



The Agriculture Lure

Understanding the awareness of the red meat sector at high school level

Olivia Ross

Kellogg Rural Leadership Programme

Course 36, 2017

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1.0 Acknowledgements

I wish to thank the Kellogg Programme Investing Partners for the support provided to putting on the programme:

STRATEGIC PARTNERS



PROGRAMME PARTNERS



I wish to acknowledge and thank the following people and organisations for their contribution or support for this project

Without the support and help from a number of people, the completion of this report would not have been possible.

- First and foremost, my remarkable partner William Weatherburn, who has provided support and encouragement throughout the past six months. His continual drive and help around home has enabled me to put 100% into this report. Thank you for putting up with me during the low times and being there to celebrate the good times.
- To Elisabeth Starnes for being the best mentor and friend I could ask for. Thank you for your assistance ensuring I had my interview questions right and for being so supportive throughout the development of my research. Your energy, kind words and overall encouragement have been much appreciated.

- To my employer, Beef + Lamb New Zealand, thank you for allowing me to take study leave to attend the Kellogg course and for being a strategic partner of the programme. To my manager and colleagues, thank you for your support and assistance with network connections and resources during my research.
- To ANZ Bank and New Zealand Young Farmers for their financial support as part of the 2016 ANZ Future Leader Scholarship. Your support has enabled me to further my personal development and leadership skills. I am privileged to be one of your scholars and hope the results of this research are an insight for your businesses, as well.
- To Scott Champion, Anne Hindson and Lisa Rogers, for all the time and effort that goes into running such a successful course. Scott – it has been great to work with you again. Anne – your passion for the programme is contagious. Lisa – your organisational skills couldn't be done without.
- Patrick Aldwell – a special thanks for taking calls at any hour of the night or day. Your knowledge, idea sharing and enthusiasm have been much appreciated.
- To all the industry leaders, teachers and students who gave up valuable time from their busy days to complete interviews. Without your commitment, this report wouldn't have come together like it has. Many thanks. I hope that you have also been able to take something from the process.
- To past Kellogg leaders Jason Rolfe, Barbara Krueger, David O'Sullivan and Aaron Wilson for allowing me to ask questions regarding your research and giving assistance on mine.
- To Nick Beeby from Beef + Lamb New Zealand for taking time to attend the networking evening during phase 2 of the course. Your attendance was appreciated, along with your insight into the Red Meat story.
- To my friends and family for being understanding of my time and unavailability over the past six months. Thanks to those of you that have provided mental support, along with those who have shared my Facebook posts and requests to find interview candidates. I look forward to catching up over summer.
- Last, but not least, to the other 36 course participants. What a great bunch of inspiring future leaders. The guidance, encouragement, coaching, laughs, tweets and phone calls have all contributed to making this one of the most enjoyable courses. I now have another 25 network connections who I won't forget, and who will be influential as I further my career. Thanks for your friendships and all the best for your leadership journeys.

“Teamwork makes the dream work, but a vision becomes a nightmare when the leader has a big dream and a bad team.” John C. Maxwell

2.0 Foreword:

Born as the eldest daughter to Southland farmers, I grew up living and breathing all aspects of the red meat sector. From raising pet lambs to seeing processing chains process the property's lambs each year, my exposure to the industry was unlimited.

I attended Takitimu Primary School in Nightcaps before heading to boarding school at Southland Girls' High in Invercargill. This is when things changed for me and my association and understanding of the urban population began.

While in Year Eleven my family moved to the Taieri Plains near Dunedin and I transferred to Otago Girls' High School. With no boarding at the school, I was one of the only students who came from a rural background and lived on a working farm.

While at school, I was known for my humorous speeches. In my first year at the school, I made the speech finals with my speech "farming through the seasons". However, this time was different. They laughed the whole way through and even the teachers were throwing me funny glances. Why? Because they simply didn't understand the farming practices I spoke about. I would take classmates home for weekends on the farm and them not understanding why we drenched the sheep or that the meat that they got in the supermarket came from a farm originally.

When I first went to school, I wanted to be a vet, teachers told me I was not academic enough (to be fair, I agreed with them), so I looked at going to Lincoln University to follow my passion in agriculture and animals. They told me I could do better than to go farming and this is when the support stopped. They didn't realise there was more to our sector than hands-on farming. Consequently, it's been my passion to try and narrow the urban-rural divide and see school students better understand our industry.

Since graduating from university in 2009, I have farmed within the sheep and beef sector, while working in the fertiliser industry for five years then in my current position with Beef + Lamb New Zealand. Over this time, I have had a heavy involvement with New Zealand Young Farmers and the Teen Ag and Agri-kids programmes.

My partner William Weatherburn and I currently live on a 700ha sheep and beef operation in Northern Southland, where William is assistant manager. I am employed by Beef + Lamb New Zealand as the Southern South Island Extension Manager based out of Gore.

3.0 Executive summary

Each of the sectors within the primary industry has an ageing population of employees. These people are going to need replaced by 2025 (as Julian Raine spoke about during the panel discussion, phase one of course 36 the Kellogg Rural Leadership Programme). The red meat sector is New Zealand's largest manufacturing employer and provides jobs for 25,000 people.

This research looks into whether the awareness of careers within the red meat sector at high school is having an impact on the overall employment rate within the sector. Thematic analysis is used to identify different perspectives and answers – to discover the understanding across the education sector. An interview data set of 70 people was used to understand the awareness of the red meat sector at high school level.

Promotion of careers across the sector is constrained due to low overall career awareness and lack of exposure at both a teacher and student level. Awareness of the red meat sector is primarily focused at farm level and not on the big picture, as reflected in the stigma of agriculture and practical occupations. More emphasis on telling our story and pathways through the sector are needed to help clarify awareness and understanding.

As generational change continues, communication methods and resources supplied need to be considered, while continuing to be positive and confident as an industry.

The main findings from this research are:

- More emphasis on telling our story and pathways through the sector are needed to help clarify awareness and understanding.
- We need to continue embracing changes for positive rewards and take advantage of the skill set of the next generation of workforce.
- The stigma of agriculture and practical occupations remains. They are not seen as prestigious.

There is a need to rebrand the term 'red meat sector', change the mentality of our industry, and tell our story more effectively. Educating educators and creating clearer career pathways through apprentice programmes is needed for success into the future. Collaboration for more exposure opportunities and simplifying systems and resources are key recommendations.

4.0 Introduction

As of 30 June 2016, New Zealand's total population sat at an estimated 4,692,700. (*B+LNZ Farm Facts 2017*). Of the total population, as at 2014, only 14% lived in rural areas, farming a total of 13.9 million hectares. Of this land area, 44% is believed to be sheep and beef properties. (*B+LNZ Farm Facts 2017*).

The red meat sector is New Zealand's second largest exporter of goods and, in 2016, \$6.7 billion in export revenue was produced (*Meat Industry Association (MIA), 2017*). While exporting more than 1 million tonnes of red meat products across the world to over 120 countries, the sector also makes a large contribution to employment in New Zealand. It is the country's largest manufacturing employer and provides jobs for 25,000 people (*MIA, 2017*). So where do these 25,000 people come from?

Through my job, I liaise with a wide range of farmers and business professionals, both on and off farm. I have observed that there is a real shortage of younger people coming into the sector. This was confirmed by the panel discussion during phase one of the Kellogg Rural Leadership Programme. The questions are 'Why is this the case?' and 'Are these effects starting at high school level?'

Each of the sectors within the primary industry has an ageing population of employees, who will need replacing by 2025 (as Julian Raine spoke about during the panel discussion).

I attended an urban all-girls school that did not encourage a career within the red meat sector or primary industry and therefore little support or encouragement was available.

Gaining a basic understanding of how our education providers think will hopefully identify what is being done well and what needs to be improved, allowing people to understand the future of the industry and its succession.

The aim of this research is to identify why there is a shortage of young people entering the primary sector, by determining the high school education providers' levels of understanding.

The goals of my research are:

- To complete an extensive research project and produce a finished report. This will be the largest report and research activity I have ever completed.
- Study a topic I am passionate about but have no real knowledge of.
- Provide insights for my employers Beef + Lamb New Zealand, New Zealand Young Farmers and the wider red meat sector, with the objective of seeing more of the next generation actively taking up careers within the sector.

The objectives of this research, through one-on-one discussions and research, are to:

- Gain a better understanding of high school teachers' and students' awareness of the red meat sector.
- Provide facts to identify incorrect or misunderstood stigmas in relations to the sector. These include: agriculture as a drop-out subject and an easy way out of other classes; and the sector and jobs on farm are for non-academic students with no direction.
- Identify what needs more emphasis or to change in order for the next generation of students to enter careers within the sector.
- Recommend solutions to current issues in regard to career uptake within the sector.
- Highlight what is being done well and what should continue.

5.0. Literature Review

This chapter looks at past research papers and studies of similar nature from across New Zealand and internationally. The purpose is to provide an overview of the ideas, theories and significant literature currently published on this topic.

5.1: Past Kellogg projects

5.1.1: Jason Rolfe (2005) – Stoking secondary school students interest in primary industry studies

Jason completed the Kellogg Rural Leadership Programme in 2005. As part of his research, he looked at what career advice was available to students, along with their awareness of the primary industry. This included identifying the barriers preventing students entering a career with the primary industry.

The key issues Jason looked at were understanding the knowledge of career advisors, career advice being provided and thoughts on how to get more academics involved in the primary industry. The intention of the research was to improve awareness of career opportunities within the primary industry and provide solutions to help generate general interest across the sector.

Jason used purposive judgemental sampling, which is ideal for a small sample size and working within time constraints. He interviewed 18 career advisors from high schools in Taranaki and Auckland. Due to time and financial constraints, the sample size was smaller than Jason would have liked. These limitations also affected the geographic area and the number of face-to-face interviews he was able to conduct. He noted that, even though phone interviews were quicker and lower cost, they were less personal and harder to interpret compared to face-to-face interactions. These limitations were taken on board for the purposes of my research methodology.

Key recommendations from Jason's findings were:

- Rebranding due to stigmas of 'Agriculture' and 'Horticulture' as subjects within high schools.
- More exposure to agriculture classes at earlier levels of school, as taster course in year nine and 10.
- Use of social media to promote careers, especially for the surveyed area of Auckland
- The role of parental influence on a child's career choices and the need for more parent engagement to increase their awareness and understanding of the industry.
- Adding primary industry courses into more urban-based campuses and also targeting international students on these campuses.

In discussions with Jason, following his recent Nuffield Scholarship study tour, he believes the stigma around agriculture being seen as a 'poor person's career' is worldwide.

Jason's questions were focused at career advisors and he now wishes he had talked to more students for their perspective. Therefore, I planned to add students' perceptions into my data collection process.

He believed the challenge was interpreting the data. Audio recordings of interviews were therefore included as part of my research to assist with the analysis process.

Jason also believed that determining the makeup of agricultural classes would have given more insight into the perceptions of the subject at school. He also talked about discovering how Switzerland and Finland are encouraging students into careers within the primary industry.

Unfortunately, due to time constraints and the inability to find reliable sources of international studies on the matter, I was unable to include these two points within my research.

Overall, Jason's report highlighted that promotion of careers with the primary industry could be done better. Knowledge of specific jobs was average and the main stigma was that agriculture was hard work and for less academic people.

5.1.2: Barbara Kuriger (2001) – Perceptions of career in the dairy industry

Barbara completed the Kellogg Rural Leadership Programme in 2001. As part of her research, she looked at the information students received in regards to entering a career in the dairy sector. She also looked at barriers facing students and getting a clearer picture of what students desired in a career.

One of the key issues Barbara addressed was "How to get information about the dairy sector into student's hands".

The strength of her research study was the large survey sample – 845 survey samples from nine Taranaki schools. A relatively even number of each gender were involved (419 males and 423 females). A good range of demographics were also involved (year groups, age and nationality).

The limitations of the research were that it was conducted 17 years ago now, and that it only focused on the dairy sector. However, in discussions with Barbara, she believed that a stumbling block to all sectors of the primary industry was stigma. My research aims to provide some evidence around some of the stigmas. Also, are the opportunities within the industry really known?

The biggest issue Barbara now has to deal with, as a National Party Member of Parliament, is tertiary education versus skilled workforce. She called it university education versus trades and apprentice training. We need both, but her view is the balance in how they are viewed in school is skewed toward university.

Therefore, I added question 12 into my interviews:

What are your views on careers within the trades industries (i.e. builders, plumbers, etc.)?

- How are these portrayed to students?
- Can you explain how a career within the trades' sectors is seen compared to a university qualification?

From Barbara's original research, the following key recommendations were made:

- Identify more effective ways to get information regarding career to students.
- Break the barriers and promote the industry more positively.
- Identify and action incentives for careers within the dairy industry and living in rural communities.
- Target students who haven't made career choices. In Barbara's findings this was 30% of students surveyed.

Overall, Barbara's data collection and findings were impressive and – since conducted 17 years ago – my research can provide more recent insights. I will also provide a different perspective through the use of empathy and one-on-one interviews, including both teachers and students.

5.1.3: David O'Sullivan (Course 35, 2017) – Primary attraction: Understanding student awareness of primary sector career opportunities

David completed the Kellogg Rural Leadership Programme as part of the first intake for 2017. As part of his research he looked at the awareness of career opportunities within the overall primary industry, including how to attract students into the sector.

He surveyed 20 students, aged 15- 20 years old, who had a combination of urban and rural upbringings. A written survey was sent out via social media and through communication channels he already had access to. A case study on three students (on a one-to-one basis) was also completed, along with interviews with two teachers.

The key issues David addressed as part of his survey work were:

- How aware are our school leavers of the diverse range of career opportunities with New Zealand's primary sector?
- What information is available at present and what is wanted?
- Encouragement from teachers – Why wasn't it happening?
- Views from students about working in the primary sector.

The strengths of David's research were the use of case studies to provide more in-depth findings, and including three different perspectives and data sources.

The fact all students who completed surveys had heard of the primary sector could be seen as a strength and a limitation. As surveys were put out via social media channels (like Facebook and David's wife's "NZ Farming Mums" page), those who saw the post were likely already involved in the sector and associated with others also involved.

By using a written survey method, interpretation of questions could differ compared to interview style data collection. This could have an effect on the overall answers. Therefore, I chose to gather my data collection via interviews.

The key recommendations from David's work were:

- The need for tailored education and creating a national curriculum related to New Zealand's key economic drivers.
- Creating awareness via a virtual platform utilising technology advancements. Allowing students to experience as close to real life exposure e.g. "Day in the life of...".
- Development of a website as a platform for those looking for opportunities. To allow companies and businesses within the sector to see what type of skills are available at the time they are looking to recruit.

Overall, David's report highlights that students are keen to get access to more information regarding career opportunities within the primary industry. In order for this information to be successful and have an impact, there is a need to educate parents, teachers and career advisors. I will try to identify what information is received by lower South Island schools and limit my focus to the red meat sector for more specific results.

The three past Kellogg reports looked at different aspects of career awareness across the primary industry. They all used written surveys and each focused on one group of respondents. I will therefore contrast my study by showing perspectives from both students and teachers. The past reports highlighted that information methods being used to relay messages to students were not

effective and that students were heavily influenced by media, parents and peers. The positivity and confidence demonstrated of the industry needs to improve.

