VISION

The vision of Mangosuthu University of Technology (MUT) is to be a pre-eminent higher education institution of technology that fosters socio-economic advancement through the scholarships of teaching and learning, applied research, technology development and transfer and community engagement.

MISSION

Our mission is to provide advanced, technology-based programmes and services that are career- and business-oriented in the broad fields of engineering, natural and management sciences for the uplift of talented but mainly disadvantaged individuals. By so doing, the University shows its commitment to social redress. It contributes to creating an equitable and prosperous Southern Africa in which individuals have the opportunity to achieve their full potential.

OUR CORE PURPOSE

To contribute to the advancement of technology-based education and training that will strengthen the skills and competitiveness of South Africa in the 21st Century.

OUR CORE VALUES

The University accepts the critical role that social relations play in the success of organisations. It is essential for our future that we adopt and practise a set of shared values that will guide the conduct of everyone in the organisation.
These are our core values:

- We will act with integrity in all our interactions with others.
- We will strive for excellence in what we do.
- We will seek to create a climate of innovation in the university as a whole.
- In all our actions we will show respect for others.
- We will be prepared to take accountability for our conduct.
- We will support and celebrate the diversity of our community.
- We will seek to promote self-respect.
- We will strive to be at the forefront of technology development and transfer.

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ABBREVIATIONS

AdvDip	Advanced Diploma
BTech	Bachelor of Technology/Baccalaureus Technologiae
ECP	Extended Curriculum Programme
ICT	Information and Communication Technology
MARCOMMS	Marketing and Communications Department
MUT	Mangosuthu University of Technology
NDip	National Diploma
PGDip	Postgraduate Diploma
QMD	Quality Management Directorate
SALDRU	Southern Africa Labour and Development Research Unit
WIL	Work-Integrated Learning

HISTORICAL BACKGROUND AND CONTEXT

Dr Mangosuthu Buthelezi together with the Chairperson of Anglo American and De Beers Consolidated Mines, conceptualized the idea of establishing a tertiary educational institution specializing in technical subjects in 1974. In support of this, the Southern Africa Labour and Development Research Unit (SALDRU) of the University of Cape Town conducted an investigation into the need for the training and employment of technicians in South Africa. The investigation revealed the need for more technicians in industry. Based on this, the Anglo American and De Beers Groups Chairperson's Fund provided the initial funds to build the Technikon. The funding was supplemented by companies such as Mobil Oil, AECI, the S.A. Sugar Millers' Association, the Rembrandt and Distillers Corporation, LTA Limited, Sasol and among others. This enabled the Technikon to establish Schools for Chemical Engineering, Mechanical Engineering, Electrical Engineering, Civil Engineering and Building, and Business and Secretarial Studies. The construction of the Technikon in Umlazi culminated in 1979 when it opened its doors for teaching and learning. The Technikon moved into its main buildings in its current location upon completion in September 1981.

In November 2007, the Mangosuthu Technikon was renamed the Mangosuthu University of Technology in accordance with the National Higher Education legislation.

1. OVERVIEW

The Quality Management Directorate (QMD) conducts a graduate survey annually to elicit graduates' views of their learning experiences at the Mangosuthu University of Technology (MUT). The graduate survey is conducted as part of MUTs commitment to assuring and enhancing the quality of provision. In 2018, the Graduate Survey sought to elicit students' views, predominantly of their experiences of teaching and learning, at the Mangosuthu University of Technology. The graduate survey is conducted with graduates in the Faculties of Engineering, Natural Sciences and Management Sciences. The findings of the Graduate Survey reported on here was conducted in 2018.

1.1 OBJECTIVES OF THE SURVEY

The initiative to survey graduates' opinions is informed by the understanding that students' views and experiences are important and should be taken into consideration in the planning and operations of the university with a view to enhancing the quality of provision. The responses in this graduate survey report, will be used to identify areas of commendation and development and to use these to improve the quality of the student experience at the University.

The objectives of the graduate survey are:

- to elicit graduates' views of their experiences of teaching and learning and extra-curricular activities that the University provides;
- to track the employment profile of the graduates;
- to establish the number of students undertaking further studies after completing their first qualification;
- to establish the current geographical catchment area of the University and the demographics of the graduates;
- to establish graduates' employment status by industry and their preparedness for the world of work; and
- to provide feedback on the survey results to the University community for reflection and improvement.

1.2 METHODOLOGY

The Graduate Survey questionnaires were reviewed by the University stakeholders and prepared and printed by the QMD. To ensure maximum participation in the survey, QMD elicited the support of MarComms who facilitate QMD's administration of the Graduate Survey during the issuing of graduation tickets to graduates.

The questionnaires were handed out to graduates by personnel from the Quality Management Directorate (QMD) the week leading up to and on the morning of the graduation ceremonies held on the 17th, 18th, 19th, 20th and 21st of April 2018.

Graduates who were requested to participate in the survey, were advised of the purpose of the survey, informed that their participation was voluntary, that their identity would be kept confidential and that the findings would be used to improve the University experience for all students. The questionnaire consisted of quantitative and qualitative questions that were divided into three sections:

- biographical details and background information (quantitative responses);
- study experiences (quantitative responses); and
- recommendations for improvement (qualitative responses).

1.3 DATA ANALYSIS

The quantitative responses were summarized and reported according to the number of respondents who selected a particular response. The qualitative responses were grouped into five predetermined themes, namely (1) physical resources, (2) human resources, (3) work-integrated learning (WIL) and employment, (4) curriculum (Teaching and Learning), and (5) questionnaire structure and content.

We used a two-pronged approach to the analysis of data. The analysis of data at Faculty level was conducted using Evasys as the questionnaire was designed for this on Evasys. At a later stage it was decided that a departmental level analysis would contribute valuable information that could be used to enhance teaching and learning and the student experience. Since the questionnaire was designed for faculty-level analysis on Evasys, the departmental level analysis was conducted using the data from the existing questionnaires. The procedure is as follows. The completed questionnaires were separated manually according to department, then the data for each department were captured manually onto an excel spreadsheet according to the questions on the questionnaire. This did pose some challenges as between Evasys and the manual system,

there were a few instances where either Evasys and/or the manual system identified spoilt copies where the other may not have. However these were few and not necessarily significant in the overall findings. Going forward the questionnaire will be prepared for analysis on Evasys for both Faculty and departmental level. The statistical analysis on departmental data was conducted using excel formulae and calculations. The findings of the Faculty level analysis are presented together with the findings of the Departmental level analysis.

The faculty-level analysis in the Faculty of Engineering, yielded 608 unspoilt surveys of the 622 that were collected. During the analysis, of the 622 questionnaires, Evasys identified 14 as spoilt and excluded them from the analysis yielding a total 608 questionnaires. As mentioned above, the departmental level data capture was conducted manually. During this process no spoilt questionnaires were identified yielding a total of 622 questionnaires. This accounts for the disparity in the totals reflected for the faculty (608) and departmental (622) level analyses and provides an explanation for why the manual departmental count of 622 does not match the faculty electronic count of 608.

In the Faculty of Natural Sciences all 372 questionnaires were registered as unspoilt on Evasys. A manual count of questionnaires for the departmental level analysis revealed 4 spoilt making the number of questionnaires a total of 368. In this case, the numbers on this manual departmental count (368) do not match the electronic count generated from Evasys (372).

Similarly for the Faculty level analysis in the Faculty of Management Sciences, Evasys yielded 885 questionnaires. This means that no spoilt questionnaires were identified electronically. The manual count revealed 5 spoilt questionnaires making the total 880. This accounts for the disparity in the number of questionnaires for the electronic and manual capturing of data of 885 and 880 for the Faculty and departmental level analyses respectively. Table 1 presents the University's Faculties with the departments offering academic programmes.

Table 1: Faculties and departments offering academic programmes

FACULTY OF MANAGEMENT SCIENCES	FACULTY OF ENGINEERING	FACULTY OF NATURAL SCIENCES
Departments	**Departments**	**Departments**
1. Accounting and Law 2. Human Resource Management 3. Marketing 4. Office Technology 5. Public Administration and Economics	1. Chemical Engineering 2. Civil Engineering and Survey 3. Construction Management and Quantity Surveying 4. Mechanical Engineering 5. Electrical Engineering	1. Agriculture 2. Biomedical Sciences 3. Chemistry 4. Environmental Health 5. Information and Communication Technology 6. Nature Conservation 7. Community Extension

1.4 LIMITATIONS

The survey is conducted with MUT graduates to elicit their views of their educational experiences at MUT.

The participation rate in the survey is 79%. Notwithstanding this, it was a challenge to convince graduates of postgraduate qualifications to participate in the survey as they felt that their participation in the previous graduate survey at their undergraduate graduation did not yield any positive changes. This affected the number of postgraduate respondents in the survey.

In addition, relatives of some graduates collected the graduation tickets on their behalf. Hence those graduates were not able to participate in the survey at the time. While every effort was made to encourage graduates to participate in the survey on the morning of each graduation, we were not able to determine whether those students participated. Of those who participated on the morning of graduation (some do not as they are often rushing to take their seats for graduation), some responded to the questionnaire hurriedly and may not have had sufficient time to read the questionnaire statements carefully and respond appropriately. This calls into question the reliability and validity of some of the responses. MUT needs to review the process of conducting the Graduate Survey to ensure maximum participation, minimal disruption and the collection of valid and reliable information.

Another limitation of the survey regards the questionnaire itself. QMD faced some challenges in reviewing and administering the questionnaires which can be viewed as limitations to the survey. To enhance the questionnaire, stakeholders were invited to review it. Only two staff members

made input into the document. This is viewed as a limitation to the survey as wide consultation is required to produce a well-rounded questionnaire. Furthermore, the questionnaire includes questions pertaining predominantly to teaching and learning. The questionnaire should include questions about students' perceptions of University life with regard to, for example, residence life, academic counseling, psycho-social counseling, transport, health and well-being amongst others. As part of the University's commitment to improve, the Graduate Survey questionnaire will be reviewed in consultation with the University stakeholders.

Going forward, MUT needs to reflect on the findings of the Graduate Survey Report and develop improvement plans which are actioned and whose progress is monitored. Graduates should also be given feedback on the findings of the surveys and the improvements that have emanated from them as a result of this.

1.5 REPORT STRUCTURE

The report is presented in two parts. The first part of the report presents the faculty-level analysis beginning with the biographical data then students' study experiences followed by their employment status. The study experiences focuses on aspects such as acquisition of knowledge and skills, standard of work, feedback, resources, readiness for the world of work, motivation to study further, and student activities on campus. This part of the report culminates with a presentation of respondents' qualitative responses (unedited).

The second part of the report presents the analysis of the data at departmental level. First the respondents' academic profile, participation rate, year of entry of the graduates into the university and graduates engaged in further studies. This is followed by the current employment profile of participants and the study experiences of the participants, which looks at aspects such as acquisition of knowledge and skills, standard of work, feedback, resources, readiness for the world of work, motivation to study further, and student activities on campus. This part of the report culminates in the qualitative section listing graduates' opinions and suggestions (unedited) for the improvement of the student experience at MUT and the conclusion to the report.

2. PROFILE OF RESPONDENTS

2.1 ACADEMIC PROFILE OF GRADUATES

The total number of graduates in 2018 is 2361. This means that there were 65 more graduates than the 2296 in 2017 indicating an increase of 3% in the number of graduates. Of the 2361 graduates, 1865 participated in the survey, indicating a participation rate of 79%. This is a vast increase of 26% compared to the 53% participation rate in 2017.

The breakdown of the overall number of graduates in 2018 is as follows: 404 students accessed the diploma programmes through the bridging programme (Pre-tech); 247 students accessed via the Foundation (ECP) programme and 1671 registered through the mainstream programmes. The majority of graduates, 2091, obtained their National Diploma qualification. One hundred and twenty two graduates (122) obtained their Bachelor of Technology (BTech) qualification, 128 graduates achieved Advanced Diploma qualifications, 14 graduates achieved Postgraduate Diploma qualifications and 6 obtained Masters qualifications (refer to Figure 1 below).

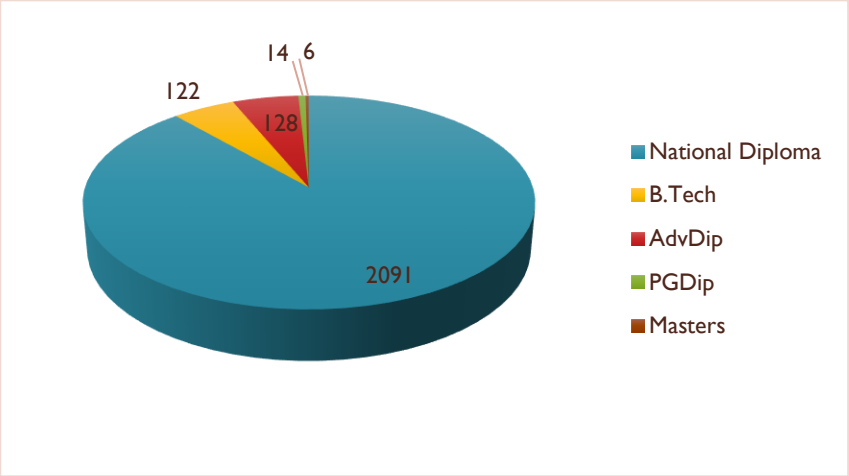

Figure 1: Qualification types

2.2 PARTICIPATION RATE

Amongst the individual faculties, the highest response rate (80.5%) was from graduates in the Faculty of Management Sciences, while the Faculties of Natural Sciences and Engineering recorded 78% and 77.5% response rates respectively. The response rate per faculty is shown in Figure 2.

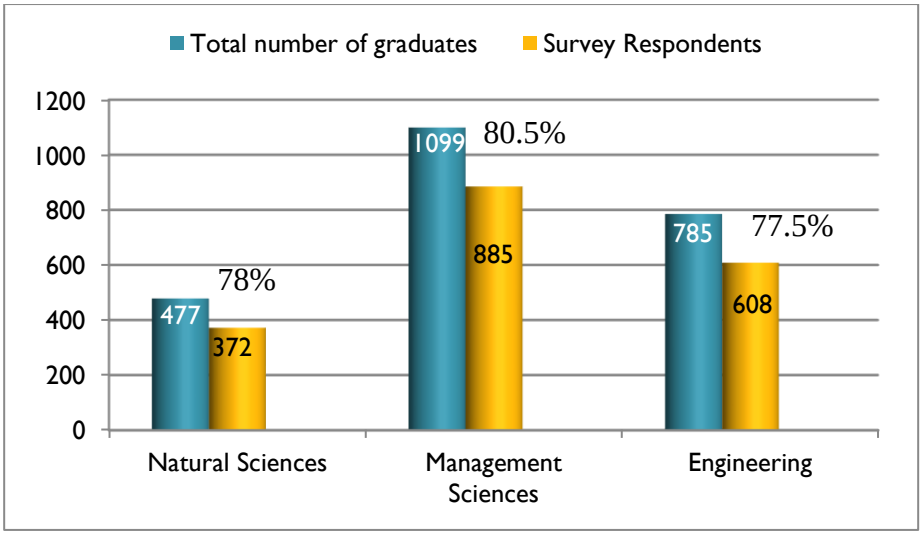

Figure 2: Graduates and respondents per faculty

2.3 COMPARATIVE ANALYSIS FOR 2017 /2018

There was an increase of 3% in the number of graduates from 2296 in 2017 to 2361 in 2018, (See Table 2).

