

**Western Cape Department of
Agriculture**



Elsenburg Agricultural Training Institute



JET Education Services



**Impact Evaluation of the
Structured Agricultural
Education and Training
Programme (SAET),
Sub-Programme:
Higher Education and
Training (HET),
for the period
2009 to 2014**

**Policy Summary
Executive Summary
Summary Report**

Compiled by JET Education Services
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Acronyms

B.Agric	Bachelor of Agriculture
CEO	Chief Executive Officer
DAFF	Department of Agriculture, Forestry and Fisheries
EATI	Elsenburg Agricultural Training Institute
EQUASA	Equine Qualifications Authority of South Africa
FET	Further Education and Training
HCDS	Human Capital Development Strategy
HEI	Higher Education Institution
HET	Higher Education and Training
ICT	Information and Communications Technology
HoD	Head of Department
LoI	Language of Instruction
OLS	Ordinary Least Squares
NPV	Net Present Value
NQF	National Qualifications Framework
NSC	National Senior Certificate
PDI	previously disadvantaged individuals
QLFS	quarterly labour force survey
RoI	Return on Investment
SAET	Structured Agricultural Education and Training
Stats SA	Statistics South Africa
SUN	Stellenbosch University
TVET	Technical and Vocational Education and Training
WCDoA	Western Cape Department of Agriculture
WIL	Work-Integrated Learning

Policy Summary

The Western Cape Department of Agriculture's (WCDoA's) **Structured Agricultural Education and Training (SAET) Higher Education and Training (HET) sub-programme** aims to provide managerial and skills training in agriculture, informed by industry and societal needs, which contribute towards ensuring a skilled and capable workforce, inclusive growth path, vibrant, equitable and sustainable rural communities and food security for all. In 2015, an **impact evaluation** was commissioned to *determine the extent to which the SAET HET offerings answer to the needs of the sector and contribute to youth employment*. The evaluation covered four HET programmes offered at Elsenburg Agricultural Training Institute (EATI) and students who graduated between 2009 and 2014:

The HET programmes have **clear positive economic impacts** for graduates and the agricultural sector and should be retained: The majority (84%) of graduates are employed and 86% of employed graduates are working in the agriculture sector, whilst a number of other graduates are working in related industries with linkages to agriculture. Encouragingly, 71% of graduates feel they receive fair compensation for the work they do and 93% of graduates see themselves working in the agricultural sector in 10 years time.

These **positive impacts vary per programme**: Higher Certificate graduates are more likely to be unemployed (29%) and discouraged work seekers (7%) than those of the other programmes. More practical exposure and opportunities to gain work experience would assist Higher Certificate graduates to find work. More class contact time and support from lecturers for Diploma students would be beneficial in balancing the theory and practical components of this programme. **Stronger and formalised academic support** for students would help increase throughput and certification rates and should be a priority for all programmes.

The **positive economic impacts also vary according to race, gender and home language**. Graduates from non-traditional farming backgrounds, including previously disadvantaged groups, find it more difficult to find work as they have limited contacts and personal and professional networks. The college could do more to help all graduates find relevant work via work readiness and career guidance programmes in addition to the informal initiatives currently in place.

There is a **cohort of graduates** (around 10%) **who wish to pursue further studies**. To support them, EATI should negotiate with universities in the Western Cape and beyond to accept EATI B.Agric graduates for their honours programmes. Also, the SAET HET programmes **do not offer a pathway** for graduates who specialise in Agricultural Extension **to become registered Agricultural Extension Officers**. The potential to offer this should be explored. At the least, pathways should be established (via other institutions) for interested graduates to pursue agricultural extension as a career.

Graduates report that they are **using the skills they gained** from Elsenburg in their work and feel that their **knowledge and skills are valued**. Employers also gave generally positive feedback. EATI has a **solid reputation** and is widely considered to be the best agricultural training institute in South Africa. EATI has a track record of offering **practically-focused training**, which industry stakeholders value. However, there was a call for **greater practical emphasis and more workplace exposure** (particularly in the Higher Certificate). There is a need for succession planning in the agricultural sector, which EATI is well placed to assist with, as Elsenburg graduates are deemed to be suitable management material, due to the practical experience and industry exposure that they receive whilst studying.

The **HET programmes** could be **better aligned to the needs of the agricultural industry** by: placing greater emphasis on business, managerial and entrepreneurial skills; responding to the emerging challenges of water scarcity and irrigation management; seizing opportunities in agri-processing; placing greater focus on the incorporation of new technologies; and offering modules/short courses

focused on niche industries and high value products (berries, nuts, olives etc.). A number of these proposals are identified in the WCDoA's own planning documents and strategies should be executed to implement them. Much as SAET HET is an initiative of the WCDoA, students come from and return to all South African provinces and the needs of the agricultural industry in other provinces should also be considered.

A stronger relationship between the college and industry would be beneficial for various reasons including: engagement on strategic issues; in-depth and sustained involvement in curriculum development/updating; work-integrated learning; and employment of graduates, etc. It is recommended that a **senior manager be appointed (or assigned) to manage industry relationships** and put formal structures and agreements in place in this regard.

Executive Summary

Background and purpose of the evaluation

This report presents an impact evaluation commissioned by the Western Cape Department of Agriculture (WCDoA) of the Structured Agricultural Education and Training (SAET) Higher Education and Training (HET) sub-programme. The main purpose of the SAET HET sub-programme is to promote “sound and integrated managerial and skills training in agriculture with advanced specialisation in area specific fields of excellence informed by industry and societal needs” (EATI, 2015). This evaluation focused specifically on four HET programmes which are offered at Elsenburg Agricultural Training Institute (EATI): **B.Agric** (three-year programme at NQF level 6); **Higher Certificate** (two-year programme at NQF level 5); **Diploma** (one-year programme at NQF level 6); and **Certificate in Horse Mastership** (18-month programme in line with the Equine Qualifications Authority of South Africa (EQASA) syllabus).

The main purpose of the evaluation was to determine the extent to which the HET offerings answer to the needs of the sector and contribute to employment of youth. The evaluation covered graduates who completed HET studies between 2009 and 2015. The questions to be answered were:

- What have been the social and economic impacts of the training programmes on participating candidates?
- To what extent and how did the acquired skills and knowledge of the students benefit their employability?
- To what extent and how did the acquired skills add value to the skills base of the agricultural sector of the Western Cape and thereby improve the sustainability of farms?
- What changes, if any, should be made to the current B.Agric, Higher Certificate and Diploma programmes to improve: efficiency; effectiveness; impacts at the level of significant longer term effects of HET students contributing to and strengthening the agricultural sector; sustainability in terms of cost-effectiveness and developmental returns of investment?
- Assessment of the SAET training model and/or system: what must happen for the system to work, or to work better?

Literature review

A brief literature was conducted to provide a sound, contextual foundation for the evaluation. Other South African graduate tracer studies were reviewed to provide an understanding of relevant themes and issues affecting graduate employment. A review of the Western Cape agricultural sector and the policy context was also undertaken to contextualise the college’s HET programmes.

Methodology

This is an ex-post **impact evaluation**, investigating the long-term effects of the SAET HET sub-programme on graduates, as well as the broader impact on the Western Cape agricultural sector. It also includes elements of a **design evaluation** as it considers the design of the HET training offerings and how they may be optimised. As there was no provision for a control group, secondary data from the national census and quarterly labour force survey (QLFS) provided a basis for rudimentary comparisons of employment and income data with individuals of similar age and qualifications.

The following data sources and data collection methods were used:

- Literature and document review;
- Graduate survey—98 respondents (conducted telephonically);
- Employer survey—nine respondents (conducted telephonically);
- Semi-structured interviews with:

- 15 graduate respondents (conducted telephonically and face-to-face);
- 10 students who did not complete their studies (conducted telephonically and face-to-face);
- 11 industry stakeholders including government (2), higher education institution (HEI) (3) and industry body (6) representatives (conducted face-to-face);
- six interviews and two focus groups with college staff (conducted face-to-face);
- Comparison with secondary data from national surveys.

Key evaluation findings

Profile of graduates

There were two data sources for information regarding the demographic profile of graduates: student records provided by the college and data from the graduate survey. The majority of graduates were male (67-69%) and white (63-65%). Student demographics varied by programme, with participation of coloured students higher in the Higher Certificate and Diploma programmes (24% and 16% respectively) and participation rates of Black/African students highest in the Higher Certificate 22%.

Just over half of the graduates surveyed were born in the Western Cape (53%) and a higher proportion of graduates who were employed (72%) remained in the Western Cape after graduating.

Relevance and alignment of HET programme with industry needs

Feedback from industry stakeholders, employers and college staff presents mixed reviews regarding the college's relationship with the agriculture industry. Industry is involved with the college in a variety of ways including: providing industry exposure, promoting job opportunities, providing input regarding curriculum alignment with industry needs and serving in advisory roles. However, some feedback suggests that the relationship between the college and industry stakeholders is somewhat strained at present. Some industry stakeholders expressed frustration with processes related to engagement with the college and a desire for the college to be more open and receptive to input from industry.

Areas of greatest need for HET training identified by agricultural sector stakeholders related to managerial, human resource management, business administration and entrepreneurial skills. The shortage of agricultural extension officers was also seen as a major gap. The greatest challenges reportedly faced by the sector related to water scarcity and irrigation systems and keeping up with technological advancements. Agri-processing, expanding exports and high-value products like berries, olives and tree nuts were identified as areas that offer opportunities for growth. The majority of the industry stakeholders charged the college to do more to align the curriculum to these needs and opportunities. Nonetheless, the majority of industry stakeholders agreed that EATI has a very solid reputation and is still the best agricultural college in South Africa.

Efficiency of HET programme processes

Lack of effective marketing and recruitment strategies for the HET programmes were identified as a gap. Although the college is generally well-known to those within the Western Cape agriculture sector, there are missed opportunities to attract individuals who are not specifically from this sector, and specifically, individuals from previously disadvantaged backgrounds, who are interested in agriculture.

There was also a major gap identified in terms of student support services available at the college, particularly academic support (specifically in the areas of mathematics and science) and career guidance. In particular, students from previously disadvantaged backgrounds mentioned difficulties in transitioning into the college environment and felt they needed more academic support. The language of instruction also appeared to place non-Afrikaans speakers at a distinct disadvantage.

There were mixed reviews regarding the social and cultural environment of the college: 10 of the 25 students interviewed felt the environment was exclusive and unwelcoming to minority groups and did not foster integration. Students of varying racial and cultural backgrounds and shared these views.

Feedback related to the quality of teaching at the college and practical components of the HET programmes was largely very positive. More than 80% of graduates agreed that their lecturers had good subject knowledge, practical skills and experience working in agriculture and 86% of the graduates surveyed felt there was a good balance between classroom and practical work. Staff and industry stakeholders held a slightly different view; many felt that students should be gaining more practical exposure and experience. Industry stakeholders and staff also viewed staff shortages as one of the greatest challenges faced by the college; they believe this creates unmanageable workloads and impacts on lecturers' ability to deliver modules effectively, ultimately compromising the quality of teaching and learning taking place at the college.

HET programme effectiveness

The majority of graduates felt that their studies had adequately prepared them for the workplace, and indicated that they were using the skills and knowledge gained at EATI on a regular basis in their current jobs. Feedback from employers confirms that EATI graduates have good theoretical knowledge, practical skills, and communication and leadership skills. The employers identified business skills, preparedness for the work place, and awareness of climate change as weaker areas of graduate performance.

The findings regarding employment are overwhelmingly positive. Of the surveyed graduates, 93% were employed in some capacity or studying. The majority, 63%, were employed in a permanent capacity. Just 6% were unemployed and 1% had given up seeking work. Of the four programmes, Higher Certificate graduates (29%) were considerably more likely to be unemployed or discouraged work seekers (7%) than graduates from other programmes¹. The vast majority of employed graduates were working in the agriculture sector (86%) and others were employed in industries with linkages to agriculture (i.e. manufacturing agricultural products and providing services to the agricultural sector). In terms of time taken to find employment upon graduating: 53% of graduates had a job lined up before completing their studies and a further 20% found work in less than one month. Qualitative feedback indicates that graduates from non-traditional farming backgrounds, and specifically previously disadvantaged groups, faced more challenges in finding employment.

Impact on graduates

A limited number of graduates divulged salary information (37). Amongst these, monthly gross income ranged from a low of R1 001-R1 500 to a high of R54 168-R62 500 per month. The greatest proportion of graduates (43%) was earning R16 001-R30 000 per month. More than 30% received additional benefits which included a vehicle, medical aid and provident fund/retirement annuity contributions, and between 20% and 29% received free housing, a cellphone, travel allowance and farm products. In terms of occupational levels, 41% of graduates indicated that they were employed as junior/mid-level managers, 39% as skilled labourers and 13% at senior manager level. The graduate survey respondents largely felt that they were following the career path they wanted to, were fairly compensated, were making an important contribution through their work and had a future in the agricultural sector.