5.2: National review: *Perspectives on research into human capability in New Zealand's primary sector (2016)*

In 2016, Scarlatti a boutique management consultancy firm based out of Auckland, completed a study working with industry bodies and training institutes. It looked into the human capability of the workforce across the primary industry.

The report revealed implications of turnover in the current workforce, along with the replacement rate of employees. It also looked into the recruitment systems and options available and being used, along with the value of training and promotion of on-the-job industry training.

Several key issues were addressed within the report, including:

- What characteristics are seen in patterns of employment?
- Qualifications the current workforce have.
- How are training volumes changing?
- How are we tracking against skill targets?
- How are we doing at recruiting from schools?
- What are the major gaps in our understanding?

The strengths of this study were that it looked at a wide range of variables and involved thoughts from several industry bodies, government agencies and tertiary providers. It considered in depth all three major sectors of the primary industry (dairy, sheep and beef farming and production forestry).

Since the report is considered to only be the perspective from those writing the report this could be seen as a limitation.

The overall study highlighted key recommendations in order to meet 2025 primary industry targets, which are to increase the volume of sector-specific training and the reliability and success of the recruitment process. A need for more research to be completed, in order to understand how fast skills and experiences are being lost from the industry, is believed to be required. It was reported that benchmarking the sector against others would help override a current stigma – that turnover in the primary sector is higher than other New Zealand sectors.

The key recommendations were:

- Replacement of the workforce requires as much attention as growth in the sector.
- Value could be seen in targeting recruitment of workers from other sectors' workforces instead of focusing solely on education providers.
- More promotion of on-the-job training needs to be encouraged.

Overall, this study highlights that, within the human capability, there are still gaps that need to be filled to understand the workforce within the primary industry. It identifies that, in order for the work force to grow, a decrease in current employee turnovers across sector needs to occur.

As part of my report, I attempt to identify if the awareness at high school level is impacting these findings. Would more promotion at a younger age be effective?

5.3: International reviews

The following reviews are from a number of international countries and looks into what they are doing compared to New Zealand in regards to career awareness and the agricultural sector.

5.3.1: Factors influencing career choices of urban agricultural students (Bowen and Esters, 2005)

A paper produced in 2005 from Pennsylvania focused on urban agricultural students who graduated between the years of 1992 and 1995. The research focused on the perception of career opportunities within agriculture. It also looked at behaviours influencing career choices.

Several themes emerged from the study, including career opportunities, education experiences at high school and work experience.

The questionnaire was piloted and reviewed by experts from the Department of Agricultural and Extension Education at Pennsylvania State University.

A limitation from this research, in relation to my own, is that it only received a 24% response rate from 448 questionnaires mailed out. Of the 24% respondents, 68% were female.

Pennsylvania is also very horticulture based but can be compared to the New Zealand primary industry as a whole.

The key recommendations from the research were:

- There should be follow-up procedures to determine graduate pathways and provide support.
- If agricultural education programmes are to set students up for careers in agriculture, the programme should conduct follow-up studies to ensure goals and missions are being achieved.
- It was identified that parents and friends of individuals surveyed have the most influence on career choices. Therefore, education into the local society about the industry should occur.

5.3.2: Factors influencing student career choices among secondary school students in Kisumu Municipality, Kenya (Edwards and Quinter, 2011)

A research paper produced from Maseno University in Kenya looked at what factors were influencing career choices among students. It was conducted in the third largest city of Kenya, which has a population estimated at 409,926. About 1.6 million hectares is agricultural land with 58% used for cattle and crop farming (*Wikipedia. Kisumu Kenya*).

A strength of this research was the use of a descriptive survey, completed by 332 former students. They were selected from a total of 2464 students via stratified random sampling technique. Fifteen pre-determined factors were used for students to indicate the level each factor had on career influence. This research was completed six years ago, giving it greater relevance to today's situation.

The key issues the research looked at included looking into gender and individual variants. This was to see whether gender influenced career choices. Of those surveyed, 48% believed that gender had no influence on career decisions.

Other key issues covered were:

- What was influencing students having problems matching career choices with abilities and school performance?
- What external factors had an influence? This highlighted political and economic considerations, previous work experience and influence of key individuals in a student's life.

The analysis was based on five main factors which gave it good structure:

- Outcome expectations
- Gender
- Personal interests
- Learning experience
- Other factors stated by students

I believe these pre-determined factors limited the ability to identify surprises and factors the students may have come up with, uninfluenced.

Following the finding that career choices were mostly based on outcome expectancies (jobs available, advancement opportunities, security, ability to choose specialisation, ability to apply knowledge and skills learned), the following recommendations were given:

- That career councillors should provide students with information and experiences from a wide range of careers (not limit it to one).
- Persons offering career advice also need to be well informed of all opportunities and outcome expectations of all careers to be successful.

5.3.3: Agriculture as a career option for senior secondary school students in the southern province of Sierra Leone (Johnson, Johnson and Macauley, 2015)

Njala University in Africa looked at the demographic characteristics that influence a career choice into the agricultural sector. It involved determining the senior high school students' perception on the importance of the sector.

One-hundred-and-twenty male and female students from both urban and rural areas of Sierra Leone were selected to complete the three section questionnaire.

Sierra Leone has an estimated population of 7 million and two thirds of the population are directly involved in agriculture. Agriculture accounts for 58% of the gross domestic product (*Wikipedia, Sierra Leone*).

The questions were mainly descriptive and analysed using the Pearson's regression analysis technique. which identifies correlations between variables.

The students' backgrounds, reasons for studying agriculture and their views on reasons why other students don't take agriculture helped provide an idea on what influenced career choices.

The strengths of this research were the equal numbers of both genders and the rural/urban distribution. Selecting students in their last level of secondary school is also a strength, as it is the year when the majority of career choices are made.

Limitations were that it only focused on students already studying agriculture in school and questions limited answers (closed questions, requiring an answer that was of best fit to the student).

The key recommendations were:

- That policy makers need to assist schools and societies to increase the level of awareness around educational and career opportunities in agriculture.
- Efforts be focused on providing sufficient funding and support for schools to supply infrastructure and resource within the sector.
- Collaborative relationships between teachers and people with careers in agriculture – to identify requirements and tools needed to pursue a particular agricultural field.
- All branches in the sector needed to work at sensitising students on the importance and benefits of a career in agriculture

5.4: A look into generations

Generational differences: re-visiting generational work values for the new millennium” (Smola and Sutton, 2002)

A paper found in the Journal of Organizational Behaviour looked into a study of generational differences and the cause of differences. Based out of the United States, more than 350 people were surveyed and their results compared to findings of a similar study completed in 1974.

This study identified differences through the investigation of work values and beliefs, along with employee attitudes. Three primary scales were addressed as:

- 1) The moral importance of work roles
- 2) The desirability to work towards outcomes, and
- 3) Pride in craftsmanship.

One of the key issues addressed included, dealing with generational change to avoid misunderstandings, miscommunications and mixed signals in the workplace. Understanding was highlighted as encouraging employee productivity, innovation and corporate citizenship.

The three keys issues addressed included:

- Are there generational differences in work values among today’s employees?
- Are the work values of today’s workers different from those in 1974?
- Do work values remain constant or change as workers grow older?

The strength of this study was the representation of generations – from generation WWII-ers through to millennials. A wide diversity of professions was also included in the survey.

Some limitations were that one area of the United States was over represented, compared to the others. There was also a disappointing number of respondents from the WWII-ers, Swingers and Millennial generations. Another possible limitation was that the two data sets (1999 and 1974) were published by different authors, potentially resulting in a variety of thoughts and methodology.

The key findings from the study included that GenX-ers' work values were considerably different to those of the Baby Boomers. In general, this meant less loyalty to employers and a desire to be promoted more quickly than the older generation.

Results from 1999 and 1974 both showed the statement “feel a sense of pride in ones work” was one of least important. It was also identified that workers’ values do change as they mature, but more so with the times and societal change, rather than the maturity of individuals.

The key recommendations were:

- Continue to monitor changes to employees' values, behaviour and attitudes over time.
- With Millennials being the first generation to be born into the 'wired' world, it is likely to bring interesting changes. More research will be needed, especially into identifying the influence they will bring to the workforce.
- Survey a larger sample size, covering a larger demographic and geographic coverage. Take into account a range of regions to see if any differences occur within generations in relation to upbringing and origin.

Review summary

The national and international reviews have given me a good outlook on similar studies across the world. The majority of their recommendations could be applied in New Zealand. This has helped provide direction and ideas for my methodology.

Educating those offering advice to students is needed, in order for clear messages to be passed on.

Understanding generational change, interpersonal skills and student interaction preferences was also highlighted as key to success.

6.0 Methodology

6.1 The process

In order to identify why there is a shortage of young people entering the primary sector, we need to understand our high school education providers.

I narrowed my research to the red meat sector, specifically sheep, beef and deer – the sector I grew up with and continue to work in.

The first step was to establish the top 10 skills believed to be needed across the industry in the next five to ten years. I liaised with industry professionals, looking for unique and similar skills to emerge.

I also needed to know the level of understanding of the primary sector and agribusiness of high school teachers teaching these subjects.

I planned to undertake:

- 12-20 teacher empathy interviews (face-to-face, where possible), across both urban and rural high schools, and
- 12-16 past high school students (with the aim of half of the students being from within tertiary institutes and half from within the workforce).

6.2 Data collection interviews

The main data collection method used was interviews with three different groups. All the interviews were semi-structured, so that they weren't narrowing those involved down one path with their answers.

The groups involved were:

- 27 industry leaders
- 23 high school teachers
- 20 past and final year high school students.

Industry leaders

I made contact with 27 industry leaders from throughout the sector. (See Appendix 1a for initial email.) Thanks to my current position with Beef + Lamb New Zealand, I have a great network of leaders I was able to target for participation.

An interview time was arranged with each leader and an empathy interview was conducted over the phone. Most interviews were completed in 20-30minutes. (While I would have liked to conduct these interviews face-to-face, time constraints and geographic spread of leaders made this unrealistic.) Those who couldn't fit in an interview were sent the interview questions to answer in their own time and send back. Each interview consisted of 11 open-ended questions.

Some interviewees gave permission for their interview to be recorded, which allowed direct quotes to be noted accurately and more effective analysis to be completed.

Topics of conversation for industry leaders were:

- Background and general information regarding the interviewee
- Current position in the sector and skills used

- Overall view of the sector and skills required to be successful
- High school experiences and pathways into sector
- Thoughts on the future of the sector
- Major factors needing more emphasis for a successful future workforce.

(A copy of the industry leader questions can be found in Appendix 1b.)

High school teachers

Following the industry leader interviews, I could articulate the skill set needed for positions within the sector and subjects they recommended be taken at high school. This allowed me to target teachers teaching these skills and subjects for my high school teacher interviews.

First of all, I needed to gain permission from the school principals. I targeted high schools throughout the Otago and Southland province. (See Appendix 2a for a copy of the letter sent to 24 schools.)

Initially, 20 schools were approached. Nine schools granted permission to interview staff, while 11 declined. I wanted to speak to teachers who taught subjects identified as 'needed skills' from industry leaders. These included the core subjects of Sciences, Maths and English, along with Economics, Accounting or Business Studies.

Interview times were arranged for face-to-face interviews and the same structure was used as for the industry leaders. (See Appendix 2b for questions.)

Topics of conversation were:

- Background and general information regarding the interviewee
- What subjects taught or specialised in
- View of the sector
- What do they think of when they hear of certain sector 'terms'
- What career opportunities were they aware of?
- Views of trades and university qualifications
- Thoughts on the future of the sector
- Major factors needing more emphasis for a successful future workforce.

To lift my sample size to 20, I requested participation from teachers independent from the schools I visited. (A copy of the flyer I used can be found in Appendix 2c.)

Students

The students were randomly sourced, using social media (Facebook), Young Farmer networks and personal connections.

Vouchers for either McDonalds or Subway were offered to the first 10 participants and all those who completed an interview went into the draw to win a hamper of red meat products. (All teachers were also put in the draw to win a hamper of red meat products.)

The student interviews were 20-30 minutes in length and conducted over the phone.

Topics of conversation were:

- Background and general information regarding the interviewee
- What subjects were your strong point and favorite?

- What they thought of when they thought of certain sector 'terms'
- Career guidance and support experiences
- What career opportunities they were aware of
- Views of trades and university qualifications
- Thoughts on the future of the sector
- Major factors needing more emphasis for a successful future workforce.

Finally, across all interviews, I conducted thematic analysis to reveal understanding across the education sector.

7.0 Results and Discussion

7.1 Analysis and discussion of interviews

Raw data available on request.

7.1.1 Industry Leaders

The 27 industry leaders were interviewed on a one-on-one basis over the phone. I classified an industry leader as someone with a direct involvement in the red meat sector, considered experts within their field, and with a good understanding of the sector and the wider primary industry.

Of the group, 44% worked and lived in the North Island, while 56% were South Island based.

A wide range of leaders were targeted and 60% had been born into the industry, by either growing up on a sheep and beef farm or from a farming background. Of the 60%, some had a dairy up bringing but had been involved with farm services related to sheep and beef operations over their careers.

Overall, 30% of the leaders started their post-university careers in roles outside the red meat sector or primary industry.

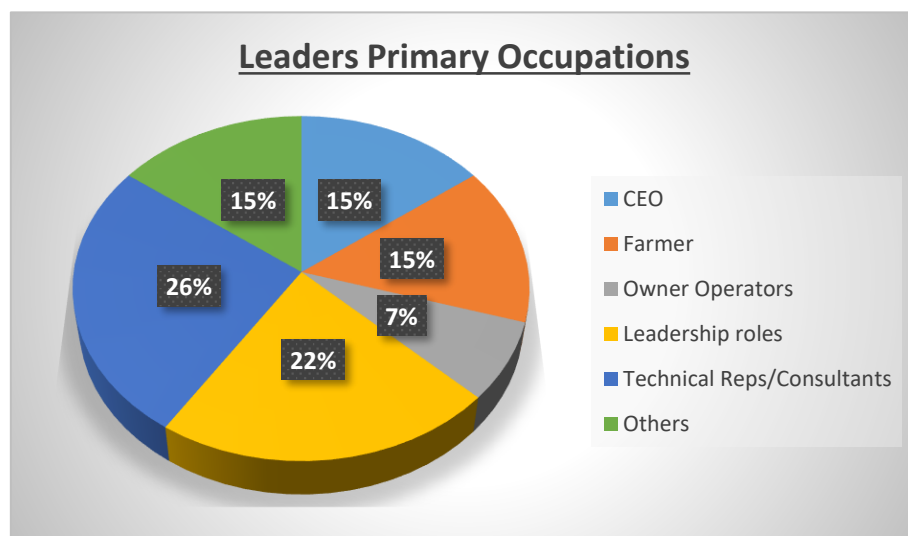


Figure 1: Primary Industry leader occupations

As identified in the graph above, a good mix of occupations within the red meat sector were covered:

- 45% of those interviewed were either farmers, chief executive officers (CEOs) or owner/operators of farming or farm service businesses.
- 22% of the industry leaders held director roles for cooperatives within the industry, were chairs of industry good bodies, or managers for different business units (on and off farm).
- Technical reps and consultants had the largest representation – at 26% and ranged from agronomists, fertiliser reps, technical support roles, agricultural and agribusiness consultants and advisors.
- The remaining 7% included vets, government employees, human resources and people management roles.