Table 2: Graduates and respondents per faculty 2017 – 2018

Faculty	Number of Graduates		Number of Respondents		Participation rate %	
	2017	2018	2017	2018	2017	2018
Management Sciences	930	1099	475	885	51.1%	80.5%
Natural Sciences	524	477	329	372	63%	78%
Engineering	842	785	376	608	44.7%	77.5%
Total	**2296**	**2361**	**1180**	**1865**	**53% (overall)**	**79% (overall)**

3. FIELDS OF STUDY

3.1 FACULTY OF ENGINEERING

The fields of study of the 608 respondents who participated in the survey in the Faculty of Engineering are shown in Figure 3 below. The respondents were from the departments of: Chemical Engineering (17%), Civil Engineering (21%), Surveying (6%), Construction Management and Quantity Surveying (13%), Electrical Engineering (28%) and Mechanical Engineering (14%).

In this faculty one percent (1%) of the respondents did not respond to the question requesting their field of study.

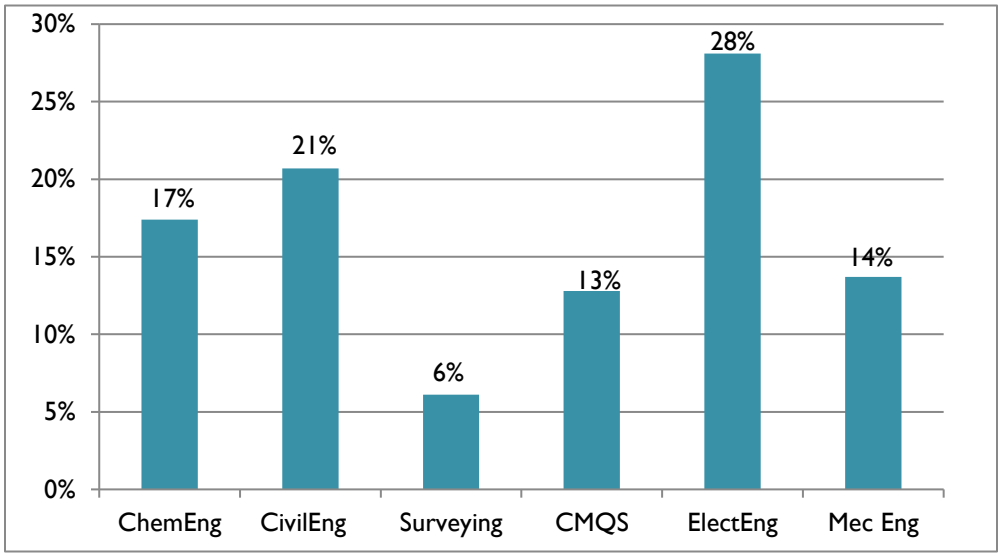

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Figure 3: Fields of study (Faculty of Engineering)

Of the 608 respondents in the faculty, 95.1% achieved the National Diploma qualification, 3.5% achieved the BTech qualification while 0.2% received the Advanced Diploma qualification. In this faculty nearly one percent (1%) of the respondents did not answer this question

In the Faculty of Engineering, 65% of the respondents gained access into engineering programmes through the Pre-tech programme, 8% through the ECP programme and 22% through the mainstream route. Five percent (5%) of the respondents did not respond to this question. Figure 4 depicts the access pathway followed.

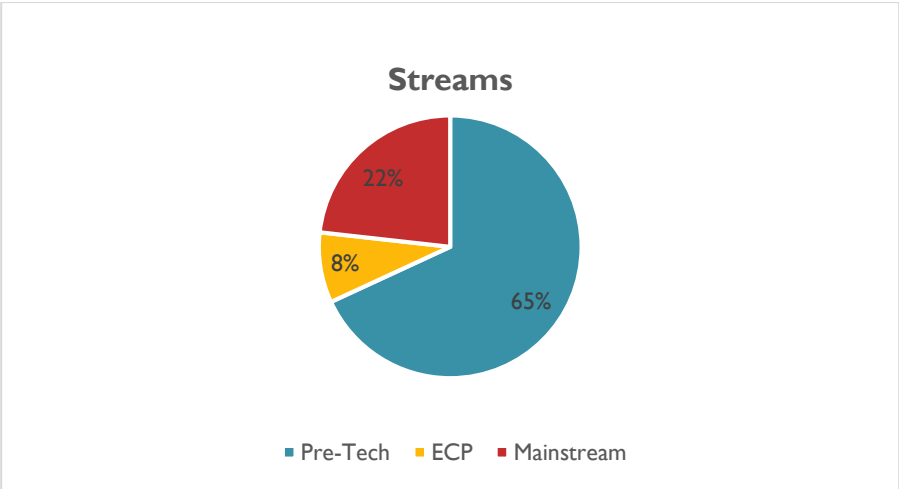


Figure 4: Streams followed into Engineering programmes

3.2 FACULTY OF MANAGEMENT SCIENCES

The fields of study of the 885 respondents who participated in the survey in the Faculty of Management Sciences are depicted in Figure 5 below**.** The respondents were from the departments of: Accounting (33.9%), Human Resource Management (18.4%), Marketing (19.9%), Office Technology (13.0%) and Public Administration and Economics (13.9%). One percent (1%) of the respondents did not respond.

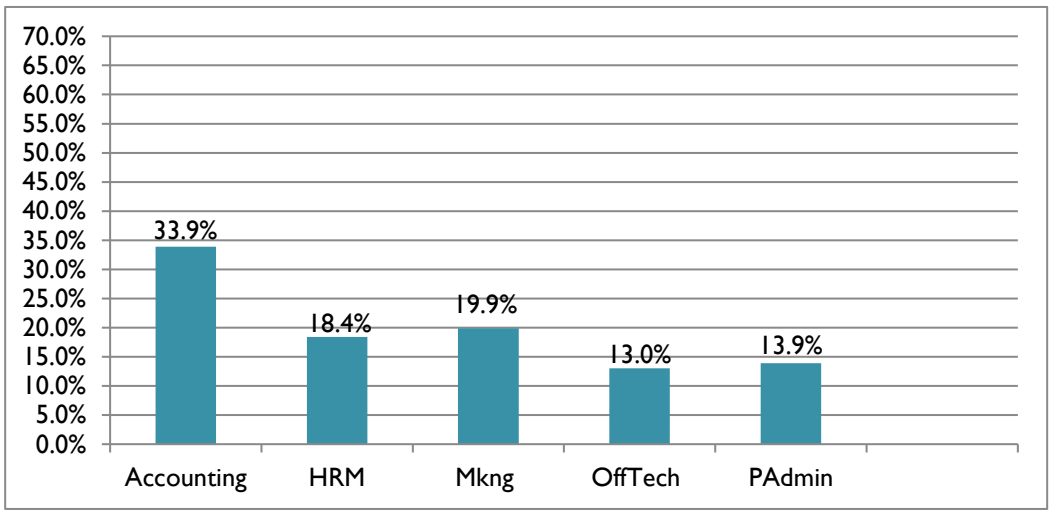


Figure 5: Fields of study (Faculty of Management Sciences)

Of the 885 respondents in the faculty, 85.1% achieved the National Diploma qualification, 3.8% achieved the BTech qualification while 8.8% received the Advanced Diploma qualification and 0.8% received the Post Graduate Diploma qualification. In this faculty one percent (1%) of the respondents did not answer this question.

Of the respondents 0.6% gained access into Management Sciences programmes through the Pre-tech programme, 9.8% through the ECP programme and 72.7% through mainstream programmes. Figure 6 below shows the streams followed. Seventeen percent (17%) of the respondents did not respond to this question. Figure 4 depicts the access pathway followed.

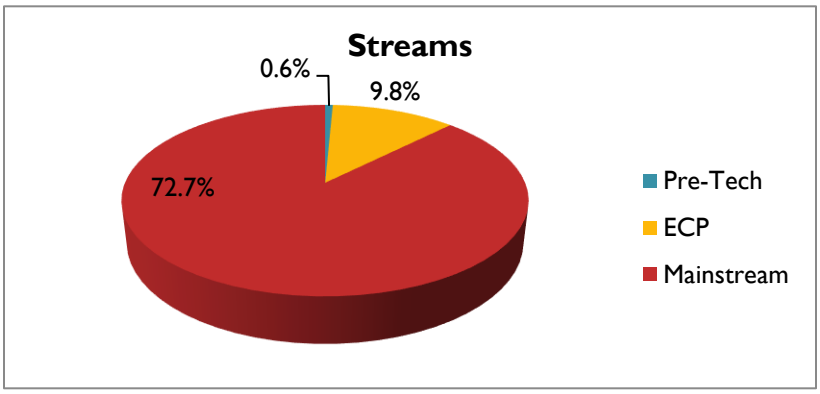


Figure 6: Streams followed into Management Sciences programmes

3.3 FACULTY OF NATURAL SCIENCES

The fields of study of the 372 respondents from the Faculty of Natural Sciences are shown in Figure 7 below. The respondents were from the departments of: Agriculture (23.1%), Biomedical Sciences (11.8%), Chemistry (11.3%), Community Extension (8.1%), Environmental Health (6.5%), Information and Communication Technology (23.7%) and Nature Conservation (13.2%). In this faculty two percent (2%) of the respondents did not indicate their field of study.

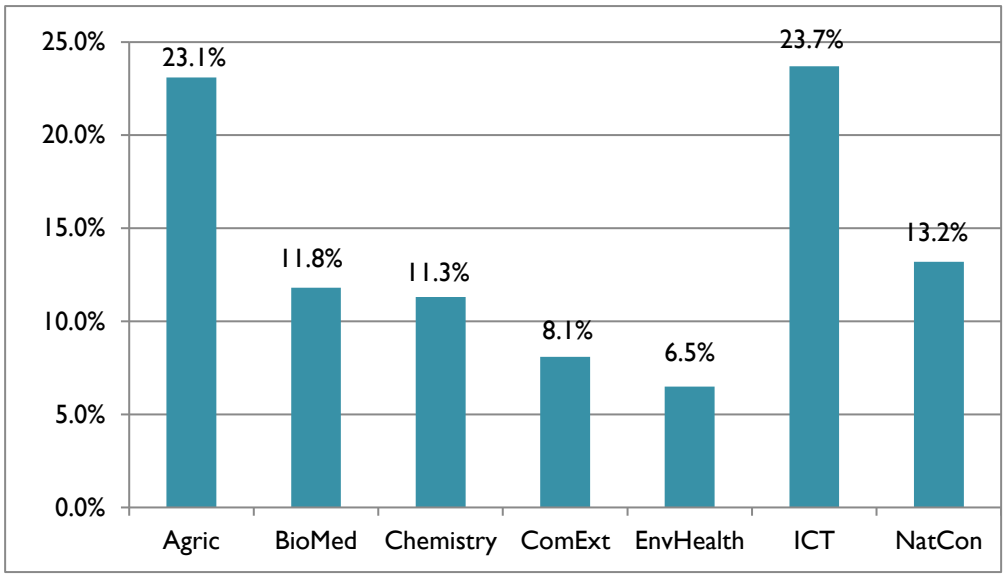


Figure 7: Fields of study (Faculty of Natural Sciences)

Eighty-four percent (84%) of respondents achieved the National Diploma qualification while 8.3% were awarded the BTech qualification, 2.4%, the Advanced Diploma, 1.1% achieved the Post Graduate Diploma qualification and 0.8% obtained Masters qualifications. In this faculty three percent (3%) of the respondents did not answer this question.

In the Faculty of Natural Sciences, of the 372 respondents, 4.3% accessed the Natural Sciences qualifications through Pre-tech programmes, 12.4% through the ECP programmes and 66.7% through the mainstream programmes. Seventeen percent (17%) of the respondents did not respond to this question. Figure 8 below shows the breakdown.

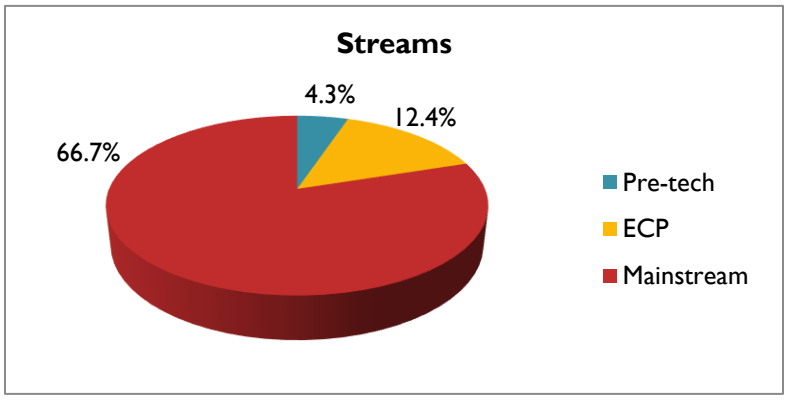


Figure 8: Streams followed into Natural Sciences programmes

SUMMARY

The majority of participants in the survey in the Faculty of Engineering (65% of respondents) gained access into the engineering qualifications through the Pre-tech programme, while only 22% accessed engineering programmes through Mainstream programmes and 8% through the ECP. In the case of the Faculty of Natural Sciences, the majority of students (66.7%) gained access into programmes through the Mainstream route while 12.4% gained access through the ECP and 4.3% through Pre-tech. In the Faculty of Management Sciences the majority of graduate respondents (72.7%) also gained access into programmes through the mainstream programme, while 0.6% accessed the programme through the Pre-tech programme and 9.8% through the ECP. Overall the participation of graduates in the Advanced Diploma, Postgraduate Diploma and Masters qualifications was low. This can be attributed to the graduates' reluctance to participate in the survey as they indicated they saw little improvement since the last participation in the survey.

4. YEAR OF ENTRY

Figure 9 below depicts the year of entry for all respondents. The data shows that a large number of students take more than the minimum time to complete their qualifications. It should be noted that the data here includes those who graduated with the Diploma (mainstream and ECP), Masters, BTech, Advanced Diploma and Post graduate diploma qualifications, each of which are one year qualifications fulltime and two years part time. Four percent (4%) of all the respondents did not answer this question.

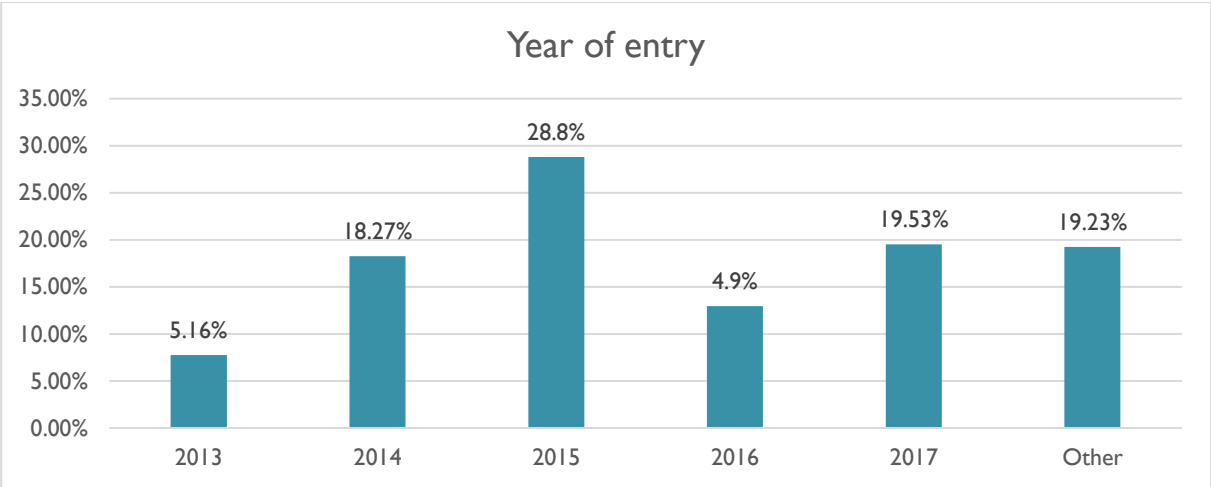


Figure 9: Respondents' year of entry MUT programmes (all respondents)

4.1 YEAR OF ENTRY PER FACULTY

The respondents' year of entry is presented per faculty in Figure 10. The data shows that the majority of the respondents in the Faculty of Engineering, 69.8%, took more than three years to complete their three year diploma programmes. Only 5.9% completed their diplomas in the prescribed minimum of three years. Three percent (3%) of the respondents in this faculty did not respond to the year of entry question.