Return on investment

Using the graduate survey data, the return on investment (RoI) of the SAET HET programmes was calculated via different methods. The earnings function method reveals that B.Agric graduates earn

¹ Unemployment and expanded unemployment (including discouraged work seekers) rates for the other programmes was between 0-3%.

more than the graduates of other HET programmes: individuals who hold a Diploma earn approximately 30% less, those who hold a Higher Certificate earn approximately 55% less and those who hold a Certificate in Horse Mastership earn approximately 66% percent less than those who hold a B.Agric qualification.

RoI was also calculated via the net present value (NPV) using a 6% discount rate². Returns to investment in agriculture education per capita were calculated over a 10 year period and revealed a negative RoI for the first three years for graduates who hold a B.Agric or a Diploma, with the cumulative NPV turning positive from the 4th year onwards. With regards to the Higher Certificate and Certificate in Horse Mastership qualifications, cumulative NPV is negative for the first two years, turning positive in the 3rd year. The results show that investing in agricultural education and training, with a specific focus on SAET HET programmes offered at Elsenburg, is viable and favourable from a RoI perspective.

Recommendations

A number of **programme specific recommendations** are suggested. Firstly, the theoretical, practical and work integrated learning (WIL) components of the Higher Certificate and Diploma programmes could be better balanced by introducing more practical exposure and opportunities to undertake WIL into the Higher Certificate and allowing for more classroom time in the Diploma. EATI should also explore the potential to offer an HET qualification which allows for students to become Agricultural Extension Officers, or at least establish pathways (via other institutions) for graduates to pursue this as a career. Additionally, the college should negotiate with universities in the Western Cape and other provinces to accept B.Agric graduates directly into their Honours programmes.

A closer, more functional relationship with the agricultural industry could facilitate more extensive practical and work exposure for students and elicit regular input regarding the alignment of the curriculum with industry needs. Appointment or assignment of a senior manager - to manage relationships, put formal structures and agreements in place, and facilitate regular meetings and communication - would be beneficial in this regard.

More practical, hands-on exposure and WIL opportunities should be incorporated into the HET programmes (particularly the Higher Certificate) to better prepare students for the workplace. One means of achieving this could be to involve students more in the day-to-day running of Elsenburg farm, which is a key resource that EATI has at its disposal.

Formal **academic support** should be provided to students to help them succeed and complete their qualifications, with a particular focus on bridging and academic support programmes (specifically in mathematics and science). Formal **career guidance** and **job readiness** programmes should also be put in place to assist graduates, particularly those from previously disadvantaged backgrounds, to find employment. **Student record keeping** should be **improved** and **graduates tracked** into employment.

Additionally, **filling vacant positions** at the college as a matter of urgency (particularly the Academic Head and student support staff) is a priority which would reduce lecturers' workload and stress and provide the organisational and support functions needed to get the college running smoothly. More resources should also be put into **marketing the SAET HET programmes and recruiting** high-quality students, particularly females and students from previously disadvantaged backgrounds.

² The base rate used by National Treasury.

Summary Report

1 Introduction: Background and Purpose of the Evaluation

This is an evaluation commissioned by the Western Cape Department of Agriculture (WCDoA) which aims to determine: “the extent to which the Higher Education and Training offerings answer to the needs of the sector and contribute to employment of youth in the sector” (WCDoA, 2015a:1).

1.1 Background to the SAET HET sub-programme

Structured Agricultural Education and Training (SAET) is a programme implemented by the Agricultural Development and Support Services Branch within the WCDoA. The purpose of the SAET programme is “to facilitate and provide structured agricultural education and training in line with the Agricultural Education and Training Strategy to all participants in the agricultural sector in order to establish a knowledgeable, prosperous and competitive sector” (WCDoA, 2015b:88).

More specifically, SAET plays a role in fulfilling the Human Capital Development Strategy (HCDS) of the WCDoA through “ensuring a skilled and capable workforce to support an inclusive growth path and vibrant, equitable and sustainable rural communities and food security for all” (EATI, 2015). In a broader economic perspective, the objective of SAET is to contribute to the success of the Western Cape’s economic development and intention to increase agricultural production by at least 10% over the next 10 years (WCDoA, 2015b).

SAET includes two sub-programmes: Higher Education and Training (HET) and Further Education and Training (FET). This evaluation focuses on the HET sub-programme which is delivered via four programme offerings at Elsenburg Agricultural Training Institution (EATI) leading to an HET qualification:

- **Higher Certificate:** This two-year programme leads to a certification at National Qualifications Framework (NQF) level 5. A maximum of 80 first-year students are enrolled annually. Candidates must be in possession of a National Senior Certificate (NSC) or equivalent qualification and achieve the minimum entrance requirement of a score of 3 (40-49%) in 4 subjects recommended for university admission. Students specialise in two of the following areas: agricultural extension; agronomy; animal production; pomology; vegetable production; and viticulture.
- **Diploma:** Students may enrol for this one-year programme following completion of the Higher Certificate with a mark of at least 55%. The Diploma leads to a qualification at NQF level 6. Three specialisations are possible: agriculture; agricultural extension; and cellar technology. A maximum of 20 students are enrolled per specialisation per year (60 in total) and students participate in a work placement programme.
- **Bachelor of Agriculture (B.Agric):** This is a three year programme which leads to a certification at NQF level 6. A maximum of 150 first-year students are enrolled annually. Candidates must be in possession of an NSC or equivalent qualification and have achieved the minimum entrance requirement of a score of 4 (50-59%) in 4 subjects recommended for university admission. Students select from the following specialisations: plant production; animal production; animal and plant production; cellar technology; cellar management; agricultural extension and plant production; and agricultural extension and animal production.
- **Certificate in Horse Mastership:** This programme follows the Equine Qualifications Authority of South Africa (EQASA) syllabus and generally lasts 18 months. Up to 15 students are enrolled annually. Candidates must be in possession of an NSC or equivalent qualification. The programme consists of five modules which lead to an EQASA International Level 1 Coach Certificate, which is the first of three international level coach qualifications (subsequent qualifications are not offered at EATI).

1.2 Purpose of the evaluation

The above-mentioned HET courses have been offered for a number of years and have entailed considerable investment by the WCDoA, as well as the individuals who have undertaken them. The WCDoA wants to establish: whether HET graduates leaving Elsenburg College are equipped with the required knowledge and skills base to be absorbed by the agricultural sector; the impact of these graduates on the agricultural sector once they are employed; and the impact of their HET studies on the lives of the graduates. Therefore, an evaluation was commissioned which aims to (WCDoA, 2015a):

- Assess alignment of the training programme with the needs of the agricultural industry;
- Determine what difference the training has made in the lives of students and the agricultural industry;
- Determine the relative contribution of different aspects of the various curricula within the HET programmes;
- Report on shortcomings;
- Provide evidence-based recommendations about the design of the programme, achievement of its outcomes and its ultimate impact.

The following **evaluation questions** were identified (WCDoA, 2015a):

- What have been the social and economic impacts of the training programmes on participating candidates?
- To what extent and how did the acquired skills and knowledge of the students benefit their employability?
- To what extent and how did the acquired skills add value to the skills base of the agricultural sector of the Western Cape and thereby improve the sustainability of farms?
- What changes, if any, should be made to the current B.Agric, Higher Certificate and Diploma programmes to improve: efficiency; effectiveness; impacts at the level of significant longer term effects of HET students contributing to and strengthening the agricultural sector; and sustainability in terms of cost-effectiveness and developmental returns of investment?
- Assessment of the SAET training model and/or system: What must happen for the system to work or to work better?

2 Key Findings from the Literature Review

In order to provide context for the evaluation, a brief literature review was conducted to understand: 1) the policy context and implications for the SAET HET sub-programme; 2) the agricultural context in the Western Cape to which the SAET seeks to align its education and training offerings; and 3) relevant themes and issues that emerge from other South African graduate tracer studies relating to employment. Key findings with regard to the latter are presented below, while the other components of the literature review can be found in the report Annexures (E and F).

Understanding youth unemployment is critical to understanding labour market dynamics and graduate employment. Unemployment rates among young people aged 15-34 years are substantially higher than that of adults in South Africa (Statistics South Africa (Stats SA), 2015a). During 2015, youth unemployment in the Western Cape was 29.9%, whereas the rate among adults aged 35-64 years was 13.6%. Although the Western Cape boasts the lowest unemployment rate amongst all South African provinces, the youth unemployment rate is still a substantial 16.3% higher than the rate for adults in the region. These higher rates suggest that young people are less able to contribute to the economic advancement of the province, and ultimately the country, which is of concern as they represent around 34% of the population in the Western Cape (Stats SA, 2015b).

Biographical factors such as race and age, socioeconomic status, provision of career guidance and job search strategies emerged as major themes affecting employability and income, in a systematic review of 14 South African graduate tracer studies conducted by Botha (2015). This meta-analysis revealed that there are multiple factors which influence a graduate's trajectory after graduation. Some research suggests that unemployment among recent graduates is increasing, as more students are facing difficulties with finding employment after graduation. Bhorat (2004) and Kraak (2005) cite the mismatch between skills being required by employers and those developed at higher education (primarily university) level as one of the contributing factors. However, more recent studies postulate that graduate unemployment in South Africa is often inflated and does not distinguish between university graduates and those from FET colleges (Altbeker & Storme 2013; Van Broekhuizen 2013). While these studies present contrasting views, they both highlight that South African graduates from universities and FET colleges face uncertainties in the labour market.

Given the history and legacy of apartheid, racial background influences employment status. An HET tracer study conducted throughout 151 technical colleges in South Africa revealed a large discrepancy between the proportion of black (21%) and white (58%) graduates who were employed (Cosser, 2003). Similarly, Stats SA highlights that tertiary educated white youth experience higher rates of employment as compared to their black counterparts (Stats SA, 2015a).

The abovementioned study details other challenges faced by graduates from the technical colleges. Graduates' employability is influenced by their being well equipped to enter the workplace. Having work experience, receiving career guidance and work readiness support, including guidance regarding job search strategies, are crucial to the process of preparing a graduate for the labour market. The technical college's tracer study found that 78% of the graduates traced did not gain work experience while enrolled in college (Cosser, 2003). Students who do not gain work experience before entering the workplace are likely to find it more difficult to navigate and survive in a new environment. Soft skills, for example, communication skills, leadership, team work and problem solving skills, contribute to ensuring that graduates are well prepared. Schulz (2008) underscores the importance of soft skills to employability as they complement the technical knowledge which students receive at the tertiary level.

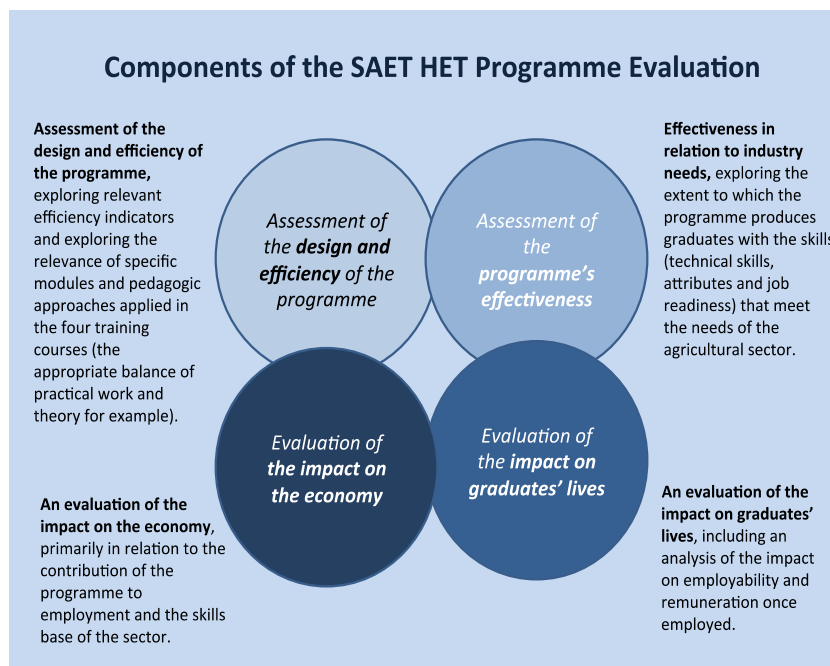
In addition to enhancing soft skills, work experience is also important for building professional networks and, as Cosser (2003) highlights, most graduates secure employment through personal contacts. However, this method of securing employment may only prove fruitful for well-networked graduates: black graduates typically have fewer networks within the private sector which ultimately influences their ability to find employment (Kraak, 2010). Thus, a lack of professional networks is likely to exacerbate the challenges faced by black graduates seeking work.

