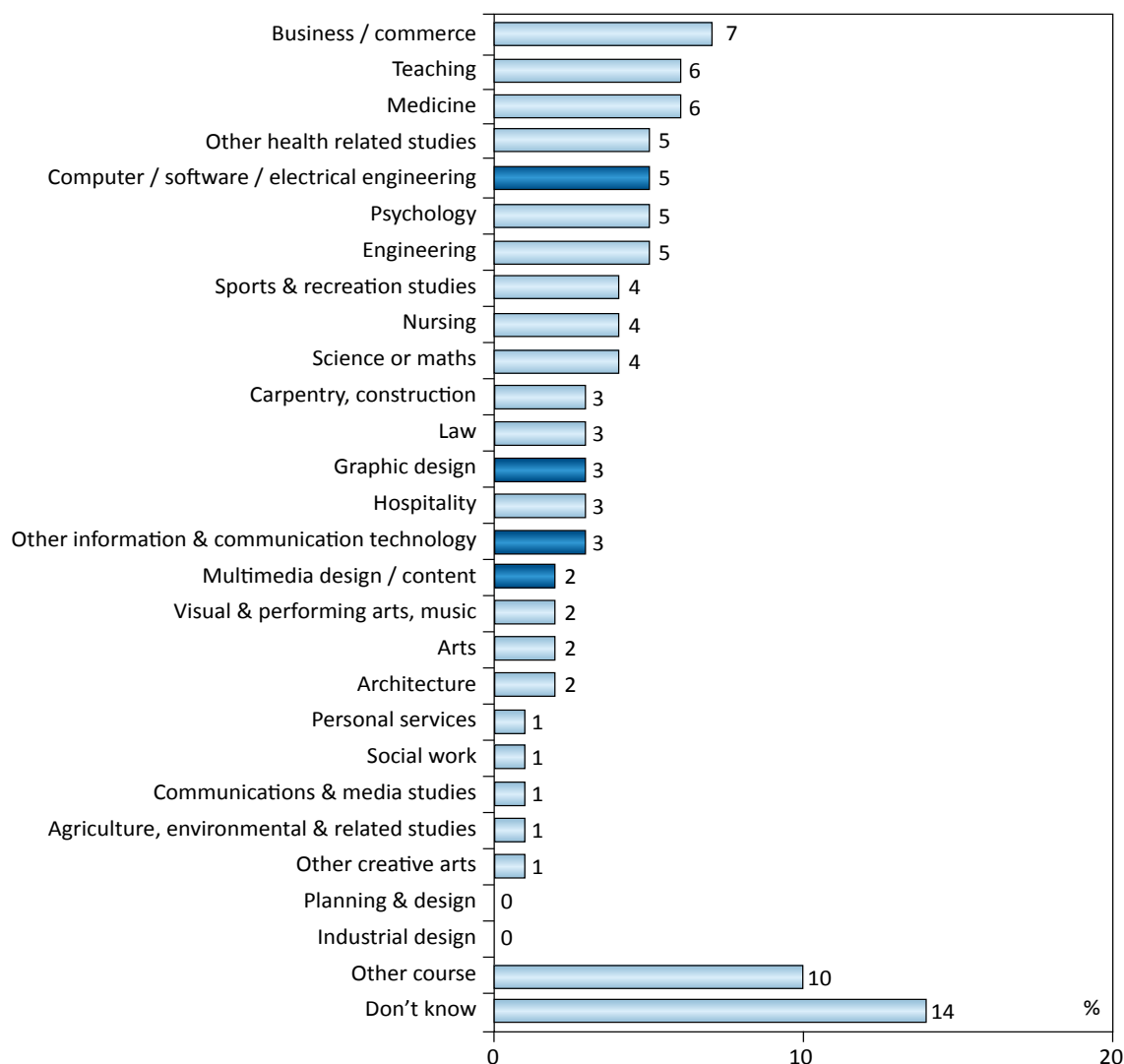
2007 2009

In total, 13 per cent of students intended to study an ICT-related course following secondary school, a result similar to the 2007 study (12 per cent). Of the ICT-related courses featured, computer/ software/ graphic design/ electrical engineering are the courses most students intended to study (5 per cent), ahead of multimedia design/ content, which is ranked the lowest.

Male students were much more likely than female students to pursue ICT studies after secondary school (19 per cent compared with 6 per cent). Students who had studied ICT at Year 9 or above were also much more likely to pursue ICT studies than those who had not (21 per cent compared with 6 per cent). Of the other tertiary study options available, the most popular were

business/commerce (7 per cent), teaching (6 per cent) and medicine (6 per cent).

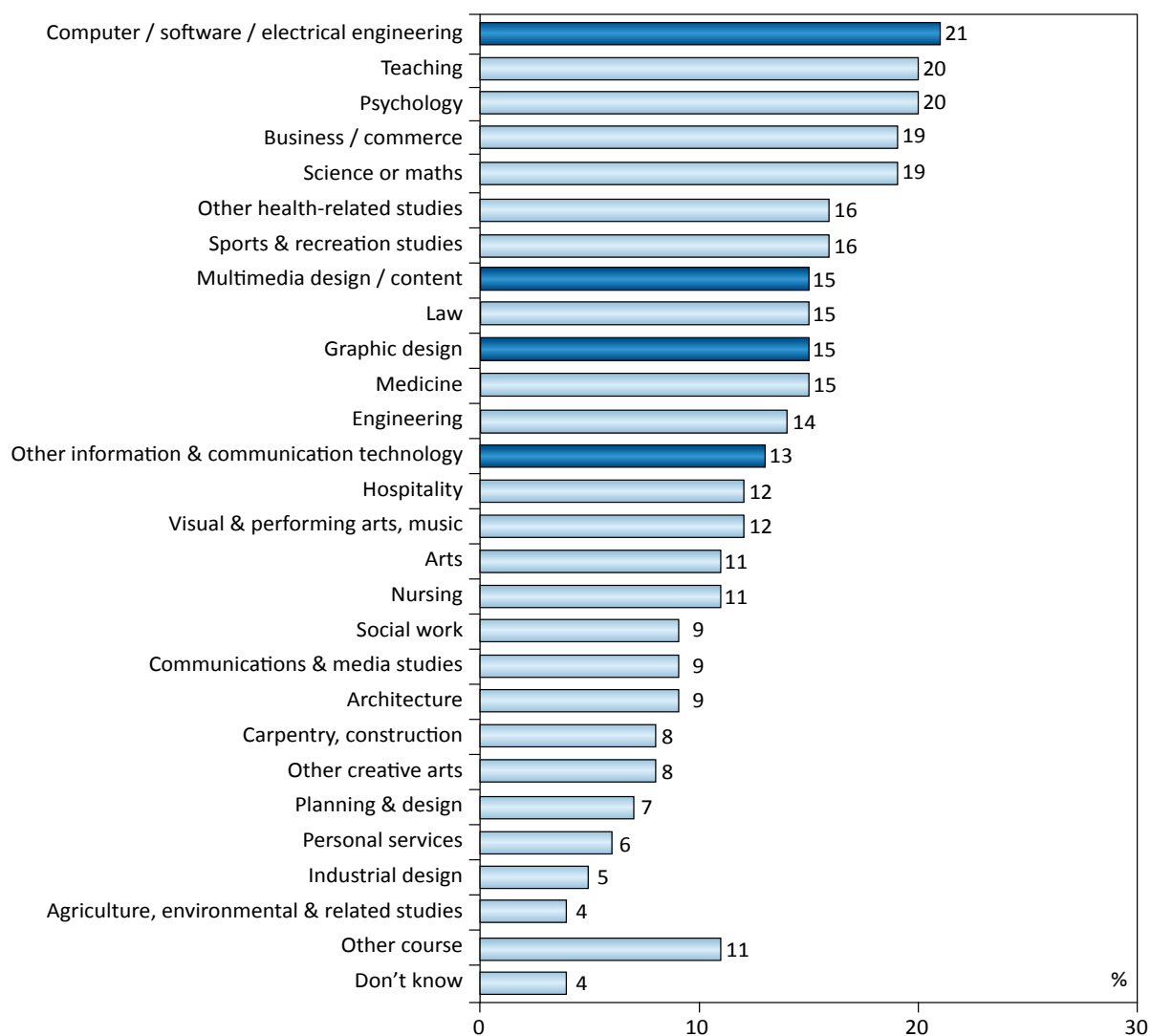
Chart 2: Course students intend to study



Q1b: What course do you intend to study when you leave secondary school?

