

The **Allen Consulting** Group

Demand for Food Science and Technology graduates

FTAA skills demand survey analysis

May 2011

Report to Food Technology Association of Australia

The Allen Consulting Group

Allen Consulting Group Pty Ltd
ACN 007 061 930, ABN 52 007 061 930

Melbourne

Level 9, 60 Collins St
Melbourne VIC 3000
Telephone: (61-3) 8650 6000
Facsimile: (61-3) 9654 6363

Sydney

Level 1, 50 Pitt St
Sydney NSW 2000
Telephone: (61-2) 8272 5100
Facsimile: (61-2) 9247 2455

Canberra

Empire Chambers, Level 2, 1-13 University Ave
Canberra ACT 2600
GPO Box 418, Canberra ACT 2601
Telephone: (61-2) 6204 6500
Facsimile: (61-2) 6230 0149

Online

Email: info@allenconsult.com.au
Website: www.allenconsult.com.au

Disclaimer:

While the Allen Consulting Group endeavours to provide reliable analysis and believes the material it presents is accurate, it will not be liable for any claim by any party acting on such information.

© Allen Consulting Group 2011

Contents

<i>Executive summary</i>	<i>iv</i>
Chapter 1	1
<i>Food Science and Technology graduates</i>	<i>1</i>
1.1 Market context	1
1.2 Stakeholder survey and consultation	2
1.3 Characteristics of respondents	3
Chapter 2	5
<i>Characteristics of FST graduates</i>	<i>5</i>
2.1 Qualifications and experience	5
2.2 Skills and attributes	6
2.3 Previous employment and area of recruitment	8
2.4 Reasons for not employing FST graduates	10
Chapter 3	13
<i>Identifying and addressing the issues</i>	<i>13</i>
3.1 Demand for FST graduates	13
3.2 Ability to attract graduates	15
3.3 Graduate retention	17
3.4 Effectiveness of strategies	18
3.5 Current strategies and their success	20
<i>References</i>	<i>23</i>

Executive summary

The quality of employees and the ability to attract staff with the desired skills, attributes and cultural fit can have significant impacts on the operation and success of businesses. The Allen Consulting Group was commissioned by the Food Technology Association to undertake a survey to examine the demand for Food Science and Technology (FST) graduates. The survey also explored the issues facing businesses in relation to hiring, attracting and retaining FST graduates and potential mechanisms to address these issues.

The results of the survey indicate that many FST graduates do not possess the skills and attributes businesses consider important. The disparity between skills identified by businesses as important, and skills identified as usually being possessed by FST graduates suggests that many graduates do not possess the technical skills that are considered important by businesses. Moreover, a limited number of FST graduates were identified as possessing the employability attributes considered to be most important.

The evidence suggests that while the skills and attributes of graduates are thought to be deficient, this can be partly attributed to high business expectations of the skills graduates should possess upon graduation. Stakeholders interviewed during the consultations suggested that some industry participants believe graduates should be able to fully perform functions straight out of university. However, it was noted that graduates need some form of on the job training and experience before being able to fully perform in new roles.

Overall, while the majority of businesses surveyed do not have unmet demand for graduates, there does appear to be a certain level of unmet demand present in the market. However, when the level of unmet demand, as measured by number of unfilled positions, is averaged across the industry, the proportion of positions vacant is relatively low.

In addition to concerns about the current availability of FST graduates, the majority of respondents believe that it will become harder to find suitable FST graduates in the next 5 years. Respondents pointed to a variety of reasons for this, including an increase in demand as the economy recovers; high competition with other industries (such as the mining industry taking more science and engineering graduates); a reduction in the number of graduates coming through university; and graduates' skill sets being inadequate.

While this unmet demand has been attributed to the number of FST graduates available, it has been exacerbated by a shortage of graduates with the appropriate skills and attributes, high expectations placed on graduates by businesses and issues associated with the ability of businesses to attract and retain graduates.

Around half of respondents indicated they had problems attracting FST graduates when needed. Significantly, a greater percentage of rural/regional businesses had experienced problems attracting FST graduates when needed than their metropolitan counterparts. While it was recognised that supply side factors, particularly the number of FST graduates available to hire was impacting on businesses, other factors such as skills deficiencies and an unwillingness to relocate are also causing issues for businesses trying to hire FST graduates.

Overall, the majority of businesses surveyed do not have a problem retaining graduates. However, nearly a quarter of respondents identified their business unit/location as having problems retaining graduates once they join their business. The most common reason cited was that respondents were unable to provide appropriate career progression. Consultations supported this view, with various businesses interviewed suggesting that graduates are ambitious and are thinking about their potential career path from an early stage.

When examining factors considered important in graduate retention, there is generally a correlation between the factors in graduate retention that businesses offer and the factors they consider important. However, there is a noticeable disparity between what is considered important and what is offered in relation to career progression and graduate training.

In relation to addressing the issues, most respondents believe that requiring internships to be part of a degree, giving graduates a level of work experience would be effective. It was noted that internships introduce people to a workplace, allow the development of workplace skills and also allow employers to get to know potential recruits.

Consultations suggested that from a university perspective, requiring internships to be part of degrees is difficult. It was suggested that internships are hard to manage, requiring large amounts of time and expense, and they are not usually considered feasible. The difference of view between universities and industry respondents indicate that this is an issue requiring further discussion between the parties.

Strategies that were identified as being successful in attracting and retaining graduates included internships, forming relationships with universities, sharing staff with other businesses and using consultants to meet specific needs. These strategies are being utilised by businesses to successfully overcome industry issues in attracting and retaining graduates. The success of these strategies suggests that they could provide a model for other industry participants.

Chapter 1

Food Science and Technology graduates

The Allen Consulting Group was commissioned by the Food Technology Association of Australia to examine the skills of Food Science and Technology (FST) graduates and the demand for these skills. This report looks at the issues facing businesses in relation to hiring, attracting and retaining graduates and potential mechanisms to address these issues. The analysis focuses on the key findings and comments obtained from the on-line survey and targeted consultations undertaken by the Allen Consulting Group.

This chapter outlines the market context of the survey, provides details about the stakeholder survey and examines the characteristics of respondents. The analysis in the ensuing chapters provides a detailed discussion of the results of the survey undertaken. It provides:

- an examination of the characteristics of FST graduates, including their qualifications, experience, skills and attributes;
- an exploration of various issues facing businesses in relation to FST graduates, including unmet demand and attracting and retaining FST graduates; and
- a consideration of possible mechanisms to address the identified issues, including case studies on successful practices.

1.1 Market context

Macroeconomic conditions in Australia have led to a tight labour market and general staff and skills shortages. Additionally, concerns about the attraction and retention of skilled labour in regional areas have grown in recent years (Department of Education Science and Training 2006a) and attracting younger workers is proving to be a particular challenge facing many regional communities (Meat and Livestock Australia 2008). The 2010 Environmental Scan of the agrifood industries also noted the ongoing population drift to major cities and coastal areas, as continuing agrifood's long term difficulties in attracting and retaining workers (AgriFood Skills Australia 2010).

Within Australia it is recognised that participation in Science and Technology more widely has declined in recent years. There have been signs of declining participation in mathematics and science subjects in schools, as well as a decline in participation in Science and Technology courses at the undergraduate level of higher education (Australian Government 2003).

Additionally, the adequacy of science, engineering and technology (SET) skill supply has been identified as an ongoing concern for Australian industry, governments, and the scientific research community. (Department of Education Science and Training 2006b). This concern is shared by many Organisation for Economic Cooperation and Development countries, which are experiencing declines in the SET share of higher education enrolments in their countries, coupled with a seeming decline in youth interest in SET study and careers (Department of Education Science and Training 2006b).

Previous studies in relation to the Food Industry undertaken in Australia suggest that companies have had difficulty employing technical staff, with a shortage of appropriately qualified people (AFGC Technical skill survey 2008). In 2009, Food & Agribusiness Intelligence And Strategy Specialists found that the number of FST graduates is declining and this is having an adverse flow on effect on industry, which is facing difficulty in attracting staff (Food & Agribusiness Intelligence And Strategy Specialists 2009). A study undertaken by Dairy Australia in 2010 also found that dairy companies face challenges attracting specialist workers (Harris Park Group 2010).