3 Methodology

This is an **impact evaluation** investigating the long-term effects of the SAET HET sub-programme on graduates as well as the broader impact on the Western Cape agricultural sector. The evaluation also combines elements of a **design evaluation** which considers the design of the HET training offerings and how they may be optimised.

The evaluation comprised four components, as indicated in Figure 1 below.

Figure 1: Components of the SAET HET evaluation



There was no provision for a control or comparison group (i.e. students who had not graduated from EATI HET programmes). In the absence of a true counterfactual, secondary data from the national census and quarterly labour force survey (QLFS) conducted by Stats SA were used to compare EATI graduates to those of a similar cohort³. Although generalisations cannot be made on this basis, a comparison of EATI graduates with national averages is still informative.

The following data sources and collection methods were used:

- Literature and document review;
- Graduate survey—98 respondents (conducted telephonically);
- Employer survey—9 respondents (conducted telephonically);
- Semi-structured interviews with:
 - 15 graduate respondents (conducted telephonically and face-to-face);
 - 10 students who dropped-out and did not complete their studies (conducted telephonically and face-to-face);
 - 11 industry stakeholders (conducted face-to-face);
- 6 interviews and 2 focus groups with college staff (conducted face-to-face);
- Comparison with secondary data from national surveys.

The sampling frame for the graduate survey was 603 individuals⁴. A sample of 500⁵ was drawn, with an anticipated 200 respondents⁶. However, the actual number of respondents was lower due to challenges including: limited student data and contact information; telephone numbers that were out of service or no longer existed; graduates who refused to participate or who scheduled interviews but did not answer subsequent calls; and graduates who did not answer their phones even after six attempts at contact. Attempts were made to increase the response rate by placing notices about the survey on social media platforms (Facebook and Twitter). The small sample size means that data collected from the student survey is not generalisable. However, comparing the demographic characteristics of the graduate survey respondents to those of the broader graduate population (see Section 4.1) reveals that they are similar, suggesting that the survey respondents were fairly representative in these respects. The main concern is selection bias. The distribution of

³ i.e. persons of the same age range, who spoke the same home languages, who studied agriculture and had attained the same highest educational level.

⁴ i.e. all HET graduates during the period 2009-2014 for whom the college had contact information.

⁵ The remaining 103 graduates were contacted to pilot the survey instrument or were contacted for semi-structured interviews.

⁶ The predicted response rate was based on similar studies carried out by JET.

graduates who responded to the survey may not be representative of all graduates in the sampling frame. For example, graduates who refused to participate or did not respond may be low or high income earners.

The number of employer survey respondents was also low due to similar challenges. EATI had limited information regarding employers and was only able to provide contact information for one. Thus, employer contact information was sourced via the graduate survey. As such, potential employer respondents were limited to the employers of the graduates surveyed. A database of 26 employers was compiled, of which nine completed the survey. Although repeated attempts were made to contact all 26 employers, 10 were deemed unreachable after six unsuccessful attempts. Six employers who were unaware of the college, directly related to their employees (as in the case of a family farm) or who had employed only one EATI graduate were excluded and one refused to participate. The majority of employers surveyed were farms or private enterprises based in the Western Cape, with the remainder were based in the Eastern and Northern Cape. Five of the nine employers surveyed were involved in the pomology, viticulture or viticulture industries and four of the nine employers represented companies with 50 or more employees.

The 11 industry stakeholders who were interviewed represented: two government agencies (WCDoA and the Department of Agriculture, Forestry and Fisheries (DAFF)); three higher education institutions (HEIs) (Stellenbosch University, University of Pretoria, Cape Peninsula University of Technology); and six industry bodies (VinPro, AgriSA, South African Table Grape Industry, Hortgro and GrainSA). A number of the industry stakeholders who were interviewed were farmers in a private capacity.

Further information about the sampling strategy and data collection procedures can be found in Annexures A and C respectively.

4 Evaluation Findings

This Chapter reports on the key findings of the evaluation under the following headings: 1) Profile of graduates; 2) Relevance and alignment of the HET programmes with industry needs; 3) Efficiency of the HET programme processes (recruitment; teaching and learning; theory, practical and work-integrated learning; student support; and social and cultural environment); 4) Effectiveness (number of graduates; alignment between graduates skills and industry needs; graduate success in finding employment); 5) Impact on graduates (employment status; income; job satisfaction; and social benefits); and 6) Return on investment (RoI).

4.1 Profile of graduates

Our intention was to profile students and graduates. However, because the college had been using a manual student record system until recently, very limited data was available relating to students who enrolled in but did not complete HET programmes. Thus we can only present information regarding the profile of graduates.

4.1.1 Demographic profile

The two data sources for information regarding the demographic profile of graduates were student records provided by the college and data from the graduate survey. The findings from both are discussed below. The extent to which the findings from these two sources are similar gives an indication of the extent to which the survey respondents were similar to the broader student population. The demographic characteristics of both groups are summarised in Table 1 (overleaf):

- Males constituted around two thirds of Elsenburg graduates: the student population and survey sample were well aligned with respect to gender;

- A similar proportion of graduates (69%) were White. Coloured and Black/African graduates constituted around 10-15% of the population and there were very few Indian graduates: the survey sample was generally well-aligned but a slightly higher proportion of Black/African graduates were surveyed. However, this may be because race information was not available for some of the student records;
- College records specified the preferred language of instruction, whereas the survey data pertained to home language: Afrikaans was the preferred language of instruction for the majority of graduates (76%). Somewhat fewer Afrikaans home language speaking graduates were surveyed;
- B.Agric was the most common qualification, with around 60% of graduates holding this qualification: the survey sample was generally well-aligned but with slightly fewer Diploma and more Certificate in Horse Mastership graduates;
- The number of graduates has remained relatively stable over time, with a slight increase in 2014: the survey sample was somewhat skewed to more recent graduates, which was to be expected as their contact details are more up to date.

Table 1: Demographic profile of graduates, source: supplied by EATI and graduate survey data

	College records	Graduate survey respondents
Number of graduates*^	648	114
Number of records/ respondents^	637	98
Gender	Male 67%; Female 26%; no information 6%	Male 69%; Female 31%
Race	White 63%; Coloured 13%; Black/African 9%; Indian 0.2%; no information 8%	White 65%; Black/African 19%; Coloured 13%; Indian 1%
Language	(chosen language of instruction): Afrikaans 75.6%; English 20.3%	(home language) Afrikaans 66%; English 15%; isiXhosa 9%; isiZulu 4%; SeSotho 4%; SePedi 1% (languages spoken) English 99%; Afrikaans 91%; plus various others
Programme(s)	B.Agric 60%; Diploma 12%; Higher Certificate 23%; Certificate in Horse Mastership 5%	B.Agric 60%; Diploma 9%; Higher Certificate 24%; Certificate in Horse Mastership 8%
Year of graduation	2009 - 15%; 2010 - 16%; 2011-16%; 2012-17%; 2013 -14%; 2014 -22%	2008 – 1%; 2009 – 5%; 2010 -11%; 2011-20%; 2012-15%; 2013 – 21%; 2014 -17%; 2015-6%

*The evaluation ToR reports that there were 748 graduates between 2009 and 2014 but fewer student records were provided. ^Some graduates completed more than one programme (e.g. Higher Certificate graduates that went on to complete the Diploma) – such graduates were counted only once in relation to gender, race and language but were included multiple times for each programme they completed and each year of graduation (except the graduate survey respondents who were counted once in relation to their highest qualification).

The demographic profile of graduates varies considerably per programme:⁷

- Graduates of the Certificate in Horse Mastership were predominantly female (88%), whereas the graduates of all other programmes were predominantly male.
- White students had the highest participation rates in the Certificate in Horse Mastership and B.Agric programmes (85% and 83% respectively).
- The participation of Coloured students was higher in the Higher Certificate and Diploma programmes (24% and 16% respectively).

⁷ Data tables can be found in Annexure G.

- The participation rates of Black/African students were highest in the Higher Certificate (22%).

Females were somewhat under-represented amongst the Diploma graduates who were surveyed. In contrast, all of the Certificate in Horse Mastership graduates who were surveyed were female. Of the surveyed graduates, the majority of B.Agric graduates respondents were White (72%), with 13% and 12% of graduates describing themselves as Coloured and Black/African respectively. There were fewer White respondents amongst the Diploma graduates; however, Whites were still the majority (56%), followed by Black/African (33%) and Coloured (11%) respondents⁸. In contrast, the Higher Certificate graduate respondents were predominantly Black/African (57%), with 21% White and 21% Coloured. Black/Africans were better represented than other race groups amongst the Diploma and Higher Certificate graduate respondents. All of the Equine Studies graduates who were surveyed were white.

College staff commented that the profile of college students has shifted in recent years from predominately White males from rural, farming backgrounds to a more diverse population that includes females, individuals from previously disadvantaged backgrounds and individuals from urban areas. There was a general understanding that students of colour (referred to hereafter as previously disadvantaged individuals (PDIs)) were more likely to enrol in the Higher Certificate and Diploma programmes because the entry requirements were slightly lower and the educational background of PDIs was often worse⁹ than for White students from more privileged backgrounds. The Higher Certificate also offers a pathway to further studies for graduates of the FET programmes.

The age of the graduate survey respondents ranged from a low of 20 to a high of 52¹⁰. The average age was similar for males and females (27.2 yrs) and slightly lower for White (26.5 yrs) than for Black/African (27.8 yrs) and Coloured (28 yrs) respondents.

4.1.2 Province of origin and current work

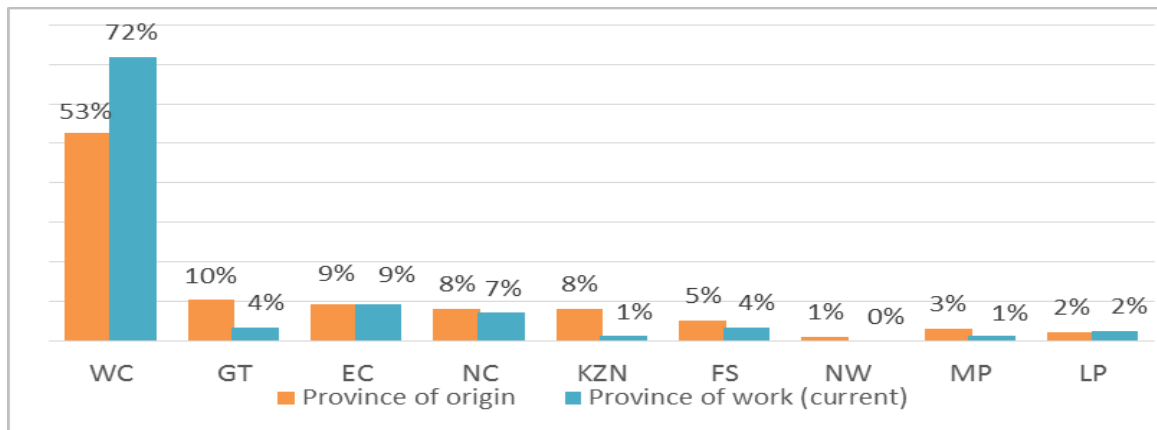
All but one of the graduate survey respondents was born in South Africa and just over half (53%) were born in the Western Cape. The next highest proportion came from Gauteng (10%), the Eastern Cape (9%), the Northern Cape (8%) and KwaZulu-Natal (8%). Every South African province was represented. A higher proportion of employed graduates (72%) remained in the Western Cape to work after graduating. A similar proportion returned to the Eastern Cape (9%) and Northern Cape (7%) and fewer returned to the other provinces to work.

⁸ Data on race was not available from the student records supplied by the college for 27% of Diploma graduates, making it difficult to ascertain alignment between the overall graduate population and the survey respondents.

⁹ Due to historic inequities which continue to the present day.

¹⁰ It is important to bear in mind that this is age at the time of the survey and not at the time of graduation.

Figure 2: Provinces in which employed graduates were born and are currently working



Note: Province of work excludes graduates who are not working.

4.1.3 Educational background and prior work experience

The majority of graduate survey respondents (62%) had Bachelor degrees as their highest qualification. Of the remainder, 9% had obtained a certificate, 16% a Diploma and 10% had a qualification at a higher level than was offered at the college, indicating that a proportion of graduates were inclined towards further study.