In the Faculty of Management Sciences, 43.7%, completed their diploma programmes in three years. One percent (1%) of the respondents in this faculty did not respond to this question.

In the Faculty of Natural Sciences, 36.8% of the respondents completed their diplomas in three years. Eight percent (8%) of the respondents in this faculty did not respond to the year of entry question. Note that "other "refers to those who registered before 2013.

The Faculties should endeavor to identify reasons for the high time to graduation. The departmental-level analysis below should reveal more information that can inform decisions regarding improvement.

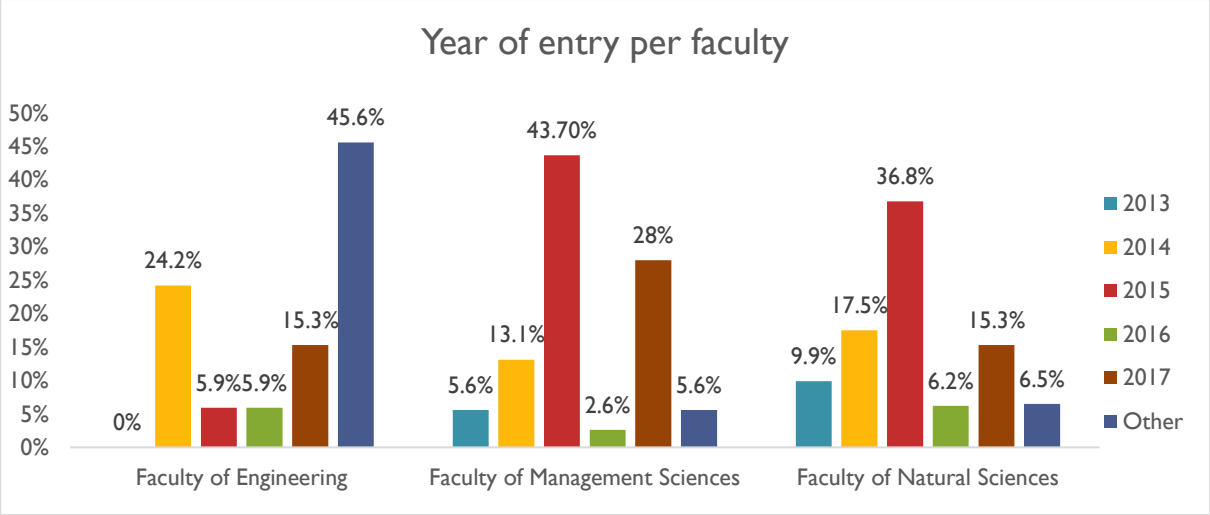


Figure 10: Respondents' year of entry per faculty

5. GENDER OF RESPONDENTS

5.1 FACULTY OF MANAGEMENT SCIENCES

Of the 885 respondents in the Faculty of Management Sciences 63.3% are female, 33.4% are male and 0.11% fell into the category of 'other'. Three percent (3%) of the respondents in this faculty did not respond to this question. Figure 11 depicts the gender split. In terms of age, 74.8% were at most 25 years of age and 24% were above the age of 25 years at the time of graduation. Three percent (3%) of the respondents did not answer the age related question.

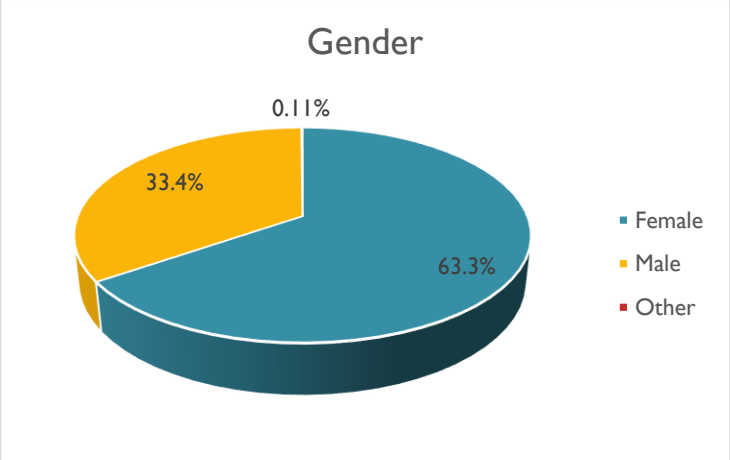


Figure 11: Gender split (Faculty of Management Sciences)

5.2 FACULTY OF NATURAL SCIENCES

Of the 372 respondents in this faculty, 54% are female, 40.9% male and 0.3% fell into the category of 'other'. Figure 12 below shows the gender split in this faculty. In terms of age, 67.5% were 25 years and below and 27.4% were over the age of 25 years at the time of graduation. Five percent (5%) of the respondents in this faculty did not respond to the gender and age related questions.

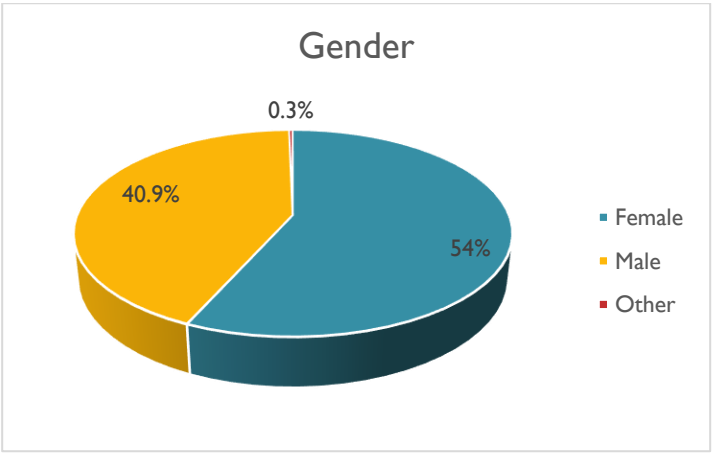


Figure 12: Gender split (Faculty of Natural Sciences)

5.3 FACULTY OF ENGINEERING

Figure 13 below shows the gender split. Of the 608 respondents in the Faculty of Engineering 36.5% are female, 62.2% are male. One percent (1%) of the respondents in this faculty did not

respond to this question. In terms of age, 44.8% were over the age of 25 years and 52.6% were at least or below the age of 25. Three percent (3%) in this faculty did not respond to the age related question.

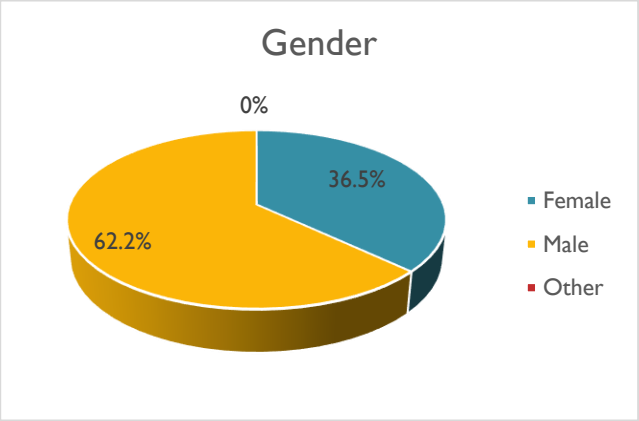


Figure 13: Gender split (Faculty of Engineering)

6. RESPONDENTS' ETHNIC/RACE GROUPS

6.1 RACE SPLIT OF ALL RESPONDENTS (COMBINED)

In all faculties combined the total number of respondents were 1865. Of the 1865 respondents 97% are African with 0.17 % Coloured and 0.18% are White respondents. There were 0.36% Indian/Asian respondents. Two percent (2%) of all respondents did not answer this question. Figure 14 shows the race split of all respondents in the three faculties combined.

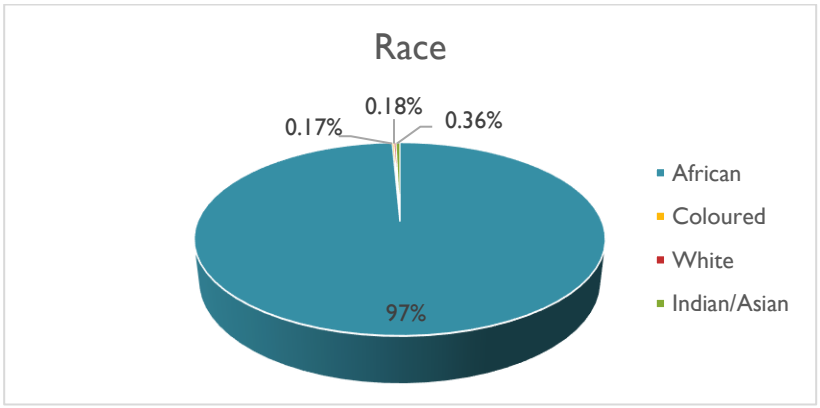


Figure 14: Race of respondents (combined)

6.2 FACULTY OF ENGINEERING

In the Faculty of Engineering the respondents were African and Coloured with 98.2% and 0.3% respectively. There were no respondents from other racial groups, Figure 15 shows the race split. In this faculty one percent (1%) of the respondents did not answer this question.

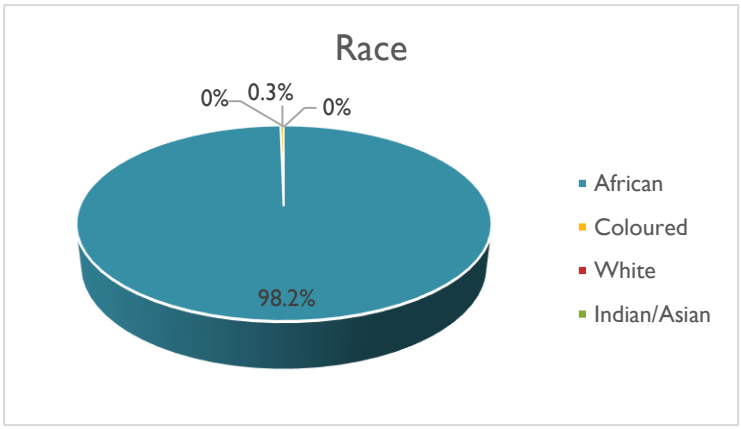


Figure 15: Race of respondents (Faculty of Engineering)

6.3 FACULTY OF NATURAL SCIENCES

In the Faculty of Natural Sciences out of 372 there were 94.6 % African respondents and 0.% Coloured respondents and 1.1% Indian/Asian respondents. There were 0.5% White respondents. In this faculty four percent (4%) did not respond to this question. Figure 16 shows the race split.

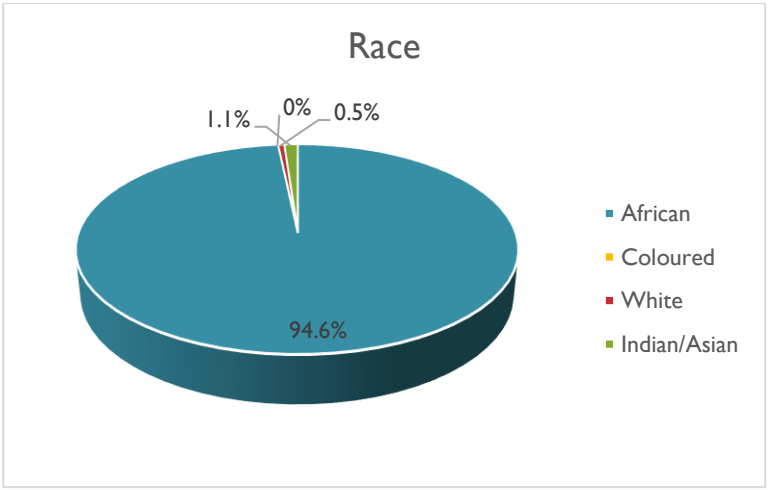


Figure 16: Race of respondents (Faculty of Natural Sciences)

6.4 FACULTY OF MANAGEMENT SCIENCES

In a total of 885 respondents there were 98.2% African respondents in this faculty and 0.2% Coloured. There were no Indian /Asian and White respondents. In this faculty two percent (2%) of the respondents did not answer this question. Figure 17 shows the race split.

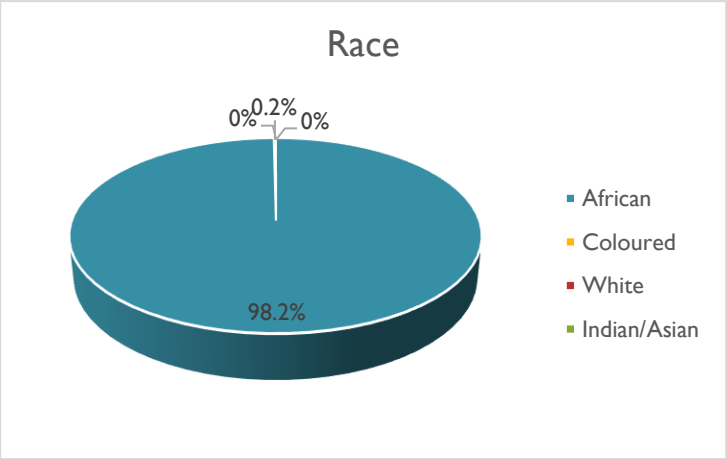


Figure 17: Race of respondents (Faculty of Management Sciences)

7. RESPONDENTS' COUNTRY OF ORIGIN

The respondents' countries of origin are shown in Figure 18 below. Two percent (2%) of all the respondents did not answer this question.

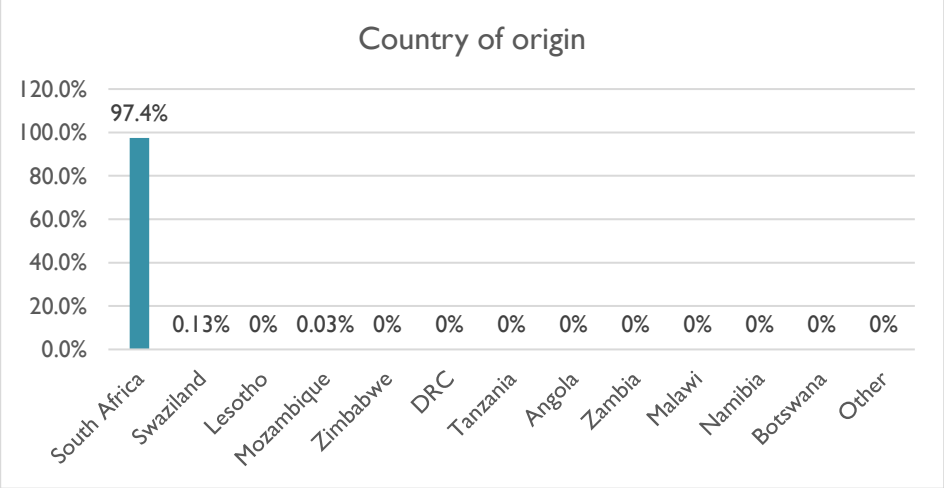


Figure 18: Respondents' country of origin

8. PROVINCE OF ORIGIN

8.1 FACULTY OF ENGINEERING

There were 608 respondents in the Faculty of Engineering. Of these respondents 87.7% came from KZN, 5.6% came from the Eastern Cape. There were 0.3% of respondents came from Free State, 0.8% Gauteng, 2% from Mpumalanga, 2% from Limpopo and 0.2% from North West . There were no respondents from Western Cape and Northern Cape. In this faculty one percent (1%) did not respond to this question. Figure 19 shows the respondents' province of origin.