Further, international research suggests that there has been a general down trend in the number of students enrolling for FST courses in educational institutions worldwide (Jideani, VA and Jideani, IA 2010). It is with these factors in mind that consideration of the demand for Food Science and Technology graduates needs to be considered.

1.2 Stakeholder survey and consultation

To capture a range of business views, the Allen Consulting Group designed an online survey comprising of a series of ‘closed’ and ‘open’ questions. The survey was sent to contacts provided by the Food Technology Association of Australia. It was distributed to approximately 300 representatives of individual business units/locations and in total 148 people responded. Of these 115 fully completed the survey. Additional information was gathered by targeted consultations with twelve selected respondents.

The survey focused on differences in demand and skills between participating business units in terms of firm size and location. These characteristics are of particular importance for this analysis, enabling the results to be examined by looking at industry-wide issues as well as those common to either firms of similar size or located in similar areas.

Firm size

To analyse the responses according to firm size, firms have been categorised according to the Australian Bureau of Statistic definitions —small businesses (0-19 employees), medium businesses (20-199) and large businesses (200+ employees). These definitions have been used to split the respondents into two categories:

- Small/medium businesses (0-199 employees); and
- large businesses (200+ employees).

Interestingly, exactly half of the respondents were from small/medium businesses and half from large businesses.

Area of location

Responses were also analysed according to area of location, from business units either operating in a metropolitan area or a rural/regional area. A metropolitan area is defined as being located in a population centre of more than 100,000 people such as Geelong, Wollongong, and Newcastle. A rural/regional location is defined as one outside the recognised metropolitan areas and outside a regional city of more than 100,000 people.

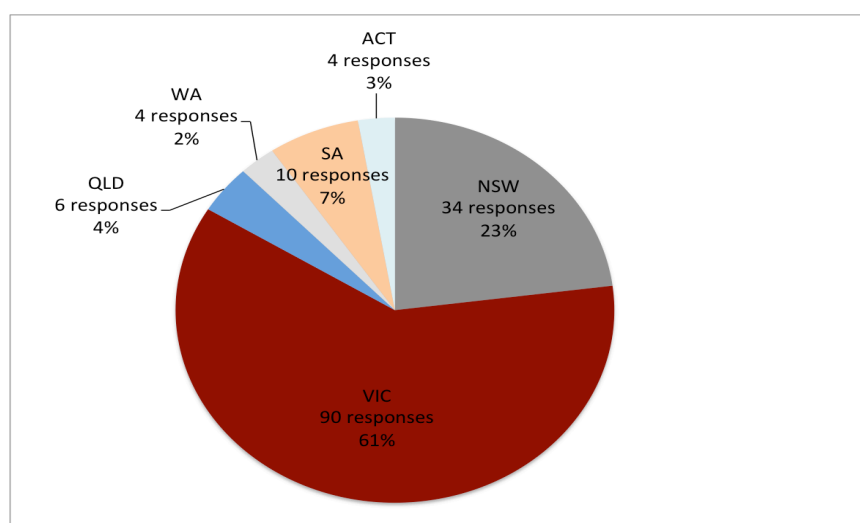
The majority of respondents (118 responses, 80 per cent) were located in a metropolitan area. Only 20 per cent of respondents (30 responses) identified as being located in a rural/regional area.

1.3 Characteristics of respondents

The majority of respondents were located in Victoria, (61 per cent of respondents) and New South Wales (23 per cent of the respondents). The remainder of the respondents were located in Queensland, Western Australia South Australia and the Australian Capital Territory. The location of respondents is illustrated in Figure 1.1.

Figure 1.1

LOCATION OF RESPONDENTS ACCORDING TO STATE/ TERRITORY

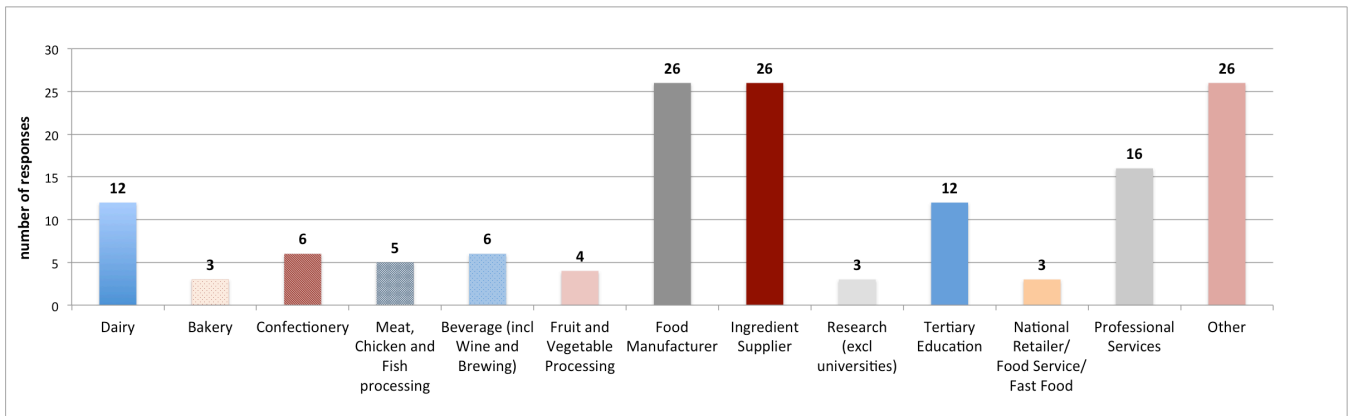


Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 4.

Respondents were from a variety of industry sectors as demonstrated in Figure 1.2. Notably, a significant number of respondents are from the food manufacturer and ingredient supplier industry sectors, with both sectors each accounting for 18 per cent of total respondents. The number of responses for other sectors is quite small. Within the 'other' category there were a variety of different sectors identified, predominately concentrated on various manufacturing sectors.

Figure 1.2

NUMBER OF RESPONSES BY INDUSTRY SECTORS



Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 5.

Chapter 2

Characteristics of FST graduates

This chapter looks at the qualifications, experience, skills and attributes of FST graduates and explores graduates employment history and the areas from which graduates are recruited. The chapter then explores reasons why some respondents do not employ FST graduates.

2.1 Qualifications and experience

Businesses surveyed identified a diverse mix of qualifications held by their staff. The proportion of staff employed by respondents having TAFE/VET, graduate and postgraduate qualifications were similar, as demonstrated in Table 2.1. Overall, respondents employed an average of four scientific and technical staff who are recent graduates and employ an average of 23 scientific and technical staff in total. Respondents suggested that the majority of these employees hold Australian qualifications.

Table 2.1

AVERAGE NUMBER OF SCIENTIFIC AND TECHNICAL STAFF EMPLOYED ACCORDING TO EDUCATION LEVEL

Education level	Average no. of staff employed	Average no. of recent graduates employed
TAFE/VET qualification (Diploma/Advanced Diploma)	21	4
Graduate degree	23	4
Postgraduate degree	18	6

Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 8 & 9.

Interestingly, the highest number of FST graduates employed had between five and ten years of experience, with an average of 7 graduates per business unit/location, as demonstrated in Table 2.2. The experience of FST graduates employed suggests that the demographic of FST graduates in surveyed businesses are of relatively young age, with the vast majority having less than ten years of experience.

Table 2.2

AVERAGE NUMBER OF FST GRADUATES EMPLOYED, ACCORDING TO YEARS OF EXPERIENCE

	Average number
0-2 years	2
2-5 years	3
5-10 years	7
10+ years	4

Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 10.