Table 6 in Annexure G shows the highest education level of the SAET HET graduates and their parents. In general, the graduates had attained higher qualifications than their parents, indicating that the SAET HET programmes can provide a pathway to a better future for graduates from disadvantaged backgrounds.

Significantly (in light of the literature review finding that work experience affects employability), 51% of the surveyed graduates indicated that they had work experience prior to studying at EATI.

4.2 Relevance and alignment of HET programmes with industry needs

This Section discusses the industry involvement and the relationship between EATI and industry, industry needs, emerging industry trends, EATI's perceived responsiveness to these and alignment of the HET programmes.

4.2.1 Relationship between EATI and industry

Feedback from industry stakeholders, employers and college staff presents relatively mixed reviews regarding the college's relationship with industry. Industry seems to be fairly well involved with the college on a variety of different levels, for example: field trips to farms for students to gain exposure to agriculture; experts coming to present to students on latest trends or practices in the field; industry approaching the college with relevant job opportunities for graduates; input on the alignment of the curriculum with industry needs; contracting consultants from industry to lecture where there were staff-shortages; and serving in advisory roles or on strategic planning committees.

The employer survey data echoes this significant industry involvement, with five of the nine employers surveyed demonstrating involvement either through promotion of job opportunities or providing work experience, bursaries or private funding to EATI.

However, a distinction was made in the feedback provided by college staff between EATI and individual staff members. Staff said the college/industry relationship was mostly built with individual lecturers and many indicated that the relationship between EATI (at a management level) and industry stakeholders was currently quite strained.

“In my situation the farmers don’t prefer to work with people in the college who have really screwed up the connections. So they don’t work with Elsenburg from an Administrative perspective, they prefer to work with me. They only work with me.” (staff focus group)

Industry representatives provided mixed feedback on their relationships with EATI. Many mentioned that they had a good relationship, while others indicated that the relationship between EATI and the commercial sector and industry bodies was quite strained, reinforcing the views of college staff. Some of the industry stakeholders (VinPro, Hortgro, Stellenbosch University (SUN) and AgriSA) indicated that their relationship with EATI had been compromised after unsuccessful attempts to engage with the institution on curriculum and staff challenges. The stakeholders, particularly those from industry bodies, expressed that when they tried to highlight concerns such as high staff turnover or a misalignment of the skills being offered and those needed, EATI was not very receptive. Frustrations were expressed with the processes related to industry involvement or the inconsistent nature of the relationship.

“Elsenburg approached us to assist with lecturing. We’ve had fairly intensive engagement identifying gaps. We’ve made some proposals as to how those gaps could be filled and offered some solutions and that was promised to be taken up. But in the end nothing happened.” (industry body interview)

Similar sentiments were expressed by HEI and industry body stakeholders involved in the curriculum committees. They felt that the curriculum update process was not effectively managed in that the goals were not always clear. College staff and management and industry stakeholders also acknowledged that the curriculum committee had been dysfunctional in recent years, impeding the curriculum update process and ultimately compromising the relevancy of the curriculum.

“The college also has a system of technical committees and curriculum committees that liaise with the industry and formulate curriculum frameworks to ensure that what is taught, and the learning objectives of the college, is aligned with the needs of the sector...but for the last four years the system has not been functional.” (HEI interview)

Most lecturers felt that the college did not do enough to nurture working relationships or create formal agreements with industry stakeholders in terms of their involvement with EATI’s programmes. The lecturers also felt that EATI should be administering those relationships rather than relying on individual staff members. The general consensus among lecturers was that there is immense potential in the further solidification of relationships with industry stakeholders to increase exposure to industry and facilitate access to job opportunities for graduates.

4.2.2 Industry needs and emerging trends

Feedback from industry regarding the needs of the agricultural sector relates mostly to the level and types of skills required of workers. This is confirmed by the employer survey data which indicates that seven of nine employers felt that the sector needs more skilled workers. The majority of the industry stakeholders underscored the specific need for more managers as most of the current production managers and individuals at middle management level were preparing to retire and will need to be replaced. Additionally, some stakeholders pointed out the shift away from family-run farms toward larger commercial entities that need managers to oversee their production.

The main areas identified as skills gaps by industry stakeholders related to interpersonal and communication skills, people-management, business-management and administrative skills. Industry representatives explained that there is a significant need for graduates who are able to interact and work well with others on farms and felt that EATI should place greater emphasis on ensuring that graduates are well prepared in this regard.

Apart from the need for management-succession planning, a gap between the number of Agricultural Extension Officers required and available was mentioned as a major challenge. One industry stakeholder suggested that the current number of Agricultural Extension Officers was about one third of the number needed to provide the necessary support services and guidance which the sector requires. This was seen as a significant gap that needs to be filled, particularly as the land reform programmes get underway and more extension support is needed to aid this transition. The document review (see Annexure E) confirmed this gap, as well as the need for upskilling existing Agricultural Extension Officers.

Water scarcity was identified by a number of industry stakeholders as a major challenge for the agricultural sector in South Africa and particularly for the Western Cape, where the industry is focused heavily on viticulture and pomology. Several industry stakeholders stressed the need for better irrigation systems and for far more research in this area to come up with effective solutions.

In terms of opportunities and emerging trends, three of the industry stakeholders mentioned the berry industry as a highly profitable one which has boomed in recent years. Other high-value products like olives and tree nuts were also mentioned as emerging and growing opportunities.

Additionally, agri-processing was mentioned as an area of great potential in South Africa and many industry stakeholders felt that more should be done to capitalise on this. There was a general perception that opportunities lie in processes further down the value-chain and it was noted that this approach is also a government priority¹¹ and should be a priority for EATI's HET programmes:

“Department of Rural Development and Land Reform are now funding Agri Parks which create a space for agri-processing so even there, there is an opportunity. So there is a whole world of opportunity.” (government interview)

Industry stakeholders also mentioned the importance of keeping up with advancements in production and agri-processing technology. For example, geospatial and satellite technology are major advancements which need to be better incorporated into the agricultural sector in South Africa.

Finally, the export market was seen as an area of great opportunity. Some industry stakeholders mentioned the importance of adhering to regulations and requirements of the external market and of being able to understand and manage processes along the value chain to ensure that products meet the requirements for exporting to these markets.

4.2.3 Responsiveness to needs and opportunities in the sector

In discussing the needs and opportunities in the agricultural sector, the majority of the industry stakeholders charged EATI to do more to address their concerns related to the alignment of the curriculum. Particularly in terms of the skills required at management level, employers and industry stakeholders alike gave the impression that EATI graduates were not ready for the workplace upon leaving and that EATI should focus more on management and business administration skills to better prepare their graduates for work in the industry, particularly at the management level. Some stakeholders suggested that work-integrated learning (WIL) or service learning opportunities would be effective in providing real-life experience in these areas. Another stakeholder mentioned that EATI should also assist students with their own entrepreneurial projects to encourage and develop the entrepreneurial skills the sector so greatly needs.

Nonetheless, industry stakeholders clearly felt that EATI's HET programmes were well-targeted to the requirements for management-level employees in the agricultural sector in terms of

¹¹ The document review confirmed this, see Annexure G.

qualification level and practical training. Many felt that EATI graduates were better geared toward management-level positions in the sector than graduates from other HEIs which have a generally more scientific than practical focus.

Another area in which the college was not meeting the sector's needs is Agricultural Extension. Since the qualification that graduates receive is not sufficient for them to be registered as a professional Extension Officer (this requires a four-year degree), EATI is not supplying graduates who are fully qualified to fulfil this function. Many graduates who specialised in Agricultural Extension expressed frustration that they were not able to take up employment as Agricultural Extension Officers upon completion of their studies. To be eligible, they are required to continue their studies at other HEIs, many of which do not recognise the B.Agric as sufficient for entrance and require that students undertake a bridging year before continuing with an Honours degree. Lecturers commented on the irony of the ineligibility of Elsenburg Agricultural Extension graduates to work for the WCDoA.

"The guys who study 'extension' as a major can't get job because in order to be an Extension Officer you need to have a four-year qualification which we don't offer, these are the requirements from the government. The government doesn't recognise what the government is offering." (staff focus group)

Industry stakeholders also indicated that EATI was not doing enough to respond to the water scarcity crisis by educating students on irrigation practices and management of water resources. One respondent did acknowledge that this topic was included in the curriculum but felt that there should be greater emphasis on it. There was also a general sense that EATI was not doing enough to stay abreast of technological advancements or opportunities in the area of agri-processing.

"In Agri-processing for example, there are several opportunities and that's one area Elsenburg is not doing...How to deal with issues of waste, are there by-products of waste that could be of benefit to the country...I don't think that the curriculum is reflecting the technological advancements in the sector...We are being exposed to some of the geospatial technology and the use of satellite technology and the use of drones in agriculture. Those are some of the things we need to build in." (government interview)

Finally, there was also concern among a number of industry stakeholders that EATI focused too strongly on pomology and viticulture which are generally dominant in the Western Cape (and specifically the geographic surrounds of Elsenburg College) and that more focus should be placed on industries such as livestock and grain production which are more prominent in other parts of the province and country. This is particularly relevant given that a significant number of EATI graduates originated from outside of the Western Cape (see Section 4.1.2).

Another stakeholder mentioned the importance of also focusing on smaller, lesser known industries within the Western Cape such as Rooibos tea, aquaculture/fish farming, etc. He indicated that few Agricultural Training Institutes in South Africa include aquaculture in their curricula and that, being a coastal province, the Western Cape should offer more opportunities for study in this area.

4.2.4 Overall alignment of curriculum to industry needs

In summary, the views of industry stakeholders on the alignment of the SAET HET programmes with industry needs were mixed. Representatives from both government agencies (DAFF and WCDoA) and HEIs mentioned that Elsenburg's programmes were aligned with the needs of the agricultural sector in the province, particularly in the fields of viticulture and pomology.

"If you look at Elsenburg and the viticulture programme specifically, it is operating very well and is up to date with what the industry wants, but this is not happening in all the fields of study..." (HEI interview)

The employer data also supports claims regarding the relevance of the curriculum, with eight of the nine employers surveyed indicating that the curriculum was well aligned with the needs of the agricultural sector.

However, industry representatives and employers highlighted a number of neglected areas, specifically, the emerging challenges of water scarcity and irrigation management, opportunities in agri-processing and alternative forms of agriculture and incorporation of technological advancements. Representatives from government and industry bodies and employers alike noted that entrepreneurial and managerial skills, while essential in the agricultural sector, were not emphasised enough. Five of the nine employers surveyed suggested that more should be done in building relationships with industry to link students to opportunities to undertake WIL.

Despite these shortcomings, the majority of stakeholders interviewed agreed that EATI had a very solid reputation and was, nevertheless, the best agricultural college in South Africa. The viticulture and pomology programmes were mentioned as main contributors to this and the Agricultural Extension programmes were well respected amongst HEIs. However, it is clear that more recent developments (or perceptions of such) such as high staff turnover, appointment of inexperienced staff and a somewhat strained relationship between the college and industry were tarnishing the reputation and respect for EATI in some areas.

4.3 Efficiency of HET programme processes

This Section discusses the efficiency of SAET HET processes and in particular: marketing and recruitment; student support; the social and cultural environment of the college; teaching and learning and the composition of programmes in terms of theory, practical and WIL; and staff support and development.

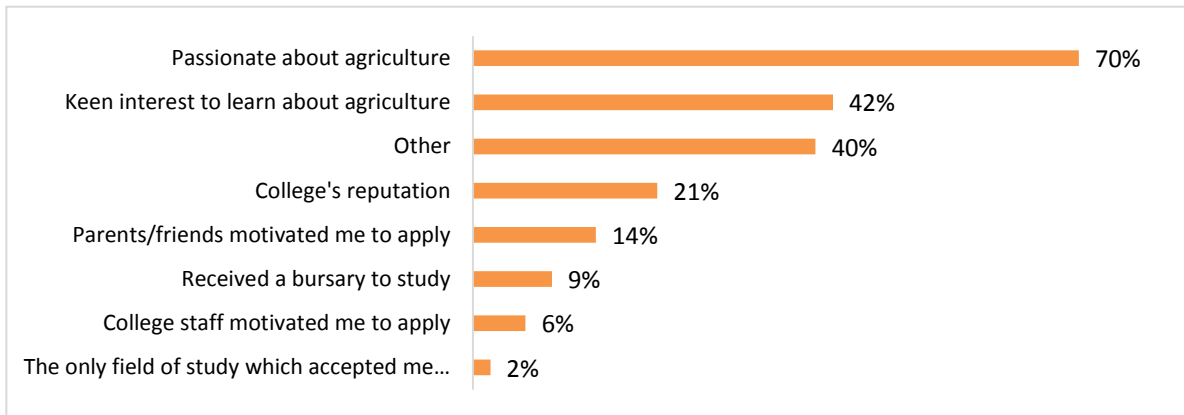
4.3.1 Marketing and recruitment

Findings from the graduate survey and interviews with college staff identify marketing and recruitment as a major gap. Although the college is generally well-known to those within the Western Cape agriculture sector, there are missed opportunities to attract individuals who are not specifically from this sector, and specifically, individuals from previously disadvantaged backgrounds.