Leaders were asked about when they left high school, how long they had been in the workforce, and how long they had been in their current position. This was to give me an idea if generational change over the years had an effect on the perception of the sector, behaviours and career outcomes.

Figure 2 shows the spread of years' leaders have been in the workforce, with 37% involved for 30-plus years and 18% involved in the past 10 years. Being involved in the workforce was classified as being 'in full time employment'.

Figure 3 shows how long these same leaders have been in their current position, to gauge the time period most commonly spent in a position. This is where I looked to identify whether a shift in generations highlighted any differences.



Figure 2: How long leaders have been in the workforce

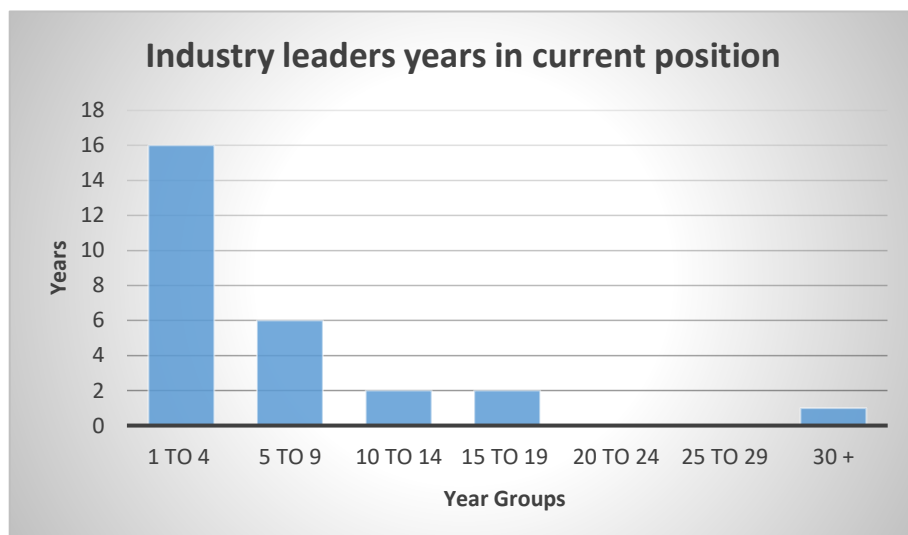


Figure 3: How long leaders have been in their current position

Taking into account generation change and the generational differences chart (*West Midland Family Centre (n.d.)*), the core values, attributes and work and life differences across the generations were.

Each leader was asked what year they left school. Most left at the end of Year 13 and I subtracted 18 years away from the year they left school to get an estimated birth date.

Figure 4 shows that 44% of those interviewed fall into Generation X, 30% fall into the Baby Boomers, and 26% are Millennials.

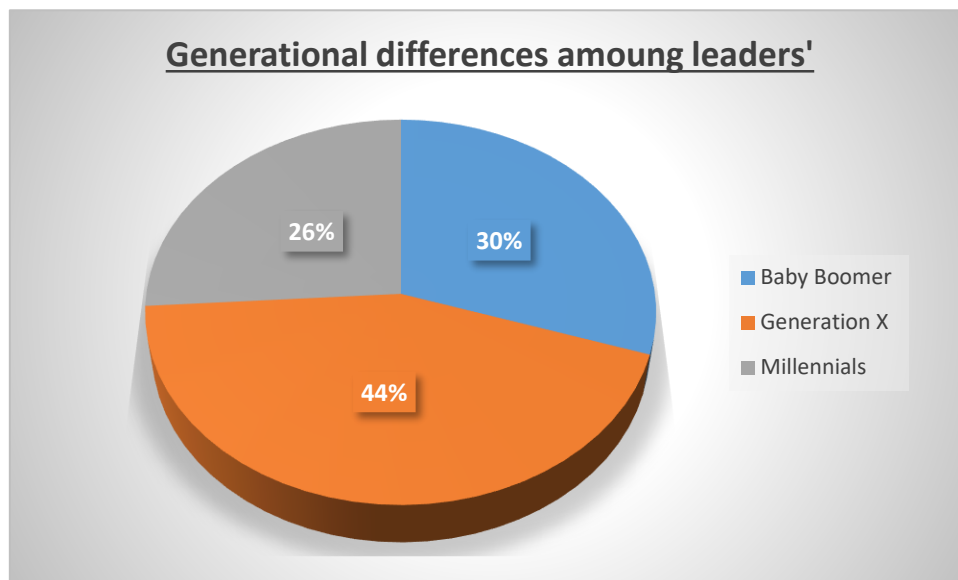


Figure 4: Generation fit for interviewed leaders

According to Smola and Sutton (2002), Baby Boomers will now be aged 53 -71 years of age (born between 1946 and 1964). Generation X will now be aged 38-52 years of age (born between 1965 and 1985), and Millennials are currently aged 23 – 37 years of age (born between 1980 and 1994). Generation Z – following Millennials (aged 5-22) – has no precise dates for its start or end, but is typically seen as those born between 1995 and 2012 (*Wikipedia, 2017*). This provides an overlap of approximately five years and, therefore characteristics for Generation Z and Millennials are thought to be very similar.

Each of these generations have had different influences, values and attributes associated with their upbringings and careers, as cited in the generational differences chart (*West Midland Family Centre (n.d.)*).

Figure 5 shows, from the leaders interviewed, the correlation between generations, work ethic and loyalty to a position. As the generational differences chart (*West Midland Family Centre (n.d.)*) indicated, work ethic for Baby Boomers is a lot more driven compared to Generation X who look for a more balanced approach. Millennials are ambitious and, as Smola and Sutton (2002) highlighted, always looking to 'What's next'. Like Generation X, they tend to be less loyal and want to move up the ladder more quickly than their established colleagues.

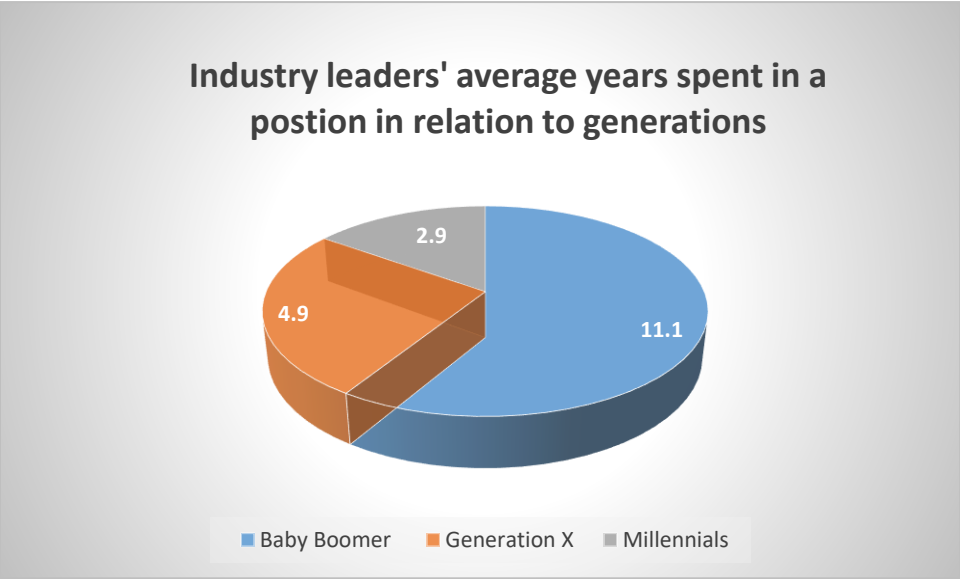


Figure 5: Correlation between generations and work commitment

Analysing the interview responses showed that those who grew up in the Baby Boomer era had a different approach to career advice and their pathways into the sector. The question “From what you learnt at high school, to where you are now – what kind of relationship between what learnt and the position you’re in do you see?” related directly to this. Only 18.5% believed there was no to little connection, whereas 30% believed the basic elements of sciences gave a good background to understanding, even if they never went down a science career. Thirty per cent also believed basic arithmetic and literacy, along with computer basics, set a good platform for the future. It was believed that, not only did the subjects have an impact on their future, but also their current positions. Thirty per cent believed being able to get on with a wider mix of people and fundamental people skills were the building blocks for communications and development of interpersonal skills. This linked well to a previous question asked to “What are the main skills used in your current position?”.

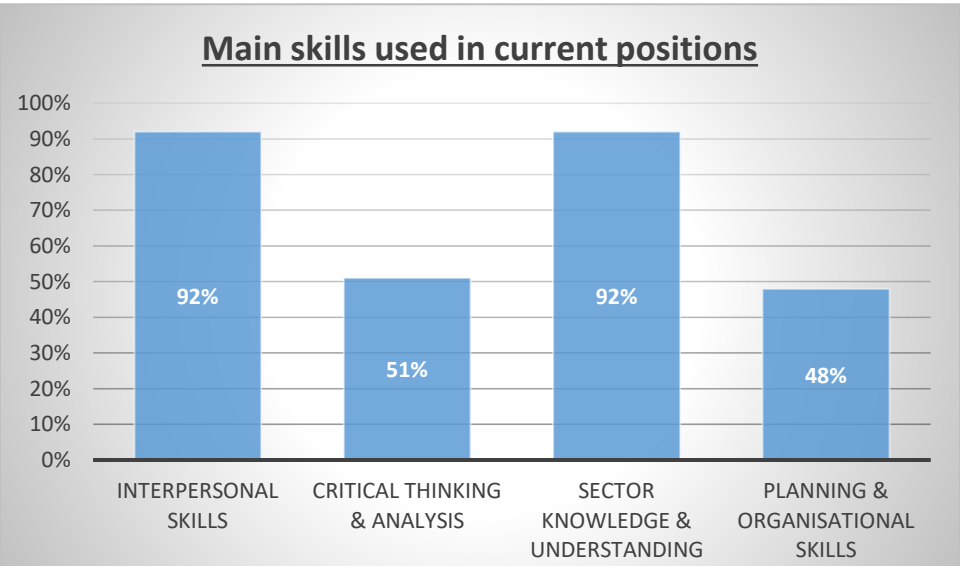


Figure 6: Main skills used by leaders in current positions

As *Figure 6* shows, the majority of leaders use interpersonal skills along with sector knowledge and understanding. This included leadership, people skills, staff and people management along with communication and team work. Knowledge included basic farm management and sector understanding, along with financial and English literacy. This highlights that, no matter the background of a person, everyday skills found in all industries are transferable to the red meat sector.

One of the main reasons for using current leaders as part of this study was to determine the skills believed to be needed within the industry. This helped to guide which teachers were to be interviewed, based on the subjects they taught.

Question 7a in the interviews asked leaders *“What do you believe are the top 3-5 skills needed within the red meat sector today?”*. Eleven themes were identified from the 27 participants' responses. (See table, Appendix 12.8 for a list from highest to lowest of skills leaders believe are needed. The results replicate those mentioned as main skills the leaders used in their current positions.)

These findings identified that our sector needs more highly skilled people, alongside practical workers. In the past, it has been thought that the sector is more suited to low skilled people and it carried the stigma put forward by Rolfe (2015) - the main one being that *“agriculture was too much hard work and for dummies”*.

The following analysis of interviews completed with high school teachers (7.1.2) and high school students (7.1.3) dives into their thoughts and understanding of the industry, in relation to these stigmas.

7.1.2 – High school teachers' interviews: Analysis and findings

Initially, 20 schools were approached to be part of this study. Nine schools granted permission to interview staff from the school, while the other 11 declined.

Of the 11 who declined, their reasoning provided me with some starting observations into the understanding of the sector from a high school leader (principal or year level leader) perspective. For 27% of the declines, genuine reasoning as to the time of year and completion of surveys already this year was accepted. Also the Education Review Office (ERO) was in the process of visiting a number of schools prior to the end of Term Three, meaning teachers were busy with reports and unable to spare time for the interviews.

The other 73% responses included:

- Not having any staff interested in being interviewed
- Not having an agriculture class, so no need to be involved
- An agribusiness teacher's response being "I am not sure how much help I will be as I do nothing related to the red meat industry"
- From a school with a boarding establishment attached: "We are an all-girls school so we have no involvement in the red meat sector"
- Simply not interested.

It appeared the term 'red meat sector' or 'primary industry' was only being linked to agriculture classes – and not necessarily to other subjects.

These were subjects identified through the skills noted (Appendix 12.8) from the industry leaders' response to the question: "What do you believe are the top 3-5 skills needed within the red meat sector today?". Along with question nine: "If you were to advise a current high school student who was interested in the red meat sector, a) what subjects would you recommend they take? And b) what skills would you encourage them to develop?".

These results can be seen in the following two tables (Figure 7 and 8). A number of responses believed that no real subjects were needed, as on-job training was more available than in the Baby Boomer era, due to post war and influences at that time (West Midland Family Centre (n.d)). One leader's response was that it was important to "Get a broad grounding and keep your options open as not to limit yourself is crucial".

People skills were highlighted again as an encouraged skill to develop while at high school and one leader quoted "being able to articulate messages clearly is essential to be understood". A number of the respondents believed that joining a sports team or club while at school was ideal. They could not only be an interest to a student, but also assist in developing leadership opportunities, team work skills and interpersonal skills that could be related back to any job.

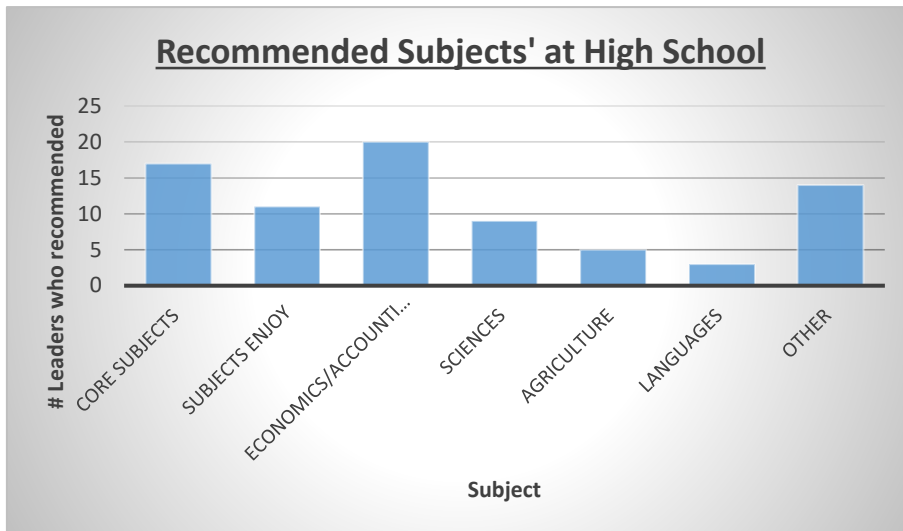


Figure 7: Responses to question 9a to leaders, what subjects would you recommend they take?