2.2 Skills and attributes

Different industries and businesses within these industries place different values on the skills of employees. It is important that the skills obtained by FST graduates are those valued by the businesses that ultimately employ them. A high percentage of respondents identified the following skills as important or very important:

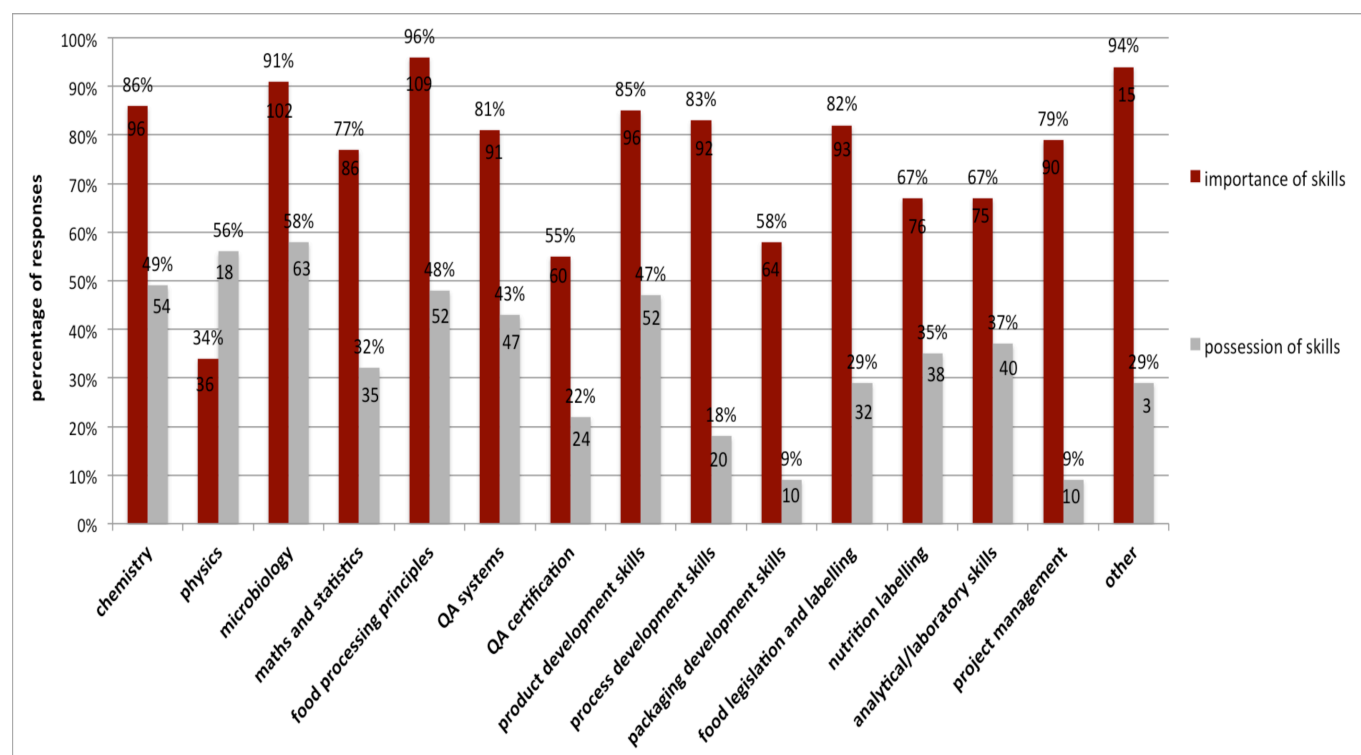
- food-processing principles skills (96%);
- microbiology skills (91%);
- chemistry skills (86%); and
- product development skills (85%).

Other skills identified as important included problem solving skills and communication and presentation skills. A key question in relation to FST graduates is whether these graduates possess the skills, which are valued by businesses as important.

Figure 2.1 compares the percentage of respondents that thought the identified skills were either important or very important to the percentage of respondents that either agreed or strongly agreed that FST graduates usually possess each skill.

Figure 2.1

IMPORTANCE OF SKILLS COMPARED TO POSSESSION OF SKILLS



Source: Allen Consulting Group 2011, FTA skills demand survey analysis, question 28 & 29.

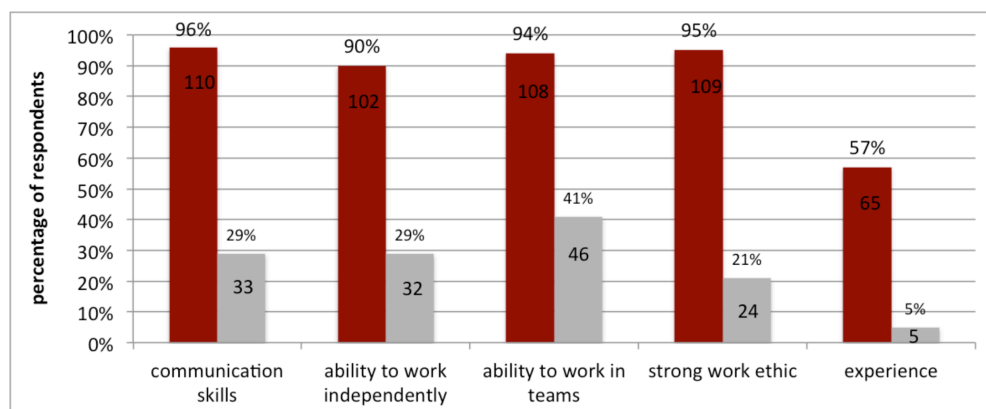
Notably, for the majority of technical skills, a higher percentage of respondents identified them as important, than recognised graduates as usually possessing these skills. Accordingly, there appears to be an overall disparity in the skills possessed by FST graduates and those considered by business as important. Further, there are certain skills that were identified as having greater disparities, such as project management, process development and food legislation and labelling. Businesses requiring these skills will therefore be affected to a greater extent by this skill disparity.

Differences in the employability attributes valued by employees and the actual attributes possessed by FST graduates also provide important insights into the current supply and demand for FST graduates. When asked about the importance of communication skills, ability to work independently, ability to work in teams and having a strong work ethic, the majority of respondents thought these attributes were either important or highly important. However, a limited number of FST graduates were identified as possessing these attributes.

Figure 2.2 compares respondent's answers in relation to the importance of employability attributes compared to whether FST graduates usually possess these attributes. Notably, while most of the attributes are highly valued, many FST graduates do not usually possess them.

Figure 2.2

IMPORTANCE OF ATTRIBUTES COMPARED TO POSSESSION OF ATTRIBUTES



Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 30 & 31.

Additional comments about the skills and attributes of FST graduates include the belief that skills and attributes of current FST graduates are below par at present; a belief that academia and the high cost of fees can create graduate expectations pressures beyond what a current graduate may be prepared to work, with graduates aiming for large multinational firms rather than work at any level to gain the necessary experience; and that unless graduates have had industry exposure most do not possess the required skills.

Targeted consultations also suggested that graduates often have the required knowledge but not the necessary practical skills upon leaving university. Further, it was suggested that graduates need ongoing training and development within businesses, which they may not always be provided with.

While a disparity between both the skills and attributes needed and possessed has been identified by survey participants, survey responses and targeted consultations raised the issue of business expectations. It was noted that many businesses expect graduates to be fully qualified when they graduate and expected to fully perform industry functions straight out of university. There was also a suggestion that employers worry too much about graduates being job ready, however most graduates are flexible and learn new workplace skills quickly.

It was suggested that certain business expectations in relation to graduates being able to fully perform roles straight out of university might be too high. Some businesses suggested that it can take anywhere from three months to two years to fully develop a graduate. Hence, while the disparity in skills and attributes needed and possessed may be caused by a deficiency of skills and attributes, it may be exacerbated by high business expectations. Targeted consultations suggested that this business expectation has developed primarily due to managers expecting the skills of graduates to be similar to the skills they possessed when they left university. However, it was noted that degree courses teaching these skills don't necessarily exist anymore.