When students were asked what courses they would consider studying (in addition to the course they intended studying), more than a third (37 per cent) indicated that they would at least consider studying an ICT-related course at a tertiary level (compared to 35 per cent in 2007).

Chart 3: All courses considered



*Q1b/c: What course do you intend to study when you leave secondary school?
What other courses would you consider?*

Future careers

As seen in Chart 4, 35 per cent of students said they were interested in working in the ICT industry, a significant increase on the 2007 result (25 per cent). ICT was the industry most students expressed an interest in, followed by health care and social services (24 per cent); arts, sport and recreation (21 per cent); and education and training (21 per cent).

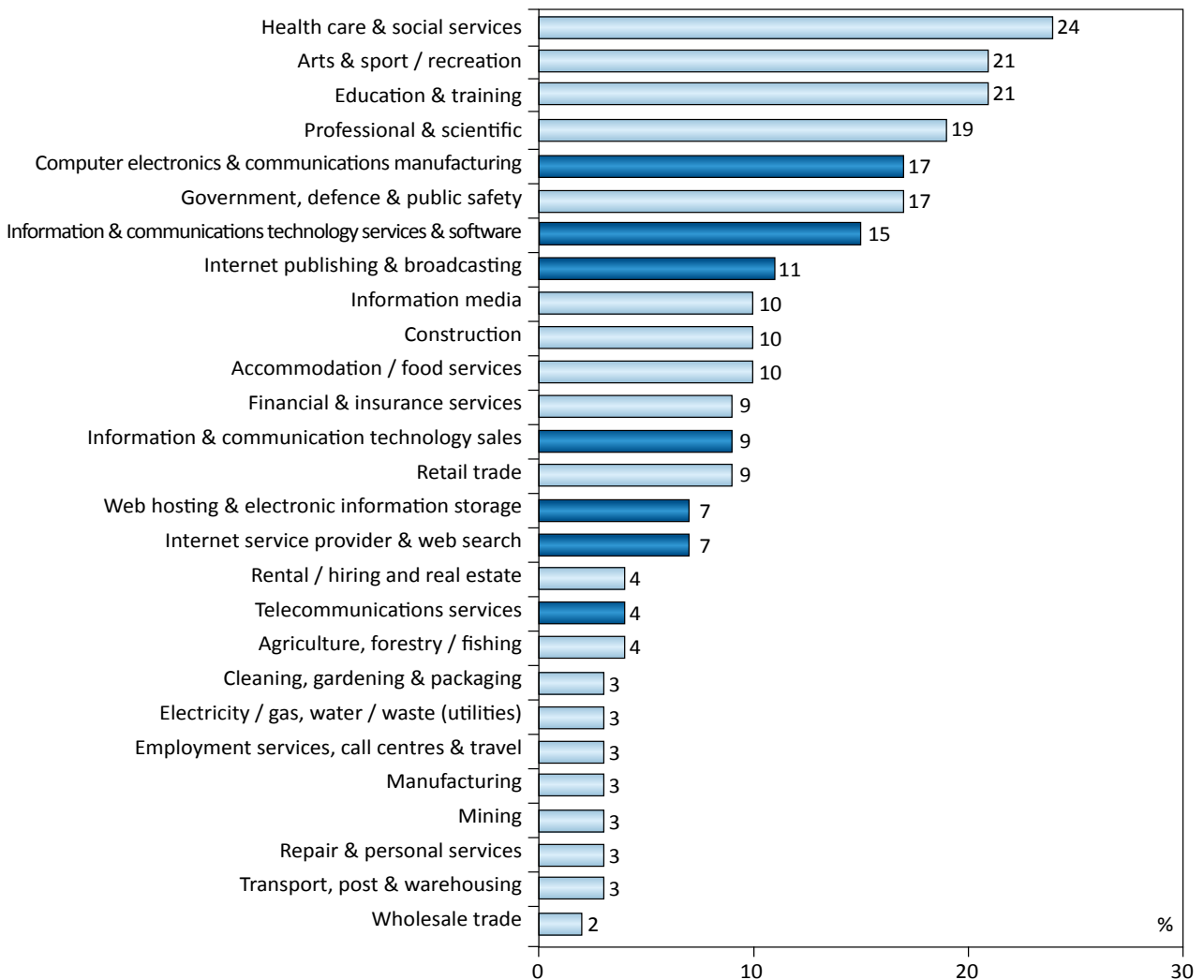
The most popular of the ICT-related career options presented were

- computer electronics
- communications manufacturing
- ICT services and software
- internet publishing, and broadcasting.

Male students were much more interested in working in ICT than female students (51 per cent compared with 19 per cent).

Students who had studied ICT in Year 9 or above were more interested than those who had not (50 per cent compared with 22 per cent), as were those with family working in the ICT industry (47 per cent, compared with 32 per cent for those without a family connection).

Chart 4: Industries students are interested in working in



Q3a: Thinking about the future, what industries are you interested in working in?

Explanatory note: The level of interest in different industry areas is based on all those industries that students indicated they were interested in working in. The responses most relevant to ICT relate to services and software, computer electronics and communications manufacturing, internet publishing and broadcasting, ICT sales, web hosting and electronic information storage, internet service provider and web search, and telecommunications services.

Career influences

The most influential source of information about different courses and careers was the advice of people already working in the careers – 35 per cent of students reported that people with first-hand experience of a career had a ‘a lot’ of influence on their career choices. A student’s own work experience (34 per cent) and parents (31 per cent) were also important influences. These factors were also the most influential in the 2007 study.

While students generally felt that the media (in the form of television, magazines and newspapers) was of the least influence, the qualitative study clearly indicated that

entertainment media does in fact play a role in shaping their views about certain careers.

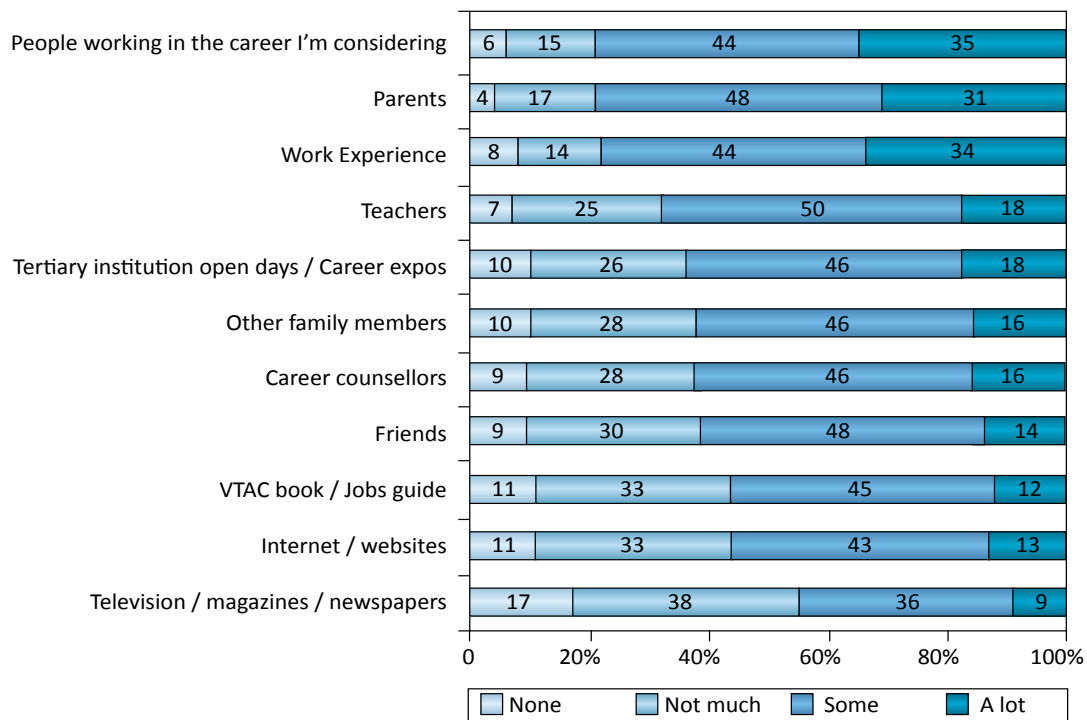
“You see fashion designers on TV and they have all this money and I don’t think they work that hard.”