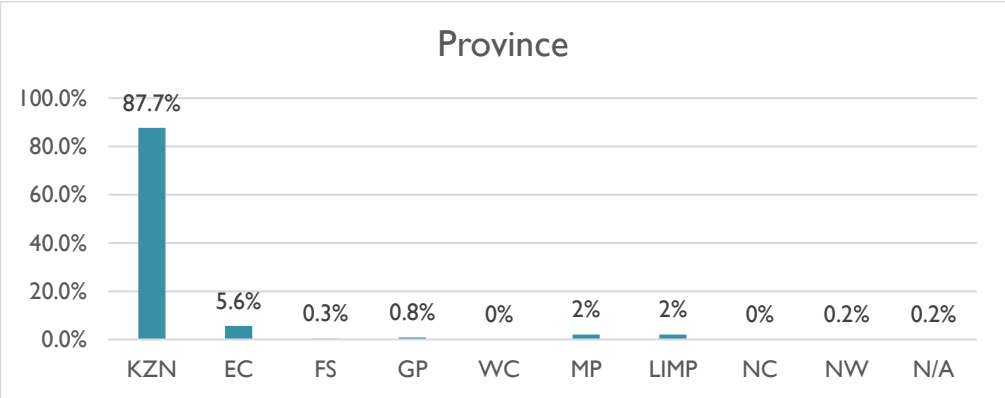


Figure 19: Respondents' province of origin (Faculty of Engineering)

8.2 FACULTY OF NATURAL SCIENCES

There were 372 respondents in this faculty. Of these, 85.8% came from KZN, 5.9% came from the Eastern Cape. There were 0.3% of respondents came from Free State, 3% from Mpumalanga, and 1.1% from Limpopo. There were no respondents from Gauteng, Western Cape, Northern Cape and North West. In this faculty four percent (4%) of the respondents did not answer this question. The provincial spread of the respondents in this faculty is shown in Figure 20 below.

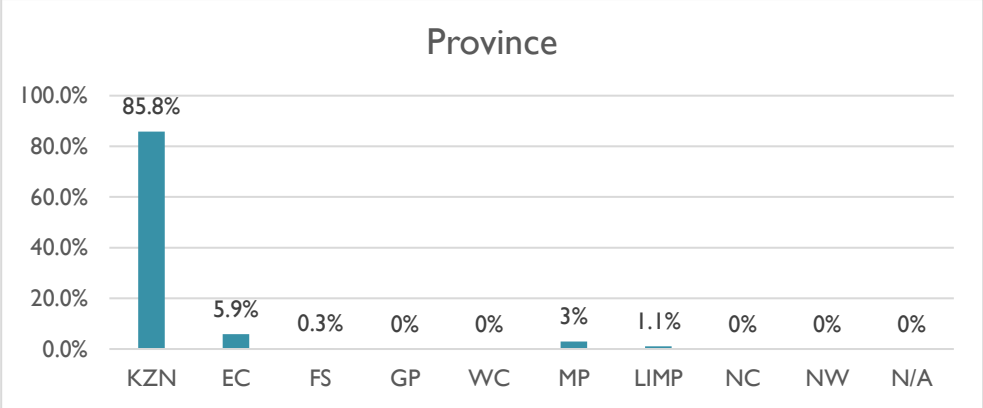


Figure 20: Respondents' province of origin (Faculty of Natural Sciences)

8.3 FACULTY OF MANAGEMENT SCIENCES

There were 885 respondents in this faculty. Of these respondents 91.5% came from KZN, 5.5% came from the Eastern Cape. There were 0.1% of respondents who came from Free State, 1% Gauteng, 0.8% from Mpumalanga and 0.2% from Limpopo. There were no respondents from Western Cape, Northern Cape and North West. In this faculty one percent (1%) did not respond to this question. Figure 21 shows the respondents' province of origin.

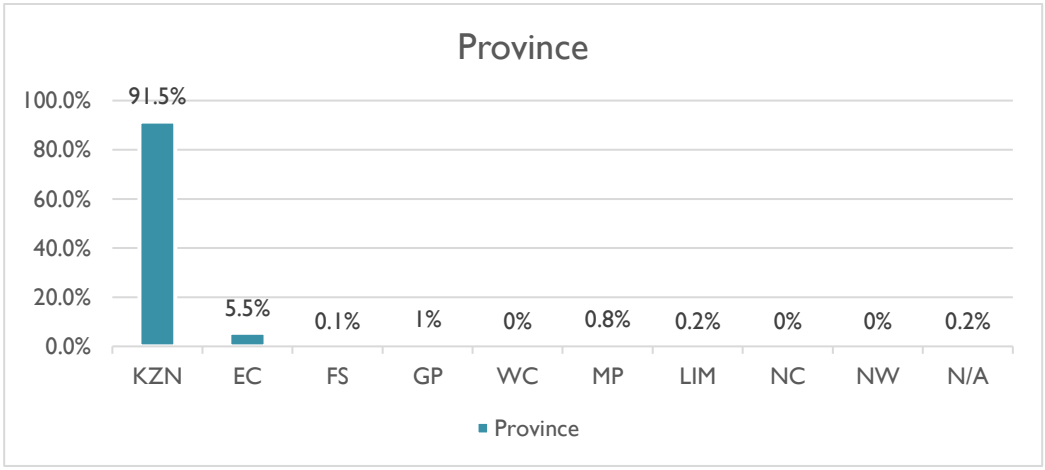


Figure 21: Respondents' province of origin (Faculty of Management Sciences)

8.4 SUMMARY

Overall the majority of respondents came from the province of KwaZulu – Natal (88.3%), followed by Eastern Cape (5.7%) and Mpumalanga (3%). Figure 22 shows the respondents' province of origin (combined).

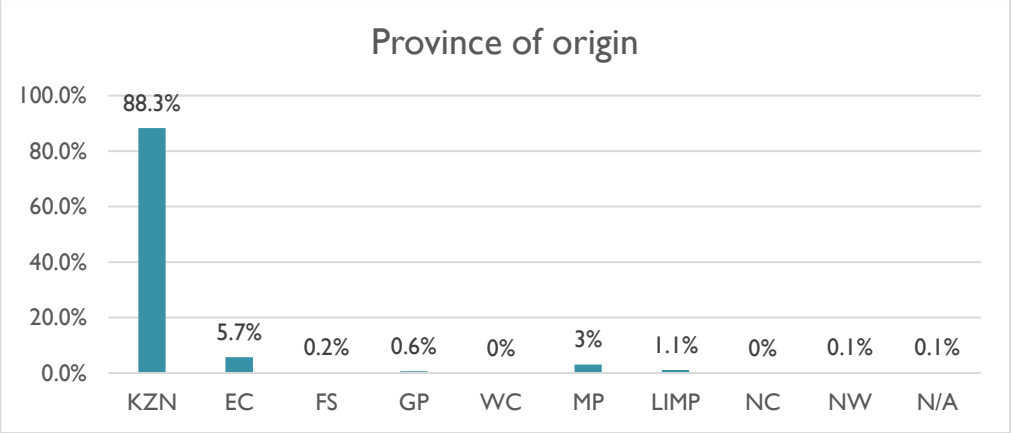


Figure 22: Respondents' province of origin

9. CURRENT EMPLOYMENT STATUS

9.1 FACULTY OF ENGINEERING

Of the 608 respondents in the Faculty of Engineering, 44.9% were employed, 1.8% were self-employed and 52.1% were unemployed at the time the survey was conducted. In this faculty one percent (1%) of the respondents did not answer this question. Figure 23 shows the employment status of the respondents at the time the survey was conducted in the Faculty of Engineering.

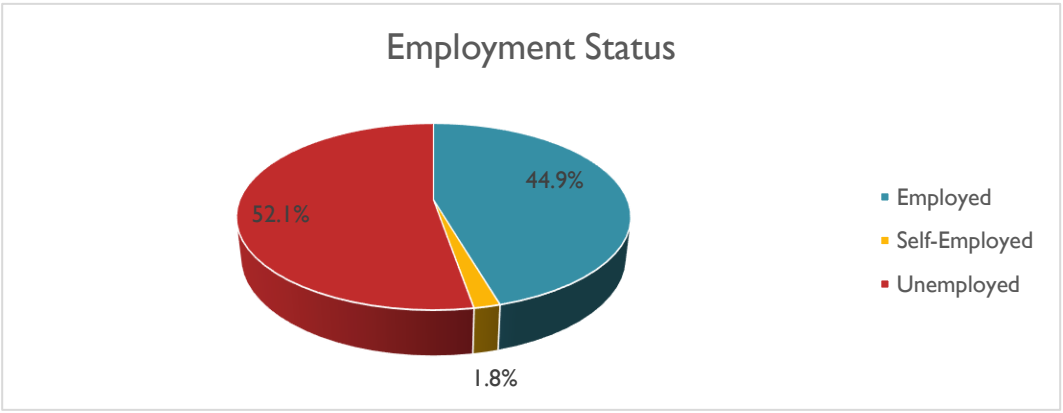


Figure 23: Current employment status of respondents (Faculty of Engineering)

Of the respondents 41.4% were employed in a sector related to their field of study, 4.8% were not employed in a field related to what they studied while 43.1% indicated that the question was not applicable to them. Eleven percent (11%) of the respondents did not answer this question.

9.2 FACULTY OF NATURAL SCIENCES

In the Faculty of Natural Sciences 31.2% were employed, 1.9% were self-employed and 63.2% were unemployed. In this faculty four percent (4%) of the respondents did not answer this question. Figure 24 shows the employment status of the respondents at the time of the survey.

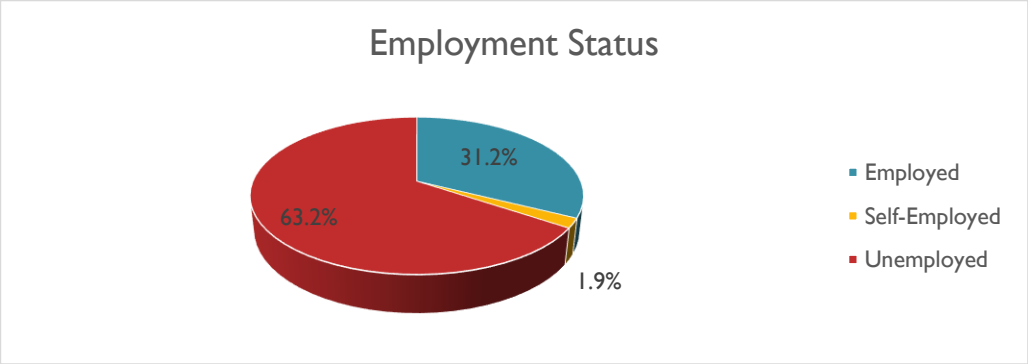


Figure 24: Current employment status of respondents (Faculty of Natural Sciences)

Of the respondents 28.5% were employed in a sector related to their field of study, 4.8% were employed in a sector not related to their field of study. Of the respondents 51.3% indicated that the question did not apply to them. Fifteen percent (15%) of the respondents did not answer this question.

9.3 FACULTY OF MANAGEMENT SCIENCES

In the Faculty of Management Sciences of the 885 respondents, 13.6% were employed, 1% were self-employed and 84.1% were unemployed. In this faculty one percent (1%) of the respondents did not answer this question. Figure 25 shows the employment status of the respondents at the time of the survey.

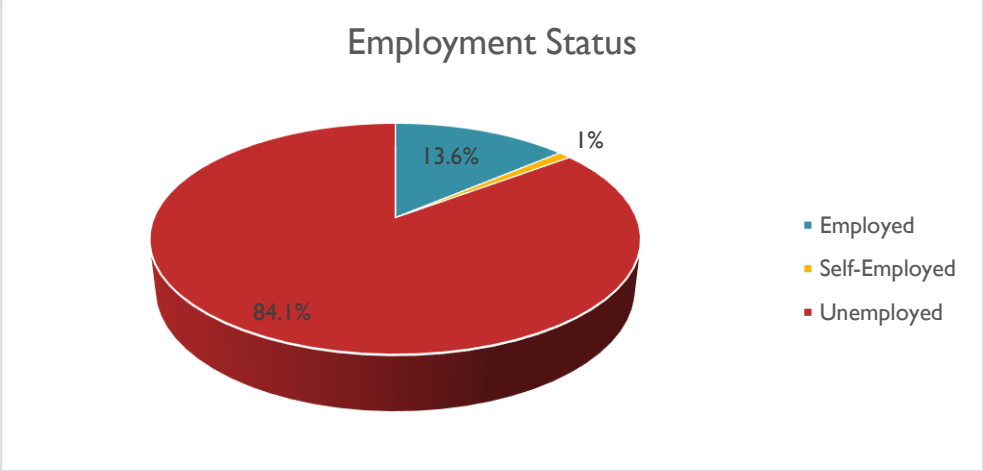


Figure 25: Current employment status of respondents (Faculty of Management Sciences)

Of the respondents 10.5% were employed in a sector related to their field of study, 6.8% were employed in a sector not related to their field of study. About 63.6% of the respondents indicated that the question did not apply to them. Nineteen percent (19%) of the respondents did not answer this question.

9.4 SUMMARY

Of majority of the respondents (combined in all faculties) at the time of the survey, 66.5%, were unemployed, 1.6% were self-employed and 30% were employed. Figure 26 illustrates the employment status of the respondents.

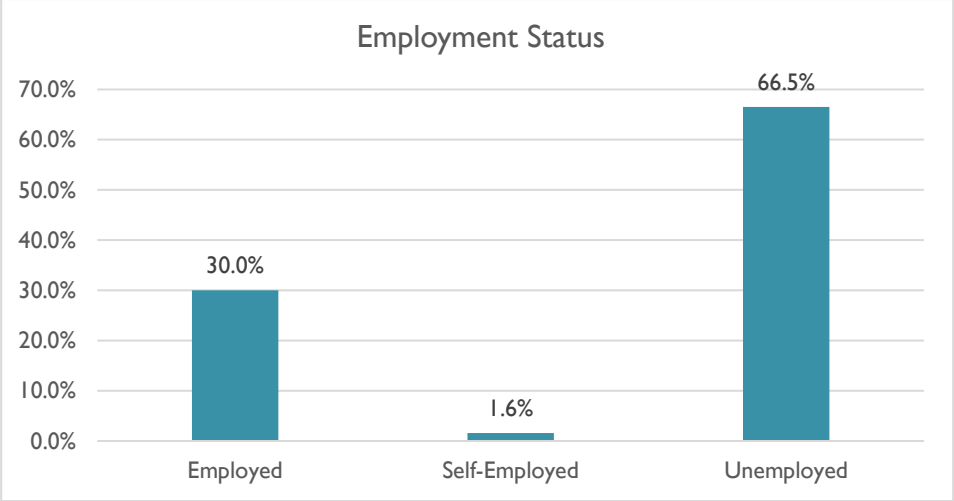


Figure 26: Current employment status of respondents (Faculties combined)

10. MANNER OF RECRUITMENT

10.1 FACULTY OF ENGINEERING

Respondents were requested to indicate how they got into the employment they were in at the time of the survey. In the Faculty of Engineering, the majority of those employed, 25.3% got into their jobs through job advertisements, 13.2% through personal contacts, 1.3% through recruitment from the University, 3% through employment agency and 1.5% were self-employed and 2.8% through WIL placement. About 44.2% indicated that the question was not applicable to them. Nine percent (9%) of the respondents in this faculty did not answer this question. Figure 27 shows how respondents who graduated from the Faculty of Engineering were recruited into their jobs.