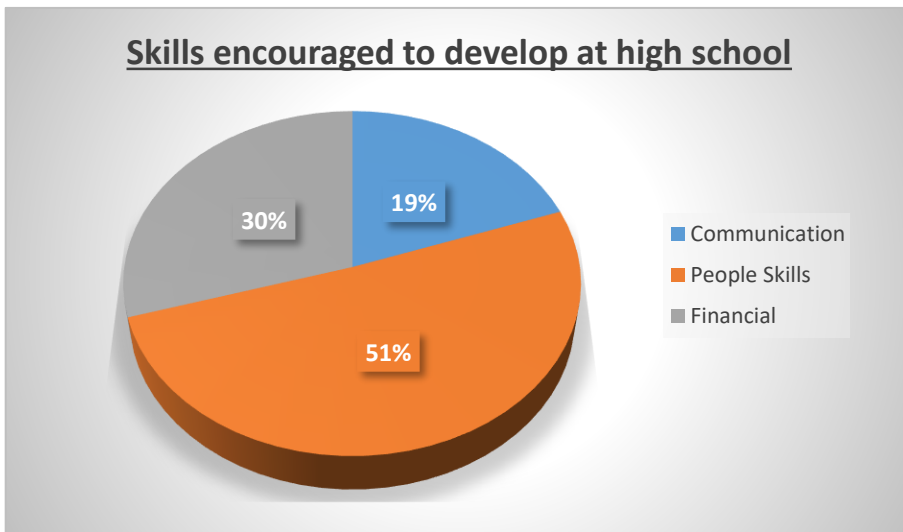


Figure 8: Responses to question 9b to leaders, what skills would you encourage them develop?

7.1.2.1. Getting to know the teachers

Twenty-three high school teachers – of which four grew up in the North Island and 19 in the South Island – completed the interview process.

On average, the teachers interviewed had been involved with education for 16.5 years with the shortest career span being two years and the longest 47 years. On average, these teachers had been at the school they currently taught at for 9.5 years.

The following figures (Figure 9 and 10) show the qualifications obtained by the teachers and subjects they specialised in. All teachers had an education certificate to enable them to teach and 25% held a leadership position (including principals, deans, heads of department, form teachers, sport coaches and board of trustee members).

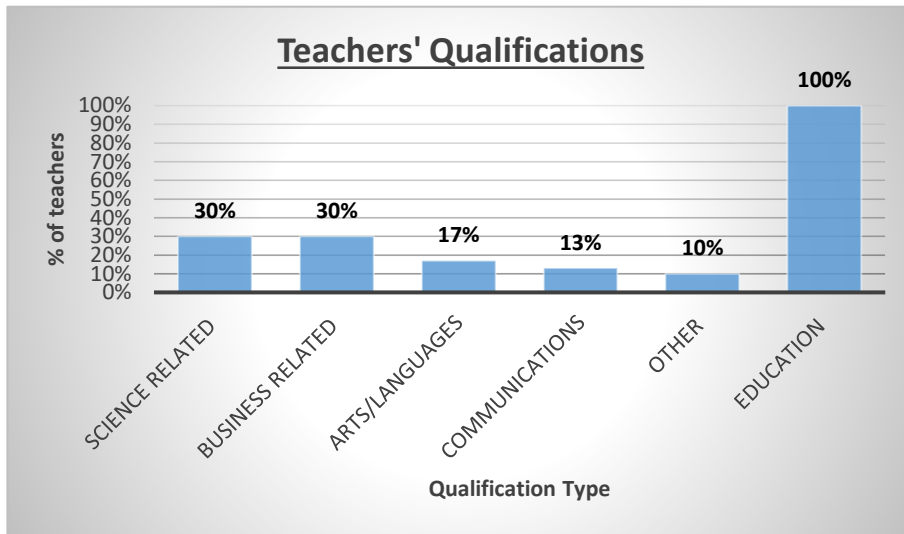


Figure 9: Teacher question 1a. Qualifications obtained

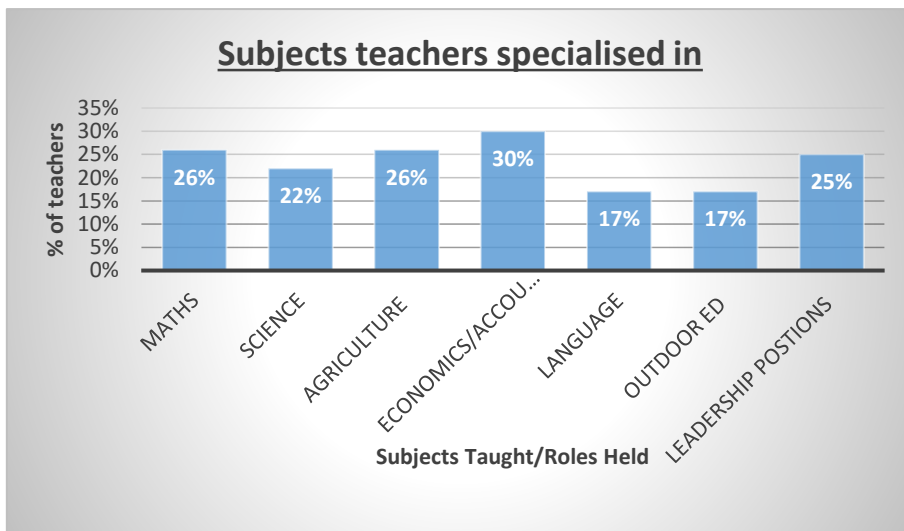


Figure 20: Teachers question 2. What subjects do you specialise in?

7.1.2.2: The questions

The following is my analysis of the questions asked to high school teachers. Raw data available on request.

It starts at question three, where the interview starts to look into careers and the sector itself in more detail. Questions prior to this were to get an understanding of the teachers' backgrounds as discussed in section 7.1.2.1.

Question 3. What questions do you get asked most often by students regarding future careers?

Subject related	52%
Qualification/university focused	65%
Other questions	82%

All but four of the teachers spoke about questions they were asked most frequently. The other four teachers believed that they didn't get a lot of questions and that it was the career advisors job to answer questions of that nature. All teachers commented that advice on what's available would be useful.

It was also mentioned that students often wanted to go in a different direction than their parents and would ask for the teachers to talk to their parents.

As Bowen and Ester (2005) identified in their study, parents and friends had the most influencing effect on career choices. Therefore, they recommended education into the local society about the industry. This also seems to be the case within New Zealand, as highlighted further into this interview.

Questions 4, 5 and 6: View of the sector

- 4. *What first comes to mind when you hear the word 'agriculture'?*
- 5. *What first comes to mind when you hear the 'term' primary sector?*
- 6. *What first comes to mind when you hear the word 'red meat sector'?*

These three questions allowed me to gain an understanding into what teachers were thinking and aware of, when it came to the sector as a whole. A summary is in Table 1 below.

The definition of agriculture is: "The science, art, or occupation concerned with cultivating land, raising crops, and feeding, breeding, and raising livestock; farming." (*Dictionary.com, 2015*)

The definition of the primary sector is: "An industry, such as agriculture, forestry, fishing, that deals in obtaining natural materials." (*Dictionary.com, 2015*)

The definition of the red meat sector isn't referenced in the dictionary or as a classification in Wikipedia. An industry specialist involved in the red meat sector described it as: "Meat processing, exporting and marketing, farmers and support industries."

Table 1: Summary responses on the view of the sector

Term/Word	Response
Agriculture	<ul style="list-style-type: none"> - 70% Farming – sheep, beef, dairy - 30% Animals – cows, sheep - 22% Primary industry/production - 21% Outdoors working, land, lifestyle - 17% Grass crops - 13% Food production
Primary Sector	<ul style="list-style-type: none"> - 26% Farming in general – dairy and sheep - 26% Awareness of all sectors that made up the primary industry - 17% Products, produce, raw products, initial producers of product
Red Meat Sector	<ul style="list-style-type: none"> - 43% Sheep and cattle farming - 48% Beef + Lamb New Zealand and Iron Maidens - 48% Meat and meat works

Also, 56% of participants were asked "What first comes to mind when you think sheep, beef and deer farming?" (see Table 2). These 56% didn't know what response to give to question six "What comes to mind when you hear the word 'red meat sector'?". One teacher said "It's a very bizarre term which I would never have associated farming to". An Otago science teacher said "It's a weird term and not something that generally was mentioned". This suggested we need to be communicating our messages in a simpler and relatable manner. This is highlighted later in this report.

Table 2: Summary of responses to thoughts on sheep, beef and deer farming

Sheep, beef and deer farming	<ul style="list-style-type: none"> - Forgotten farmers - Images of stock and fences - Steak and lamb chops - Farming - Stuff we eat
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Question 7. What career opportunities are you aware of within the red meat sector?

Unsure/limited knowledge	39%
Heard of lots, but couldn't define	9%
Good knowledge	52%

This part of the interviews investigated if there were limitations in knowledge and awareness of the opportunities available within the red meat sector. Those unsure and with limited knowledge mentioned careers in the processing plants, butcher, food preparation and marketing. Even when showed a list of potential careers put together from the Career New Zealand website (2015), they said they wouldn't have associated the positions to the red meat sector. (This list can be found in Appendix 12.9.)

Question 8. How would you describe the scope of the red meat sector?

Excellent, wide and diverse range	48%
Thought be quite varied	30%
Range unknown/unsure	22%

Despite those interviewed being unaware of exact career opportunities available, 48% were aware that the sector had an excellent range of opportunities and career options available. Thirty per cent knew there was a variety of options, but had no experience or knowledge of them. They were aware that the dairy industry had a strong career pathway and believed the red meat sector was nowhere near as strong.

The remaining 22% believed they didn't know of any opportunities, but presumed there was a good range. However, they also believed the industry held a stigma of being underpaid and over worked. This highlighted that opportunities within the industry are not understood, unless brought up with those who already have a connection to a farm while at high school. As the Federated Farmers (2017) report shows, the mean salary for sheep and beef employees is \$48,203. Based on an average 42-hour week, this is \$21.97 per hour.

Let's compare that to a teacher. Ministry of Education (2017) states that the average starting salary for teachers is \$51,200. Based on a 45-hour week (Ministry of Education, 2017) that's \$21.88 per hour. This again highlights that the misunderstanding between red meat sector employee pay versus hours worked.

Question 9. Do you actively encourage careers within the red meat sector to your students?

a. If "yes", how are you promoting/encouraging this?

b. If "no", what are the factors preventing you from encouraging?

Having determined participants' overall awareness of the sector, it was interesting to determine whether the 52% who demonstrated to have a good knowledge and awareness of careers within the red meat sector did, in fact promote, them.

Yes	47%
No	52%

Of those teachers who did actively promote or encourage red meat sector careers to their students, these were not direct approaches. Those students whom showed interest were focused on, by linking futures to food where possible and experiences they were aware of. Providing overall awareness and planting the seed was considered the extent of this encouragement.

Some teachers had no awareness or knowledge and therefore believed they did not discourage but simply didn't have the expertise to promote. However, even some of the teachers with a good knowledge and awareness of the sector did not actively promote agriculture careers to the students.

Some of the reasons included:

- Didn't teach an agriculture class, so didn't see the relevance or have the opportunity to mention careers or opportunities involved.
- Didn't believe in narrowing choices too early.
- Workload and other units take more of a focus and therefore didn't have time.
- Need more resources.

Seventy-two per cent of the 47% of teachers who said they did promote or encourage careers within the red meat sector to their students only did so when asked, or did so via an agriculture class. If they knew the students had an agriculture background, they would also encourage them. This means those students who had no experiences or exposure to the sector would still be unaware of the opportunities.

Question 10a. Are there any particular groups of students to whom you advocate careers in agribusiness?

The responses are very similar to those seen in question nine as shown in the following table. More teachers are likely to promote a career within the sector if the students show an interest in factors they believe are related to the sector.

This limits promotion due to poor awareness of opportunities in some situations. 10% of teachers (classified as other responses) believed they couldn't advocate as they didn't know where to start.

One teacher's response, from an all-boys school, was "those less academic students who aren't going to get to the top through the sciences are well suited".

This comment started to provide some facts around the stigma of 'agriculture' being a class for dummies and those wanting an easy way out, was still there.

To interested students	47%
To anyone	26%
Those with a rural background	17%
Other responses	10%

Question 10b. How would you describe these students?

When asked to describe the students that they tended to advocate towards agribusiness careers, characteristics such as ‘motivated’ and ‘practical’ were most prevalent.

The following quotes from two teachers from different mixed-sex schools summed up this question well.

Teacher 1: Biology teacher, Southland – "They are typically students with a rural background, but have no desire to work on farm."

Teacher 2: Principal, Otago – "These students are passionate already and are motivated."

Question 11. At what year level do students start to be counselled at school towards careers?

Before Year 11	57%
Year 11	26%
Year 12 and 13	13%
Year 13 Only	4%

It was great to see that conversations were often being started as early as Year Nine. Career fairs and speakers then started to emerge from Year 10, prior to subject selection for NCEA Level 1, starting in Year 11.

More precise counselling typically started in Year 11, as subject choices started to become more important in connection with their goals following school.

Thirty per cent of teachers interviewed commented that the following factors could have a major impact on student career choices at all year levels:

- Parent influence
- Subject selection processes
- Form teachers
- Peer pressure.

Question 12. What are your views on careers within the trade industries?

12a. How are these portrayed to students?

12b. Can you explain how a career within the trade sectors is seen compared to a university qualification?

As Kruiger (2001) brought to our attention, the biggest issue she currently has to deal with as a National Party Member of Parliament is tertiary education versus skilled work force.

Eight-six per cent of teachers viewed trades as realistic opportunities that were absolutely crucial and something that was seen in a positive light so are encouraged.

"Natural disasters have now changed the view to vital requirements" was a comment one urban Otago school teacher expressed.

Fourteen per cent of teachers (a) believed a career within the trades was more for men who are practical, or (b) didn't have comments to make due to not being exposed to the trade industry and what it involved.

Question 12a highlighted how trade careers were portrayed to students. The overall response is positive:

As practical/hands on	40%
Positive	30%
Good career paths	30%

Gateway programmes were mentioned by the 40% who highlighted that trade careers were practical and hands on. They also alluded to the gateway programmes and how these gave exposure to potential future career opportunities within the trade industry well.

Quotes including 'Got a trade, got it made' and 'Learn while you earn' underlined that careers within trades were seen positively overall and a growth industry.

In question 12b, participants were asked for their view on trade career paths versus university qualifications. Twenty-two per cent of responses said a university qualification was as equal or just as good as a trade qualification. They viewed a trade as just as successful with many opportunities, and as well paid as positions students would gain following university. Business opportunities appeared to be clearer and learning on the job was more acceptable within the trade industry.

The majority of those interviewed (43%) viewed trades as not prestigious and portrayed as the easy way to gain qualifications and get into the workforce.

However, 35% of teachers believed that perception across the country was starting to change. The stigmas of 'not for academics' and being 'more physical' needed to be outweighed by more positive media.

Overall, 73% of teachers would encourage university qualifications over trades due to their schools' goals and values. However, the promotion towards university is changing and the principal to this change is perception of acceptance to society.

7.1.3. Past and final year high school students: Analysis and findings

The addition of students to this study helped reflect on generational differences, as highlighted in 7.1.1 with the industry leaders.

All students interviewed fall into the Millennial category, being between the ages of eight to 27 years old. Millennials are the first generation to grow up with digital media, as well as the first children with schedules (*West Midland Family Centre (n.d.)*). As Smola and Sutton (2002) found, Millennials want a balance between work and personal goals and these values tend to change as they grow older.

7.1.3.1. Getting to know the students

As seen in *Figure 10*, the majority of students came from and attended, high schools in the South Island. Half attended co-ed schools and half single sex schools. Of those who attended single sex schools, 60% came from girls' high schools.