The majority (55%) of graduate survey respondents had heard about EATI via friends and family. Other marketing mediums which appear to have been effective were the internet (14%) and college visits/open days. Advertisements barely featured. These findings were echoed in the qualitative student interviews. Males (62%) and White (67%) graduates were more likely to have heard about EATI via friends and family. This was also the main information source mentioned by Coloured students (39%). In contrast, Black/African graduates were more likely to have heard about EATI via the internet (37%) than through friends and family (26%). Additionally, 63% of graduates who were born in the Western Cape had heard about EATI via family and friends, versus 47% of graduates originating outside of the province. These findings suggest that EATI needs to do more active marketing and recruitment of individuals from non-traditional and specifically previously disadvantaged backgrounds.

In terms of motivation to apply to EATI, the graduate survey suggests that these are predominantly intrinsic: being passionate about agriculture and interested to learn about agriculture were the main motivators. The other commonly cited reasons were the college's reputation; motivation of friends and family; and the college's emphasis on practical learning. Of the 25 students who were interviewed, nearly half mentioned a family background in farming and personal experience in working on farms as their main motivation for applying to EATI. Another motive students mentioned was the desire to obtain a formal qualification in the field of agriculture.

Figure 3: Motivation for applying to Elsenburg College, source: graduate survey



4.3.2 Student support services

Student support was identified as lacking by students and college staff. Of the 25 students interviewed, nearly two thirds indicated that EATI did not offer the support students needed. The types of support students identified mostly related to financial support, academic support, career guidance and psycho-social support.

4.3.2.1 Financial support

The graduate survey suggests that the main source of student funding was bursaries, obtained by 42% of respondents, followed by parents and family, reported by 41%. A breakdown by race reveals that Black/African (100%), Coloured (92%) and Indian/Asian (100%) graduates were much more likely to have received a bursary; all but one of these graduates had financed their studies via a bursary, whilst only 14% of White students did so.

Of the graduates who received bursaries, 68% received a bursary from the WCDoA. The other 32% received bursaries from a range of sources, including other government departments, local municipalities, corporates (Nedbank), private companies and industry bodies (Hortgro and Cape Winemakers Guild).

Feedback from qualitative interviews suggests that most students who received bursaries felt that the funding covered all of their core costs, including tuition, meals and accommodation. However, a problem area identified by five of the students was the lack of transportation available to and from campus. They identified this as a barrier to attending practicals - often held off-site - and a negative impact on their participation and performance.

“There were no vehicles from theory class to practicals. The timetable didn’t accommodate that very well. Transportation was not provided. Students like myself would arrive late and practical would be halfway through...The train station is 30 minutes away and the taxis only travel at certain times. Transportation is very difficult without a car.” (B.Agric graduate, interview)

Three students who were interviewed mentioned that Diploma students were ineligible for bursaries, constituting a barrier to pursuing further studies. Although students were required to undertake a work learnership whilst studying towards the Diploma, most farms only paid a small stipend that did not cover the cost of tuition. One of these students did not continue studying for the Diploma for this reason. Another student was still in debt to EATI for Diploma tuition fees and unsure how he was going to pay it off.

4.3.2.2 *Academic support*

Although the graduate survey indicates that 36% of students used academic support services available at EATI, the feedback from staff and students in interviews indicates a lack of formal academic support structures. College staff (but not students) mentioned a week-long bridging course available for students before the start of the semester. College staff also mentioned a recently initiated science tutorial programme but said it was too early to determine its impact.

Some students indicated that they were able to approach specific lecturers if they needed extra academic support but the level/amount of support they received was completely dependent on individual lecturers. A number of students, particularly PDIs, mentioned that they needed extra support to successfully transition from Matric into their programmes as the standard was much higher than what they were used to. Science and mathematics were identified as particularly difficult subjects that students struggled with. College staff also noted this and felt that although the entry level requirements for the Higher Certificate were lower than most university programmes, first-year students were expected to perform at a similar level without having the educational background or support required. Many of the lecturers felt that in some ways the college was setting up these students for failure.

“We say it is ok if you come with this lower level of maths, but we are not providing a system to get them from that lower level of maths to the higher first year requirements of maths. It is the same for chemistry, biology, etc. Subjects that are not compulsory for getting into the institute. But when you are here you are expected to have basic knowledge of those subjects.” (college staff interview)

The language of instruction (LoI) was brought up numerous times in student interviews, particularly by Black/African students, as a major barrier to academic success. Of the 25 students interviewed, nine identified the LoI at Elsenburg as a problem, stating they were unable to follow a number of their lectures and practicals which were presented in Afrikaans. The college instituted a new LoI policy in 2016 in response to protests that took place in 2015 and the primary LoI is now English. EATI should monitor the situation to see if feedback changes in response to this new policy and if so, how.

4.3.2.3 *Career guidance*

The graduate survey data indicates that 20% of respondents used career guidance services available at EATI. However, as with academic support, the interviews with students and staff confirmed that the college did not have a formal structure for career guidance. All support services provided were done so informally. Eight of the 25 students interviewed stated that their lecturers (both staff and/or visiting lecturers) did provide some level of informal support by forwarding job opportunities and providing advice on career options and relevant opportunities if approached. Provision of informal career guidance was also confirmed by the college staff.

“I discussed with one lecturer and she referred me to the Cape Winemakers Guild, the chief wine industry and then I applied to the (Protégé Programme) and I got the thing so. Yes I did get some help.” (Diploma graduate, interview)

Two students emphasised that the onus was on students to approach lecturers if they wanted guidance or advice and that support was never offered or given unless requested. In general, the students who were interviewed felt that formal career guidance would have been very helpful.

4.3.2.4 *Psycho-social support*

Only 5% of graduate survey respondents indicated that they received psycho-social support services whilst they were studying; this was the lowest usage of all student support service categories. Lack of psycho-social support services was brought up by five of the students interviewed as well as a few

staff members, who felt that this was a necessary support given the social climate of the college (discussed below) and the unrest that occurred during the previous year.

"I went to Stellenbosch University to see a psychologist, just to see if I was all good, because Elsenburg didn't have anything like that. Elsenburg had this whole initiation thing that they did with the first years and that was rough so after that I went to the psychologist because I thought it affected me because I wasn't as positive and happy as what I was when I first got there and I wasn't as motivated." (discontinued student, interview)

Considering the substantive negative feedback regarding the social and cultural environment at the college (detailed in the next section), it appears that these services would be beneficial for many students.

4.3.3 Social/cultural environment

There were mixed reviews from graduates, former students and staff relating to the social and cultural environment at EATI. About half of the students who were interviewed indicated that they felt EATI's culture was conducive and inviting to students from different backgrounds and that there were positive examples of integration and cross-cultural learning taking place.

"I found it being exposed to different cultures was beneficial, I get to see how other cultures live and the things that they do. Being in a different town from the one you grew up in was nice." (discontinued student, interview)

On the other hand, 10 of the students interviewed as well as a number of staff indicated that the culture at EATI was unwelcoming of students from previously disadvantaged backgrounds and did not foster integration among students. Many non-Afrikaans students expressed that they felt like 'outsiders' on the campus. Most of the negative feedback relates to the attitudes of students on campus. However, five students gave negative feedback regarding the attitudes of lecturers. These students felt that they were treated differently by college staff specifically because of their race or gender and were not granted the same opportunities as students from more privileged backgrounds.

"You heard words that describe the Blacks, the Coloureds. Certain students were close with the lecturers because of the colour of their skin...It was bad in the dining hall, in the computer lab, practicals, everywhere, it was really hard. When there is noise, they complain and said it's the Blacks." (Higher Certificate graduate, interview)

Some college staff concurred that staff at the college generally ignored the varying needs of students from different backgrounds. The unrest in 2015 was seen as a particularly divisive event that negatively impacted EATI, albeit one which forced latent issues to the surface.

The above findings offer insight into how inclusive EATI is towards students from previously disadvantaged backgrounds. There is a fair amount of financial support available in the form of bursaries. However, the percentage of Black/African and Coloured graduates is still relatively low. Beyond this, the negative feedback relates to the LoI and lack of formal academic support structures suggests that students from previously disadvantaged backgrounds continue to experience disadvantage. The social and cultural environment of the college, while praised by some, appears to be a barrier according to others in terms of minority groups feeling part of the college community.

4.3.4 Students who discontinued their studies

Ten students who enrolled for HET programmes but discontinued their studies were interviewed to ascertain the barriers to completing their studies and the reasons for dropping out. The most common reason given for discontinuing was failing too many subjects and being unable to continue their studies (two students who dropped out for these reasons were on bursaries which were

rescinded due to poor academic performance). Other reasons related to changing career interests, lack of motivation to complete studies and eagerness to start their careers, as they felt the SAET HET programmes were not engaging enough. Incidentally, one of the graduates interviewed had discontinued their studies for a period of time because the social and cultural environment at the college was too alienating.

A stronger academic and psycho-social support system as well as more exposure to and engagement with industry would have likely encouraged the students who dropped out to stay and complete their studies. Of the ten students interviewed, eight indicated that given the chance, they would go back to complete their studies.

4.3.5 Quality of teaching

Data from all sources indicates positive perceptions of the quality of teaching at EATI. Between 81% and 90% of graduates agreed or strongly agreed that their lecturers had good subject knowledge (90%), practical skills (89%) and experience working in agriculture (80%). The qualitative data suggests that students felt the lecturers were generally very knowledgeable, skilled in their fields, qualified to teach the modules they were responsible for and passionate about the subject matter. However, some of the students mentioned that the quality of teaching depended on the lecturer. The modules that were mentioned as being most useful by surveyed graduates were animal production (32%), viticulture (23%) and pomology (19%). On the other hand, the modules most frequently mentioned as being least useful were communication (29%) and natural resource management (19%).

The perceptions of industry stakeholders regarding the quality of teaching at EATI were that many staff members were dedicated, enthusiastic and well trained. A similar sentiment was conveyed by the employers surveyed in that more than half of them agreed or strongly agreed that the quality of teaching at EATI was high and eight out of nine employers agreed or strongly agreed that the HET programmes provided a strong theoretical grounding.

There was some sentiment amongst industry stakeholders that a number of college staff were young and inexperienced and, whilst well qualified, did not possess adequate practical and industry experience. There was also concern raised by industry stakeholders and staff members alike related to serious staff shortages at the college and how these impacted on the quality of teaching.

4.3.5.1 Practicals

Regarding the practical components of the HET programmes, 86% of the graduates surveyed agreed or strongly agreed that there was a good balance between classroom and practical work. These findings were supported by employers, with seven out of nine survey respondents agreeing or strongly agreeing that students received adequate practical exposure and eight of nine respondents feeling there was a good balance between theory and practical work.

However, about one third of the students who were interviewed felt that, for certain modules—such as livestock, agricultural engineering and agronomy—practicals were lacking and exposure to practical application in a real-life setting was inadequate. In particular, two students pointed out the lack of opportunities to operate machinery like tractors and other equipment, which they felt was essential experience if they planned to work on a farm.

“If you are a manager on a farm and you are responsible for a team of workers, how are you going to be able to guide them if you don’t know how to operate the tractor or if you don’t know what the safety measures are when operating a tractor?” (Higher Certificate graduate, interview)

In terms of equipment and facilities, 89% of the graduates surveyed agreed or strongly agreed that the college infrastructure and equipment were sufficient for practicals and 97% agreed or strongly agreed that the college infrastructure and equipment were sufficient for classroom-based study.

College staff indicated somewhat more dissatisfaction with the amount and quality of practical work carried out and the facilities on campus. Many lecturers felt that the students needed more exposure to specific aspects of their specialisations to better prepare them for a career in agriculture. This was echoed by the industry stakeholders, who felt that students should be exposed to more practicals that would better equip them with the necessary skills to work on farms. There was a similar consensus among the employers who were surveyed that EATI graduates needed more practical exposure during their studies. However, it was acknowledged that EATI provided more practicals than other HEIs in the region offering agricultural programmes.

The industry stakeholders' concerns related primarily to the Higher Certificate, which some felt did not provide enough theoretical and practical knowledge. One stakeholder suggested that students begin spending time in industry during their second year (of the Higher Certificate) rather than waiting until their third year (the Diploma course).