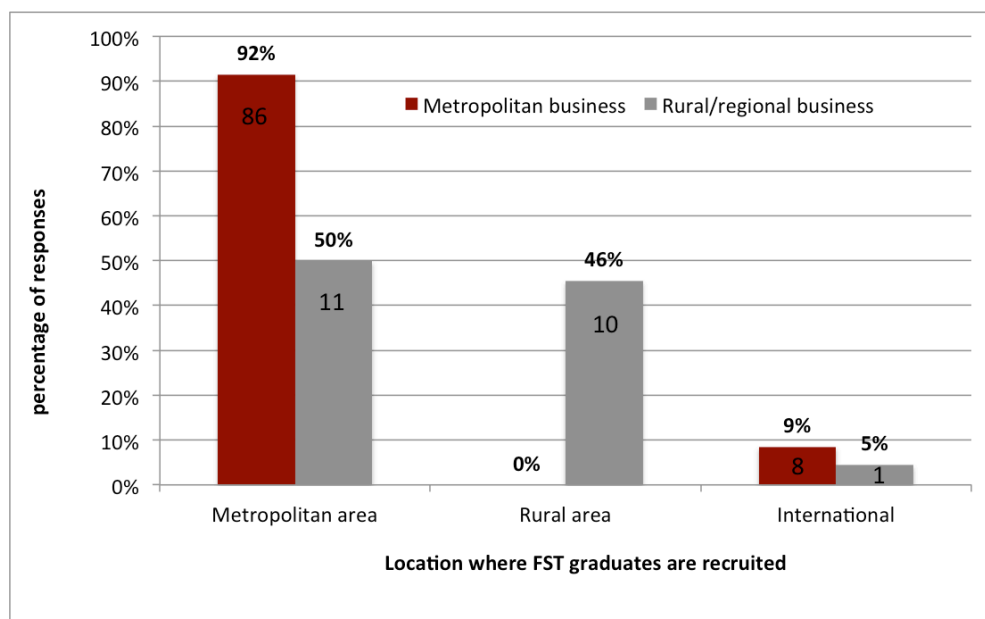
2.3 Previous employment and area of recruitment

Most businesses surveyed suggested that their recruitment is focused on their own local catchment areas. On the whole, FST graduates are mainly recruited from metropolitan areas, with 84 per cent (97 responses) of all respondents identifying that they usually recruit graduates from metropolitan areas. Only 9 per cent (10 responses) of respondents usually recruit graduates from rural/regional areas. A small proportion of respondents (8 per cent, 9 responses) suggested that to find suitable FST graduates they need to recruit internationally. Notably, it was suggested that businesses are increasingly looking internationally to fill vacancies.

While these findings were consistent across firm size, differences were apparent between areas of location. Notably, respondents from metropolitan areas do not usually recruit FST graduates from rural/regional areas; instead predominately recruiting from metropolitan areas (86 responses, 92 per cent), with the remaining graduates recruited internationally. In contrast, 46 per cent (10 responses) of businesses located in rural/regional areas recruit from rural/regional areas, as illustrated in Figure 2.3.

During targeted consultations it was noted that this is not necessarily a deliberate feature of recruitment but unless there were graduates with specific skill sets in rural/regional areas that were demanded, some metropolitan businesses would not explicitly recruit in these areas. Additionally, it was suggested that the location from which FST graduates are usually recruited was driven partly by graduates wanting to stay near their home location.

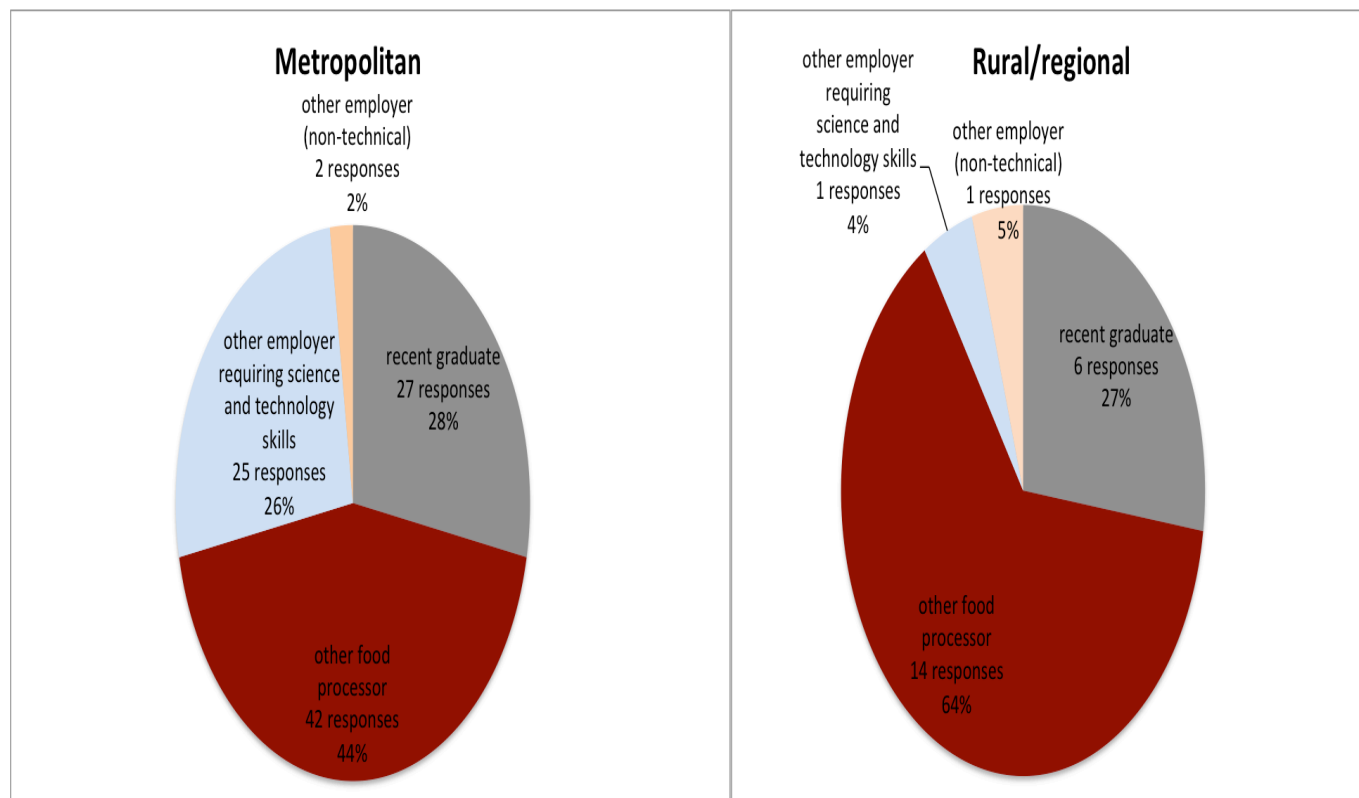
Figure 2.3

LOCATION FROM WHICH FST GRADUATES ARE RECRUITED, METROPOLITAN VS. RURAL/REGIONAL COMPARISON

Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 16.

The analysis of FST graduates previous employment suggests that FST graduates are most likely to have come from other food processors or be recently graduated. FST graduates in businesses located in rural/regional areas predominately come from other food processors. While this was also the main previous place of employment for FST graduates in metropolitan businesses, FST graduates in metropolitan businesses were more likely to have come from other employers requiring more general science and technology skills. This is demonstrated in Figure 2.4.

Figure 2.4

PREVIOUS EMPLOYMENT FST GRADUATES ARE LIKELY TO HAVE COME FROM, METROPOLITAN VS. RURAL/REGIONAL COMPARISON

Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 17.

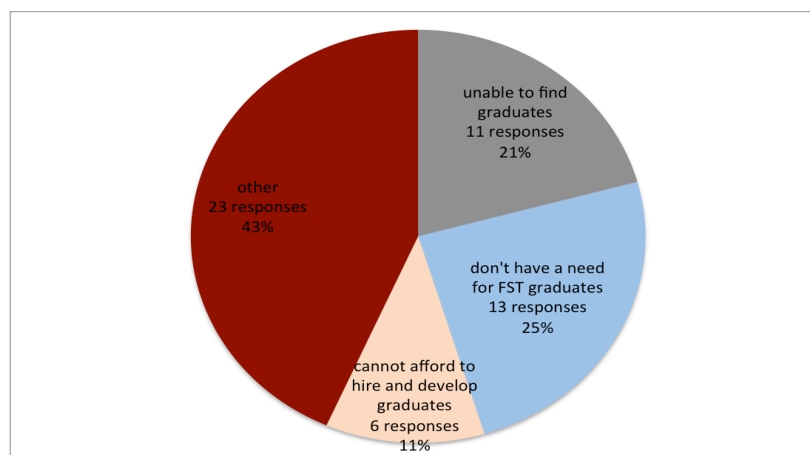
2.4 Reasons for not employing FST graduates

The main reason businesses do not employ FST graduates, is that they do not have a need for these graduates (13 responses, 25 per cent). The next most cited reason was that they were unable to find graduates with the right skills (11 responses, 21 per cent), as seen in Figure 2.5. Other reasons identified included the inability to afford to hire and develop FST graduates; graduates being employed with degrees other than FST degrees, specifically science degrees; or graduates having come through other paths and specialising in FST.