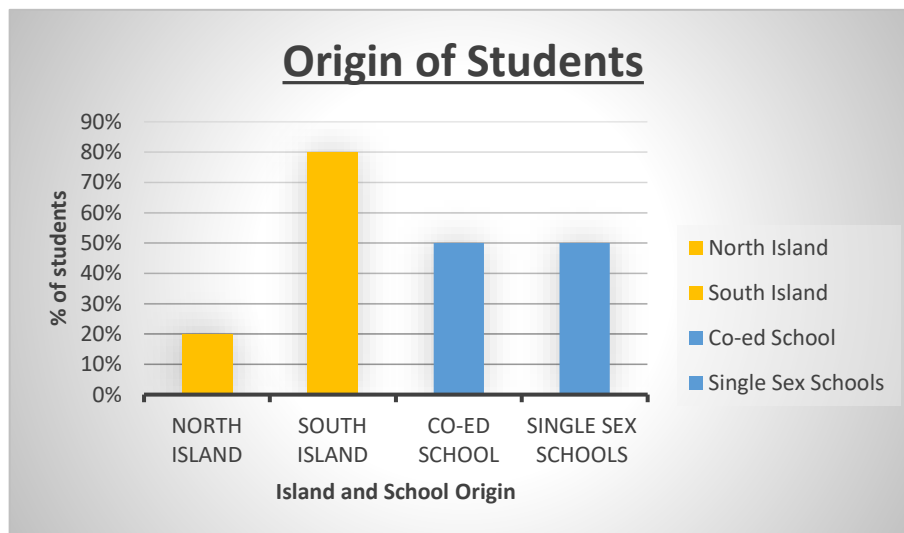


Figure 10: Where the past and final year high school students come from

The average year that students had graduated from high school was 2015, with the eldest having left in 2013. Ten per cent of those interviewed were still at high school, completing their final years, while 15% had entered the workforce.

Figure 11, breaks down the subjects' students studied in their final years. Core subjects were choices of study by most students. Physical Education (PE) and Outdoor Education, while not core subjects, showed the majority of the students either liked the outdoors or being active.

Core subjects, as classified by the *Ministry of Education (2016)*, include Maths, English and Science. For Year nine and 10 students, these are compulsory. For year levels after this, they are electives (*Ministry of Education, 2016*).

Less uptake of the subjects, Business and Work Experience, noted. Business takes into account Accounting, Economics and Agribusiness studies; Work Experience includes Gateway programmes, which enable schools to provide senior students with the opportunity of structured workplace learning (*Tertiary Education Commission, 2017*).

Figure 12 breaks provides an understanding of where students are heading. Sixty-five per cent are pursuing a career within the primary sector, following completion of an agriculture or science qualification. Fifteen per cent were already working on-farm and 30% had chosen career pathways in the trades or education sectors.

Fifty-three per cent of students attended university and completed either a Bachelor of Commerce, Bachelor of Agriculture, Bachelor of Science or a Diploma in Agriculture.

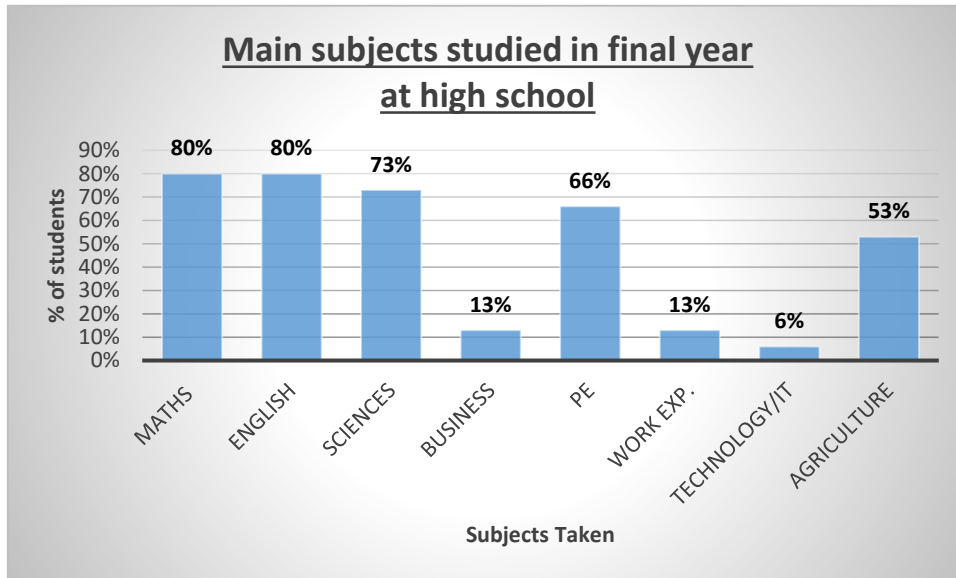


Figure 11: Subjects studied by high school students

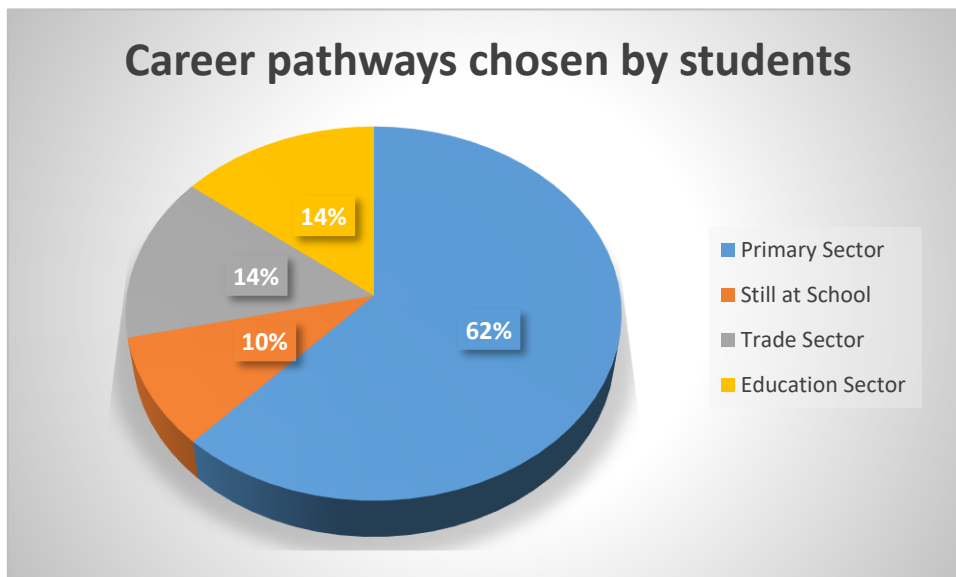


Figure 12: Career pathways of students

Like the industry leaders, students were asked “What kind of relationship between what was learnt at high school and your current position do you see?”.

There was no to little connection, with 50% portraying that everything was a lot different following high school. However, 30% believed the basic elements of the sciences gave a good background (in line with the industry leaders). Forty per cent also believed basic arithmetic and literacy, along with Computer basics, set a good platform for the future. As a second year Lincoln University student said “High school gives you a basic platform and sets you up for the roles and responsibilities ahead”.

7.1.2.3. The questions

The following is my analysis of the questions asked of high school students. Raw data available on request.

It starts at question two, where the interview starts to look into careers and the sector itself. Prior questions were to get an understanding of the students’ backgrounds and directions, as discussed in section 7.1.3.1.

Question 2. When you went to high school, did you know what career you wanted to do?

a. Yes/No

Yes	47%
No	33%
Kind of	20%

b. And if so what was it?

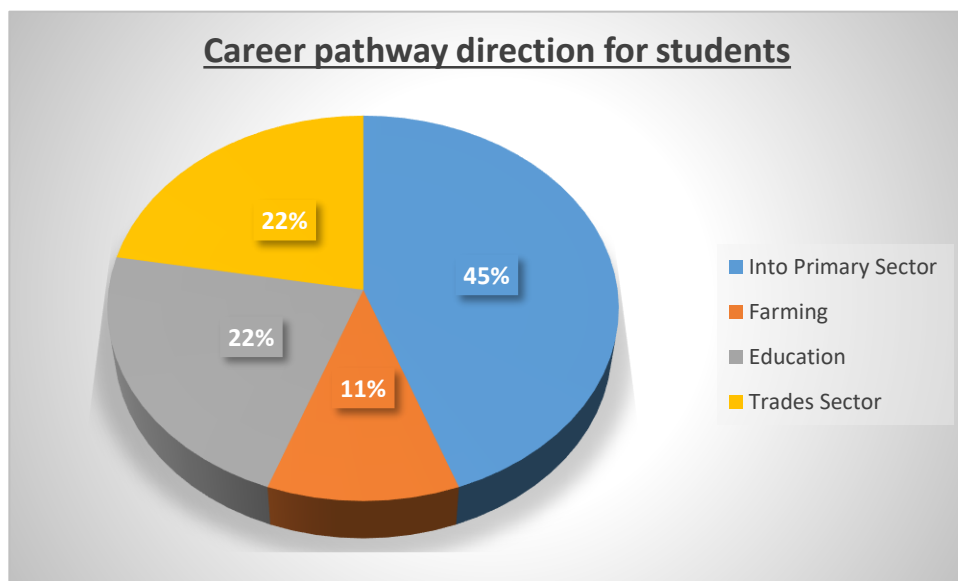


Figure 13: Career pathways for students when started high school

Figure 12 shows 53% of students were influenced while at high school as to what careers they chose.

Question 3.**What subjects are your strongest?**

PE/Outdoor Education	33%
Agriculture	40%
English/Science	40%
Science	26%
Other	1%

a. What subjects were your favorites?

PE/Outdoor Education	20%
Agriculture	40%
Other	33%
No favorite	7%

NB: Some students had more than one strong subject.

The correlation confirms that, typically, students who enjoy a subject will do well at it.

Questions 4, 5 and 6: View of the sector:

4. What first comes to mind when you hear the word 'agriculture'?
5. What first comes to mind when you hear the "term" primary sector?
6. What first comes to mind when you hear the word 'red meat sector'?

These three questions allowed me to gain an understanding into what the students were thinking and aware of, when it came to the sector as a whole. A summary of the results can be seen in Table 3 below. It also allowed me to contrast their thoughts and those of the teachers.

Table 3: Summary responses on the view of the sector

Term/Word	Response
Agriculture	<ul style="list-style-type: none"> - 60% Farming – sheep, beef, dairy - 46% Animals – cows, sheep - 13% Outdoors working, land, lifestyle - 13% Grass crops - 13% Food production
Primary Sector	<ul style="list-style-type: none"> - 47% Farming in general – dairy and sheep - 26% unsure - 27% meat works
Red Meat Sector	<ul style="list-style-type: none"> - 47% sheep and cattle farming - 20% Beef + Lamb New Zealand - 60% Meat and meat works

These responses surprised me, with 62% having chosen a career pathway into the primary industry as a whole. However, no students mentioned "products", in relation to the primary sector.

It is clear both teachers and students understand what the term 'agriculture' means, but there is some confusion on what the primary sector entails.

When it comes to the red meat sector, the name itself leads to 'red meat' and the thought of food. However, exporting, marketing and supporting industries are not associated with the sector at present.

Question 7. What kinds of jobs do you think there are in the wider red meat sector?

The responses to this part of the interview were even, with 50% aware of the vast opportunities inside and outside the farm gate. The term 'red meat sector' influenced the thinking of the students. When asked about the jobs within the sector and mentioning agriculture, they were able to articulate the sector a lot clearer than when solely referred to as red meat sector.

However, 50% of students were also unsure of jobs available and believed they were limited to processing plants, processors and meat preparation. They didn't consider supporting industry jobs, such as technical experts, sales reps and practical farming as positions.

Question 8. While at high school, can you recall how teachers actively encouraged careers within the red meat sector?

No encouragement recalled	50%
Encouragement, but only if part of agriculture class	45%
Only from career advisors	5%

Students who did receive encouragement were all part of an agricultural class.

One student who attended an all girls' school recalls: *"My father attempted to have speakers come to the school to speak to the hostel girls regarding careers and experiences within the sector. However, was told that the hostel girls knew enough about the industry from their backgrounds and getting more main stream speakers would be more acceptable."*

The findings from this question link well with those from question nine put to the teachers (section 7.1.2.2), where 52% of teachers said they did not actively promote or encourage a career in the sector.

Twenty per cent of students voiced concerns that agriculture classes were considered a drop out subject and, for four of the schools involved, agriculture did not count towards university entrance and they only awarded unit standards.

As quoted from the Careers NZ website: *"Unit standards are gained from studying towards traditional curriculum subjects as well as vocational subject areas (e.g. tourism or hairdressing). Students are awarded unit standards on an 'achieved' (pass) or 'not achieved' (fail) basis."* (Ministry of Education 2017)

This raises the question: Is the wrong messages being received? You can't receive an 'excellence' mark in agriculture, as a unit standard.

Will a 'pass' be seen as equal to an 'excellence' on a student's curriculum vitae?

This question was also asked of industry leaders. Their responses questioned whether a change over the years has resulted in sector influence being lost from subjects. Eleven per cent of leaders recalled parts of the sector being exposed through other classes (not just agriculture), such as science, statistics and economics.

Question 9. How were careers within the trade industry (i.e. builders, plumbers, etc.) portrayed to you while at school?

a) Can you explain how they were seen compared to doing a university qualification?

Given the responses to this question when directed at teachers, the student responses were surprising. The differences suggested that, even though individual teachers overall saw careers within trades the way to go and in a positive light, from a student's perspective this was not what was being portrayed.

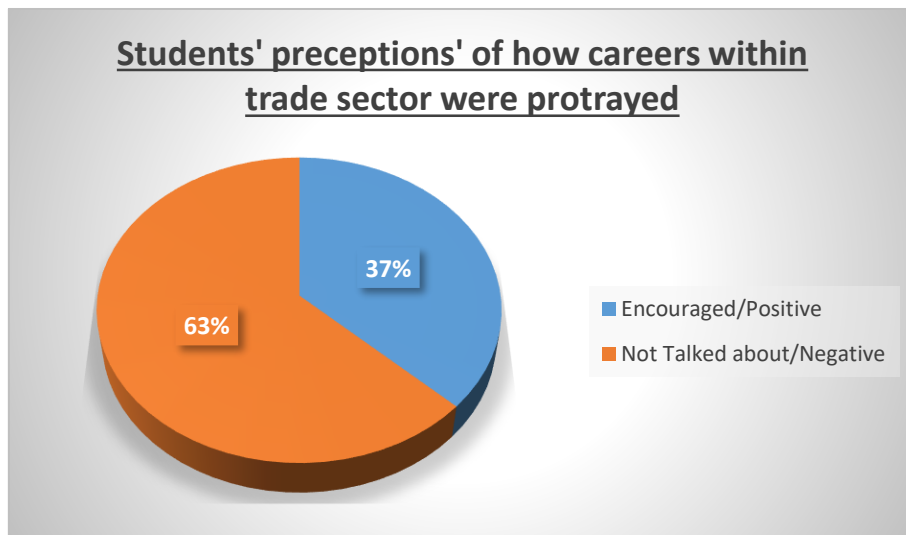


Figure 14: How students saw trade sector careers being portrayed

Figure 14 shows only 37% of students believed trade sector careers were encouraged or seen as positive. They were seen as “realistic opportunities” and “needed”. All of the 13% who took work experience/gateway programmes at school were within this 37%.