"Let's start with the Higher Certificate; I don't know where those students will end up. The students in the 2 year Certificate have a brush of agriculture. You know a little bit of livestock, fruit and the wine industry. I don't know where they go to be honest. What is the aim of that course?" (stakeholder interview, HEI)

Some industry stakeholders and many of the staff felt that some of the infrastructure and equipment at EATI was outdated, impacting EATI's ability to provide students with ample practical exposure that would prepare them for the workplace.

4.3.5.2 **WIL**

WIL provides an opportunity for students to apply their knowledge and skills in the workplace. Less than half (38%) of the graduates who were surveyed indicated that they had a chance to gain practical work experience in industry as part of their programmes. Differences between programmes were apparent, with the majority of Diploma (60%) and Certificate in Horse Mastership (56%) graduates indicating that they had gained practical work experience, while the majority of B.Agric (66%) and Higher Certificate (68%) graduates did not. The majority of graduates who had gained practical work experience agreed (56%) or strongly agreed (26%) that it was relevant to their studies and career interests. Six out of nine employers who were surveyed were of the opinion that the HET programmes provided adequate opportunities for students to gain work experience.

4.3.6 **Staff services and support**

Feedback from industry stakeholders and staff interviews suggests that the staff shortage is one of the greatest challenges faced by EATI at the moment¹². Staff felt that the shortage increased their individual workloads and impacted their ability to deliver their modules effectively. A number of lecturers had taken on roles outside of their scope, for example, serving on a marketing committee, because of the shortage of dedicated support staff. The position of Academic Head of HET programmes was vacant at the college and seems to have had significant implications for the oversight of HET programmes.

¹² At the time of writing this report, the evaluation team had been unable to obtain information regarding the number of vacancies in relation to the SAET HET organogram. An organogram dated February 2016 was later shared which indicated that there were 47 funded and unfunded vacancies in the SAET programme including five Head of Departments, seven Senior Lecturers, 18 Lecturers and 13 Farm Aides (WCDaA, 2016)

There was a general feeling amongst lecturers that they carried too much responsibility with regard to organising practicals and facilitating student exposure to industry and that the college should provide more support in maintaining industry relationships, procuring equipment for practicals and organising field trips. This feedback was echoed by some industry stakeholders who felt that the lack of support from management as well as low salary levels could be contributing to the high staff turnover and the prolonged staff shortages which posed a threat to EATI's reputation.

Lecturers also felt that EATI/WCDoA regulations were too strict and that the supportive functions required for lecturers to carry out more innovative projects that would be valuable to both the students and the college were lacking. Many felt that the college should make better use of the farm land and resources at their disposal and involve students more in the day-to-day running of the farm, rather than relying on day labourers for upkeep and maintenance.

4.4 Effectiveness

4.4.1 Number of graduates per year

It was envisaged that the evaluation would investigate the overall efficiency of the HET offerings by calculating throughput¹³ and certification¹⁴ rates per programme. However, this was not possible due to limited data being available regarding the number of students who enrolled and commenced each HET programme in a given year, as well as the number who dropped out and the number writing final examinations.

Ultimate measures of effectiveness are alignment between the HET graduates' skills and industry needs (discussed to a certain extent in Sections 4.2.2-4.2.3 and 4.3.5) and the extent to which graduates are absorbed into the labour market, specifically in the agricultural sector.

4.4.2 Alignment between HET graduates skills and industry needs

When asked whether their studies had prepared them adequately for the workplace, graduates responded positively:

- 71% agreed or strongly agreed that their studies at EATI had prepared them adequately for their current jobs;
- 86% agreed or strongly agreed that they were using skills they had gained from EATI in their current jobs;
- 95% agreed or strongly agreed that their knowledge and skills were valued in the workplace.

Qualitative data from the interviews supports and explains these findings. All of the graduates interviewed who were working in the agricultural sector felt the practicals and theoretical knowledge they had learned while at EATI was very applicable to their current employment and they reported using much of the knowledge and skills they had gained on a regular basis.

"I started working this year on a seasonal contract for a table grapes company called Exsa that exports overseas. The practical exposure that I got throughout my degree program was very helpful for me to be able to work in that type of environment." (B.Agric graduate)

Feedback from the lecturers was generally in line with the positive feedback from students. However, a few skills were mentioned as lacking in graduates, for example, interpersonal skills, teamwork and practical knowledge and skills related to business administration.

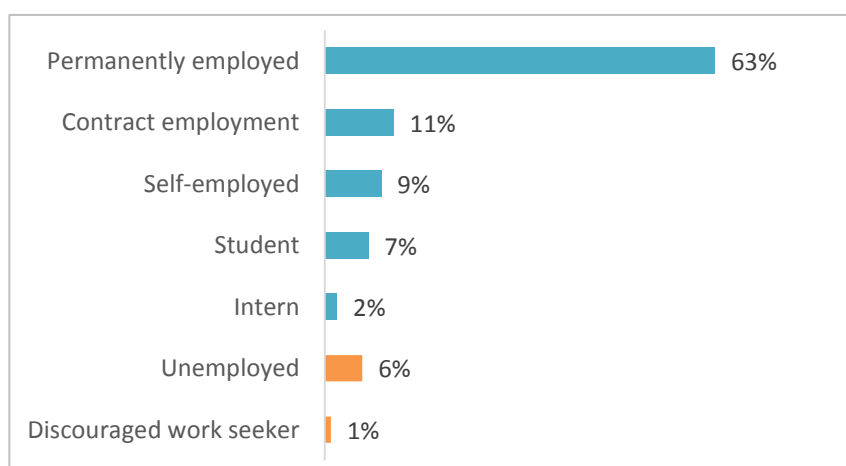
¹³ Throughput refers to the proportion (%) of students who start a programme and complete in the prescribed period of time.

¹⁴ Certification refers to the proportion (%) of students who sit final examinations and pass and graduate.

Feedback from employers regarding the skills and attitudes of EATI graduates was generally positive, with all employers confirming that EATI graduates had a good work ethic, worked well as part of a team and were aware of sustainability issues and able to incorporate them into the workplace. Similarly, eight out of nine employers confirmed that EATI graduates had good theoretical knowledge, practical skills, communication and leadership skills, were good with numbers and were aware of relevant agricultural policy and legislation. Slightly weaker areas were their business skills (two out of nine disagreed), awareness of climate change (three out of nine disagreed) and preparedness for the workplace (three out of nine disagreed). Additionally, literacy and information and communications technology (ICT) were noted by some employers as areas that needed improvement.

4.4.3 Employment

Figure 4: Employment status of graduates, source: graduate survey



The findings regarding employment are overwhelmingly positive. Of the surveyed graduates, 93% were employed in some capacity or studying. The majority, 63%, were employed in a permanent capacity, 11% were employed on a contract basis and 9% were self-employed. Just 6% were unemployed and 1% had

given up seeking work, which is significantly lower than the national average of youth unemployment and other graduate tracer studied (as discussed in the literature review).

Comparing the employment status of EATI HET graduates to that of individuals of a similar age who had studied agriculture and had qualifications of a similar level is also encouraging: 84% of EATI graduates were employed as compared to 71% of a similar cohort surveyed for the QLFS; and the unemployment rate among EATI graduates was considerably lower than the rate reported in the QLFS.

Table 2: Employment status of Elsenburg HET graduates and similar cohorts in the 2015 QLFS and 2011 census

	Elsenburg HET graduates, 2016	QLFS, 3rd qrtr, 2015	Census, 2011*	
			Yes	No
Paid employment	75%	71%	75%	25%
Self-employment	9%		22%	78%
Unemployed	6%	24%		
Discouraged work seeker	1%	1%		
Intern/volunteer	2%		9%	90%
Other	7%	4%		

*The census differs from the other surveys in that the respondents answered yes or no to three employment-related questions, whereas in the graduate survey and QLFS the respondents selected an option which represented their employment status.

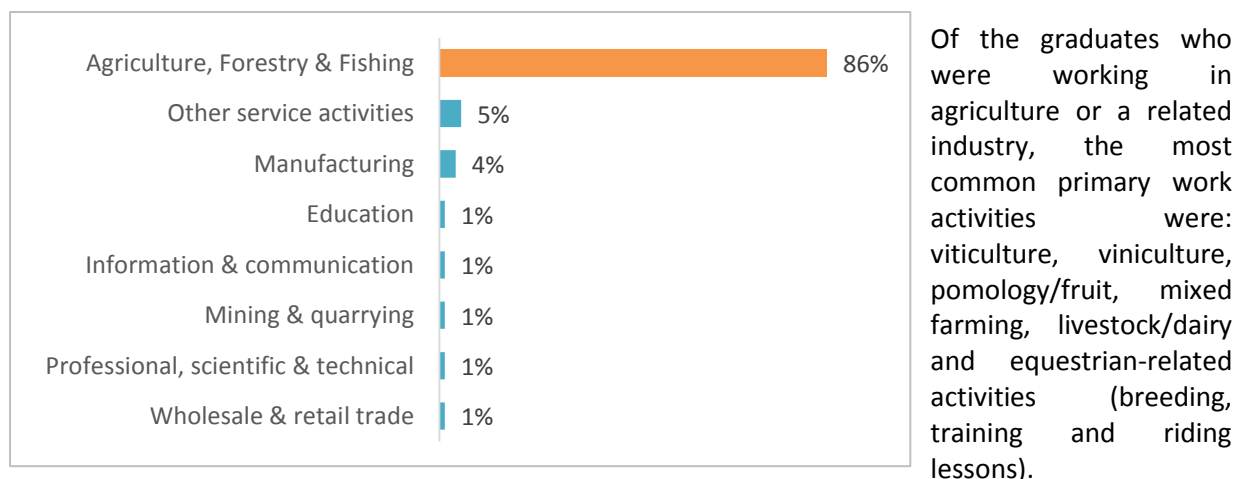
Employment status varied considerably by programme, gender and race.

- Higher Certificate graduates (29%) were considerably more likely to be unemployed or discouraged work seekers (7%).
- No Diploma or Certificate in Horse Mastership graduates were unemployed and just 3% of B.Agric graduates were.
- Certificate in Horse Mastership graduates were more likely to be studying: three out of seven who were surveyed indicated that they were studying further.
- Female graduates were less likely to be self-employed (3%) than male graduates were (12%).
- Black/African graduates (26%) were more likely to be unemployed and discouraged work seekers (5%), reflecting the findings from the literature review.
- No Coloured or Indian graduates were unemployed and only one White graduate (2%) was.
- Of those graduates who were employed, Black/African graduates were more likely to be employed on a contract (32%) and less likely to be employed on a permanent (26%) basis. At least 70% of graduates of all other race groups were permanently employed.
- White graduates were the only graduates who were self-employed (13%).

The vast majority of graduates who were employed were working in the agricultural sector (86%) and others were employed in sectors with linkages to agriculture (i.e. manufacturing and services). In contrast, of a cohort of individuals who had studied agriculture and who had qualifications of a similar level surveyed for the QLFS, only 37% were working in agriculture.

The proportion of graduates working in agriculture was consistently high across all HET programmes except the Certificate in Horse Mastership: two out of the four graduates who were employed were working in the services sector. Males (89%) were somewhat more likely than females (78%) to be working in agriculture and more than 80% of employed graduates of every race group were working in agriculture. English and isiZulu home language speaking graduates were somewhat less likely to be working in agriculture than other home language speakers (Afrikaans, isiXhosa, SeSotho and SePedi).

Figure 5: Industry in which SAET HET graduates who are employed are working, source: graduate survey

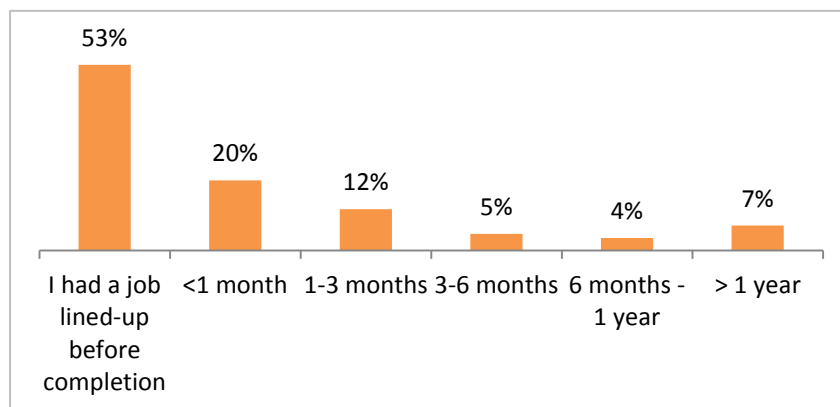


With regards to the type of institutions they were employed by, the majority (79%) were working for private enterprises or farms, whilst 10% were working for government (local, provincial or national). White and Indian/Asian graduates were more likely to be working for private enterprises/farms and Black/African and Coloured graduates were more likely to be working for government. The size of the organisations/businesses ranged from one to 50+ employees.