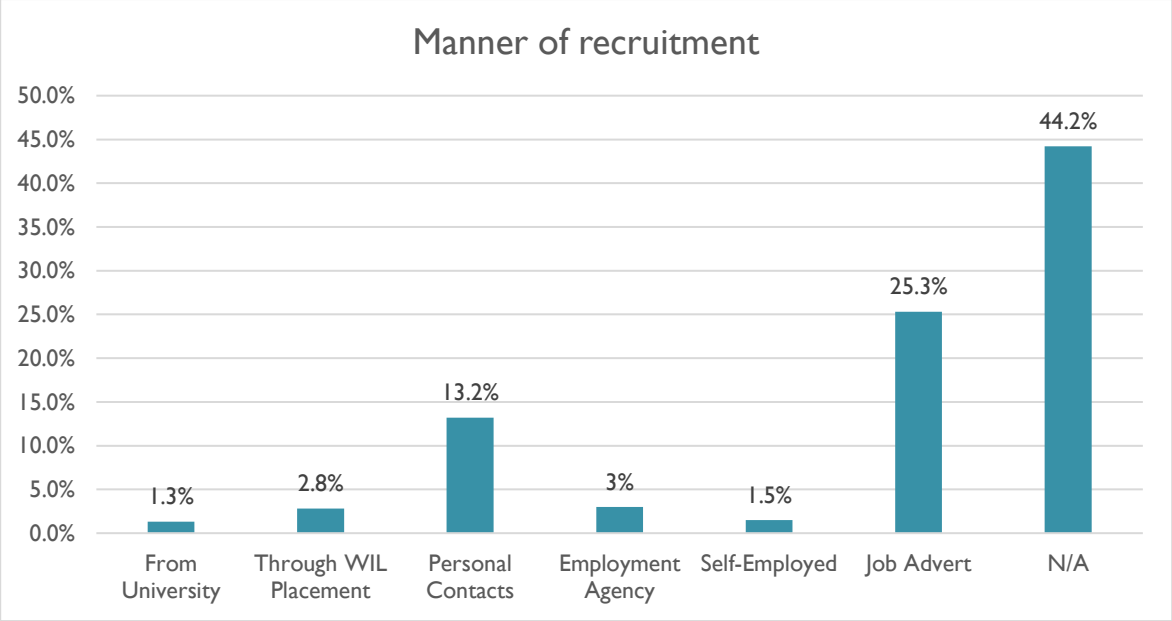


Figure 27: Manner of recruitment of employed respondents (Faculty of Engineering)

10.2 FACULTY OF NATURAL SCIENCES

In the Faculty of Natural Sciences, of the 372 respondents, 13.4% of those employed got their jobs through job advertisements, 3.8%, through recruitment from the University, 3.5% through personal contacts, 5.9% through WIL placement, 3.5% through an employment agency and 2.2% were self-employed. About 54.6% indicated that the question was not applicable to them. Thirteen percent (13%) of the respondents in this faculty did not answer this question. Figure 28 illustrates the types of recruitment for respondents who graduated from the Faculty of Natural Sciences.

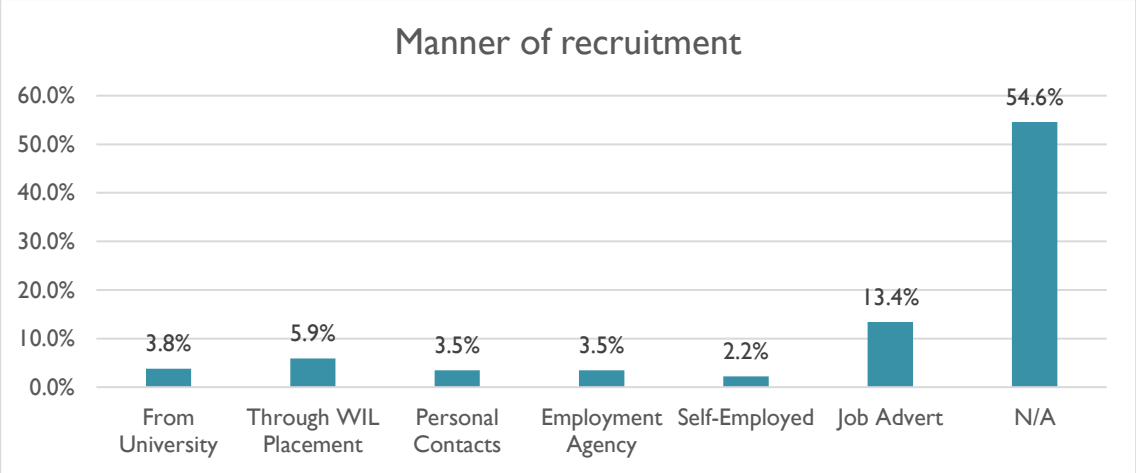


Figure 28: Manner of recruitment of employed respondents (Faculty of Natural Sciences)

10.3 FACULTY OF MANAGEMENT SCIENCES

In the Faculty of Management Sciences, of those employed, 7.2% got their jobs through job advertisements, 1.9% through an employment agency and 2.1% through personal contacts. About 1.5% got employment through recruitment from university, 0.8% through WIL, 1% were self-employed. Sixty nine percent (69%) indicated that the question was not applicable to them. Eighteen percent (18%) of the respondents in this faculty did not answer this question. Figure 29 illustrates the various forms of recruitment.

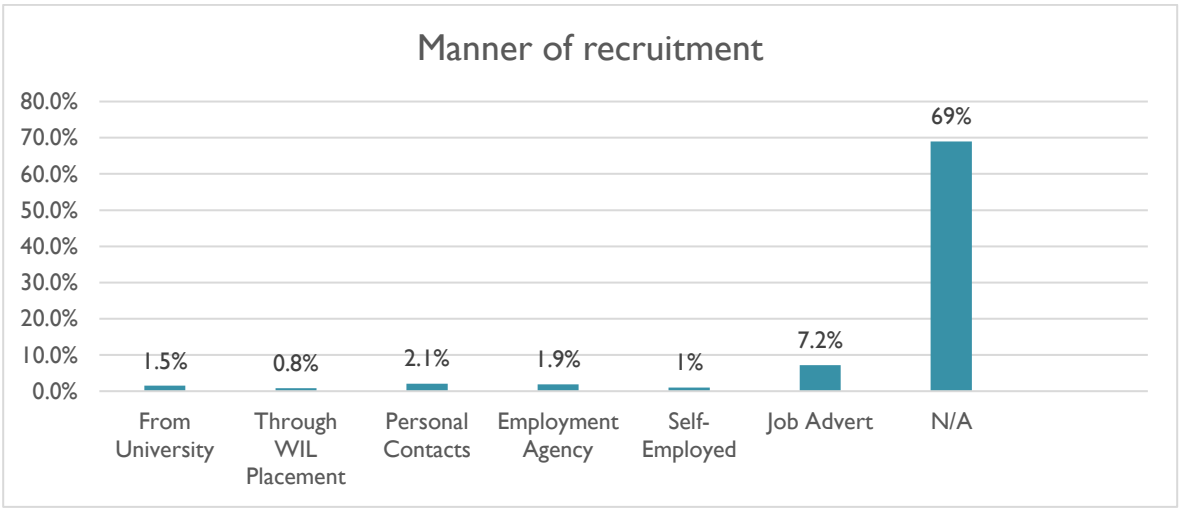


Figure 29: Manner of recruitment of employed respondents (Faculty of Management Sciences)

10.4 SUMMARY OF MANNER OF RECRUITMENT FOR THOSE EMPLOYED

Cumulatively, 30.0% of the respondents from all the faculties were employed. Of the employed respondents, 15.3% got their jobs through responding to advertisements, 6.3% got jobs through personal contacts, 2.2% were recruited from the University directly by companies, 3.2% through WIL, 2.8% through employment agencies and 1.6% were self-employed. Almost fifty six percent (56%) indicated that the question did not apply to them. Thirteen percent (13%) of all the respondents did not answer this question. Figure 30 illustrates the various forms of recruitment.

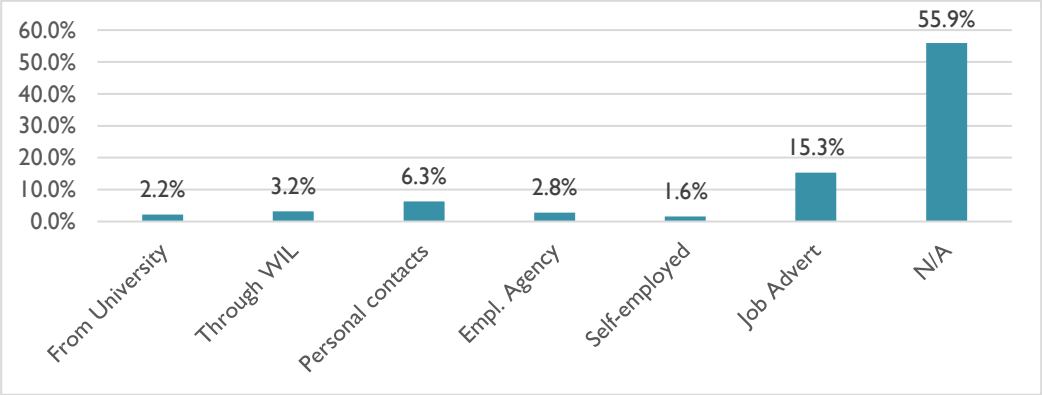


Figure 30: Manner of recruitment of employed respondents (Faculties combined)

11. FURTHER STUDIES

11.1 FACULTY OF ENGINEERING

Of the 608 respondents in the Faculty of Engineering, 8.2%, were involved in further studies on a fulltime basis while 11.8% were involved in further studies on a part time basis. The majority of the respondents, 77.3% were not involved in any form of further studies. Three percent (3%) of the respondents in this faculty did not answer this question. Figure 31 shows respondents' involvement in further studies.

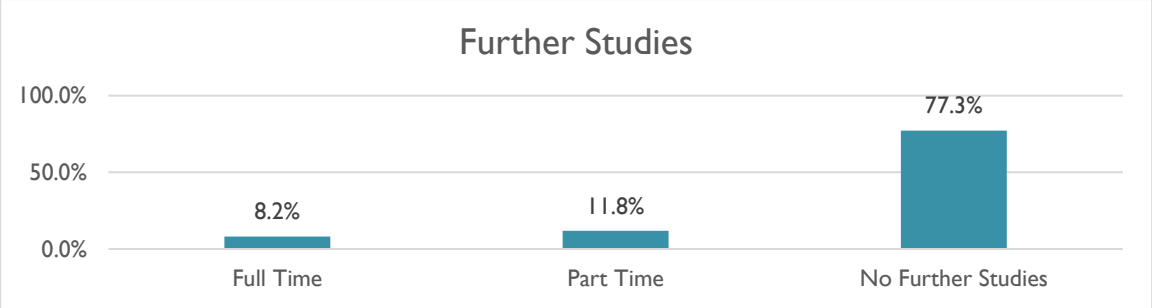


Figure 31: Further studies by respondents (Faculty of Engineering)

11.2 FACULTY OF NATURAL SCIENCES

Of the 372 respondents in the Faculty of Natural Sciences, 8.6% were involved in further studies on fulltime basis, 8.3% were involved in further studies on part time basis. The majority of the respondents, 77.2% were not involved in any form of studies. Six percent (6%) of the respondents in this faculty did not answer this question. Figure 32 shows respondents' involvement in further studies.

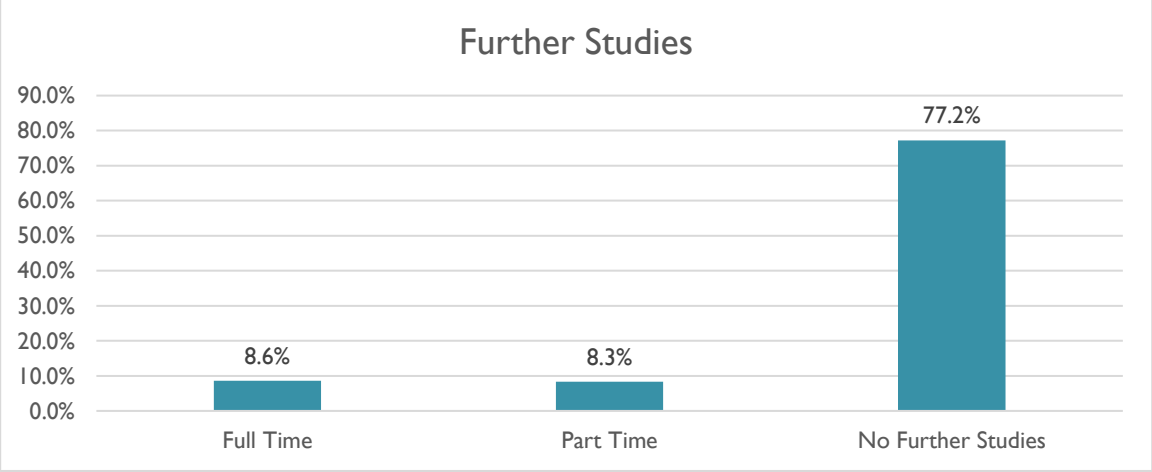


Figure 32: Further studies by respondents (Faculty of Natural Sciences)

11.3 FACULTY OF MANAGEMENT SCIENCES

Of the 885 respondents in the Faculty of Management Sciences, 21.7%, were involved in further studies on a fulltime basis, 9.2%, were involved in further studies on part time basis. The majority of the respondents, 64.7%, were not involved in any form of further studies. Four percent (4%)

of the respondents in this faculty did not answer this question. Figure 33 shows respondents' involvement in further studies.

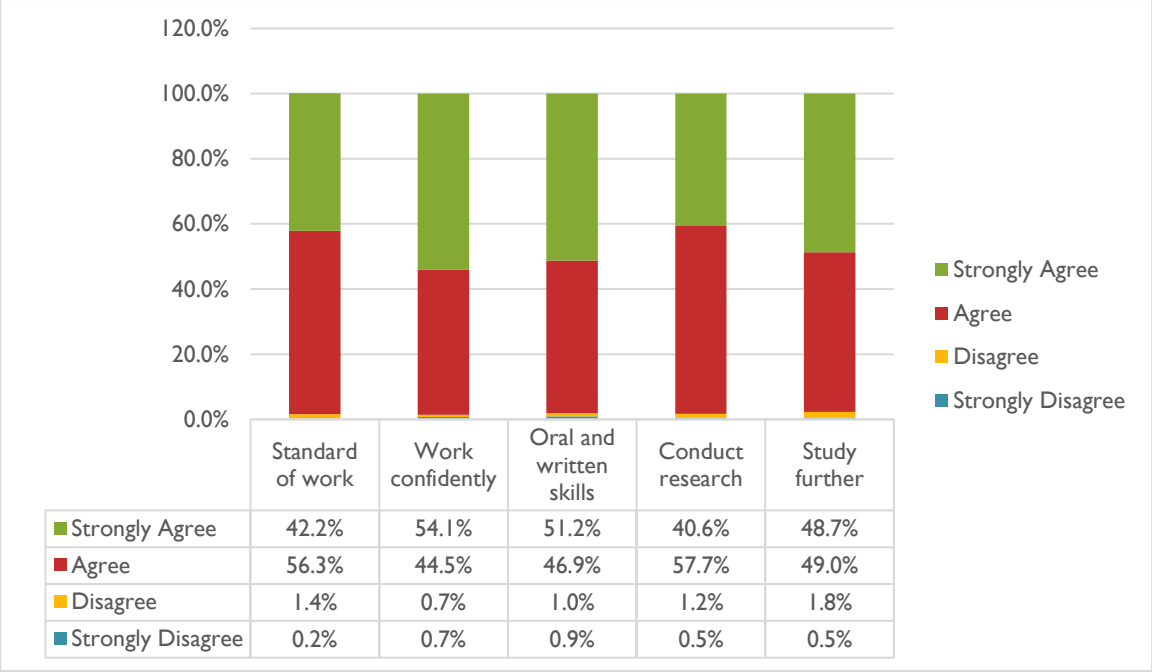
Figure 33: Further studies by respondents (Faculty of Management Sciences)

12. RESPONDENTS' STUDY EXPERIENCES AT MUT

Graduates were asked to comment on various aspects relating to their study experience at MUT. These aspects included, among others, knowledge and skills acquired, standard of work expected, interaction with teaching staff, availability and suitability of teaching and learning resources, readiness for the world of work, stimulation to study further, student activities on campus and the acquisition of the so called soft skills.