Additionally, several businesses, particularly small/medium and rural/regional businesses, suggested that they are looking to consultants to meet their needs. It was suggested that consultants are employed to resolve a particular issue, and are especially useful where businesses do not have the quantity of work to warrant or attract full time employees with the required skills.

Figure 2.5

REASONS FOR NOT EMPLOYING FST GRADUATES

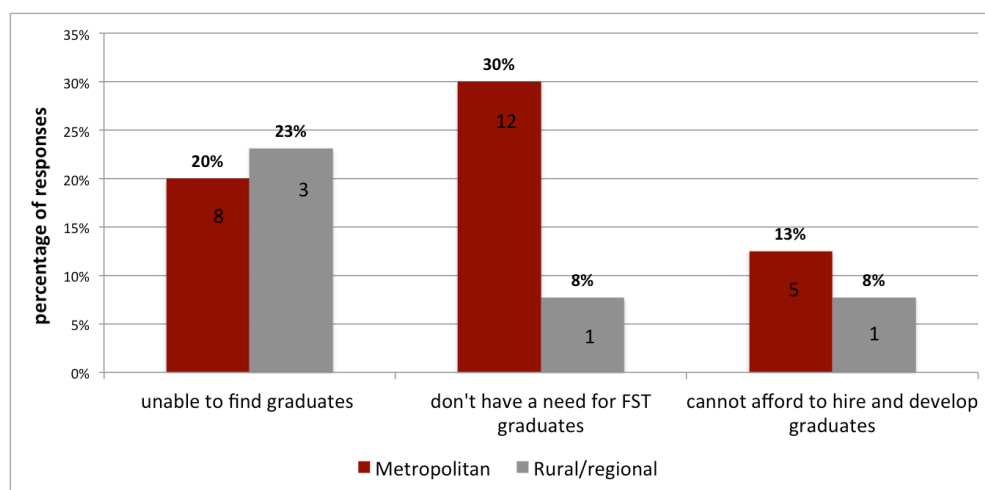


Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 10.

Significantly, when examining the differences between metropolitan and rural/regional areas, 30 per cent (12 responses) of respondents in metropolitan areas suggested they did not have a need for FST graduates, while the main reason that rural/ regional businesses do not employ FST graduates was that they were unable to find graduates with the right skills. Figure 2.6 compares the reasons for not employing FST graduates given by rural/regional and metropolitan respondents.

Figure 2.6

REASON FOR NOT EMPLOYING FST GRADUATES, METROPOLITAN VS. RURAL/REGIONAL COMPARISON

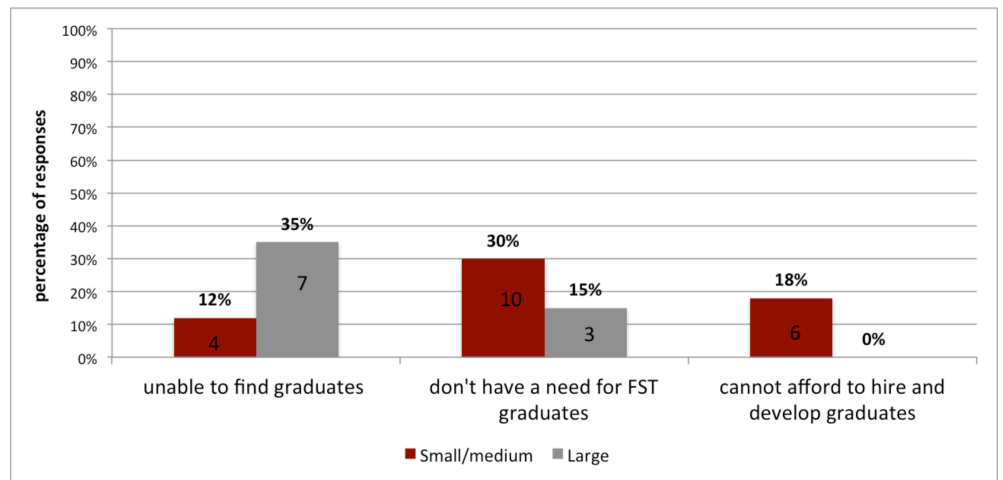


Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 10.

The greatest differences in reasons for not employing FST graduates for small/medium businesses and large businesses related to their ability to afford to hire and develop graduates and the ability to find graduates, as outlined in Figure 2.7. Notably, no large business respondents suggested that they could not afford to hire and develop graduates, while 18 per cent (6 responses) of small/medium businesses identified this as a reason.

Figure 2.7

REASON FOR NOT EMPLOYING FST GRADUATES, SMALL/MEDIUM VS LARGE BUSINESSES COMPARISON



Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 10.

Chapter 3

Identifying and addressing the issues

This chapter outlines the present demand for FST graduates as well as examining the anticipated demand in the next five years. It explores the ability of businesses to attract suitable graduates and discusses issues associated with graduate retention. This chapter also details some of the possible solutions identified by respondents that may be used to attract FST graduates. It outlines the perceived effectiveness of these solutions, and concludes with the current strategies employed to attract graduates, including some case studies on successful strategies currently being undertaken.

3.1 Demand for FST graduates

Current demand

Overall, 77 per cent of respondents (96 responses) do not have unmet demand for graduates, while 23 per cent (or 29 responses) of respondents identified their business unit/location as having unmet demand. Notably, this number was fairly consistent for both rural/regional businesses and metropolitan businesses and for small/medium and large businesses.

Of the respondents with unmet demand for FST graduates there was an average of two positions vacant for FST graduates with 0-2 years experience and also an average of two positions vacant for FST graduates with 2+ years of experience. While for individual business, particularly small businesses, these numbers suggest unmet demand is an issue, the level of this demand does not appear to be significant when compared to the number of staff in employed by the surveyed businesses in total. The responses suggest that the 23 per cent (or 29 responses) of respondents who have unmet demand, do so for an average four employees. When averaged across the industry the proportion of positions vacant to employees is relatively low.

The majority of respondents identified new product development as where they had unmet demand, as shown in Table 3.1.

Table 3.1

UNMET DEMAND FOR SPECIFIC SPECIALTIES

Specialities in unmet demand	Number of responses	Percentage of responses
New product development	18	62 per cent
Quality assurance and control	12	41 per cent
Technical sales	3	10 per cent
Other*	8	28 per cent
*Other specialities cited included research, process development and regulatory specialities.		

Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 13.