“You hear all the time that teachers are less respected these days.”

Students in Years 9 and 10 were more likely to be heavily influenced by their parents than those in Years

11 and 12 (38 per cent compared to 24 per cent). Younger students were also more likely than students in Year 11 and 12 to report that teachers had a lot of influence on their career choices (22 per cent compared with 14 per cent). Female students were more likely than male students to be influenced by tertiary institution open days and career expos, the VTAC book/job guide and work experience.

Chart 5: Career Influences



Q4: How much influence do each of the following have on your choice of a career?

Note: Figures may not add up to 100 per cent due to rounding

3.2 ICT at school

Studying ICT at school

Consistent with the previous study, just under half of the students (45 per cent) had studied ICT in Year 9 or above. As in 2007, male students were much more likely to study ICT from Year 9 onwards (55 per cent, compared with 35 per cent of female students).

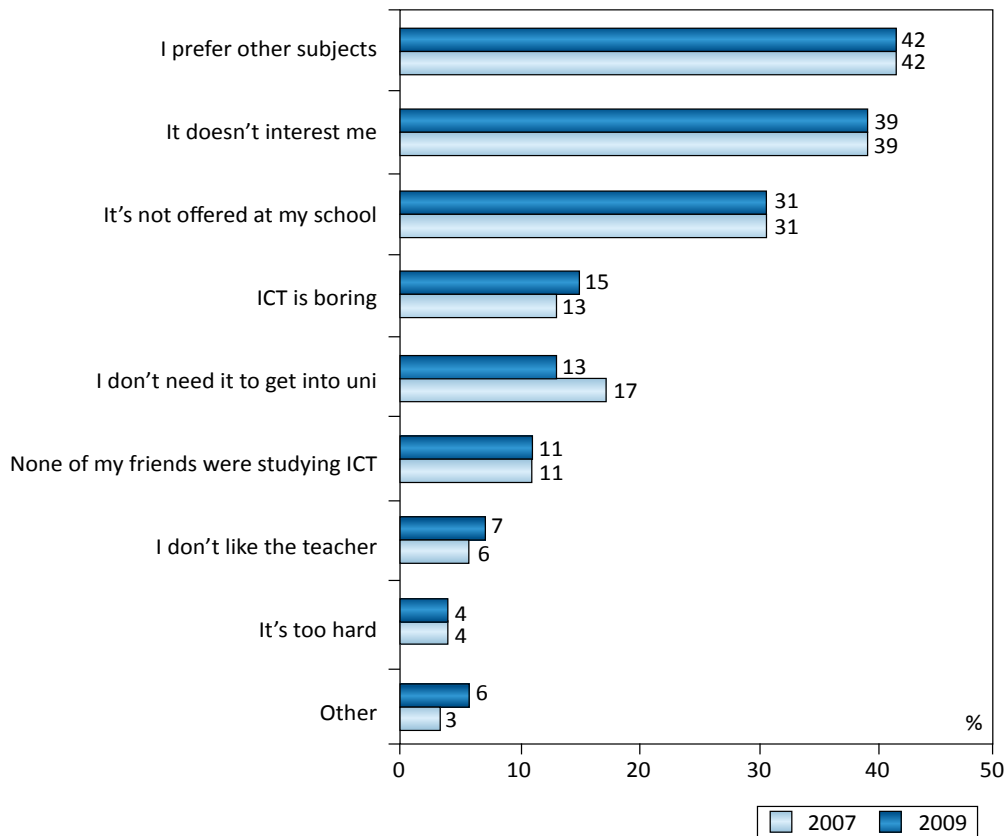
As seen in Chart 6, the most common reasons for not studying ICT in Year 9 or above were a preference for other subjects (42 per cent),

a lack of interest in ICT (39 per cent) and ICT subjects not being offered (31 per cent).

The qualitative research revealed that students felt ICT subjects at secondary school were often boring and repetitive; this may be due to a focus on programming, hardware and web development in secondary school studies. Female students were significantly more likely to avoid ICT studies because the subject did not interest them or because they found it boring.

“We had to program a robot in primary school and it was hard and I had no idea what I was doing; it was cool, kind of, but then actually really boring.”

Chart 6: Reasons for not studying ICT in year 9 or above



Q12b: Why did you not study ICT in Year 9 or above?

Note: respondents to this question did not study ICT in Year 9 or above

Note: Figures may not add up to 100 per cent due to rounding

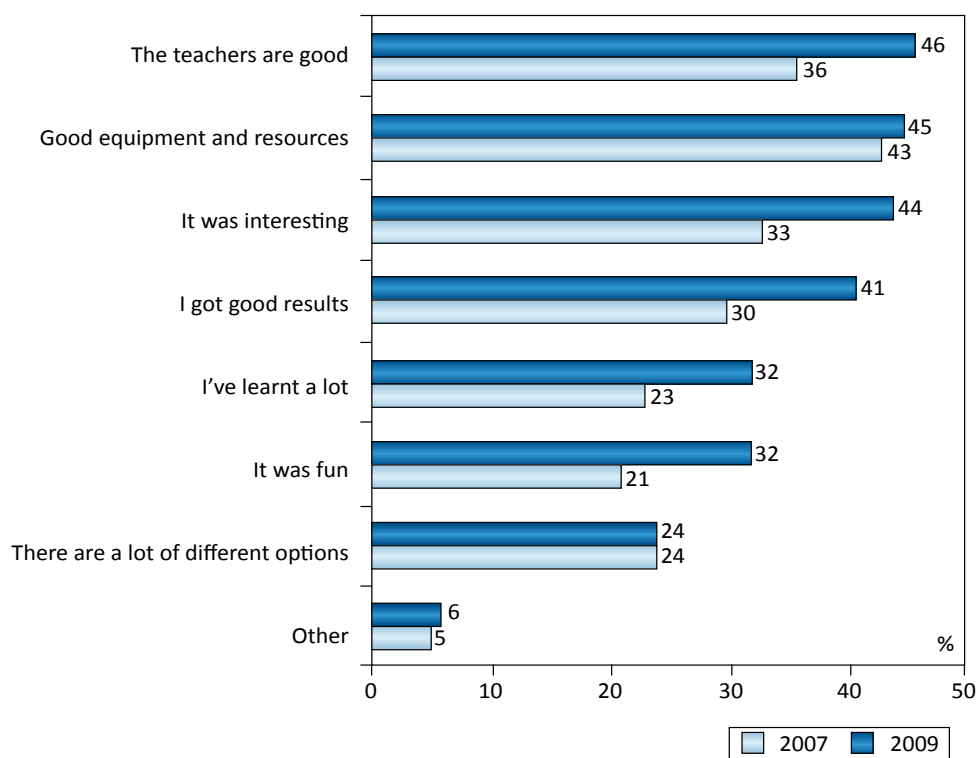
Standard of ICT teaching

In general, students were positive about the standard of ICT teaching, with 58 per cent considering it to be either good or very good, and a further 6 per cent excellent. Only 16 per cent of students reported that the standard of ICT teaching was poor. The percentage of students rating the standard as very good or excellent in 2009 (32 per cent) increased since 2007 (27 per cent).

Good teachers were most often cited as the reason for ICT being taught well, followed by good equipment and resources, and ICT being interesting.

The 2009 study showed significant increases in the percentage of students who felt that their teachers were good (46 per cent in 2009; 36 per cent in 2007) and that the subject was interesting (44 per cent in 2009; 33 per cent in 2007).

Chart 7: Reasons ICT was taught well in secondary school 2007 vs 2009



Q14a: Why do you feel that ICT was taught well?