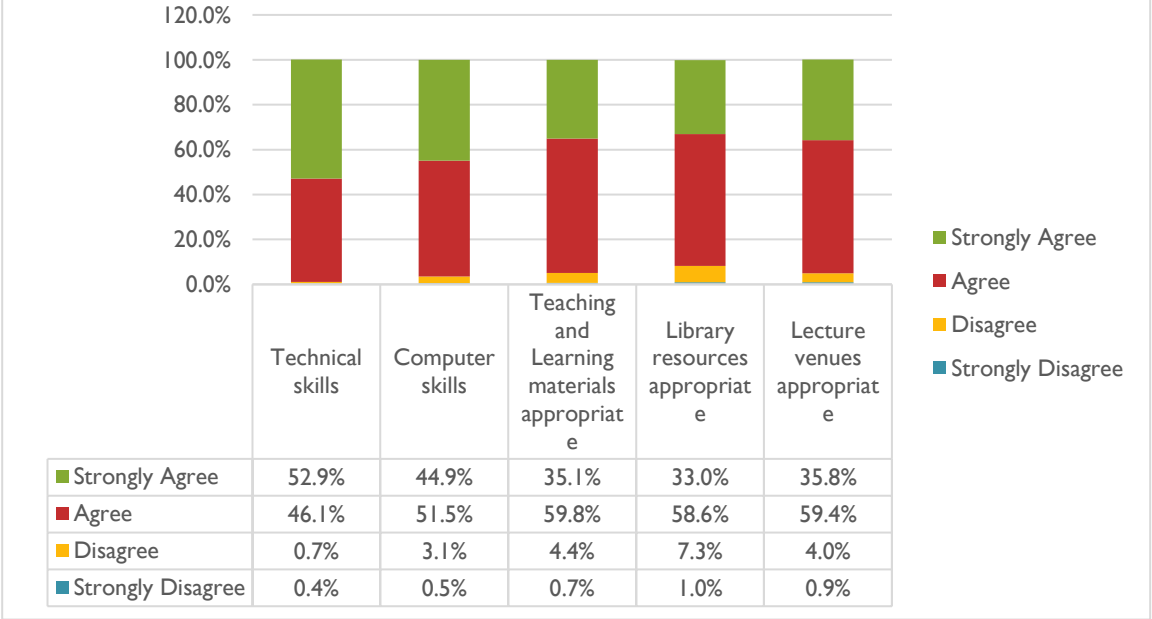
12.1 FACULTY OF ENGINEERING

In the Faculty of Engineering, of the 608 respondents on overall study experience, 98.6% of the respondents agreed that their experiences in MUT was positive. Only 1.4% disagreed that they had a positive study experience in the university in the Faculty of Engineering. A majority of the respondents (97.6%) indicated that they would recommend others to study at MUT. Figures 34, 35, 36 & 37 show how respondents rated the various aspects of their study experience in the Faculty of Engineering.



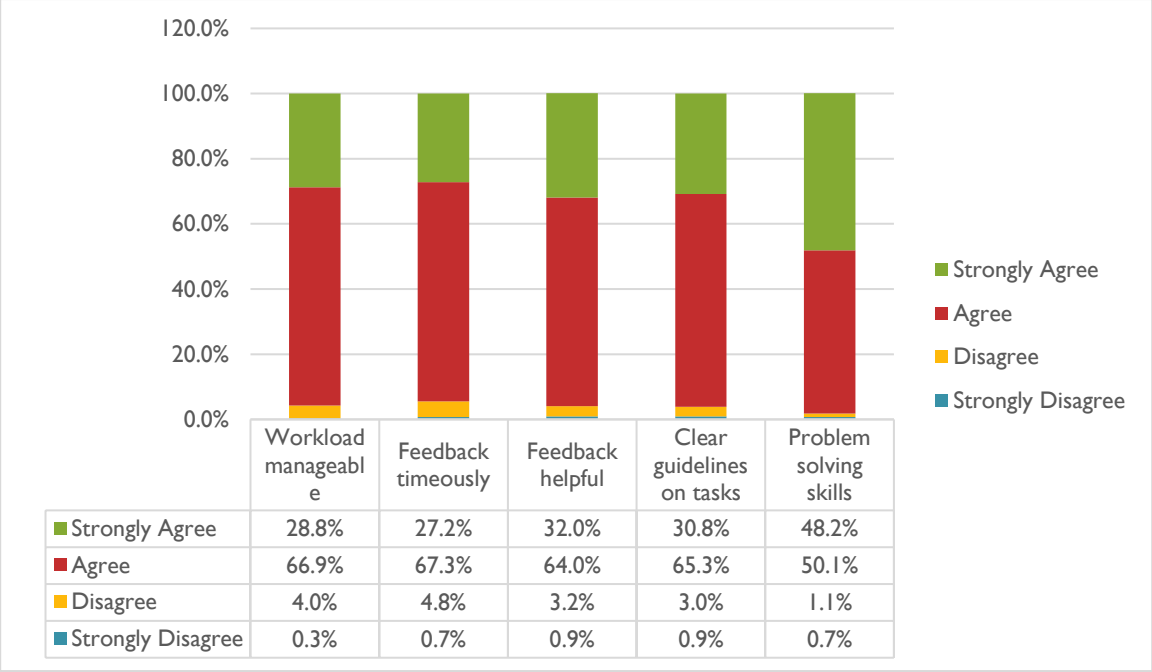
	Standard of work	Work confidently	Oral and written skills	Conduct research	Study further
Strongly Agree	42.2%	54.1%	51.2%	40.6%	48.7%
Agree	56.3%	44.5%	46.9%	57.7%	49.0%
Disagree	1.4%	0.7%	1.0%	1.2%	1.8%
Strongly Disagree	0.2%	0.7%	0.9%	0.5%	0.5%

Figure 34: Respondents' study experience (Faculty of Engineering)



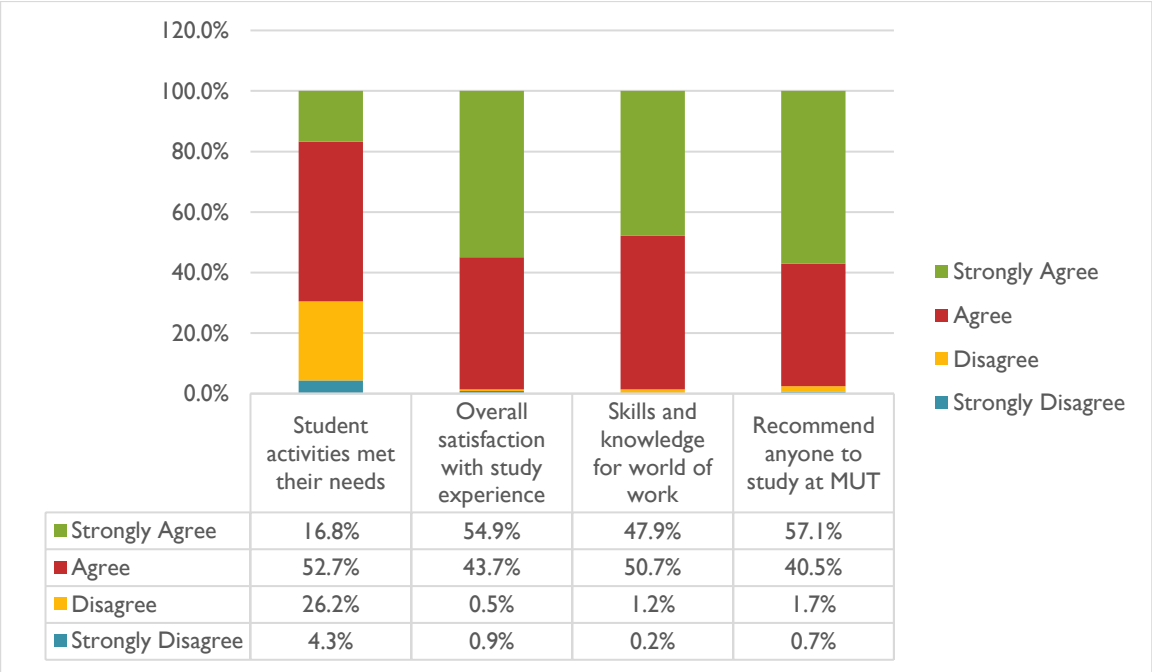
	Technical skills	Computer skills	Teaching and Learning materials appropriate	Library resources appropriate	Lecture venues appropriate
Strongly Agree	52.9%	44.9%	35.1%	33.0%	35.8%
Agree	46.1%	51.5%	59.8%	58.6%	59.4%
Disagree	0.7%	3.1%	4.4%	7.3%	4.0%
Strongly Disagree	0.4%	0.5%	0.7%	1.0%	0.9%

Figure 35: Respondents' study experience (Faculty of Engineering)



	Workload manageable	Feedback timeously	Feedback helpful	Clear guidelines on tasks	Problem solving skills
Strongly Agree	28.8%	27.2%	32.0%	30.8%	48.2%
Agree	66.9%	67.3%	64.0%	65.3%	50.1%
Disagree	4.0%	4.8%	3.2%	3.0%	1.1%
Strongly Disagree	0.3%	0.7%	0.9%	0.9%	0.7%

Figure 36: Respondents' study experience (Faculty of Engineering)

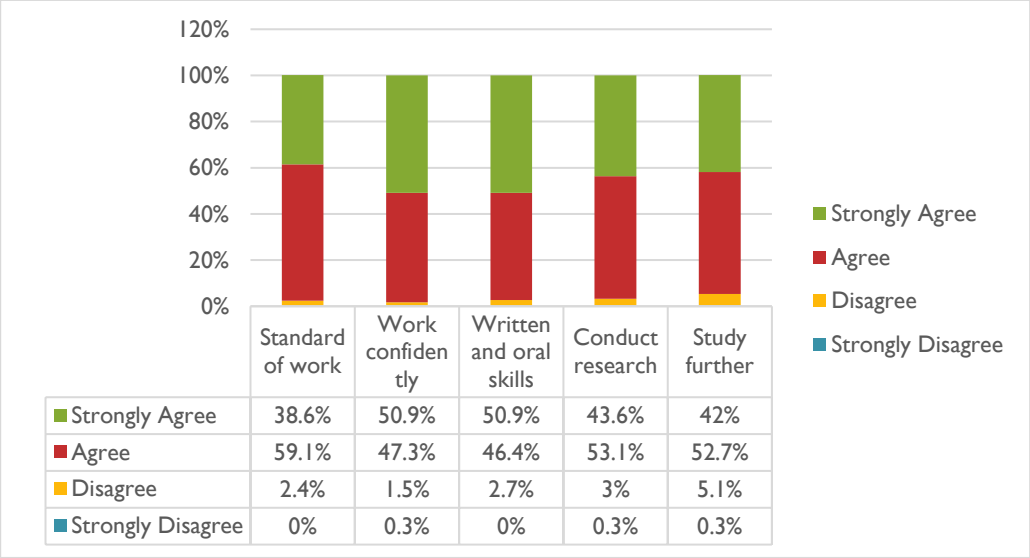


	Student activities met their needs	Overall satisfaction with study experience	Skills and knowledge for world of work	Recommend anyone to study at MUT
Strongly Agree	16.8%	54.9%	47.9%	57.1%
Agree	52.7%	43.7%	50.7%	40.5%
Disagree	26.2%	0.5%	1.2%	1.7%
Strongly Disagree	4.3%	0.9%	0.2%	0.7%

Figure 37: Respondents' study experience (Faculty of Engineering)

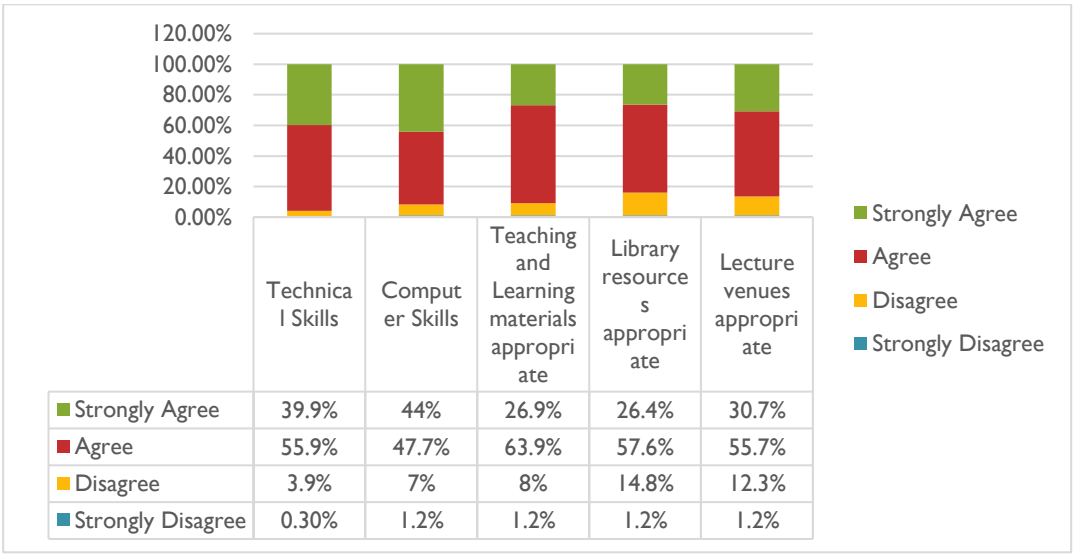
12.2 FACULTY OF NATURAL SCIENCES

In the Faculty of Natural Sciences, 95.3% of the respondents indicated that they agree that overall they had a positive study experience at the University. About 4.7% disagreed that they had a positive experience at MUT. A majority of the respondents (95.2%) indicated that they would recommend others to study at MUT. Figures 38, 39, 40 & 41 show how respondents rated the various aspects of their study experience in the Faculty of Natural Sciences.