The respondents (all but nine) who had worked since leaving EATI were asked how long it had taken them to find work. Encouragingly, 53% of graduates had had jobs lined up before completing their

studies. A further 20% found work in less than one month and only 7% took longer than one year to do so.

Figure 6: Time taken to find work after completion and graduation



Graduates used varied job search strategies to find work: 17% used the internet/social media; 16% were referred by a friend or family member; 14% joined a family business; 10% found their first job through the college or a lecturer; 10% via previous work experience; 8% via their

bursary providers; 7% via newspapers; and 4% reported using “other” strategies. The qualitative interviews confirm and illuminate these trends: the majority of graduates who were interviewed were employed in the agricultural sector: some went back home to work on family farms, some found work via opportunities passed on by lecturers and others relied on cold calling employers to secure jobs.

Interestingly, the majority of the students interviewed who enrolled in but did not complete HET programmes were also working in agriculture: some walked immediately into jobs (these job offers appeared to be the main motivation to leave) and others had found work within four months of leaving. Of these former students, some worked on family farms or co-operatives they belonged to, some were able to find work through personal connections and one found employment through cold calling.

The qualitative interview data sheds light on challenges and barriers to finding employment which students from non-traditional farming backgrounds, and specifically PDIs, faced. Several students from previously disadvantaged backgrounds felt that their race and cultural background were serious barriers to securing employment in agriculture. Feedback from college staff supports these claims. There was a general feeling that the predominant culture in the agricultural sector in the Western Cape was White, Afrikaans and male and farmers with this cultural background preferred to hire graduates of the same demographic. It was also felt that students who came from family farms or had prior work experience on farms were predominately White, Afrikaans males and their networks, personal connections and work experience assisted them in finding employment. This echoes the findings from the literature review which suggest that White graduates were more likely to have wider professional networks which aid them in finding employment.

“When you leave Elsenburg, as a disadvantaged student, it is difficult to find a job. White students have it easy because they have contacts. Blacks and Coloureds have to work very hard to find a job.” (graduate interview, Black male).

On the other hand, Agricultural Extension was noted as a desirable field of study for PDIs, who may have an advantage over White graduates in securing government employment.

Some lecturers acknowledged feeling somewhat helpless in relation to facilitating access into the agricultural sector for graduates from previously disadvantaged backgrounds. The lecturers felt that regardless of how well the college handles transformation and how many opportunities it provides, little impact will be made if the agricultural sector lags behind.

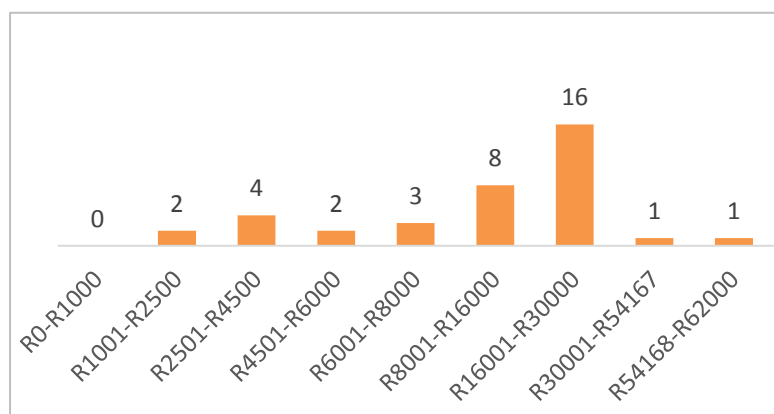
4.5 Impact on graduates

This section discusses the longer term impact of the HET programmes on graduates – such that they could be ascertained – in terms of income, career progression, job satisfaction and other perceived benefits of studying at EATI.

4.5.1 Income and benefits

Graduates who were employed were asked about their income. Of the 84 graduates who were employed, 37 answered this question¹⁵ and these findings are reported below. Salaries ranged from a low of R1 001-R1 500 to a high of R54 168-R62 500 per month. The greatest number and proportion of graduates (43%) were earning R16 001-R30 000 per month.

Figure 7: Gross monthly income of SAET HET graduates (n=37)



Comparing the gross monthly income of EATI HET graduates to a similar cohort of HET graduates who studied agriculture, gathered via the census shows that the incomes were similar, although there were likely to be fewer Elsenburg graduates with no income (as 86% were engaged in some type of employment). No Elsenburg graduates were earning

an income of R1-R1 000 (as compared to around 2% of the census cohort). More Elsenburg HET graduates were earning incomes of R1 001-R2 500, R2 501-R4 500 and R16 001-R37 500. However, a higher proportion of the census cohort earned upwards of R37 501, which is to be expected as the census cohort was not restricted to recent graduates.

Table 3: Income of EATI HET graduates and a similar cohort in 2011 census, source: graduate survey and Stats SA

Gross monthly income	Elsenburg HET graduates (2016)	Gross monthly income adjusted for inflation	Census (2011) adjusted for inflation
No income			16.20%
R1-1 000		R1-R566	1.16%
		R567-R1 132	0.82%
R1 001-R1 500	3%	R1 133-R2 265	1.87%
R1 501-R2 500	3%		
R2 501-R3 500	5%	R2 266-R4 529	4.75%
R3 501-R4 500	5%		
R4 501-R6 000	5%	R4 530-R9 057	10.00%
R6 001-R8 000	8%		
R8 001-R11 000	0%	R9 058-R18 113	21.17%
R11 001-R16 000	22%		
R16 001-R30 000	43%	R18 114-R36 226	25.80%
R30 001-R37 500	3%		
R37 501-54 167	0%	R36 227-R72 452	12.51%
R54 168-R62 500	3%		
		R72 453-R14 4903	3.14%
		R14 904-R28 9806	1.55%

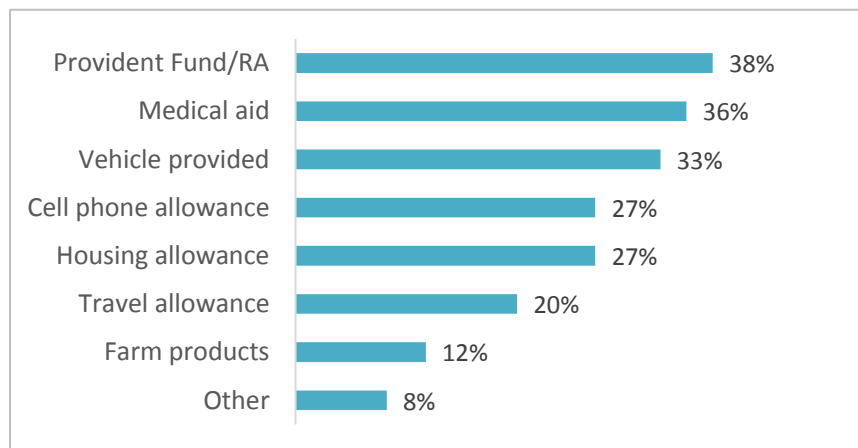
¹⁵ 43 refused to answer the question and four said they did not know or the question was not applicable.

Gross monthly income	Elsenburg HET graduates (2016)	Gross monthly income adjusted for inflation	Census (2011) adjusted for inflation
		More than R28 9807	1.04%

The average monthly income¹⁶ per programme was R18 792 for B.Agric, R12 471 for Diploma, R14 318 for Higher Certificate and R5 250 for Certificate in Horse Mastership graduates. Income also varied per gender, race and home language: females earned slightly less on average than males (R18 132 versus R19 570 per month). White graduates earned an average of R19 080 whilst Coloured graduates earned R13 072 and Black/African graduates earned R10 584. In terms of home language, Afrikaans graduates earned the most, R19 439, whilst English speaking graduates earned an average of R13 282 and African home language speakers earned an average of R5 251 to R12 126.

With regards to year of graduation, the mean income was highest amongst those who graduated in 2012 (R19 834), followed by 2010 (R17 901), 2011 (R16 637) and 2013 (R16 542). Average wages were lower for more recent graduates (i.e. 2014 and 2015) and for those who graduated in 2009, but the latter observation may be skewed by the low number of observations.

Figure 8: Additional benefits received, source: graduate survey



In addition to income, the graduates received various other benefits. More than 30% of respondents had a vehicle provided and received medical aid and provident fund/retirement annuity contributions. Between 20% and 29% received free housing, a cell phone, travel allowance and farm products and 12%

received a housing allowance.

4.5.2 Occupation level, career progression and job satisfaction

When asked about their occupational level, the highest proportion (41%) indicated that they were employed as junior/mid-level managers, 39% at the level of skilled labourer and 13% at senior manager level. Only graduates with a B.Agric (17%) reported being employed at senior manager level and graduates of the Diploma (50%) and Higher Certificate (56%) programmes were more likely to be employed as skilled labourers. Only males (18%) were employed at senior manager and professional (5%) levels. Similarly, only Afrikaans home language speakers (18%) were employed as senior managers.

¹⁶ It is important to bear in mind that the averages were calculated based on the midpoint and not exact incomes. When the data is disaggregated, there are very few observations for some categories and the standard deviation of means is often high. For example, the average monthly income of Higher Certificate graduates is influenced by an outlier earning R54 158-R62 500. The results are merely indicative and are not generalisable.

The graduate survey respondents largely felt that they were following the career paths they wanted to, were fairly compensated, were making an important contribution through their work and had a future in the agricultural industry:

- 82% agreed or strongly agreed that they were working in the industry for which they trained;
- 71% agreed or strongly agreed that the compensation they received was fair for the work they did;
- 91% agreed or strongly agreed that they were making an important contribution to the agricultural sector;
- 93% could see themselves working in the agricultural industry in 10 years time.

With regards to career advancement, some of the graduates working in agriculture who were interviewed felt that they did not have much opportunity for advancement at their current places of work, either due to the size of the business or the lack of opportunities available. Some of the graduates worked on family farms and knew they would be taking over those farms one day and thereby advancing in their careers. The other graduates – who were employed by private companies – felt that they had space to grow and learn and advance their careers.

4.5.3 Other benefits of studying

The graduates were asked whether there were any additional, non-monetary benefits of studying at EATI. Making friends (60%) and networking opportunities (50%) were mentioned by at least half of the survey respondents. Other commonly reported benefits included the enjoyment of learning (34%), enhanced social status (in terms of educational and professional level) (28%), being able to break into the agricultural sector (23%), being motivated to succeed (17%) and gaining practical experience (9%).

From the qualitative interviews, some students mentioned EATI's positive reputation in the agricultural sector as a key benefit of studying at Elsenburg which they felt gave them an advantage in securing employment. A number also mentioned the social environment and exposure to people from different backgrounds and cultures as a major benefit of their time at EATI.

4.6 Return on investment

4.6.1 Estimated cost of studying

EATI provided estimates regarding the costs of studying (see below) and these were verified via the survey which asked graduates to estimate the total amount spent in Rands in their final year of study. The graduate survey data should be viewed as indicative, as the number of observations is small and the data may be subject to recall error. However, it does indicate that the cost of studying as estimated by the college seems to be more or less in line with the graduates own estimates for the B.Agric and Higher Certificate qualifications, (if clear outliers are excluded). However, graduates estimated the cost of studying towards the Diploma to be higher than EATI's estimate.

Table 4: Estimated costs of studying, source: Elsenburg College, 2016

COURSE	2009	2010	2011	2012	2013	2014
B.Agric – yr 1	R37 273	R39 136	R41 093	R43 148	R45 305	R47 570
B.Agric – yr 2	R37 311	R39 176	R41 135	R43 192	R45 351	R47 619
B.Agric – yr 3	R38 206	R40 117	R42 122	R44 228	R46 440	R48 762
Higher Certificate – yr 1	R37 273	R39 136	R41 093	R43 148	R45 305	R47 570
Higher Certificate – yr 2	R38 206	R40 117	R42 122	R44 228	R46 440	R48 762
Diploma	R11 431	R12 002	R12 602	R13 232	R13 894	R14 589
Certificate in Horse Mastership	R50 935	R53 482	R56 156	R58 964	R61 912	R65 008

Table 5: Mean estimated cost of studying in final year, source: graduate survey

COURSE	2009	2010	2011	2012	2013	2014	2015
B.Agric (yr 3), n=29	R150 00	R48 250	R46 492	R50 833	R43 910	R44 000	
Higher Certificate (yr 2) n=8			R37 400	R43 000	R23 500	R45 667	
Diploma n=4			R23 500	R48 000	R15 000		
Certificate in Horse Mastership n=2			R500				R41 000

During qualitative interviews, the graduates and students who enrolled and dropped out were asked about the costs – financial and otherwise - of studying at EATI. Those which were mentioned related to opportunities passed up to study elsewhere and or job opportunities. A few graduates mentioned that they had chosen to study at EATI over studying at a university where they could have received a higher degree which may have opened more doors for them. Most of the respondents who expressed some regret in choosing EATI over other options were students who had discontinued their studies. However, some graduates also felt their decision to study at EATI involved some trade-offs. Yet, for the most part, graduates felt that the costs associated with studying at EATI were minimal and the money and time put in had paid off.