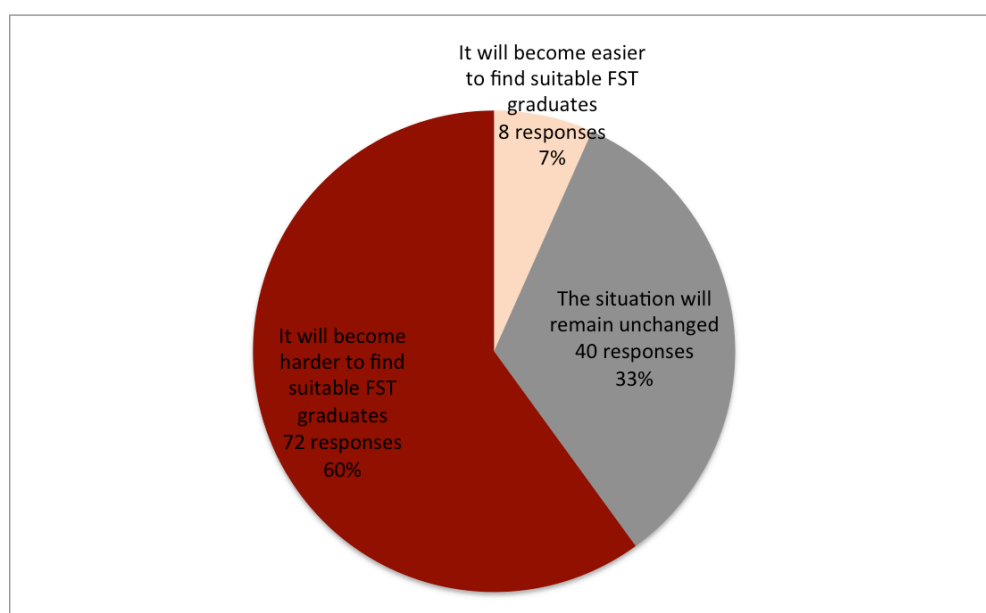
Future demand

When respondents were asked what they believed would happen to demand for FST graduates in the next five years the majority of respondents (72 responses, 60 per cent) thought that it would become harder to find suitable FST graduates in the future, as seen in Figure 3.1. This percentage was consistent across firm size and location.

When asked why respondents thought this would happen a variety of reasons were cited, including an increase in demand as the economy recovers; high competition with other industries (such as the mining industry taking more science and engineering graduates); a reduction in the number of graduates coming through university; and graduates' skill sets being inadequate.

Figure 3.1

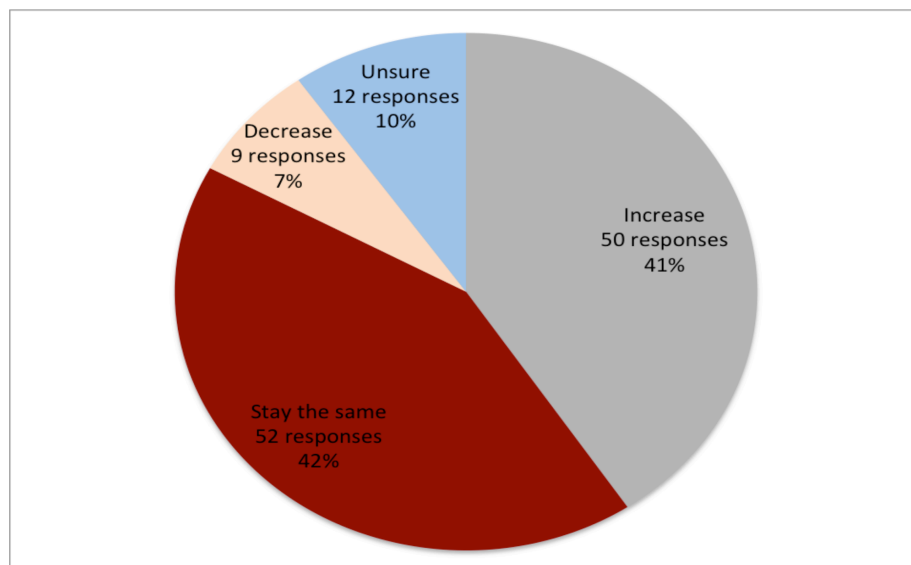
EXPECTATIONS ABOUT HIRING SUITABLE FST GRADUATES IN THE NEXT 5 YEARS



Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 14.

Most businesses expect their demand for graduates would either increase (50 responses, 41 per cent) or stay the same (42 per cent), as shown in Figure 3.2. When asked the reasons for their expectations business units/locations mentioned business growth, an increasing demand for food due to global needs and that as more of the senior food technologists retire the demand for skills and competencies is increasing and not being met by new graduates.

Figure 3.2

EXPECTATIONS ABOUT BUSINESS UNIT/LOCATION FUTURE DEMAND FOR FST GRADUATES (NEXT 5 YEARS)

Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 15.

3.2 Ability to attract graduates

On average respondents hire less than one new FST graduate (with no prior work experience) each year, with almost half of respondents (50 responses, 43 per cent) indicating that they had had problems attracting FST graduates when needed. Significantly, however, a greater percentage of rural/regional businesses had experienced problems attracting FST graduates when needed (14 responses, 64 per cent) than their metropolitan counterparts, of whom 38 per cent (36 responses) had experienced problems. This was often attributed to a reluctance to move to rural/regional areas, as well as a reluctance to remain there over the longer term.

While it was recognised that supply side factors, particularly the number of FST graduates available to hire was impacting on businesses, other factors such as skills deficiencies and an unwillingness to relocate are also causing issues for businesses trying to hire FST graduates.

The most common reason cited by those participants who had a problem attracting FST graduates was a skill mismatch—where university courses do not teach the types of skills needed in graduates (15 responses, 28 per cent). During targeted consultations, some interviewees suggested that they had had success with employing international graduates. The reason this had been successful is that some overseas degrees require practical experience such as internships to be part of degrees. Graduates identified had come from countries such as Germany, New Zealand and France.

An unwillingness to relocate by potential employees was the second most common reason given (9 responses, 17 per cent). Targeted consultations confirmed that relocation was a genuine issue within the industry, which is being exacerbated by businesses moving from metropolitan areas.

The remaining responses were spread across a variety of reasons, as outlined in Table 3.2.

Table 3.2

REASON FOR DIFFICULTY IN ATTRACTING FST GRADUATES

Reason	Number of responses	Percentage
Skills mismatch	15	28%
Unwillingness to relocate by potential employees	9	17%
Unable to provide requisite training and development in-house	1	2%
Not enough graduates to fill positions	6	11%
Other degrees have skills more closely aligned to needs	1	2%
Can't pay enough compared to other food processors	4	8%
Can't pay enough compared to other industries	3	6%
Other*	14	26%
Total	53	100%

*Other reasons identified include a lack of applicants with relevant qualifications and difficulties associated with being located in a regional area.

Source: Allen Consulting Group 2011, FTAA skills demand survey analysis.

Differences were observed between the responses of small/medium and large businesses. Small/medium businesses identified the main reason in having problems recruiting graduates as being a skills mismatch (9 responses, 36 per cent), while large businesses main reason was an unwillingness to relocate by potential employees (7 responses, 25 per cent).

There were also differences observed in responses from businesses located in different areas. While 42 per cent (15 responses) of businesses located in metropolitan areas identified a skills mismatch as being the reason for having problems attracting FST graduates, this was not an issue for rural/regional areas. Further, 8 per cent (3 responses) of metropolitan respondents suggested they are not able to pay enough compared to other industries, which was not identified as an issue for rural/regional businesses. The main problem in recruiting FST graduates for rural/regional businesses was an unwillingness to relocate by potential employees (6 responses, 35 per cent).

There were mixed views about the value of the technical skill sets possessed by FST graduates. Some respondents suggested that they were moving from a focus on FST graduates to graduates with more specialised degrees. Other degrees identified as containing skills more closely aligned to respondent's business needs included science, chemistry, engineering and marketing. However, during targeted consultations some businesses suggested that other degrees were not adequate, and they would continue to rely on FST graduates.

Of note, during targeted consultations it was suggested that recent FST graduates possess more generic skills with an increased level of nutritional skills. However, this was not seen as a positive as it was suggested that a more generic degree does not equip graduates with the level of FST skills required, with an inadequate depth of skill in specific areas.

3.3 Graduate retention

While 76 per cent (80 responses) do not have a problem retaining graduates, some 24 per cent (25 responses) of respondents identified their business unit/location as having problems retaining graduates once they join their business. Notably, this was similar across area of location and business size. It was noted that younger generations do not have as much business loyalty and that they expected to move around to gain promotions and consequently, were not staying in single jobs for as long as previous staff may have.

Respondents were asked to identify why they believed their business unit/location had trouble retaining graduates. While only 29 respondents provided reasons for this, the most common reason cited was that respondents were unable to provide appropriate career progression (35 per cent, 10 responses).