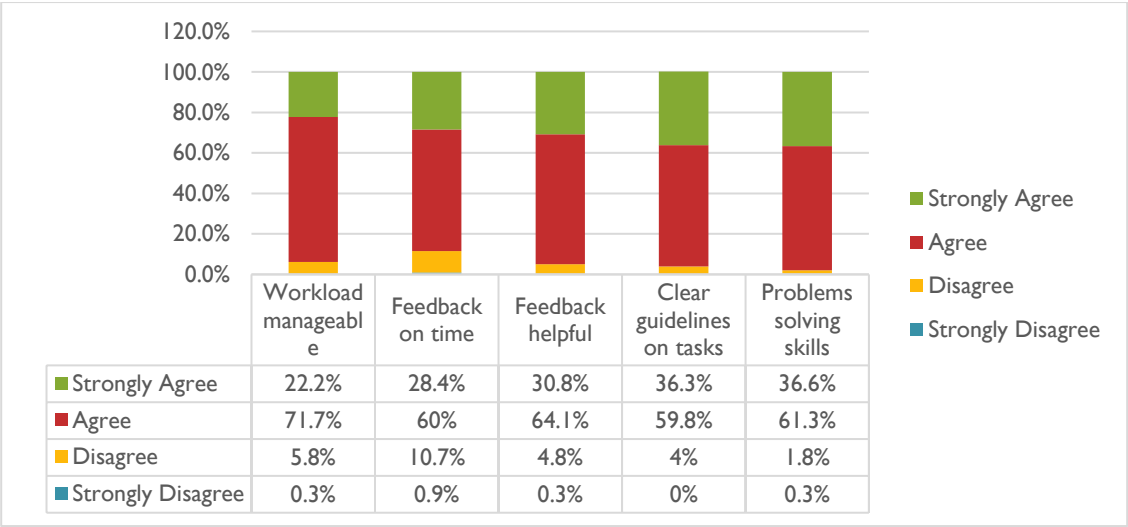
	Standard of work	Work confidently	Written and oral skills	Conduct research	Study further
Strongly Agree	38.6%	50.9%	50.9%	43.6%	42%
Agree	59.1%	47.3%	46.4%	53.1%	52.7%
Disagree	2.4%	1.5%	2.7%	3%	5.1%
Strongly Disagree	0%	0.3%	0%	0.3%	0.3%

Figure 38: Respondents' study experience (Faculty of Natural Sciences)



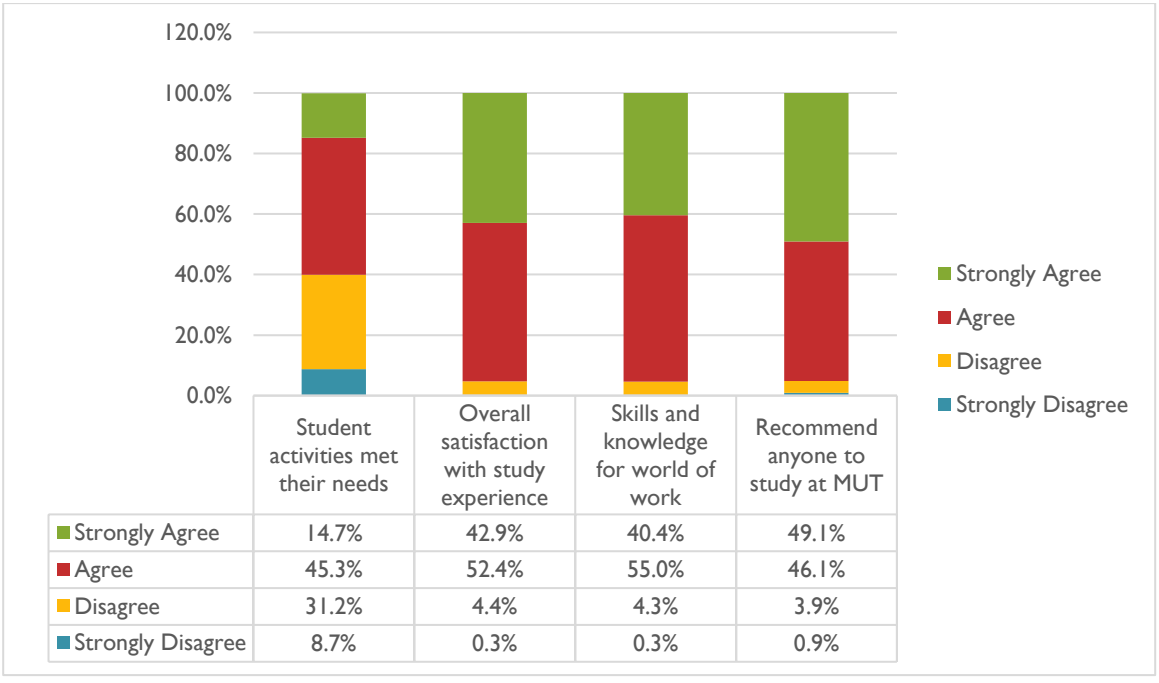
	Technical Skills	Computer Skills	Teaching and Learning materials appropriate	Library resources appropriate	Lecture venues appropriate
Strongly Agree	39.9%	44%	26.9%	26.4%	30.7%
Agree	55.9%	47.7%	63.9%	57.6%	55.7%
Disagree	3.9%	7%	8%	14.8%	12.3%
Strongly Disagree	0.30%	1.2%	1.2%	1.2%	1.2%

Figure 39: Respondents' study experience (Faculty of Natural Sciences)



	Workload manageable	Feedback on time	Feedback helpful	Clear guidelines on tasks	Problems solving skills
Strongly Agree	22.2%	28.4%	30.8%	36.3%	36.6%
Agree	71.7%	60%	64.1%	59.8%	61.3%
Disagree	5.8%	10.7%	4.8%	4%	1.8%
Strongly Disagree	0.3%	0.9%	0.3%	0%	0.3%

Figure 40: Respondents' study experience (Faculty of Natural Sciences)

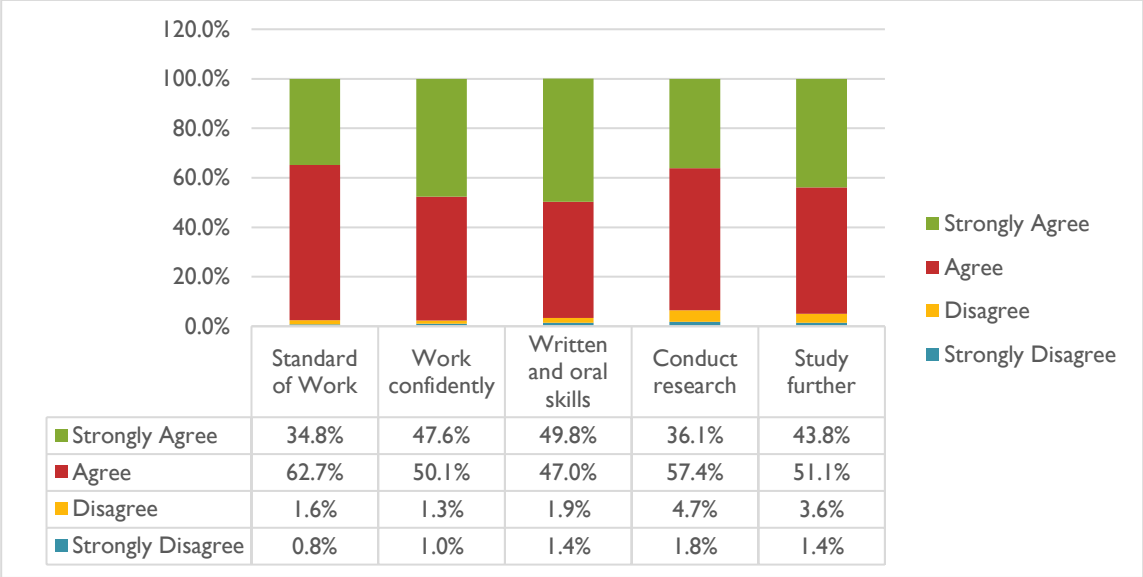


	Student activities met their needs	Overall satisfaction with study experience	Skills and knowledge for world of work	Recommend anyone to study at MUT
Strongly Agree	14.7%	42.9%	40.4%	49.1%
Agree	45.3%	52.4%	55.0%	46.1%
Disagree	31.2%	4.4%	4.3%	3.9%
Strongly Disagree	8.7%	0.3%	0.3%	0.9%

Figure 41: Respondents' study experience (Faculty of Natural Sciences)

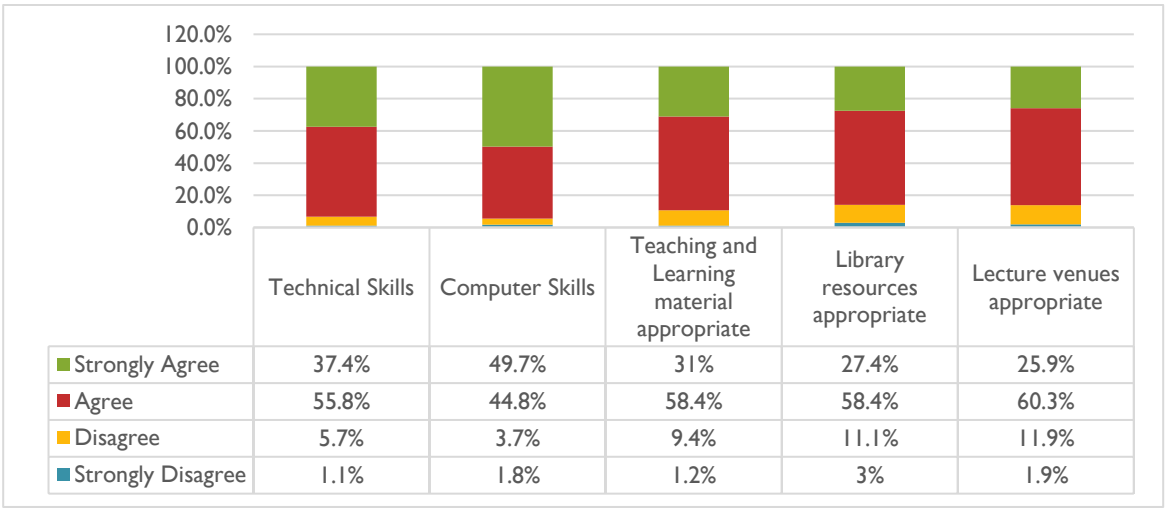
12.3 FACULTY OF MANAGEMENT SCIENCES

In the Faculty of Management Sciences, 95.2% of the respondents agreed that they had positive study experiences at MUT. About 4.8% disagreed that they had a satisfactory experience at the University. A majority of the respondents (93.1%) indicated that they would recommend others to study at MUT. Figures 42, 43, 44 & 45 show how respondents rated the various aspects of their study experience in the Faculty of Management Sciences.



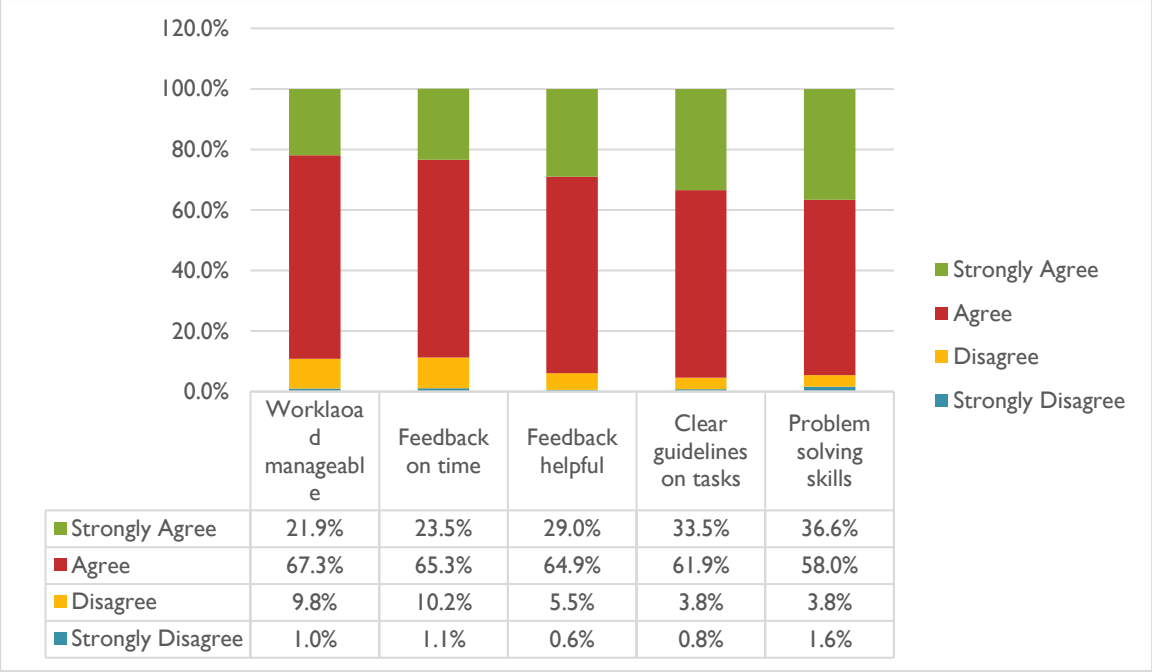
	Standard of Work	Work confidently	Written and oral skills	Conduct research	Study further
Strongly Agree	34.8%	47.6%	49.8%	36.1%	43.8%
Agree	62.7%	50.1%	47.0%	57.4%	51.1%
Disagree	1.6%	1.3%	1.9%	4.7%	3.6%
Strongly Disagree	0.8%	1.0%	1.4%	1.8%	1.4%

Figure 42: Respondents' study experience (Faculty of Management Sciences)



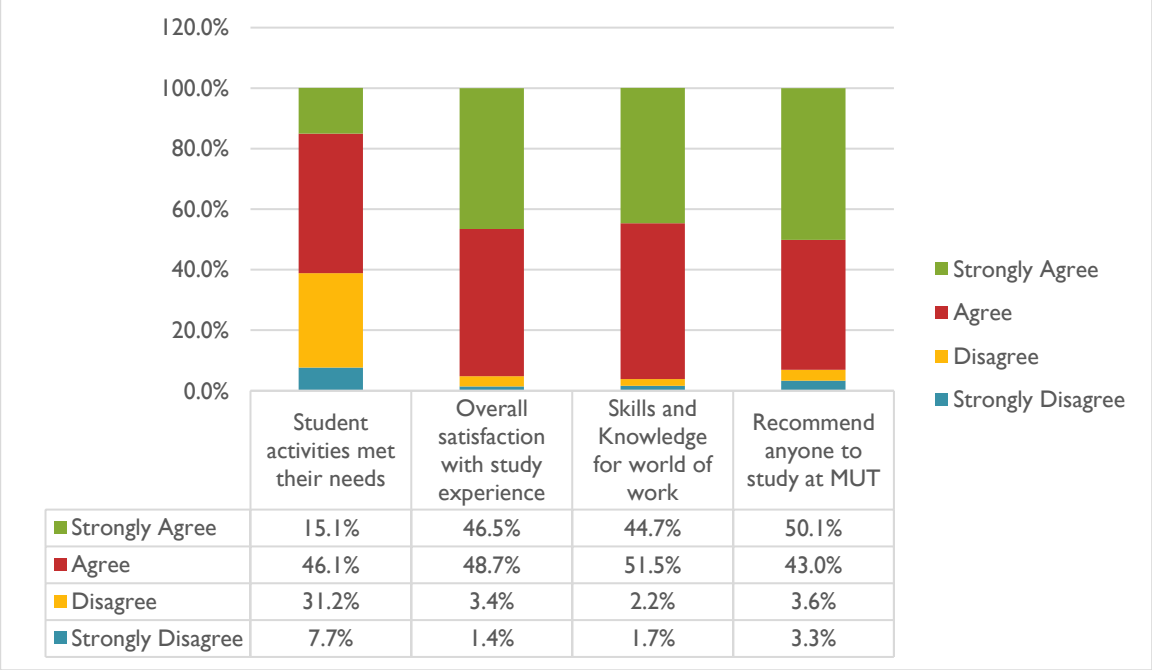
	Technical Skills	Computer Skills	Teaching and Learning material appropriate	Library resources appropriate	Lecture venues appropriate
Strongly Agree	37.4%	49.7%	31%	27.4%	25.9%
Agree	55.8%	44.8%	58.4%	58.4%	60.3%
Disagree	5.7%	3.7%	9.4%	11.1%	11.9%
Strongly Disagree	1.1%	1.8%	1.2%	3%	1.9%

Figure 43: Respondents' study experience (Faculty of Management Sciences)



	Worklaoad manageable	Feedback on time	Feedback helpful	Clear guidelines on tasks	Problem solving skills
Strongly Agree	21.9%	23.5%	29.0%	33.5%	36.6%
Agree	67.3%	65.3%	64.9%	61.9%	58.0%
Disagree	9.8%	10.2%	5.5%	3.8%	3.8%
Strongly Disagree	1.0%	1.1%	0.6%	0.8%	1.6%

Figure 44: Respondents' study experience (Faculty of Management Sciences)



	Student activities met their needs	Overall satisfaction with study experience	Skills and Knowledge for world of work	Recommend anyone to study at MUT
Strongly Agree	15.1%	46.5%	44.7%	50.1%
Agree	46.1%	48.7%	51.5%	43.0%
Disagree	31.2%	3.4%	2.2%	3.6%
Strongly Disagree	7.7%	1.4%	1.7%	3.3%

Figure 45: Respondents' study experience (Faculty of Management Sciences)

12.4 SUMMARY

Although an overwhelming number of respondents have had a positive experience studying at MUT, graduate responses indicate that there are areas that need improvement like library resources, sports activities, lecture venues, teaching and learning materials.