4.6.2 Return on investment (RoI)

Three methods were used to calculate the RoI of the SAET HET programmes: 1) the earnings function method (based on ordinary least squares (OLS) regression in Stata); 2) the net present value (NPV) method; and 3) the qualitative system dynamics modelling approach. The first two approaches utilised the graduate survey data and the NPV utilised the estimated costs of studying (see Table 4). Highlights are presented below and the full analysis can be found in Annexure H.

Using the earning function method, the regression results show that individuals who held a Diploma earned approximately 30% less than those who held a B.Agric qualification, whilst those who held the Higher Certificate earned approximately 55% less than those with the B.Agric degree. Moreover, those who held the Certificate in Horse Mastership earned approximately 66% less than those holding the B.Agric qualification. However, despite the anticipated coefficients being produced by the regression, only the Higher Certificate qualification and the constant are statistically significant, whilst the rest are not. This can be attributed to the small sample size (98 graduates of whom only 37 respondents disclosed their gross incomes. As a result there will be less variation within the OLS regression.

The NPV results (included in Table 2 of Annexure H) show a negative RoI for the first three years for graduates who hold a B.Agric and a Diploma from EATI. From the 4th year onwards the cumulative NPV turns positive ending with a grand cumulative NPV total figure of approximately R534 127 for the B.Agric and R 327 615 for the Diploma. With regards to the Higher Certificate and Certificate in Horse Mastership qualifications, the cumulative NPV is negative for the first two years, turning positive at the 3rd year and ending with a total cumulative NPV of approximately R571 727 for the Higher Certificate and R236 357 for the Certificate in Horse Mastership. The positive NPV values for all courses show that investing in agricultural education and training, with a specific focus on SAET HET programmes offered at EATI, is viable and favourable.

The socio-economic returns to investing in agriculture could not be derived using the OLS regression and the NPV method due to lack of monetary values and the high complexity involved. However, the qualitative system dynamics model in the form of a causal loop diagram helped to outline the costs and benefits of investment in agricultural education. The systems thinking approach adopted for this

part of the analysis is useful to help understand complex and non-linear systems such as agricultural education and training. The results can be found in Annexure H.

The positive RoI after 10 years for all of the HET offerings are evidence of considerable private returns to investment in agricultural education, specifically the SAET HET programmes offered at EATI. The benefits of investing in agricultural education outweigh the costs thereof.

5 Conclusion and Recommendations

What have been the social and economic impacts of the training programmes on participating candidates?

There were clearly positive economic impacts of the SAET HET programmes as indicated by the high rates of employment (84%) among graduates, the majority (86%) of whom were working in the agricultural sector and were employed in a permanent capacity (63%). Seventy one per cent of graduates agreed or strongly agreed that the compensation they received was fair for the work that they did.

These generally positive results did vary per programme: Higher Certificate graduates were much more likely to be unemployed or discouraged work seekers than graduates of the other programmes; and Certificate in Horse Mastership graduates earned the least on average. The positive economic impacts also varied according to race, gender and home language. Encouragingly, a very high proportion (93%) of graduates saw themselves working in the agricultural sector in 10 years time.

For some graduates there was an opportunity cost involved in studying at the college (i.e. alternative educational and job opportunities passed up) but most found it to be a very worthwhile experience. Many students felt that attending the college was a positive developmental experience which afforded the opportunity to meet students from different backgrounds and develop networks. However, for a group of students, particularly PDIs, the cultural and social environment at the college was unwelcoming, making them feel like “outsiders” on the campus.

To what extent and how did the acquired skills and knowledge of the students benefit their employability?

The majority of graduates reported that they were using the skills they gained from EATI in their current jobs and that their knowledge and skills were relevant and valued in the workplace. Employers also gave generally positive feedback regarding the attitude and skills of the EATI graduates they employed. The college had a solid reputation in the agricultural industry, which also boded well for employability. However, work experience and activating social and professional networks were also key factors influencing employability.

EATI’s track record of offering practically-focused training was valued by industry stakeholders and graduates often entered junior and mid-level management positions on farms (however, it was felt that management skills is an area which could be improved upon). The viticulture programmes in particular (and to a slightly lesser extent pomology) were very highly respected and graduates specialising in viticulture were practically guaranteed to find work.

To what extent and how did the acquired skills add value to the skills base of the agricultural sector of the Western Cape and thereby improve the sustainability of farms?

This question was challenging to answer as a relatively small number of industry stakeholders and employers participated in the study (as discussed in Chapter 3) and it would be exceptionally difficult to attempt to isolate and quantify the value-add to agricultural enterprises of skills gained via studies at EATI. Suffice to say that the vast majority of SAET HET graduates were employed and working in the agricultural sector and planned to remain working in agriculture for the foreseeable future.

Industry stakeholders noted the need for succession planning as the current cohort of senior managers in the sector will be retiring soon. EATI is well placed to assist in this regard as Elsenburg graduates were deemed to be suitable management material.

What changes, if any, should be made to the current B.Agric, Higher Certificate and Diploma programmes to improve: efficiency; effectiveness; impacts and sustainability?

This question is addressed under the programme specific recommendations below.

What must happen for the SAET training model/system to work or to work better?

This question is addressed under the recommendations relating to student support services.

5.1 Recommendations

5.1.1 Programme-specific recommendations

General perceptions of the Higher Certificate programme were that the level of the qualification and amount of practical exposure gained was insufficient for graduates entering the agricultural sector, particularly those from non-traditional farming backgrounds. The lower employment levels of Higher Certificate graduates as compared to the graduates of other programmes support this claim.

In contrast, it was reported that the Diploma programme allowed too little contact time, making it difficult to balance full-time work experience with the classroom components. However, graduates experienced very high levels of employment, likely due to their work experience and relationships and networks built during their internships.

It may be beneficial to balance out the theoretical, practical and WIL components of these programmes by introducing opportunities for more practical exposure into the Higher Certificate and allowing for more classroom time in the Diploma. Building an aspect of WIL (e.g. during holidays) into the Higher Certificate programme may also enable students to build professional networks and is thus likely to boost employment levels of this cohort.

There is a cohort of EATI students and graduates who wish to pursue further studies and B.Agric graduates expressed their disappointment that there are few universities (particularly in the Western Cape) where they can continue their studies following graduation. It would be beneficial for EATI to negotiate with universities in the Western Cape and beyond to accept B.Agric graduates for their Honours programmes.

There is a misalignment between the SAET HET programmes which offer Agricultural Extension as a specialisation and the educational level and qualifications required of Agricultural Extension Officers. EATI should explore the potential to offer an HET programme which could lead to such a qualification or at least establish pathways (via other institutions) through which graduates specialising in Agricultural Extension can pursue this as a career. This could help to satisfy the national and provincial need for qualified Agricultural Extension Officers and potentially boost employment levels of PDI graduates.

The Certificate in Horse Mastership appears to attract a particular demographic and students with a passion for horses. The programme is not well known within EATI or widely known outside of it. It was not clear whether this programme is a priority for EATI. If it is, EATI could look at offering the subsequent qualifications not currently offered. If it is not a priority, the college could look at shifting resources away from this programme and into the other three HET programmes which appear to be in great need of material and human resources.

5.1.2 Alignment and relationships with industry

A closer, more functional relationship with the agricultural sector and specifically key industries would be beneficial for several reasons. Firstly, it is clear that EATI is falling short to some extent in

addressing current challenges and taking advantage of emerging opportunities in the sector. By engaging with industry in a more strategic, in-depth and sustained manner and by soliciting industry's input on curriculum matters, EATI will ultimately be more successful in supplying highly skilled graduates to the sector and key and emerging industries within it. Additionally, a stronger relationship with industry could facilitate exposure for students to opportunities for work-learnerships, holiday work and ultimately permanent employment. EATI could improve the practical components of its HET programmes by relying more on industry stakeholders for the necessary facilities and resources for practicals in certain subjects where the college has limited facilities available (e.g. such as animal production and agricultural extension).

It is recommended that management of industry relationships is allocated to a senior manager's portfolio, a communication strategy is developed and formal structures and agreements are put in place. There should be regular formal and informal engagements; for example, via a quarterly Chief Executive Officer's (CEO) forum and regular business breakfasts.

5.1.3 Practical exposure

A recurrent recommendation from students and industry alike was the incorporation of more practical exposure into the HET programmes. A number of students felt they needed more hands-on experience and real-life exposure to working on a farm. The lack of opportunity to operate machinery and equipment as well as the lack of human resources experience were two major complaints brought up by students. Opportunities for WIL, as mentioned above, would allow to students apply what they learn in the classroom. It was also suggested that EATI explore opportunities to involve the students in the day-to-day running of Elsenburg farm, rather than relying on day labourers for the maintenance and upkeep. This would provide real-life experience to better prepare students for the workplace.

5.1.4 Student support services

Student support services as outlined in the *Norms and Standards for the Agricultural Training Institutes in South Africa* (see Annexure E) are a key area that is lacking at EATI. Given the high rates of employment of EATI graduates and the apparent success of the SAET HET programmes, EATI should focus resources on providing the academic support necessary for all enrolled students to succeed and complete their qualifications. Bridging programmes and tutorial programmes should be put in place to help ease the transition from secondary to tertiary education and ensure the success of all students, particularly PDIs.

Formal support for career guidance, networking and job/work readiness programmes should be put in place to assist graduates to get work ready and find employment. This could be especially effective for PDIs, who generally have fewer connections and less work experience (as highlighted in the literature review and this evaluation).

On a related matter, EATI should improve its student record system by keeping accurate, electronic records of students who apply to, enrol, drop-out of and complete SAET HET programmes and their pathways thereafter. This would enable EATI to monitor throughput and certification rates, understand the reasons why students drop out and trace graduates for future studies.

A number of other barriers to inclusion for PDIs were identified, such as the Lol (during the period 2005-2014) and lack of transportation for students to get to off-site practicals. EATI should consider how to coordinate and provide comprehensive student support services, to better assist the student body and PDIs in particular. Dedicated student support staff are required.

5.1.5 Staff shortages

Staff shortages was a reoccurring theme in many of the qualitative interviews. This was described as a major challenge which creates unmanageable workloads for lecturers and raises questions among

industry stakeholders as to the quality of teaching and learning taking place at EATI. The extent of these was outlined in Section 4.3.6 EATI is operating far below optimum capacity. Filling vacant positions – including as a matter of urgency the Academic Head - would release strain on the lecturers and provide the organisational and support functions needed to get EATI running smoothly. This should also serve to correct some of the negative perceptions that exist within the industry regarding the functionality and effectiveness of the college. If the appointment of additional fulltime staff is not viable, alternative arrangements need to be made such as the secondment of staff from the WCDoA and industry.

5.1.6 Recruitment and marketing

EATI should put more resources into marketing its HET programmes and recruiting high-quality students. In particular, it was mentioned that low numbers of PDIs and females apply. A proper marketing and recruitment strategy should be developed and driven by a marketing “champion”, whether in-house (i.e. by a staff member who is appointed or allocated this portfolio) or externally (i.e. by a consultant or company). This would be beneficial in attracting a larger pool of high-quality applicants including those with an interest in and passion for agriculture from non-traditional farming backgrounds.

5.1.7 WCDoA

The indicators currently used to measure the success of the SAET HET and FET sub-programmes are the number of students enrolled and the number of graduates, both of which are measured annually. The WCDoA should also be monitoring and measuring throughput and certification rates, time taken to graduation and the employment rate after graduation. These are appropriate outcome indicators which should be tracked per HET programme.

Improve alignment between SAET HET and the WCDoA’s five-year plan and other programmes (for example Project Khulisa’s focus on agriprocessing). Many of the gaps, needs and emerging opportunities identified by industry stakeholders with respect to EATI programme offerings are mentioned in the WCDoA’s own planning documents (see Annexure E).

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