From the 63% of students who saw trades portrayed in a negative light, comments included:

- “Unless went to career day, wasn’t shown in choices”
- “Not talked about”
- “For non-academics not wanting to be at school”
- “Considered a boy’s subject”
- “More encouragement needed for females”

Part ‘a’ of this question asked students to explain how a trade career compared to completing a university qualification? Of the 37% who saw trades as positively portrayed, they also saw them as equal and just as good as a university qualification. Twenty per cent of those who saw it as equal, also saw trades as more practical and hands on.

This left 70% believing trade sector careers were a “struggling persons” career, which wasn’t considered “aspiring” and “would contribute less to society”.

Twenty-five per cent of students considered university was for the more intelligent and of higher value.

Question 10. What career support was offered and available to you?

- a) If this support was different, do you believe it would have resulted in you doing something different now?**
- b) If this support was provided, at what year level was the support provided?**
- c) What was the nature of this support?**
- d) Is there anything that wasn't provided at high school in regards to career guidance, that you wish was?**

This part of the interview helped to bring together the support systems to understand what students were getting value out of and what needed to be added or improved.

Figure 15 illustrates career support that students identified as being available. In regards to 'sector exposure', students spoke about having exposure to speakers, gateway programmes and university open days. They commented that, even though this exposure was of good value, it was more university focused, than career opportunity focused. This relates to findings earlier in the report that pathways and career opportunities were relatively unclear and unknown. Eighty per cent of students indicated they had access to a career advisor of some kind. However, in some cases, this support was only utilised by the students' initiative.

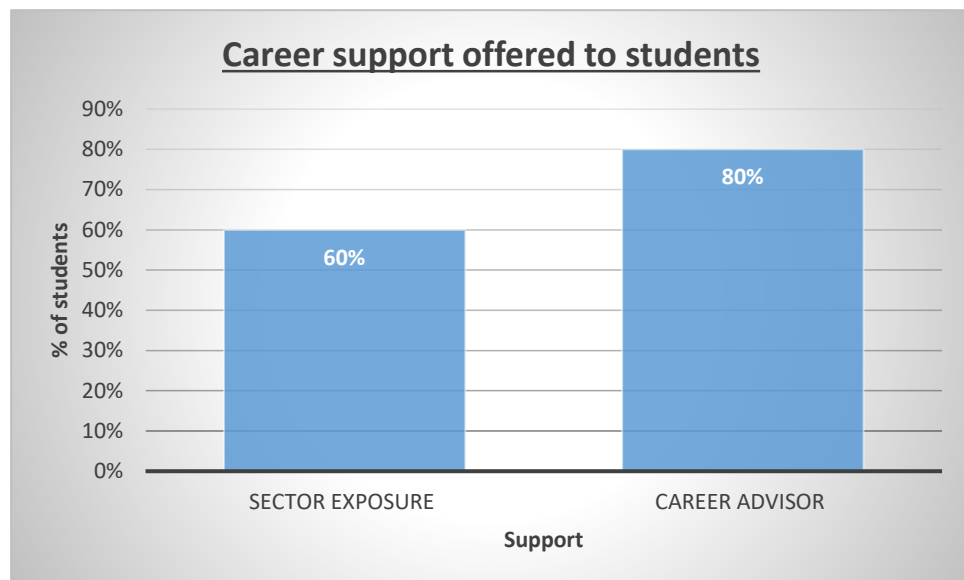


Figure 15: Career support offered and available from a student's perspective

Part 'a' of this question looked into whether the students would have gone in a different career direction had the support been different.

Yes	50%
No	50%

Even though it wouldn't have affected half of those who said "no" 10% of those who said no believed it could have resulted in a different pathway in the same direction had support been different.

Those who said "yes" believed that, if they had known about options and opportunities earlier, it would have definitely have helped.

One student, now at Lincoln University, commented: “There were a lot of opportunities I didn’t know about. I thought it was all just rural banking and fertiliser reps, as that is what all my brother’s friends have done since university.” This showed that this student had limited exposure to options within the industry and that peers and those known to individuals can have a large impact on perception and understanding.

Part ‘b’ looked into what year level the support was seen to be provided to students:

Before Year 11	55%
Year 11 on	25%
Year 13 only	10%
Unsure	15%

The responses between the teachers and students were very similar, with the majority of support before students hit their senior years.

Part ‘c’ looked in more detail at the nature of the support being experienced:

- One-on-one support when in final years
- At subject choice time, the career advisor was available
- Agriculture classes had the most exposure to speakers
- Attendance to career days from Year nine.

The final part ‘d’ gave students the chance to highlight any support they would have like to have seen:

Advice earlier	25%
Practical experiences & more exposure	47%
Unsure	28%

As they say, you ‘don’t know what you don’t know’ and this may well be the case for the 28% who were unsure of what they would have liked to have seen.

Practical experiences – including more speakers, awareness and insights, speakers who could link the subjects at school to career opportunities and share their experiences – were wanted by students. More exposure and talks at the whole school level was also wished for. This ensures that not only those in agriculture classes are being made aware of opportunities.

This question was also put to industry leaders and *Figure 16* shows their responses. Thirty-seven per cent of industry leaders interviewed believed the wrong messages were being shared due to misunderstandings and narrow thinking. Big picture thinking was seen as being needed to broaden teachers' awareness and view agriculture and the red meat sector as acceptable career paths.

Telling our sectors story more to provide more information and guidance opportunities was one wish 37% of teachers agreed on. This links well to the 26% wanting to see more relevant pathway and options information provided.

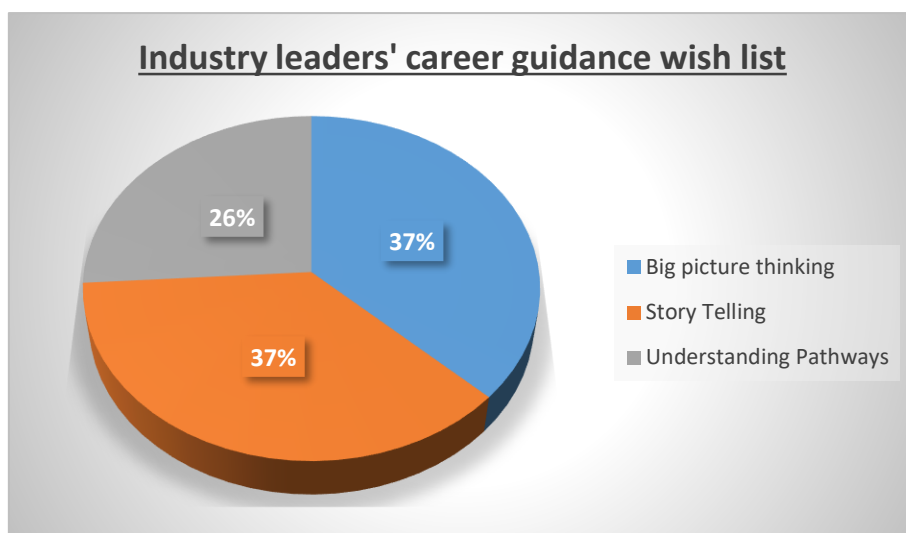


Figure 16: Industry leader responses to question 10, (appendix 12.2)

Two of the major questions which all three groups were asked as part of the interviews were:

- ***From your experience, what major factors do you believe need more emphasis in order to encourage students to enter the red meat sector?***
- ***What are your thoughts on the future needs of the skills workforce across the sector for the next 5-10 years?***

The following is an analysis of these two questions and contrasts between the responses. *Figure 17, 18 and 19* demonstrate what each group of interview participants believed needed more emphasis in order to encourage young people into the red meat sector.

The three groups highlighted similar themes and beliefs. Storytelling, which included 'painting the picture', was one of the main factors as identified by 81% of industry leaders. Telling and informing students, along with the general public, about the details behind food production in our country will enable opportunities within the sector to be understood more clearly and opportunities to be obvious. Twenty per cent of teachers believed this was a factor missing from the current models. There would also be benefit from the attendance of more industry employees at career days.

Understanding and clarity

Each group believed clearer messaging was needed to help highlight opportunities and provide options for future workforces. Some believed this needs to be a change in attitudes and a clearer pathway to success (like the dairy industry) is needed. As quoted from the *ANZ Bank New Zealand (2015)*, pathways are still unclear:

"One of the challenges for the industry is providing much greater visibility of successful pathways to ownership, and an understanding of the factors that make them successful. While the dairy industry model is visible to red meat farmers, most can't see how it applies to them."

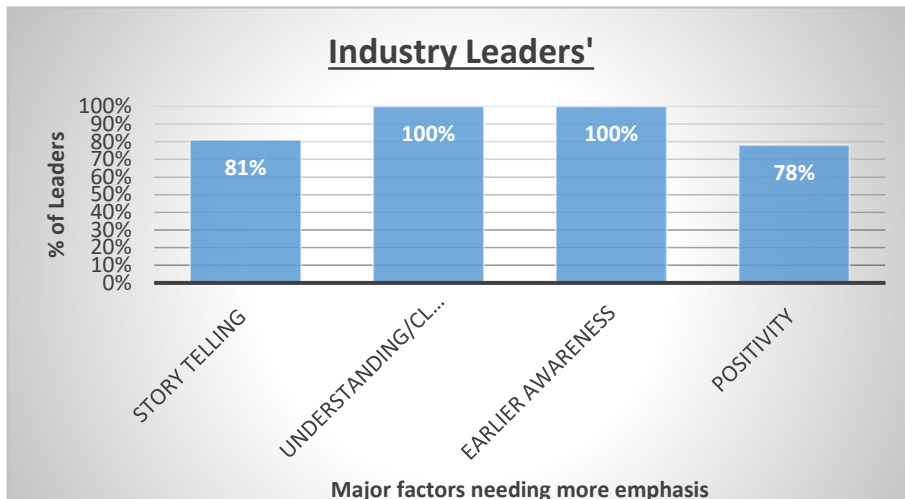


Figure 17: Industry leader's responses to the major factors they believe need more emphasis in order to encourage young people into the red meat sector

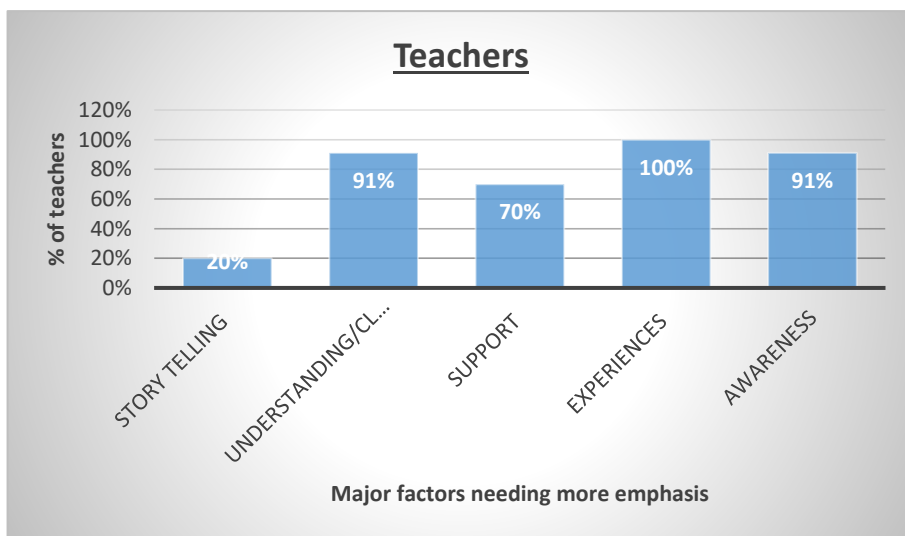


Figure 18: Teachers responses to the major factors they believe need more emphasis in order to encourage young people into the red meat sector

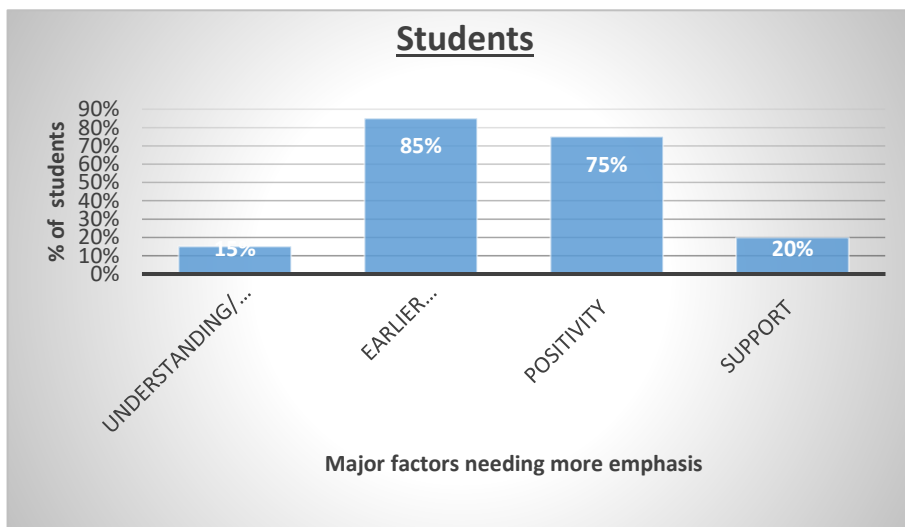


Figure 19: Students responses to the major factors they believe need more emphasis in order to encourage young people into the red meat sector

Earlier awareness

One-hundred per cent of industry leaders, 85% of students and 91% of teachers indicated that earlier awareness was required for success.

Bowen and Esters identified that parents and friends of individuals have the most influencing effect on career choices. Being able to provide information for students to consider earlier in life was also likely to ensure that influencing people could contribute to and complement learnings (Bowen and Esters, 2005).

Every school student learns and remembers from events through life and it's these events that can spark interest in the sectors they go to work for (KPMG, 2017). Engagement from pre-school level is possible.

New Zealand Young Farmers and the Red Meat Profit Partnership (RMPP) recently introduced a new project into primary schools. It involves schools teaching a science unit (to 11-13 year olds) on how farmers use science and innovation to increase productivity and profitability. With each school needing to visit a local sheep and beef farm, the project is looking for a pool of top farms. (RMPP, 2017). The RMPP along with New Zealand Young Farmers have some great programmes available at high school level (New Zealand Young Farmers, 2017). Making students and teachers aware of these resources and that they are funded is the challenge.

Experience and awareness, as highlighted in the generational differences chart (West Midland Family Centre (n.d.)) are what Millennials will continue to seek. They want career development in order to succeed. If they don't find it, they will go elsewhere for the experiences and knowledge (Smola and Sutton, 2002). Teachers also require these experiences to be able to share the messages. One Otago high school teacher said *"the challenge is fitting extra activity into an already busy work load and demand... We (business teachers) went on a day visit to farms a number of years ago and it really opened my eyes to what farming actually involved and how everything else linked"*.

Communication in person is very important to Millennials, who have been brought up with media and electronics' as their main form of communication. (The Centre of Generational Kinetics, 2016). Communication needs to be positive. For the past decade, red meat production has been perceived as the poor cousin to a booming dairy industry. Dairying has generally delivered greater returns and been seen as a key pillar in New Zealand's export drive (ANZ Bank of New Zealand 2014).

It was expressed by all groups that more pride and confidence in the sector needs to be displayed to make it a welcoming sector and one the next generation wants to be part of.