Note: respondents to this question rated ICT teaching at their school as good, very good or excellent

Note: Figures may not add up to 100 per cent due to rounding

Attitudes towards ICT teaching

Overall, student attitudes towards ICT teaching in schools were very similar to those in 2007, although there has been a decrease in the percentage who felt there wasn't enough subject choice in the ICT field (32 per cent in 2009; 38 per cent in 2007). More students now agree that the standard of teaching in ICT subjects is as good as that in more traditional subjects (34 per cent in 2009, compared with 29 per cent in 2007).

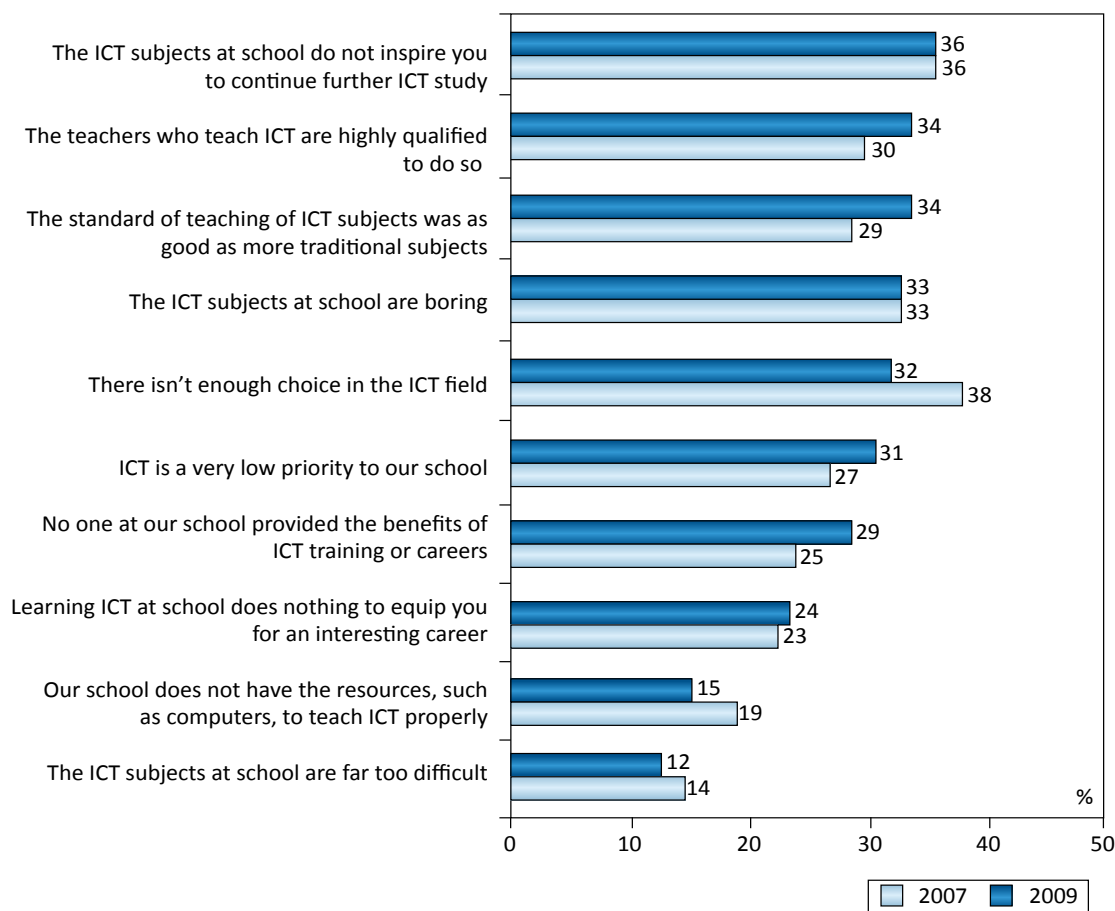
Few students considered ICT subjects at school to be far too difficult or felt that their school did not have the resources to teach ICT properly.

Students who had studied ICT at Year 9 or above were generally more positive about ICT teaching; however, they were also more likely to have concerns about the range of ICT subjects available.

ICT career information

The quantitative study found that about half of the students felt they had not been given adequate information about ICT as a career choice, a result consistent with the 2007 study. Female students, those who did not have family in the industry and students who had not studied ICT at Year 9 or above were all much more likely to feel that information about ICT careers was inadequate.

Chart 8: Attitudes towards ICT teaching - % agree



Q15: Still thinking about the ways ICT is taught at your school, how strongly do you agree or disagree with the following statements?

Note: Figures may not add up to 100 per cent due to rounding

3.3 ICT in tertiary education

Interest in studying ICT in tertiary education

Just under half of the students (44 per cent) reported at least some interest in studying ICT at a tertiary level. The level of interest was significantly higher for male students, students with family in the industry and who had studied ICT at Year 9 or above.

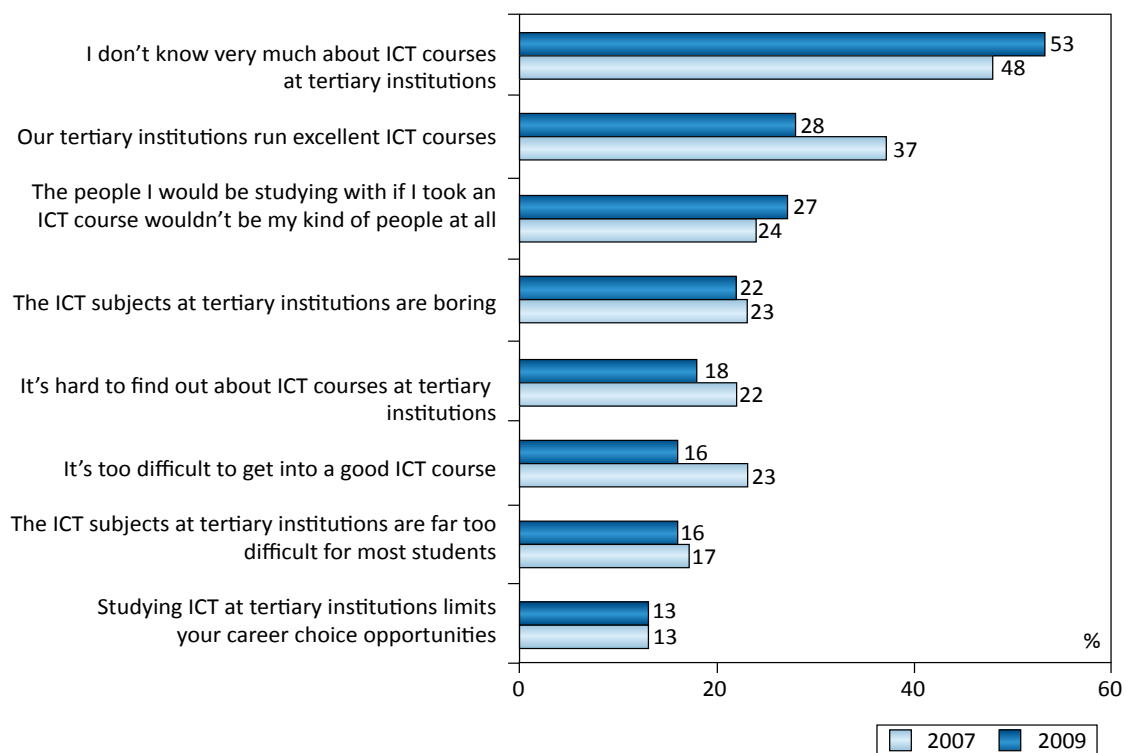
Qualitative research suggested that students interested in studying ICT courses at a tertiary level tended to simply focus on courses that interested them, rather than make a conscious decision to 'study ICT'.

Attitudes towards ICT study at tertiary institutions

Just over half of the students felt that they did not know much about ICT courses at tertiary institutions. In addition, 18 per cent of students reported that it was hard to find out about ICT courses at tertiary institutions.

Additionally, the study suggested that students have a better understanding of tertiary courses other than ICT, and that these courses are therefore seen to offer more future opportunities. Despite this perceived lack of information, few students considered it too difficult to gain a place in an ICT course.