Targeted consultations supported this view, with various businesses interviewed suggesting that graduates are ambitious and are thinking about their potential career path from an early stage. Additionally, it was suggested that the current lack of formal continuing professional development may be contributing to concerns about career progression. However, it was also noted that for many graduates provision of development opportunities to meet career aspirations could mitigate lack of career projection since employees are looking at developing experience and skills as well as being promoted.

Better offers at other food processors were also cited as the reason for having trouble retaining graduates (7 responses, 24 per cent). Other reasons cited included:

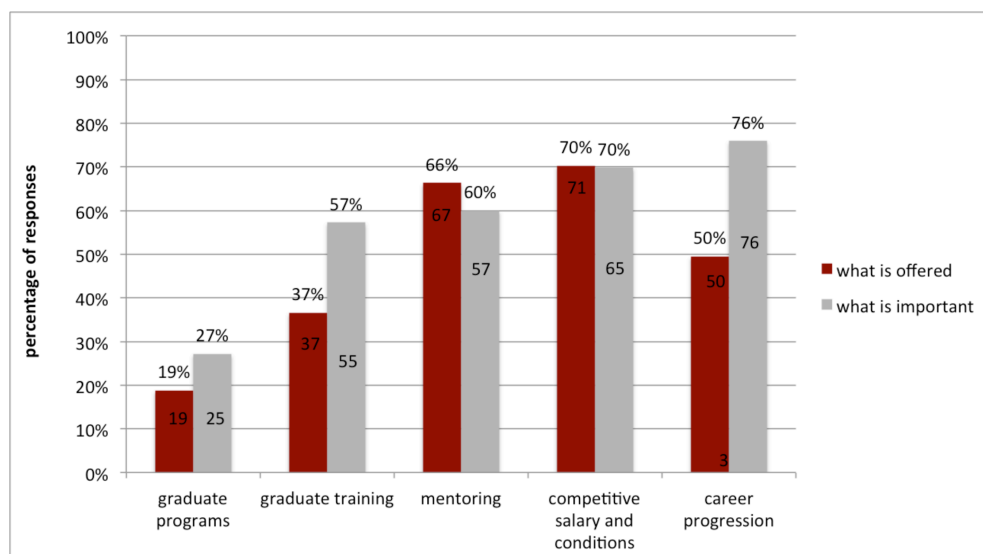
- unable to provide requisite training in-house;
- better offer in another industry;
- better offer overseas; and
- issues associated with being in a rural location.

In considering the issue of graduate retention, an analysis of the importance of factors in graduate retention is crucial. Notably, the most common factors identified by respondents as being the most important were career progression and competitive salary and conditions. Graduate programs were nominated as important by only 17 per cent (16 responses) of respondents. Other factors identified included the workplace environment and culture, the location and the firm's standing in the community.

Overall 70 per cent (71 responses) of respondents stated that their business unit/location offers competitive salary and conditions, and 66 per cent (67 responses) offer mentoring. A comparison between the importance of factors in graduate retention and the current measures offered to retain graduates is demonstrated in Figure 3.3.

Figure 3.3 shows that there is generally a correlation between the factors in graduate retention that businesses offer and the factors they consider important. However, there is a noticeable disparity between what is considered important and what is offered in relation to career progression and graduate training. This could be due to the fact that not all businesses are in a position to invest in graduate training and career progression. It is noted this appears to be a particular concern for small/medium businesses who do not offer these factors as often as their larger counterparts.

Figure 3.3

COMPARISON OF THE IMPORTANCE OF FACTORS IN GRADUATE RETENTION AND THE CURRENT MEASURES OFFERED

Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 35 & 36.

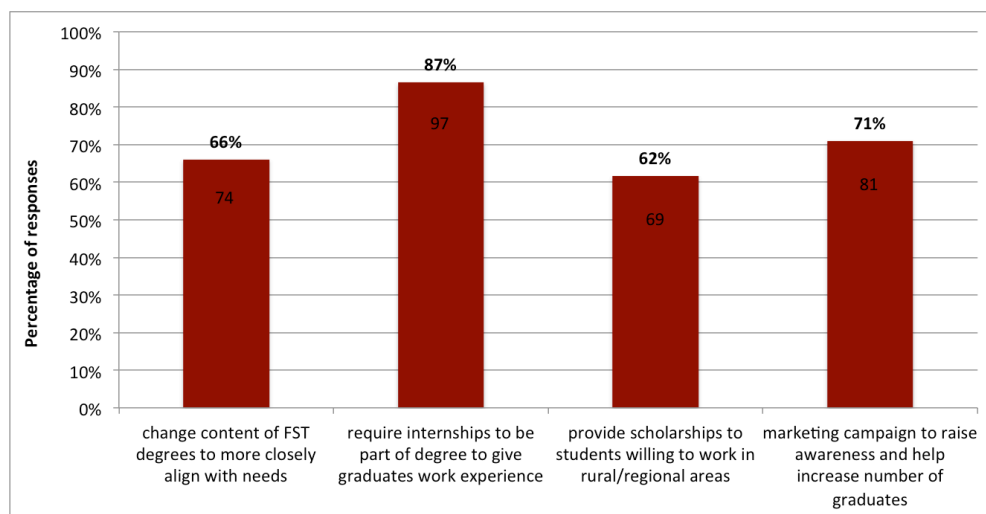
3.4 Effectiveness of strategies

Survey participants were asked to outline the effectiveness of the options used to make it easier to attract suitable FST graduates. Notably, 87 per cent (97 responses) of respondents believed that requiring internships to be part of a degree, giving graduates a level of work experience would be either effective or very effective. Respondents believe that internships introduce people to a workplace, allow interns to develop workplace skills and also allow employers to get to know potential recruits.

Targeted consultations suggested that from a university perspective, requiring internships to be part of degrees is difficult. It was suggested that internships are hard to manage, requiring large amounts of time and expense, and they are not usually considered feasible. The difference of view between universities and industry respondents indicate that this is an issue requiring further discussion between the parties.

All of the strategies identified in the survey were thought to be effective or very effective, as outlined in Figure 3.4. Other mechanisms suggested included encouragement of collaborative projects with Universities and industry; work experience; and improved industry exposure and promotion of the benefits of FST careers. It was noted that improving the marketing of the benefits of working in the industry might help to address a current lack of interest in FST degrees by secondary school students.

Figure 3.4

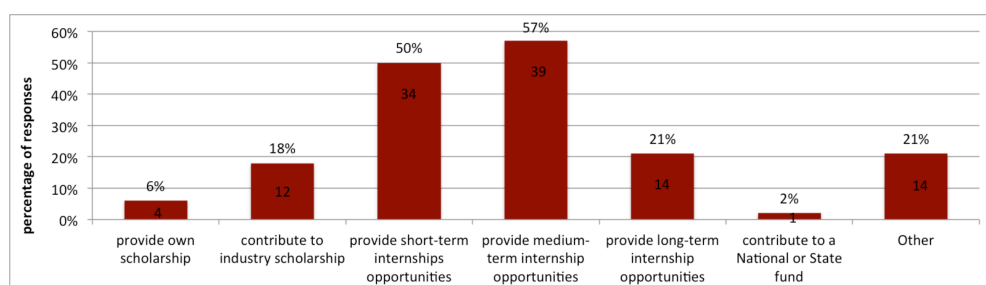
OPTIONS RATED AS EFFECTIVE OR VERY EFFECTIVE IN ATTRACTING FST GRADUATES

Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 22.

The majority of respondents (59 responses, 53 per cent) stated that they would be willing to contribute financially or in kind to the above solutions. Importantly, while there was no significant difference as to whether respondents in small/medium or large business would be willing to contribute, there was a notable difference between responses for rural/regional and metropolitan businesses. The majority of businesses units/locations (13 responses, 68 per cent) located in rural areas stated that they would be willing to contribute either financially or in kind, while only 50 per cent (46 responses) of their metropolitan counterparts had the same view. This could be attributed to the fact that rural/regional businesses have more problems attracting and retaining graduates than their metropolitan counterparts.

When asked how they would contribute most respondents said they would provide short, medium or long-term internships. These and other means of contributing are outlined in Figure 3.5. Other responses included help with marketing, providing materials for practical work and providing mentoring and development.