Teachers said more resources and links to farms were needed, alongside awareness of what was out there. After speaking to a New Zealand Young Farmer employee, more than 20 schools within Otago/Southland and 100 teachers had engagement with the organisation (see Appendix 13.0). However, responses to resources *"have been very hit and miss"*. They experienced both *"really positive"* feedback, as well as feedback suggesting that *"there wasn't room in curriculums to add the resources on offer"* (RMPP 2017). Common responses experienced also included *"will look at it for next year"*.

I asked the New Zealand Young Farmer employee what they thought drove these responses:

“I feel we could be getting this response as it is not filtering down from the top or just taking a while to get here. We (the industry) are all about talking the talk and producing facts and figures, however schools don’t relate to those. For this to change there needs to be change from the top to ensure teachers have the knowledge to change the perception of “agriculture”. Most teachers I have come across are not off a farm and have no knowledge of this but yet they are teaching the subject.”

They often came across teachers who teach their preferred subject area, and Agriculture is an add on. There is a general feeling from the industry leaders and New Zealand Young Farmers that there is a shortage of good quality Agriculture teachers who have more than just a practical focus and realise the opportunities and technical perspective.

The New Zealand Young Farmer member recalled one particular response they received about a class of Agriculture students: *“Our students are the bottom of the bunch; I don’t see them grasping this resource”*. They then continued to comment that, like the 70 participants I interviewed, the world is changing and we need to move with the times. The New Zealand Young Farmer employee quoted *“we need to change. It is us teaching the next generation. They won’t change if we don’t and I believe a big part of this is starting with teachers. It is a very challenging time but I feel perseverance will pay off”*.

Our mind-set has to change, not about the importance of school, but about the value of learning what happens outside of school. Eighty per cent of learning happens informally in families and in communities (Lenz, 2015).

In summary and drawing on the data shown in *Figures 20-22*:

- Positive highlights of the sector
- Need recognition that ‘it’s not just the physical side of farming’
- Clearer salaries and pathways
- More real life experiences and exposure
- Support for teachers and connection to farms need to be supported
- Lift in public perception overall required to also educate parents and key influencers
- Sharing opportunities and experiences at grass roots level, across all school levels is required

Fatima Imram quoted: *“Everything starts with agriculture – the land, the people, our food. People become obsessed with careers like becoming a doctor or a lawyer, but agriculture encompasses so many professions and brings them all together”*. It was following her parents' influence that she continued her pathway into the “agri-foods” sector (KPMG, 2017).

Figures 20,21 and 22 demonstrate that, as we move into a changing world of technology and innovation, we need to have a work force which can display the following traits in order to succeed:

- Utilise and understand technology more, while being enablers who are competent but not reliant on technology for all life processes.
- Have a basic understanding of sector needs and big picture awareness of what is happening globally.
- Basic science understanding and know how.
- Have good interpersonal skills, so they can be work as a team, listen, enable, collaborate and negotiate.
- Be innovators with open minds who are creative and forward thinking. Problem solve and adapt to change.
- Have a good work ethic, while being organised, self-motivated and ambitious. Persistence and positivity are also believed to be crucial.
- A passion to learn.

As the 2017 KPMG Agribusiness agenda outlines, both the increase of the rural and urban understanding and engaging with communities sits in the top 30 of priority rankings under the 2017 agribusiness agenda (*KPMG, 2017*).

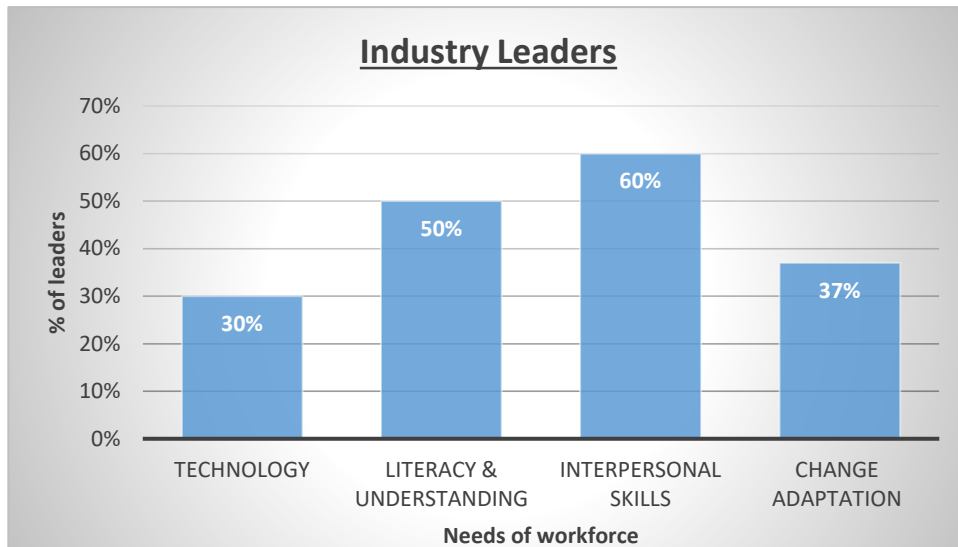


Figure 20: Industry leader's thoughts on the future needs of the workforce across the sector for the next 5-10 years

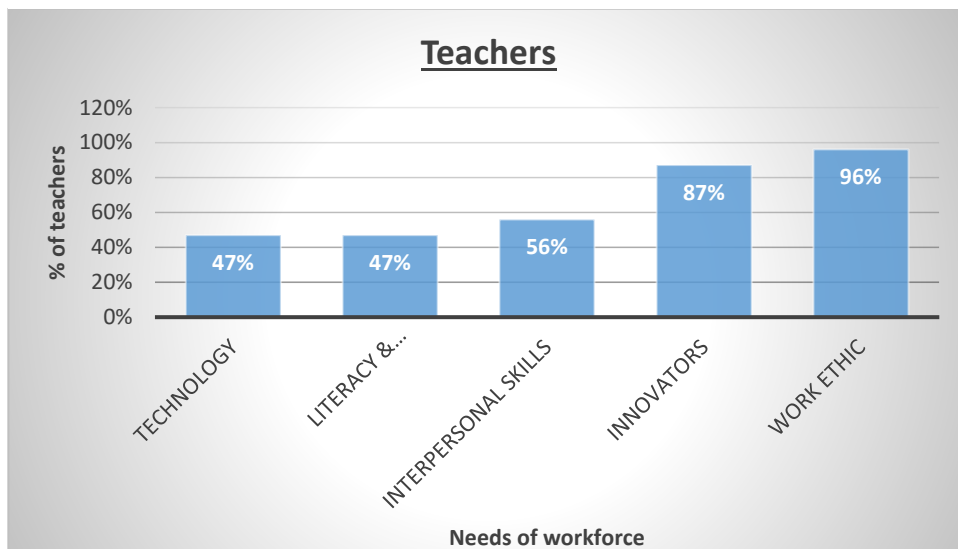


Figure 21: Teacher's thoughts on the future needs of the workforce across the sector for the next 5-10 years

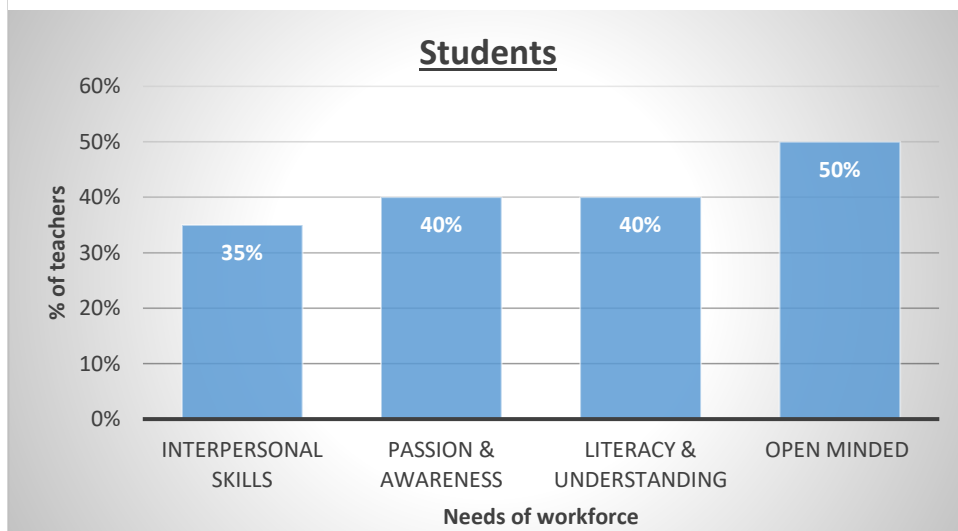


Figure 22: Students thoughts on the future needs of the workforce across the sector for the next 5-10 years

8.0 Recommendations

The following are my recommendations to industry:

- As Bowen and Ester (2005) identified in their study, parents and friends of individuals surveyed had the most influencing effect on career choices. Therefore, education into the local society about the industry should occur. This appears to also be the case for those who were part of this research study. There is a need to break down mentality of the red meat sector and what it actually entails. I recommend that a rebranding of the term 'red meat sector' to 'agri-foods production'.
- Creating mentality for change is also going to require 'educating the educators'. This is just as important as education of the students. I recommend a mentor programme between, farmers, industry and high school teachers is put in places to tell our story and the positives of our sector. This would be from a practical grass roots level, through to technical, so as to incorporate all subjects into the overall big picture. I recommend that each school has four mentors, covering science, agribusiness (maths/economics), leadership and practical skill sets.
- More teachers are likely to promote a career within the sector if the students show an interest in factors they believe are related to the sector. This limits promotion due to poor awareness of opportunities in some situations. Industry leaders from our leading industry good bodies, processing plants, farm services and agribusinesses need to be going into schools. My recommendation would be a roadshow-type event, so it's time efficient for all parties.
- More research into generational change and its effect on our industry needs to occur to identify where the majority of changes are occurring – not only with regard to teachers and students, but also with farmers and red meat sector employees.
- We need to maintain confidence and positivity across the industry, both inside and outside the farm gate. Markets and price will drive a lot of the confidence within the industry, however, highlighting the lifestyles and sector capabilities should be portrayed to our communities more through media and everyday living.
- I recommend industry collaborates under one umbrella to ensure representation of all parts of the sector are present at school career days and information evenings. I would like to see national and local field days (Mystery Creek field days, Central Districts field days, South Island Agricultural field days and Southern field days) have a late night as part of their event. From 5.30-8pm, for example, where high school students can attend field days' sites as an organised, structured visit. All sites would be focused on the students for this period and be able to provide exposure and real life experiences into careers and opportunities available. Many teachers have identified that they can't fit more into the already weekly school timetable and this would allow it to happen outside schools' normal working hours.
- Creation of an apprenticeship programme to allow for learning on the job and clearer career pathways.
- Continuing the promotion of resources within school through New Zealand Young Farmers and the Red Meat Profit Partnership.

- Simplifying resources for teachers to easily add to lesson plans for Year nine and 10 students, for use in Terms Three and Four. These are the terms focused on seniors for their exams and time for the junior schools is often limited to add new material. Having simple, ready to use resources that allow teachers with no sector knowledge to pick up is essential.
- The creation of a quick facts sheet or booklet for teachers on the answers to frequently asked career choices in relation to the sector.
- More advertising of farm job vacancies and career vacancies within schools and magazines. (like the Outback Australia magazines do at present). I recommend more research into the effectiveness of this type of communication.

Further work

Had time allowed, I would have also liked to look into trends, in regards to where students planned to go following high school, and compare and contrast where the students who attend tertiary institutes originate from relative, to the regions. Then see whether there are any impacts from the regions, in specific having an impact on student engagement and involvement in the sector.

9.0 Conclusion

This research study started out with three main goals and five objectives. Over the course of this research process I believe I have accomplished all of these.

- To complete an extensive research project and produce a finished report. This will be the largest report and research activity I have ever completed.
- Study a topic I am passionate about but have no real knowledge of.
- Provide some insights for both my employers Beef + Lamb NZ, New Zealand Young Farmers and the wider red meat sector to see more of the next generation actively taking up careers within the sector.

On completing this research, I have been surprised to find that awareness of the red meat sector is not only limited among those from an urban back ground, but also those from rural backgrounds.

The quantity of data acquired will provide insights for my employers Beef + Lamb New Zealand, New Zealand Young Farmers and the wider red meat sector. There is already great work being done in the sector and the findings from this study should enhance the success of that work.

The objectives of this research were to:

- Gain a better understanding of high school teachers and students awareness of the red meat sector.
- Provide facts to identify the correctness or misunderstandings of current sector stigmas.
- Identify what needs more emphasis or needs to change in order for the next generation of students to enter careers within the sector.
- Recommend solutions to current issues. in regards to career uptake within the sector.
- Highlight what is being done well and what should continue.

My methodology and empathy interviews ensured that the basis of my findings came directly from teachers and students, without being selective in their answers, like a survey with multi-choice options would likely have done.

My main findings:

- Awareness of the red meat sector is primarily focused at farm level and not the big picture.
- The stigma of agriculture. Practical occupations still aren't seen as prestigious as those with technical expertise or those historically pushed like doctors, lawyers and scientists.
- More emphasis on telling our story and pathways through the sector are needed to help lift awareness and clarify understanding.
- Some great programmes under the Red Meat Profit Partnership and New Zealand Young Farmers are being pushed for schools to uptake. However, more awareness of the sector needs to be built and confidence within the sector itself is required.
- We need to continue embracing changes for positive rewards and take advantage of the skill set the next generation bring with them.
- Understand the differences in generations working in the sector is important for success, collaboration and advancement.
- I believe all these factors contribute to the overall workforce employment numbers.

Key recommendations are:

- Rebranding of the term 'red meat sector' to 'agri-foods production'.
- We need to change the mentality of our industry and tell our story more effectively.
- Create an apprenticeship programme to allow for learning on the job and clearer career pathways.
- Educate the educators.
- Collaborate for more exposure opportunities.
- Simplifying systems and resources.

10.0 Limitations and Considerations

Consideration should be given to the data set coming primarily from the southern South Island of New Zealand. Had time allowed, a bigger data set could have been gained from a wider demographic across New Zealand. I see this as one of the major limitations to my method.

The interviews took place during August-September, which did limit the availability of teachers, being so close to the end of Term Three.

The initial approach to get schools on board could have been done differently, to more clearly specify the need required. Specifying the want for non-agriculture related teachers who had contact at a whole school level would have been an advantage.

Having 47% of students already being connected to the red meat sector prior to high school could be seen as a limitation.

One of the main limitations to my report was the time being underestimated in regards to analysing and completing a data collection of this scale. This is the first time I have completed a research study of this magnitude and my personal competence should be taken into consideration.

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Appendices

1.0. Email to industry leaders

Dear

The reason I am contacting you as I am part of the current Kellogg rural leadership course for 2017. We are currently working on our projects as part of the programme which finishes in November. The project topic I have chosen is "Understanding the awareness of the red meat sector at secondary school level".

My aim is to try and identify why there is a shortage of young people entering the red meat sector through determining the level of awareness held by high school education providers and the skills needed within the sector.

As part of my research I would like to understand the skills believed to be needed across the red meat sector over the next 5-10 years and see what unique and similar skills emerge. From this information I then plan to approach teachers who teach those skills to get an idea of the level of understanding they have when it comes to the red meat sector. I also plan to talk to past high school students to get their experiences.

Would you be willing to be part of my research by answering some questions?
The types of questions I would like to ask will cover these areas:

- Your background and current positions
- Skills needed within your part of the sector
- The future of the workforce over the next 5-10 years

There will be 10 questions which will take approximately 20-30 minutes to complete.