Chart 9: Attitudes towards ICT at tertiary institutions - % agree



Q19: To what extent would you agree or disagree with the following statements about ICT courses at university, TAFE or other tertiary institutions? Note: the table lists the percentage of students who 'somewhat agree' or 'strongly agree' with each statement

Note: Figures may not add up to 100 per cent due to rounding

3.4 ICT careers

The term 'ICT'

The percentage of students with at least some knowledge of what the term 'ICT' meant increased significantly compared to 2007, rising from 12 per cent to 35 per cent. Male students were much more likely than female students to correctly define 'ICT' (61 per cent compared with 44 per cent).

The qualitative research found that exposure to ICT in school may limit students' perceptions of ICT outside the education system. The research suggested that, because ICT is taught as a discrete subject in schools, some students believe that ICT encompasses only those topics taught in their 'ICT' classes (such as computer programming or IT).

"[It's] anything with technology."

Understanding of ICT careers

Many students are still unclear about what ICT is, how it differs from IT, and what career opportunities the industry can offer.

Although 54 per cent of students had some understanding of ICT career opportunities, only 10 per cent felt they had a very clear understanding, and more than a third reported that they had no understanding at all. These results are comparable with those of the 2007 study.

"Isn't it like programming and databases?"

Perceptions of ICT careers

The study found that students still saw ICT and IT as interchangeable. While they acknowledged that any future vocation would include the use of ICT, they felt that to specialise in ICT would limit their career opportunities. Careers in games development, visual arts and graphic design were appealing to some students, but these jobs were rarely associated with the ICT industry.

"Technology is part of life for us."

"Everyone will have to use ICT at work no matter what they do."

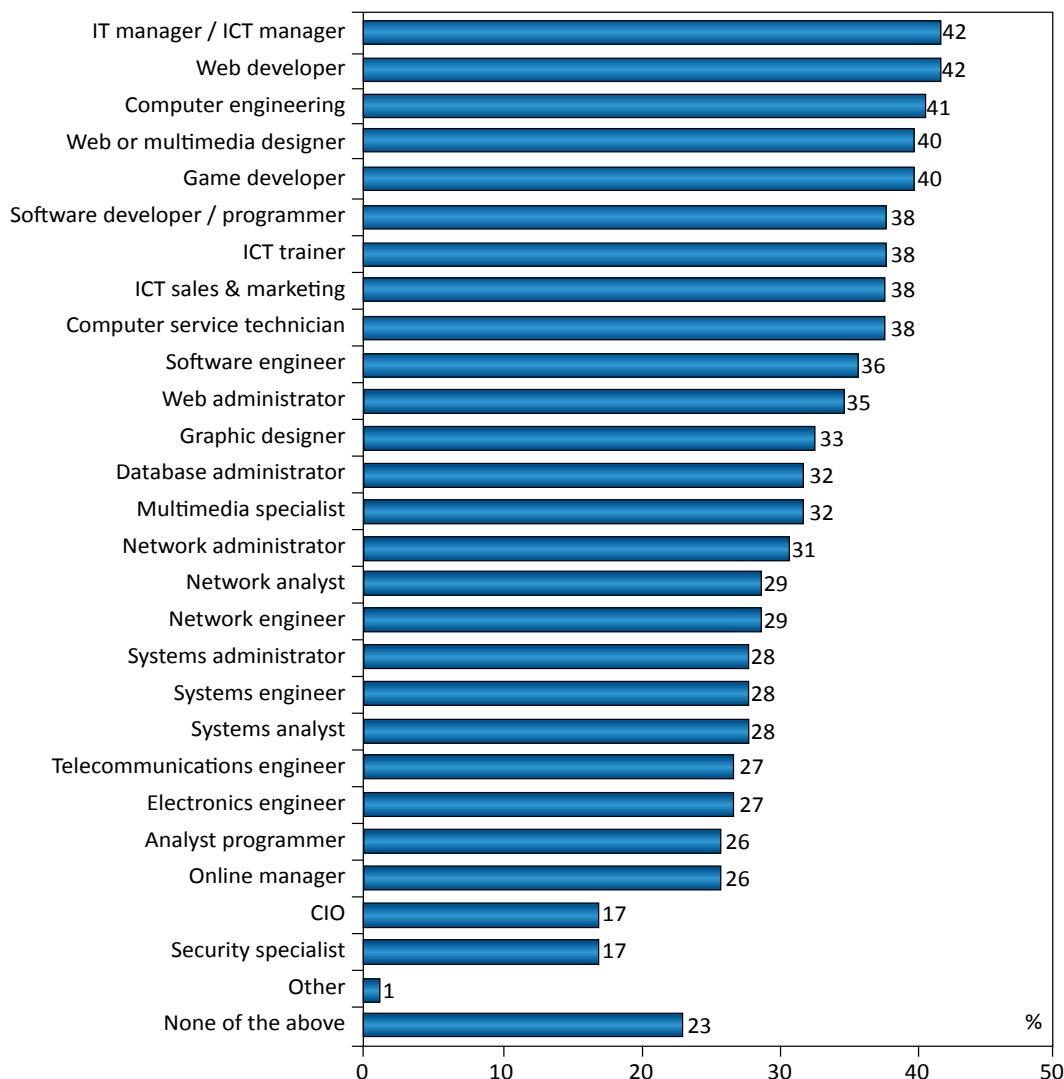
"Being in games and stuff like that would be cool, but I don't think that's ICT."

Awareness of ICT career options

The ICT career options most commonly known to students included IT manager/ICT manager, web developer, computer engineering, web or multimedia designer and games developer. The least known ICT roles were Chief Information Officer (CIO) and security specialist (17 per cent each). Almost one quarter of students were not familiar with any of the ICT career options presented.

Qualitative research found that students were more likely to associate a career in ICT with traditional IT vocations (such as computer programmer or IT manager), and that students did not immediately relate ICT with more creative vocations such as graphic designer, games developer or web/multimedia designer. This narrow view of ICT career possibilities may be related to the ICT curriculum in schools, which tends to focus on computer hardware and programming.