Figure 3.5

HOW RESPONDENTS AGREED TO CONTRIBUTE TOWARDS ATTRACTING FST GRADUATES

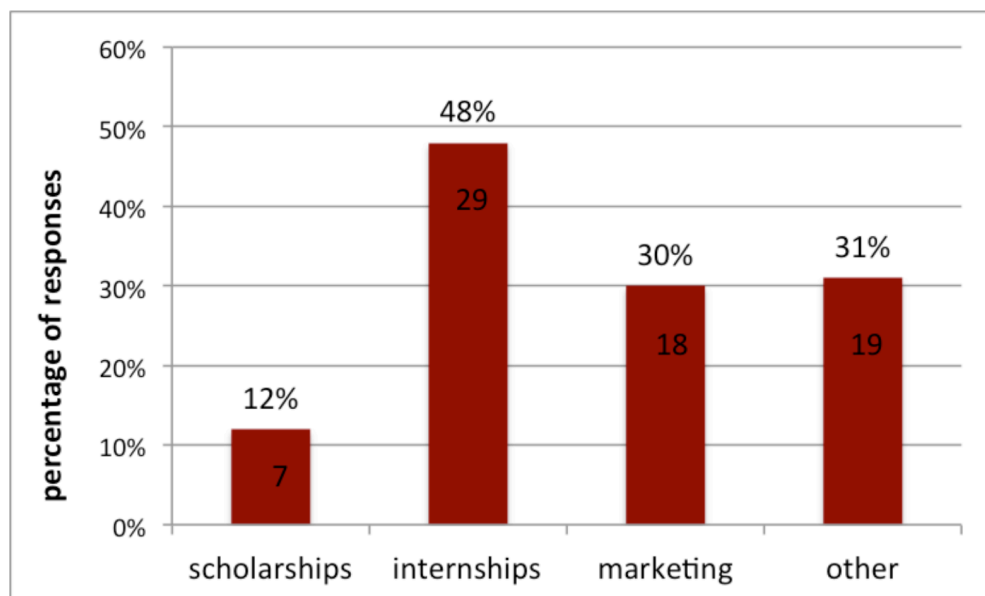
Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 24.

3.5 Current strategies and their success

When respondents were asked which strategies their business unit/location used to attract graduates, internships were cited as the main strategy (29 responses, 48 per cent). Figure 3.6 outlines the strategies used by respondents.

Figure 3.6

STRATEGIES RESPONDENTS ARE CURRENTLY USING TO ATTRACT FST GRADUATES



Source: Allen Consulting Group 2011, FTAA skills demand survey analysis, question 25.

While many respondents noted internships as being particularly successful, targeted consultations revealed that closer interactions with universities, such as work experience programs, guest lecturing and attendance at careers fairs have also been very successful.

Strategies that were identified as being particularly successful in attracting and retaining graduates included forming relationships with universities, sharing staff with other businesses and using consultants to meet specific needs. These strategies had been utilised by businesses to successfully overcome industry issues in attracting and retaining graduates. The success of these strategies suggests that they could provide a model for other industry participants.

Box 3.1 outlines the experience of Birch and Waite Foods Pty Ltd, in successfully recruiting graduates. Birch and Waite Foods Pty Ltd have formed a strong connection with the University of New South Wales, hosting student tours to their factory as well as having an established work experience program. Birch and Waite Foods Pty Ltd believe this strategy to be highly effective in attracting and retaining graduates.

Box 3.1

CASE STUDY: BIRCH & WAITE FOODS PTY LTD

Birch & Waite is an Australian food manufacturer based in the suburb of Marrickville, NSW. All of its products are made on site and the business has a workforce of 100 staff. The business has a family-based working culture, with five explicit values: integrity, superior quality, exceptional service, high performance and continuous improvement. Monthly staff meetings, staff engagement and empowerment and an open attitude to career progression foster this business culture.

Birch & Waite have a close connection with the University of NSW (UNSW), established by a personal connection to the University. This connection has led to a bi-annual half-day tour of the factory for UNSW students, which has taken place for the past 9-10 years. The tour builds industry exposure and allows undergraduates to experience firsthand the operation of a food manufacturing business. This tour is supported by university guest lectures, a close relationship with lecturers and a highly developed flexible work experience programme for UNSW foodtech students, whereby 2-3 graduates work for Birch & Waite each year.

Birch & Waite believe that it is a combination of their business culture and their close association with the University of NSW that ensures that they attract and retain FST graduates. The relationship with UNSW provides exposure for Birch & Waite, and allows graduates to experience their culture while still at university. This is further enhanced by the work experience programme, which allows undergraduates to gain experience in the industry while enabling Birch & Waite to observe potential employees in their business. Most FST graduates are recruited through this process, which Birch & Waite believe has been extremely successful and has ensured that attracting graduates has not been an issue for them.

Source: Birch & Waite Foods Pty Ltd

Careers fairs were noted as being successful as they allow for personal interaction, allowing businesses to identify if candidates would fit into their culture, while also enabling candidates to obtain a sense of the business, including the culture and type of work. Further, Kooka Brotha's noted that they had had success in using a staff sharing arrangement as a solution to meet their needs, as outlined in Box 3.2. This strategy has enabled them to employ and retain workers in partnership with other businesses, which they may otherwise not have had the quantity or type of work available to attract and retain an employee for.

Box 3.2

CASE STUDY: KOOKA BROTHA'S PTY LTD

Kooka Brotha's Pty Ltd. is a Food manufacturer located in Albury-Wodonga. It is a medium sized business that was established in 1987 and produces cakes and desserts for the Food Service Industry.

Being a regional medium size business Kooka Brotha's suggests that it can have issues hiring staff associated with its size and location. At times the business can have a need for additional staff, although they do not have enough work to warrant a full time position. In order to address this need, Kooka Brotha's has established staff sharing arrangements for some of its employees with nearby businesses. Industry connections are used to establish these arrangements with other businesses that have similar needs, and take advantage of local synergies when skilled resources are scarce.

The staff sharing arrangement allows Kooka Brotha's to hire skilled employees they may otherwise be unable to afford to hire. Kooka Brotha's noted that as a smaller business the staff sharing arrangement is particularly important in allowing its employees to undertake a diverse range of work. Additionally, the strategy is used to ensure that employees have enough meaningful and engaging work to ensure job satisfaction. Hence the arrangement allows Kooka Brotha's to obtain the skills needed, while being financially viable.

Source: Kooka Brotha's Pty Ltd

Another practice that was noted as being used successfully to assist with the issues associated with attracting and recruiting graduates is the engagement of consultants. Consultants are being used in the industry to undertake specific work where employers have had trouble hiring candidates with the desired skills. This has also been successful where there may not be the required need for a full time employee. Additionally, it was also found that consultants are also being used to train staff in a mentoring capacity and help them with career advancement.

References

AFGC Technical skill survey 2008, *AFGC Technical skill survey*, question 10 and question 12 undertaken by AIFST Inc

AgriFood Skills Australia 2010, *A perfect storm of shortages*, 2010 Environment Scan of the agrifood industries, p. 3.

Australian Government 2003, *Mapping Australian Science & Innovation*, Main Report, p. 19.

Department of Education Science and Training 2006a, *Industry Skills Report*, Agri-Food Industries, Australian Government.

Department of Education Science and Training 2006b, *Audit of science, engineering and technology skills*, Summary Report, Australian Government.

Food & Agribusiness Intelligence And Strategy Specialists 2009, *A Situation Analysis for Food Science and Technology Education and Skills Development For AIFST*, Food & Agribusiness Intelligence And Strategy Specialists

Harris Park Group 2010, *Workforce Development*, Dairy Manufacturing (post farm gate) Final report, p. 2.

Jideani, VA and Jideani, IA 2010, *A model for education and promoting food science and technology among high school students and the public*, African Journal of Biotechnology Vol. 9(31), pp. 4826-4835.

Meat and Livestock Australia 2008, *Attracting and retaining staff in Australia's beef, sheep and pastoral wool industries*, report prepared by the Centre for International Economics and The Ryder Self Group.