If you would be keen to be involved I would like to arrange a phone or skype interview with you prior to September 11th.
If time doesn't allow I am also happy to email you the questions and for you to return them to me that way.

Why is this topic important to me?

Throughout my day to day job (as Beef + Lamb Extension Manager for Southern South Island) I liaise with business professionals from both on and off farm.

During this time, I have seen that there is a real shortage of younger people coming into the red meat sector.

By trying to understand why this might be the case and whether there is a connection between messaging from high school level, I believe will help to answer part of this unknown.

I thank you very much for your time and wisdom.

If you have any questions on my research, please don't hesitate to contact me.

Regards Olivia Ross
Kellogg Rural Leader 2017
0278017868

2.0. Industry leader questions

Name:

Contact Details:

1. How long have you been in the workforce?
2. How long have you been in your current position?
3. What is your current role?
 - a. What are the main skills used in your current position?
 - b. From what you learnt at high school to where you are now what kind of relationship between what learnt and position you're in, do you see?
4. Where did you attend high school?
 - a. What year did you leave high school?
5. While at high school can you recall how teachers actively encouraged careers within the red meat sector?
6. Did you complete studies following high school? If Yes, please provide a brief description.
7. What pathway did you take to end up part of the Red Meat Sector?
 - a. What do you believe are the top 3-5 skills needed within the red meat sector today? (can be viewed from your part of the sector)
8. Your thoughts on the future needs of the workforce across the sector for the next 5-10 years?
9. If you were to advise a current high school student who was interested in the red meat sector.
 - a. What subjects would you recommend they take?
 - b. What skills would you encourage them to develop?
10. Is there anything that wasn't provided at high school in regards to career guidance, that you wish was?
11. From your experience, what major factors do you believe need more emphasis, in order to encourage young people to enter the Red Meat Sector?

3.0. High school principal letter Re: Seeking permission to interview teachers

Dear (School Principal)

My name is Olivia Ross and I am contacting you in regarding a research project I am currently completing as part of the 2017 Kellogg Rural Leadership Programme.

The Kellogg Rural Leadership Programme is an established and respected programme in the rural and primary industry sectors. It has a large alumni who have achieved success in leadership roles across New Zealand agriculture.

As part of the programme we are required to complete a research project. This project is to help us gain greater insights of the primary sector.

The project topic I have chosen is:

“Understanding the awareness of the Red Meat Sector at secondary school level”

My aim is to try and identify why there is a shortage of young people entering the red meat sector. By determining the level of awareness held by high school education providers, it will allow me to understand whether or not there is a connection between high schools and the number of people entering the sector.

At present I am interviewing industry leaders from across the red meat sector. I am asking them to determine what they believe the top skills needed for careers within the sector are for the next 5-10 years. As part of the research I would then like to interview a 3-4 teachers from each high school who teach subjects that relate directly to the skills industry leaders identify.

The interview process I plan to undertake will be a face to face interview where possible at a suitable time for the interviewee in mid to late September. Each interview will be on a one by one basis and is expected to take no longer than 30minutes.

The interviews will be semi structured and all answers will be kept confidential as well as the school's identification.

Following results from industry leader interviews we will be able to determine subject' teachers required for the interview process. I would then like to contact you in early September to get the names and contacts of teachers teaching these subjects if your school is happy to be involved.

Your involvement would require:

- Being contacted in early September for names and contacts of teachers from your school who teach subjects identified as essential by industry leaders.
- Allowing me to come to your school to conduct the interviews when most convenient for all involved.
- Giving permission for your school's location and other information other than identity to be used in my final report.

On the next page you will find a permission form. If your school is happy to be involved.

Able to fill it out and send back to me by the 1st of September it would be much appreciated.

If you have any questions regarding my research, please don't hesitate to contact me.

Many thanks for your valuable time.

Regards Olivia Ross

Kellogg Rural Leadership Leader 2017

rosso_liv@hotmail.com – 0278017868

Interview Information and Permission Form Kellogg Rural Leadership Programme 2017

Please email back to rosso_liv@hotmail.com by September 1st 2017

School Name:	
School Location:	
Principal Name:	
Principal Contact Number:	
Principal Contact Email:	

School Size:	
Single or Mixed Sex:	
Year Levels Taught:	
Core Subjects Offered:	
Additional Subject Options Offered:	
Give permission to be contacted to interview teachers. Yes/No	
Signed..... Principal	

Thank you for your response. I wish to conduct these interviews in a manner which is most convenient for your school. Olivia Ross

4.0. High school teacher interview questions

Name:

1. Background and general information regarding the interviewee
 - a. Where did you grow up?
 - b. Where did you attend high school?
 - c. What qualifications have you obtained since high school?
 - d. How long have you been teaching?
 - i. How long have you been teaching at this school?
2. What subjects do you teach/specialise in?
3. What questions do you get asked most often by students regarding future careers?

View of the sector:

4. What first comes to mind when you hear the word agriculture?
5. What first comes to mind when you hear the “term” primary sector?
6. What first comes to mind when you hear the word red meat sector?
7. What career opportunities are you aware of within the red meat sector?
8. How would you describe the scope of the red meat sector?
9. Do you actively encourage careers within the red meat sector to your students?
 - a. If YES – How are you promoting/encouraging this?
 - b. If No – What are the factors preventing, you from encouraging?
10. What students do you advocate for careers in agribusiness?
 - a. Are there any particular groups of students to whom you advocate careers in agribusiness?
 - b. How would you describe these students?
11. At what year level do students start to be counselled at school towards careers?
12. What are your views on careers within the trades industries (i.e. builders, plumbers, etc.)?
 - a. How are these portrayed to students?
 - b. Can you explain how a career within the trades sectors is seen compared to a university qualification?
13. From your experience, what major factors do you believe need more emphasis in order to encourage students to enter the red meat sector?
14. What are your thoughts on the future needs of the workforce across the sector for the next 5-10 years?

5.0 Advertising flyer used to reach teachers outside of targeted high schools



**HIGH SCHOOL
TEACHERS
WANTED**

Core Subject Teachers required for interviews to assist a current Kellogg Rural Leadership programme research project

Be involved in identifying the gaps within the red meat sector

If you can assist please contact Olivia Ross 0278017868

6.0 Advertising Flyer used for getting students participation



WANTED

Past & Current
HIGH SCHOOL Students
Tell us your career pathway & win if you left school in last 3-4 years or in your final years I need you!!!

Complete a 10 minute ph interview & go in the draw to win a hamper of red meat sector products.
First 10 recieve subway/mcdonald vouchers

Be involved in identifying the gaps within the red meat sector

If you can assist please contact Olivia Ross 0278017868

7.0 Past and final year high school student interview questions

1. Background and general information regarding the interviewee
 - c. What high school did you attend?
 - d. What year did you finish high school?
 - e. What were the main subjects you studied in your final year at school?
 - f. What other qualifications have you obtained or working towards since leaving high school?
 - g. For those in workforce:
 - i. How long have you been in the workforce (full-time paid employment)?
 - ii. How long have you been in your current position?
 - iii. What is your current role?
 - iv. Main skills used in current position
1. What kind of relationship is there between what you learnt at high school and your current position?
2. When you went to high school did you know what career you wanted to do?
 - a. Yes/No
 - b. and if so what was it?
3. What subjects your strongest?
 - a. What subjects were your favorites?

View of the sector:

4. What first comes to mind when you hear the word "agriculture"?
5. What first comes to mind when you hear the term "primary industry"?
6. What first comes to mind when you hear the term "red meat sector"?
7. What kinds of jobs do you think there are in the wider red meat sector?
8. While at high school can you recall how teachers actively encouraged careers within the red meat sector?
9. How were careers within the trade industry (i.e. builders, plumbers, etc.) portrayed to you while at school?
 - a. Can you explain how they were seen compared to doing a university qualification?
10. What career support was offered and available to you?
 - a) If this support was different do you believe it would have resulted in your doing something different now?"
 - b) If this support was provided: At what year level was the support provided?
 - c) What was the nature of this support?
 - d) Is there anything that wasn't provided at high school in regards to career guidance, that you wish was?
11. From your experience, what major factors do you believe need more emphasis in order to encourage students to enter the red meat sector?
12. What are your thoughts on the future needs of the skills workforce across the sector for the next 5-10 years?

8.0. Industry leader top skills believed needed with the red meat sector today

Theme	Includes	Percentage of leaders believed needed as skill
Interpersonal skills	Communication, people skills, psychology – understanding customers, values, empathy, listening, human resource skills	70%
Technology/ IT	Understanding of technology ability, keeping up to date with technology advancements, basic computer skill set, innovation, favourable and adaptable to future shaping	60%
Critical Thinking and Analysis	Data interpretation, ability to analysis, problem solving, strategic thinking, creative thinking, measurement and reporting skills.	59%
Other Skills	Specialised skills including animal health, machinery, stockmanship, goal setting, environmental management, trade	52%
Sector knowledge and understanding	Practical understanding, production systems awareness, science understanding, specific area specialists	51%
Core Values	Work ethic, motivation, positivity, passion, acceptance, responsibility, honesty, willingness, open minded, supportive natures, commitment	48%
Leadership Skills	Enabling skills, relationship building, getting most out of people, empowering, ability to manage, ability to connect and learn	37%
Financial Skills	Basic financial literacy, planning and understanding of business, profitability drivers	33%
Markets	Understanding of products, end-users and consumers. Customer focus and awareness	22%
Research	Research skills, developers	15%

9.0. Potential job opportunities, career New Zealand (2015)

Agricultural Engineer

Mataaro Ahuwhenua

Agricultural engineers perform and supervise engineering work related to the use and development of agricultural land, buildings, machines and equipment.

Graduate agricultural engineers usually earn

\$45K-\$50K per year

Agricultural engineers with four to six years' experience usually earn

\$70K-\$100K per year

Job opportunities

Average

Training usually required

3-4 years

Agricultural Technician

Kaihangarau Ahuwhenua

Agricultural technicians perform tests and experiments, and provide technical support to assist agricultural scientists in areas such as research, production, servicing and marketing.

Agricultural technicians with up to five years' experience usually earn

\$45K-\$65K per year

Senior agricultural technicians with five or more years' experience usually earn

\$55K-\$85K per year

Job opportunities

Average

Training usually required

3 years

Environmental Scientist

Kaipūtaiao Ao Tūroa

Environmental scientists study the environment and how plants, animals and other organisms are affected by it. They also study external influences, such as pollutants, and advise how to avoid or reduce harmful effects on the environment.

Environmental scientists usually earn

\$49K-\$130K per year

Job opportunities

Good

Training usually required

3-9 years

Farm Worker

Kaimahi Pāmu

Farm workers help farmers with a variety of tasks, including raising and caring for livestock, repairs and maintenance, tractor work, and other farming activities.

Farm workers usually earn between

\$40K-\$53K per year

Job opportunities

Good

Agricultural/Horticultural Consultant

Kaitohutohu Ahuwhenua

Agricultural/horticultural consultants provide professional advice to farmers and growers on how to improve the profitability, efficiency and sustainability of their farm management systems. They also help to develop business and financial plans.

Agricultural/horticultural consultants with less than five years' experience usually earn \$45K-\$80K per year

Agricultural/horticultural consultants with more than five years' experience usually earn \$80K-\$150K per year

Job opportunities

Good

Training usually required

3 years

Shearer

Kaikuti Hipi

Shearers cut the wool from sheep with electric clippers (hand-pieces) or manual clippers (blades).

Shearers with one to three years' experience usually earn \$30K-\$50K per year

Shearers with more than three years' experience usually earn \$50K-\$100K per year

Job opportunities

Good

Agricultural/Horticultural Scientist

Kaipūtaiao Ahuwhenua

Agricultural/horticultural scientists study farm animals, soils, pastures and crops to improve their yield, health and quality, and to prevent pests and disease.

Agricultural/horticultural scientists usually start on \$55K-\$67K per year

Agricultural/horticultural scientists with several years' experience usually earn \$70K-\$100K per year

Job opportunities

Good

Training usually required

5-9 years

Farmer/Farm Manager

Kaiahuwhenua/Kaiwhakahaere Pāmu

Farmers/farm managers are responsible for the planning, management and day-to-day running of farms. Farmers own the land they farm, while farm managers manage farms for farm owners.

Farmers/farm managers usually earn \$60K-\$64K per year

Job opportunities

Good

Crop Farm Worker

Kaimahi Huangakai

Crop farm workers assist with the raising and harvesting of fruit, vegetables and grains on farms and in orchards, vineyards and hothouses. They may work year-round or do seasonal work.

Crop farm workers usually earn \$16-\$18 per hour

Crop farm workers who supervise others usually earn \$18-\$25 per hour

Job opportunities

Good

Wool Classer

Kaimāhiti Wūru

Wool classers sort wool into categories according to breed of sheep, age, colour, length and micron (fibre thickness). They ensure contamination is removed from the wool, and complete identification and documentation prior to sale.

Wool classers are usually paid per fleece, but typically earn the equivalent of \$35-\$55 per hour

Job opportunities

Average

Training usually required

1-2 years

Agricultural Field Representative

Māngai Taiao Ahuwhenua

Agricultural field representatives sell products and services to clients such as farm equipment, and advise on crop and livestock management.

Agricultural field representatives with less than two years' experience usually earn \$45K-\$55K per year

Agricultural field representatives with two to three years' experience usually earn \$55K-\$70K per year

Job opportunities

Average

Training usually required

1-3 years

Crop Farmer/Crop Manager

Kaiahuwhenua Huangakai/Kaiwhakahaere Huangakai

Crop farmers/crop managers plan and manage food plant production on farms and in orchards, vineyards and hothouses.

Crop farmers/crop managers usually earn \$50K-\$100K per year

Job opportunities

Good

10.0. Email questions sent to New Zealand Young Farmers member

The aim is and study question for this research is to identify why there is a shortage of young people entering the primary sector through determining the level of understanding our high school education providers' hold.

My goals of my research are:

- *To complete an extensive research project and produce a finished report. This will be the largest report and research activity I have ever completed.*
- *Study a topic I am passionate about but have no real knowledge of.*
- *Provide some insights for both my employers Beef + Lamb NZ, New Zealand young farmers and the wider red meat sector to successfully see the next generation actively up taking careers within the sector.*

The objectives of this research through one on one discussions and research are:

- *Gain a better understanding of high school teachers and students awareness of the red meat sector.*
- *Provide some facts to identify the correctness or misunderstandings of current stigmas known throughout the sector.
These include agriculture as a subject been seen as a drop out subject and easy way out of other classes. That the red meat sector and jobs on farm are for non-academic students with no direction.*
- *Identify what needs more emphasis or needs to change in order for the next generation of students to enter careers within the sector.*
- *Recommend some solutions to current issues in regards to career uptake within the sector.*
- *Highlight what is being done well and what should continue.*

As young farmers work with schools it would be great to get some insights to what you guys are seeing:

Below are a few questions to allow me to understand a little better:

- What engagement do you have with schools?
- How do schools find out about resources and the sector?
- What resources are available and how are they accessed?
- What responses are like from schools and teachers?
 - Why you think you are getting these responses?
- With agri-kids and teen ag are they getting good uptake of urban students as well as rural?
 - If no, then why do you believe this is?
- What do you believe is working well?
- What do believe needs to change?
- At primary school level what's available?

Many Thanks for your time