Chart 10: ICT career options aware of

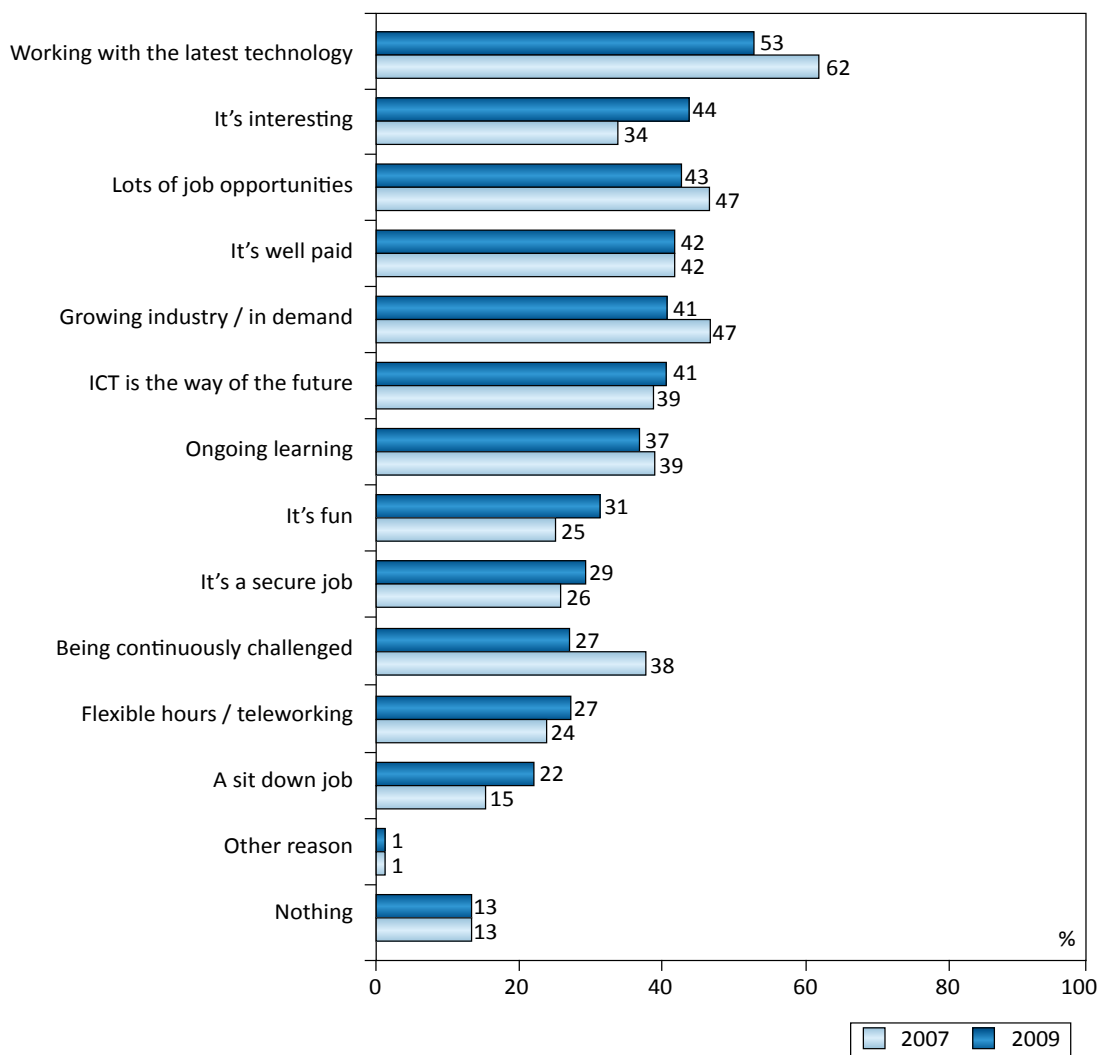


Q5c: The following are some career options in ICT. Before today, which of the following would you have considered to be ICT careers?
 Note: Figures may not add up to 100 per cent due to rounding

The factors most commonly nominated as being positive aspects of an ICT career included the opportunity to work with the latest technology, ICT being an interesting career, lots of job opportunities and well-paid jobs.

Male students were more positive about a career in ICT, as were those with family working in the industry. The study showed that students who had studied ICT at Year 9 or above, and those intending to go to university rather than TAFE, were more likely to hold positive viewpoints.

Chart 11: Positive aspects of an ICT career



Q8a: What would you see as the good things about a career in ICT?
 Note: Figures may not add up to 100 per cent due to rounding

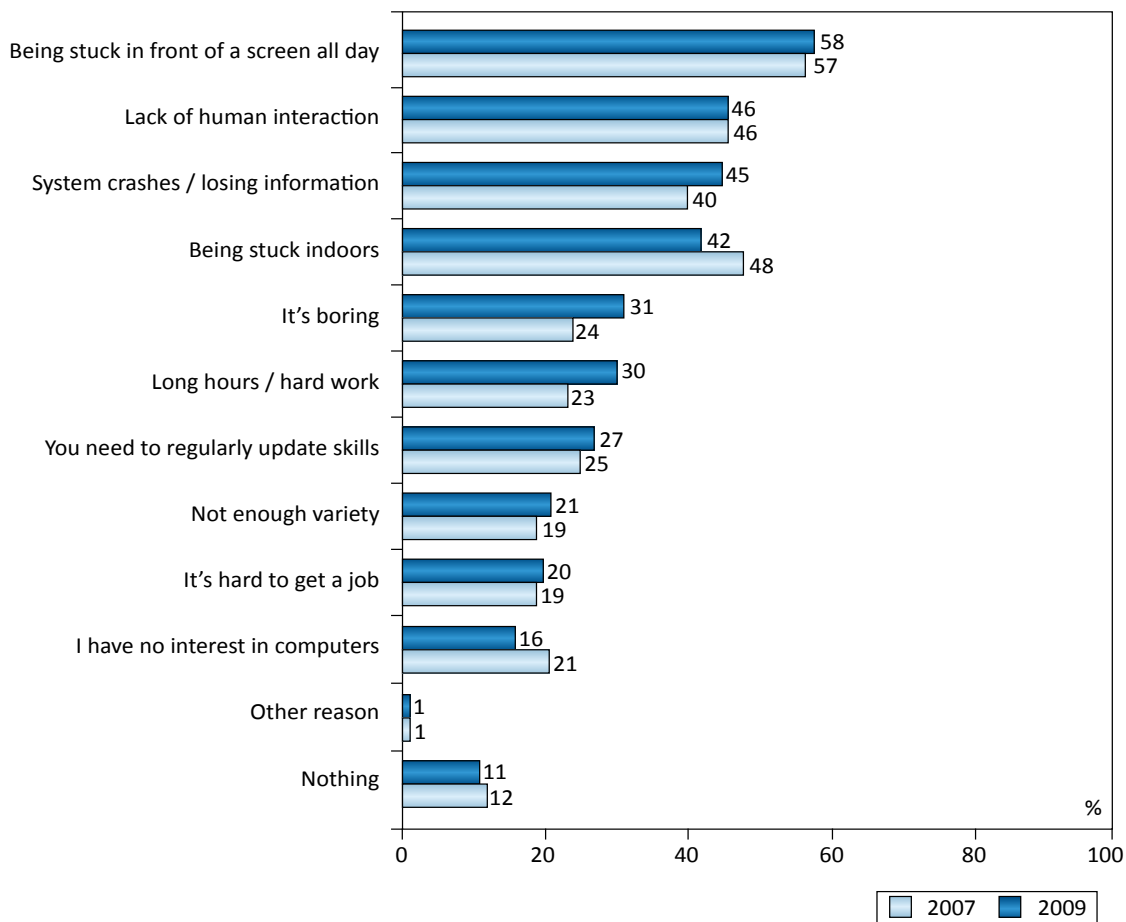
Negative perceptions of ICT careers remained similar to those in 2007 (see Chart 12). The most commonly held negative perceptions of a career in ICT were being stuck in front of a screen all day, a lack of human interaction, system crashes and the loss of information, and being stuck indoors – these findings indicate the extent to which students associate ICT jobs with the IT industry. Many of these negative perceptions of ICT careers appear to have been passed on from friends and family working in the industry.

Female students were significantly more likely than male students to highlight these perceived negative aspects of an ICT career.

“It’s just boring; you sit in front of a computer all day and don’t talk to anyone.”

“If you’re really into it you’d love it but it just seems so boring to me.”

Chart 12: Negative aspects of an ICT career



Q8b: What would you see as the bad things about a career in ICT?

Note: Figures may not add up to 100 per cent due to rounding

As mentioned in section 2.1, there remains a significant gap between those elements students consider important in future careers (e.g. jobs that suit their areas of interest and jobs they are good at) and what students perceive ICT careers can offer. Chart 13 shows that many of the factors most important to students (appearing on the right-hand side of the chart) also have a low ICT rating – that is, students don't necessarily associate these important career considerations with ICT careers.

Chart 13: Important factors vs perceptions of ICT

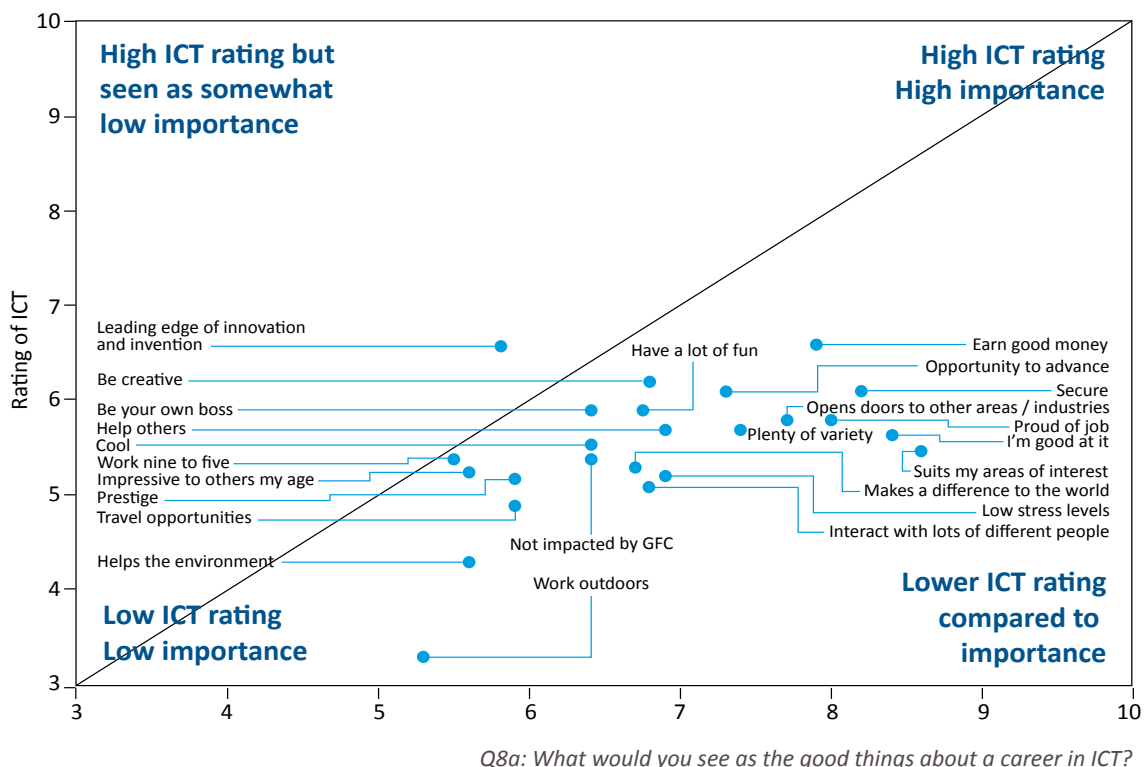
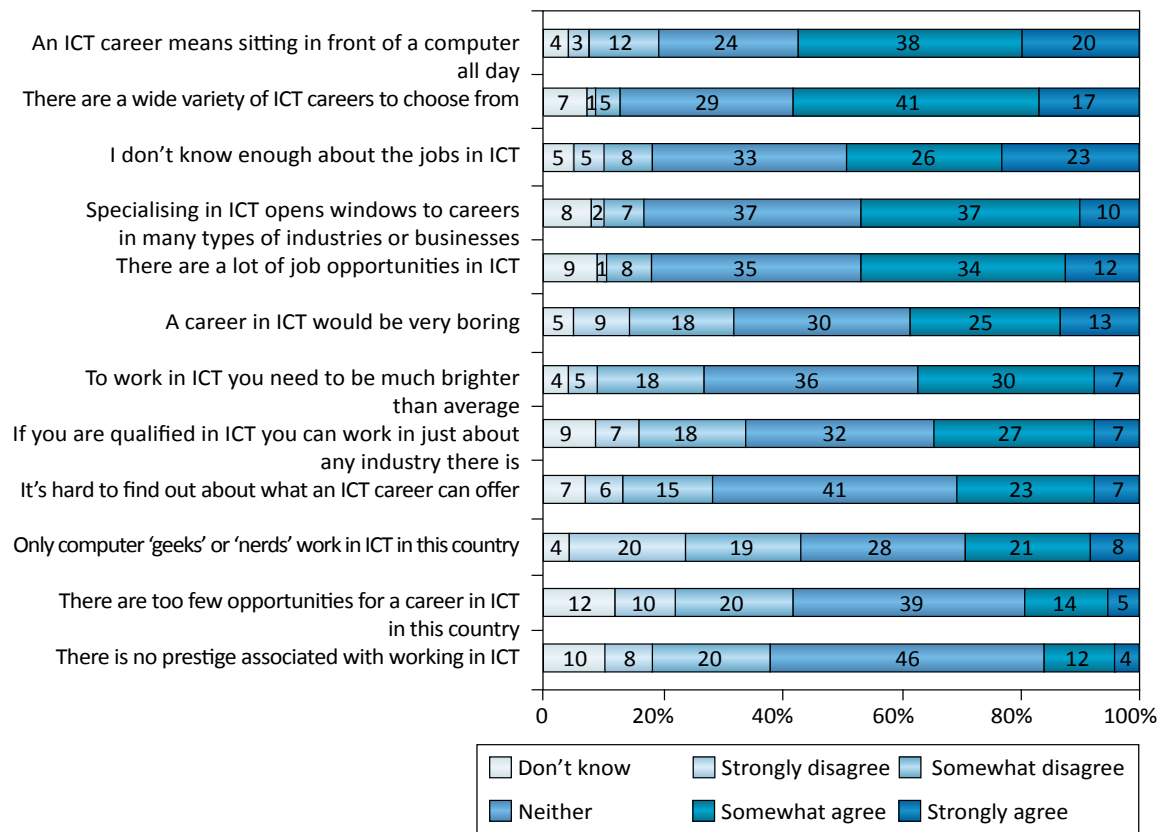


Chart 14: Attitudes towards careers in ICT



Q10: To what extent do you agree or disagree with the following statements about a career in ICT?

Note: Figures may not add up to 100 per cent due to rounding

Level of interest in an ICT career

Half of the Year 9 –12 students reported at least some interest in an ICT career. The study found that 13 per cent had a strong interest an increase on the 2007 result (10 per cent). Male students were much more likely than female students to report a strong interest (23 per cent compared with 3 per cent), and students with family members working in ICT also reported higher levels of interest in ICT careers.

The most popular ICT career options were games developer and graphic designer – these were also the most popular choices in 2007. Male students had significantly higher interest levels for all the ICT career options presented, except for graphic designer and ICT trainer, where the gender difference was much less pronounced. In particular, male students were far more interested in the role of games developer (46 per cent) than female students (15 per cent). As in the 2007 study, the more ‘traditional’ IT roles held much less appeal for students.

Chart 15: ICT career options students are interested in

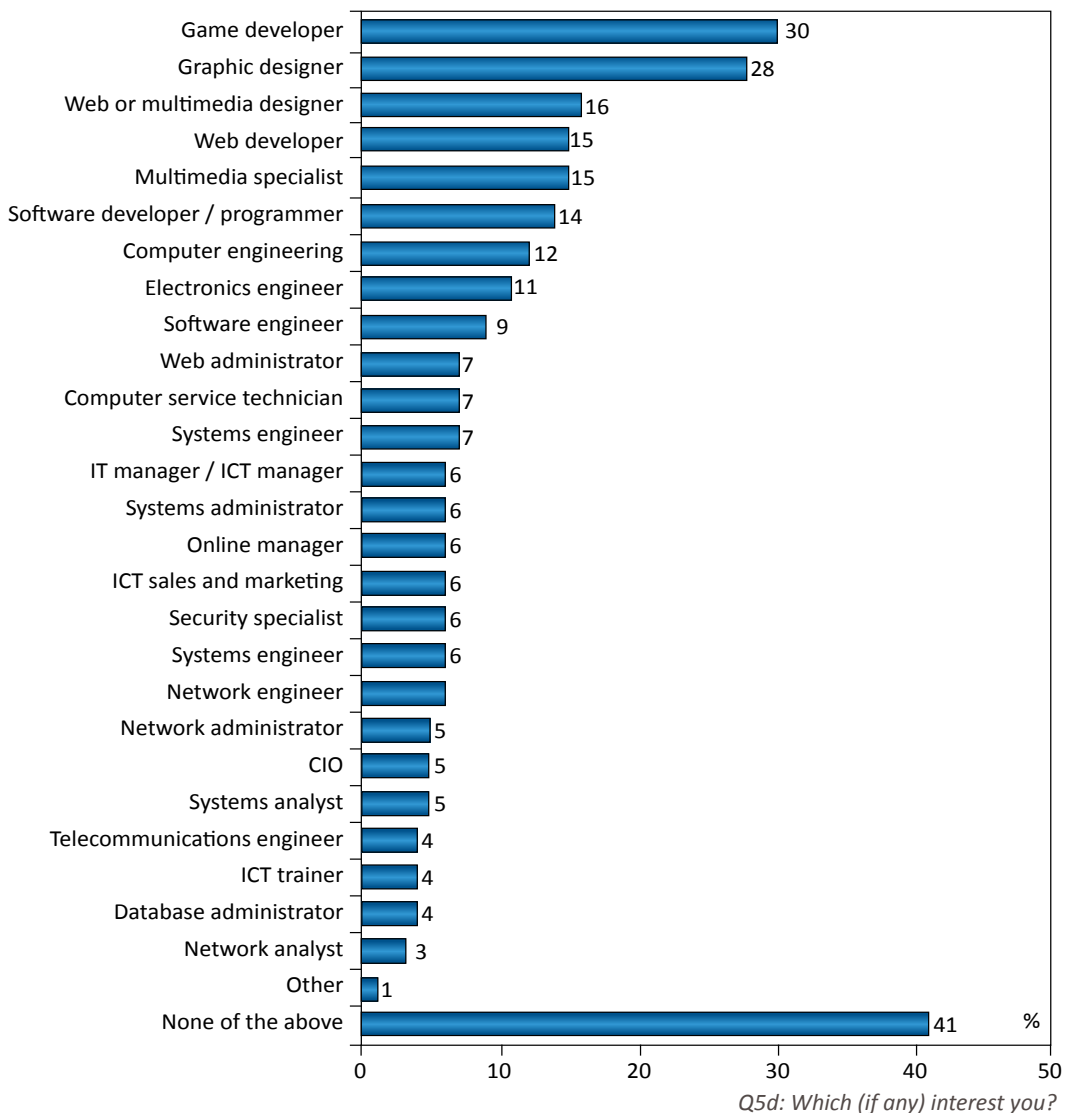


Table 1: ICT career options students are interested in

	Total	Year level		Gender		School type		Family in industry		Studied ICT	
		9/ 10	11/12	Male	Female	Private	Government	Yes	No	Yes	No
Game developer	30	28	32	46	15	29	30	35	29	45	18
Graphic designer	28	29	27	29	27	30	27	35	26	39	19
Web or multimedia designer	16	15	16	19	13	16	16	17	15	25	9
Web developer	15	16	13	22	8	15	15	19	14	25	7
Multimedia specialist	15	16	14	18	12	16	14	18	14	20	11
Software developer / programmer	14	17	11	22	6	14	14	20	12	22	7
Computer engineering	12	14	11	22	3	11	13	18	11	20	6
Electronics engineer	11	13	9	18	4	14	10	17	9	16	7
Software engineer	9	9	9	16	2	9	9	15	8	15	4
Web administrator	7	8	7	10	4	4	9	11	7	13	3
Computer service technician	7	9	5	13	1	5	8	11	6	11	4
Systems engineer	7	7	6	12	2	8	6	13	5	11	3
Systems administrator	6	6	6	10	2	3	7	10	5	10	2
IT manager / ICT manager	6	6	5	10	1	5	6	10	5	10	2
Online manager	6	6	5	8	3	5	6	7	5	9	3
ICT sales & marketing	6	7	4	8	3	6	5	7	5	8	4
Network engineer	6	6	5	11	0	5	6	10	5	10	2
Security specialist	6	7	4	9	2	5	6	11	4	8	4
Network administrator	5	5	6	10	1	4	6	11	4	9	3
CIO (Chief Information Officer)	5	6	4	7	3	4	5	8	4	8	2
Systems analyst	5	4	5	8	1	2	6	8	4	8	2
Database administrator	4	4	4	6	2	3	5	5	4	6	3
Analyst programmer	4	4	4	6	1	2	5	8	3	7	1
Telecommunications engineer	4	5	3	7	1	4	4	7	3	6	3
ICT trainer	4	5	3	5	3	2	5	7	3	6	2
Network analyst	3	4	3	6	1	2	4	8	2	6	2
Other	1	1	0	1	0	0	1	1	0	1	1
None of the above	41	39	43	29	53	44	40	30	44	25	54

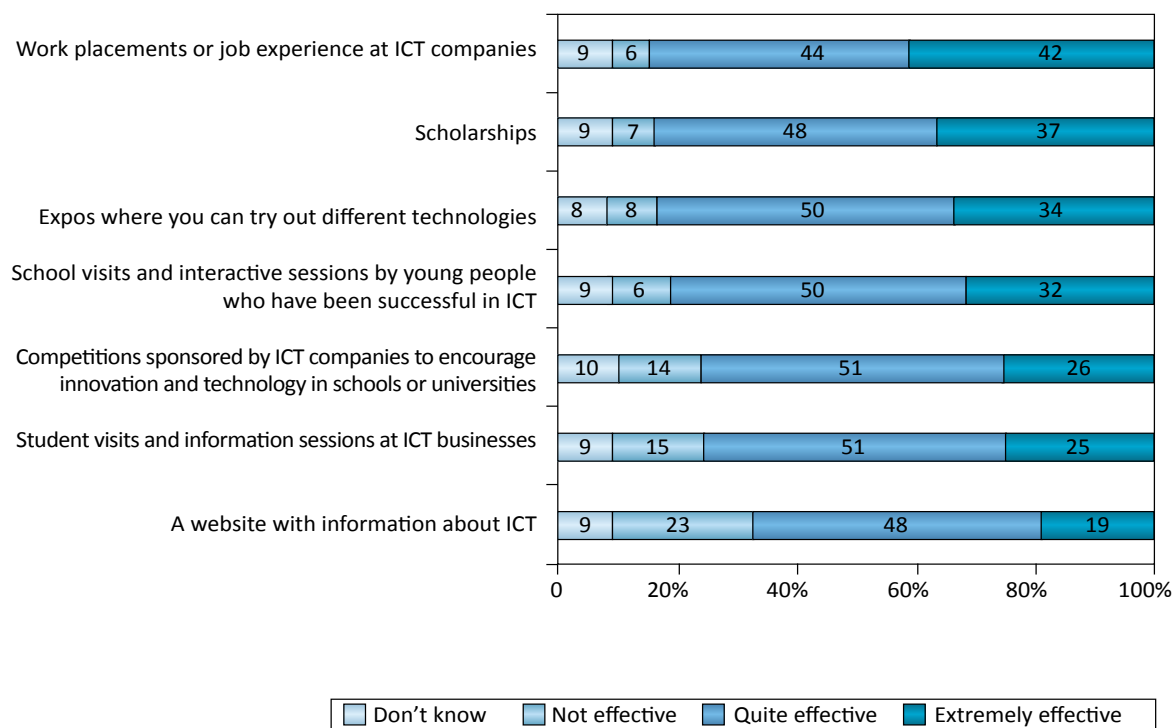
Q5d: Which (if any) interest you? Significant differences highlighted

Promoting ICT careers to young people

When presented with a range of options to promote ICT careers to young people, students nominated work placements or job experience with ICT companies and scholarships as the most effective means – a result consistent with the 2007 study. Students were also attracted to the idea of expos allowing them to explore emerging technologies, and this was the third most popular option. The study confirmed that students value the opportunity to speak to people already engaged in vocations they may be considering.

Scholarships were most attractive to students intending to study at university (39 per cent, compared with 28 per cent for those planning TAFE studies), and expos were more attractive to those with family members already working in ICT (42 per cent compared with 32 per cent of those who did not).

Chart 16: Promoting ICT careers to young people



Q11: If the ICT industry were to promote careers in ICT to young people, how effective would the following means of promotion be?

Note: Figures may not add up to 100 per cent due to rounding



Appendix: research methodology

This report is based on qualitative and quantitative research undertaken by Open Mind Research Group in May–June 2009.

Qualitative research

- Twelve affinity paired in-depth interviews with male and female Year 9 and 10 students from both government and non-government schools in metropolitan and regional Victoria.
- Eight discussion groups with male and female students in Years 11 and 12, or in tertiary study.
- An online discussion forum involving a total of 96 students in Years 9–12 from government and non-government schools, or studying tertiary education.

Quantitative research

- An online survey involving a sample of 723 Victorian students in Years 9 to 12.

Sample included representatives from both government and non-government schools in metropolitan and regional areas.