One positive aspect that needs to be highlighted is that in all faculties over 50% of the respondents indicated that the programme they studied and the qualification they obtained, motivated them to study further. This does indicate the need for all faculties to provide articulation qualifications beyond the Diploma qualification. Postgraduate qualifications in niche areas must be identified and developed.

13. VIEWS ON IMPROVING THE QUALITY OF EDUCATION OFFERED AT MUT

The last section of the questionnaire solicited opinions from respondents as to how the University might improve the quality of education. Their opinions are grouped into five (5) categories/ themes: Physical Resources, Human Resources and Delivery, Curriculum/ Teaching and Learning, Campus Activities and WIL. In each category their views are presented in the report unedited.

Table 3: Respondents' views on improving the quality of education offered at MUT

INFRASTRUCTURE	DELIVERY/HUMAN RESOURCES	CURRICULUM/TEACHING & LEARNING	CAMPUS ACTIVITIES	WIL
• Lecture venues may be aided with more technical equipment to enhance learning. • By increasing computer labs. • IT lab computers must have WIFI access at all times. • More computer aided programmes for	• They can provide more lecturers for students. • Whenever lecturers giving out assignments they need to give students enough time to conduct research and collect information. • I think the University needs to hire more qualified lecturer, people who have been	• By giving extra lectures to students and offer more mentorship programmes. • More revision for the preparation of exams. • The library services need to be improved by purchasing books relevant to the courses offered. • Introducing distance learning for a longer period to accommodate all circumstances students find themselves facing.	• The university needs to take students to the relevant companies for the exposure of their field of study. • Extend library times • Try to reduce strikes they impact studies negatively. • Involve the Unizulu	• By introducing more practicals to students so that they are employable. Mangosuthu must send students to field work for trainings before they finish the qualifications • By introducing WIL programme at an earlier

engineering students, particularly Autodesk. AutoCAD is widely used and is a requirement for civil engineering. • Keep an updated system of books at the resource centre. • There must be more buses to take students to and from residences in town for time management of lectures. • They should improve resource center and computer labs. • They can improve their technology and installation of WIFI on all the university premises. • YouTube videos of lectures to be available/or videos of lectures to be made available on blackboard. • Improve the state of lecture rooms, air-conditioning could not be controlled and bath rooms were	in this industry for many years not just BTech graduates. • By making sure that all lecturers possess masters degrees. • Should be tutors for extra lessons and even have lessons during weekends for students who are working or having difficulties.	• By providing more research related assessments to the students. • Introducing the latest technology material to teach. • The quality of education can be improved by introducing Advanced Diplomas for all courses. • The study material needs to be improved. • By ensuring that all the studies are treated equal in terms of day and night study. BTech should be issues to all students in all courses. • MUT can improve quality of education by encouraging lecturers to go to lecture halls in time and give feedback in time. • They should also offer PHD's • By providing more research related assessments to students. • I think there should be more presentation activities to boost our confidence in terms of communicating through English language. • More workshops • More online study material • Provide students with more tutorials • I recommend that there must be an improvement on the specifications	campus more in activities and programmes held at the University. • MUT must improve in sport activities. • If they can improve the online registration programme and avoid unnecessary student disruptions that would help in managing time. • By providing new technology of studying material and be active to student talents because MUT only focuses to sport forgotten to reveal student talent such as art for example. • By improving the manner in which funds are distributed to students. • The lines during registration, NSFAS application etc. could flow better, with better	stage of learning. • Specifically in Agriculture I would like the offer their student farm so that will gain more skill and understand what they learn. • Creating more experiential work opportunities, leading to full time employment after graduation. • They must find WIL for student or recommend them because it hard to find WIL. • By employing more training co-ordinator to visit students during their professional training on site.

leaking and off poor housekeeping • By introducing online study with no lecture on classroom. • It can improve the library facilities so students can get exposed to the practical work. • Lecturers to have projectors to use. • They must provide more resources for students. • They should also focus more on e-learning programmes • By trying to build more accommodation rooms for students at main campus.		of the subject/modules, they must match industry needs. • Improve in educating of writing reports, especially formal reports necessary for the work place. • Lecturers email address should be available for students to consult especially the part time lecturers. • Blackboard system should be used for all modules not only computer studies. • Helping student more in communication skills. • Give students more time to study to their tests and give gaps between examination dates.	planning and service delivery. • Money for books should be given before the semester commence.	

The following recommendations emerged from the respondents:

- Improve the university infrastructure – in order to improve the student experience and teaching and learning
- IT infrastructure in terms of e-mail access, availability of WI-FI, increasing the size of computer labs and up-to-date software need to be enhanced to improve students' study experience and future employability
- Increase the number of postgraduate programmes across the three faculties

- The University needs to identify factors impeding further study (even though most respondents felt that their programme had inspired them to study further), develop articulating programmes for Diploma programmes and identify niche areas for the development of Postgraduate qualifications
- To address the issue of inadequate tutorial, Departments should consider providing more tutors for every course to support and mentor students
- Library resources such as books, journals and study material were flagged by some respondents as requiring attention, updating and being made accessible to students
- A concerted effort needs to be made to facilitate the WIL placement so that students can graduate
- The low percentage of self-employed graduates points to the need for the University to consider the inclusion of entrepreneurial skills in academic programmes
- The throughput rates need to be interrogated to identify factors affecting student success. All faculties should endeavor to identify reasons for the high time taken to graduation
- The quality of education can be improved by employing qualified and experienced lecturers with the relevant skills to address issues such as language competence, development of study material, tutorial support, use of technology in teaching and learning
- Securing land for use by students enrolled in agricultural courses as this is imperative for them to gain practical experience.

14. DEPARTMENT LEVEL ANALYSIS FOR THE FACULTIES OF ENGINEERING, MANAGEMENT SCIENCES & NATURAL SCIENCES

The graduate survey historically has been prepared and analyzed at faculty level. The 2018 graduate survey questionnaire was prepared in accordance with this. The initial data capture and analysis were thus conducted at faculty level. It was subsequently decided that a department-level analysis would provide valuable information that could be used to enhance the educational experience. Since the questionnaires were prepared for electronic capture and analysis at only faculty level, the data for departmental level analysis was captured manually. To facilitate this, the forms were separated manually into the different faculties, then departments and then captured onto an excel spreadsheet. The Faculty level analysis was conducted from the data

generated by the Evasys system and the Departmental level analysis was conducted from the data generated manually.

Please note in all faculties while hundred percent (100%) refers to the total number of students that participated not all respondents responded to every question on the questionnaire, hence, the total number of respondents per question will not necessarily add up to the total number of respondents for that questionnaire in a particular department/faculty. This is consistent across the entire report.

14.1 FACULTY OF ENGINEERING DEPARTMENTAL LEVEL ANALYSIS

The Faculty of Engineering consists of the following departments:

- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering
- Construction Management and Quantity Surveying
- Surveying

Each department produced graduates in the following programmes:

- Bachelor of Technology in Chemical Engineering
- National Diploma in Chemical Engineering
- National Diploma in Civil Engineering
- National Diploma in Electrical Engineering
- National Diploma in Mechanical Engineering
- National Diploma in Building
- National Diploma in Surveying

14.1.1 ACADEMIC PROFILE

The total number of MUT graduates in 2018 was 2361. A manual count of the total number of participants from the Faculty of Engineering yielded 622 (see Table 4). Of the 622 participants identified in the Faculty the departmental breakdown of survey participants is as follows: Chemical Engineering 17% (108), Surveying 6% (39), Construction Management & Quantity Surveying 13% (82), Civil Engineering 21% (132), Electrical Engineering 28% (175)

and Mechanical Engineering 14% (86). The highest and lowest survey participation rate in Faculty came from the Departments of Electrical Engineering and Surveying respectively.

In the Faculty the majority (96%) of graduates obtained their National Diploma qualification. The departmental breakdown of the overall number of National Diploma graduates is as follows: Chemical Engineering 80%, Surveying 97%, Construction Management & Quantity Surveying 100%, Civil Engineering 100%, Electrical Engineering 99% and Mechanical Engineering 100%. Of the 622 participants identified, 19% achieved the Bachelor of Technology qualification in Chemical Engineering. As the faculty did not at that point offer any Advanced diploma programmes, there were no graduates with this qualification.

The Table 4 below reflects the year of entry for all respondents in the Faculty. The table indicates those who began their studies in 2015 and finished in the minimum time of three years including those who began in 2013 and 2014 and therefore took five/more than five and four years respectively to finish their qualifications.

Table 4: Respondents' academic profile (Faculty of Engineering)
*The numbers in the table have been rounded off

	CHEMICAL	SURVEYING	CM&QS	CIVIL	ELECTRICAL	MECHANICAL	TOTAL
1. Field of study:	17% (108)	6% (39)	13% (82)	21% (132)	28% (175)	14% (86)	100% (622)
2. Qualification obtained:							
NDip	80% (88)	97% (38)	100% (82)	100% (132)	99% (174)	100% (86)	96% (600)
BTech	19% (21)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	3% (21)
AdvDip	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
PGDip	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
3. Year of enrolment:							
2013	19% (21)	31% (12)	45% (37)	23% (30)	22% (38)	16% (14)	26% (152)
2014	9% (10)	10% (4)	1% (1)	8% (10)	7% (13)	9% (8)	7% (46)
2015	13% (14)	0% (0)	6% (5)	2% (2)	6% (10)	6% (5)	6% (36)
2016	15% (16)	23% (9)	7% (6)	16% (21)	16% (28)	13% (11)	15% (91)
2017	42% (45)	36% (14)	37% (30)	52% (68)	45% (79)	50% (43)	44% (279)
Other	2% (2)	0% (0)	4% (3)	1% (1)	4% (7)	6% (5)	3% (18)
4. Involved in further studies:							
Full time	18% (19)	0% (0)	4% (3)	9% (12)	5% (8)	8% (7)	7% (49)
Part time	17% (18)	5% (2)	15% (12)	11% (14)	9% (16)	15% (13)	12% (75)
No further studies	64% (69)	95% (37)	82%(67)	79% (104)	85% (148)	76% (65)	80% (490)

In the Department of Chemical Engineering of the respondents who graduated in 2018, 13% did so in minimum time, 9% in 4 years, 19% in 5 years and 2% took more than 5 years to

complete their qualification. In the Surveying Department of the respondents who graduated in 2018, 0% did so in minimum time, 10% in 4 years and 31% took 5 years to complete their qualification. Similarly of the respondents who graduated in 2018 in the Department of Construction Management and Quantity Surveying, 6% did so in minimum time, 1% in 4 years, 45% in 5 years and 4% took more than 5 years to complete their qualification. For the Department of Civil Engineering of the respondents who graduated in 2018, 2% did so in minimum time, 8% in 4 years, 23% in 5 years and 1% took more than 5 years to complete their qualification. In the Department of Electrical Engineering of the respondents who graduated in 2018, 6% did so in minimum time, 7% in 4 years, 22% in 5 years and 4% took more than 5 years to complete their qualification. Whereas in the Department of Mechanical Engineering of the respondents who graduated in 2018, 6% did so in minimum time, 9% in 4 years, 16% in 5 years and 6% took more than 5 years to complete their qualification.

The 2013 and 2014 statistics seems to indicate that a significant number of students took more than three years to complete their qualifications. Financial constraints or obtaining WIL placement could be some reasons affecting students' time to graduation. The Employer Satisfaction Survey, which is conducted every two years could possibly provide some guidance in identifying some of the reasons along with providing an understanding as to how departments can better prepare students for the working world. Based on the above, departments are advised to further investigate the challenges and reasons behind students' time to graduation.

Of the 622 respondents in the Faculty only 7 % are engaged in further studies on a full-time basis, while 12% are engaged in part-time studies. The respective breakdown of those involved in fulltime and part time further studies in the department is as follows: Chemical Engineering 18% & 17%, Surveying 0% & 5%, Construction Management & Quantity Surveying 4% & 15%, Civil Engineering 9% & 11%, Electrical Engineering 5% & 9% and Mechanical Engineering 8% & 15%. Those pursuing no further studies are as follows: Chemical Engineering 64%, Surveying 95%, Construction Management & Quantity Surveying 82%, Civil Engineering 79%, Electrical Engineering 85% and Mechanical Engineering 76%. The majority of the respondents (80%) were not involved in any form of further studies.

The high percentage of students who are not pursuing further studies (it seems at any HEI), may indicate that, among other reasons, there are a dearth of articulating programmes for them at MUT or that they may not be able to gain admission to other HEIs offering

articulating programmes (which may have to be investigated further by the departments). It is recommended that articulation qualifications be developed to provide articulation/ career paths for students to make them more employable. However, it must be noted that with the exception of Chemical Engineering, no other disciplines had or have articulating programmes in place.

14.1.2 EMPLOYMENT STATUS AND FURTHER STUDIES

The Table 5 below indicates that of the 622 respondents in the Faculty of Engineering less than half (46%) of the respondents are employed. The status of those employed in the department is as follows: Chemical Engineering 69%, Surveying 36%, Construction Management & Quantity Surveying 43%, Civil Engineering 53%, Electrical Engineering 34% and Mechanical Engineering 42%. Those unemployed was as follows in Chemical Engineering 31%, Surveying 59%, Construction Management & Quantity Surveying 51% , Civil Engineering 45% , Electrical Engineering 65% and Mechanical Engineering 57%. Chemical Engineering was identified as the department with the highest employment rate (69%) while the Department of Electrical Engineering was noted with the lowest employment rate (34%).

It can be inferred from the 51% unemployed that a large percentage of respondents do not have jobs and that a small percentage of those unemployed are actually engaged in further study. There could be many reasons for this. This might suggest that industry does not require graduates in this discipline or that the NQF level qualifications are no longer relevant in those industries. It could also point to the economy of the country being static. This requires further investigation at departmental level. The Employer Satisfaction Survey, could provide much-needed information that may assist in ascertaining reasons for this.

Table 5: Respondents' employment status & further studies (Faculty of Engineering)

PROFILE/THEMES	CHEMICAL	SURVEYING	CM&QS	CIVIL	ELECTRICAL	MECHANICAL	TOTAL
1. Employment status:							
Employed	69% (74)	36% (14)	43% (35)	53% (70)	34%(59)	42% (36)	46% (288)
Self employed	0%	3% (1)	6% (5)	2% (2)	1% (1)	1% (1)	2% (10)
Unemployed	31% (34)	59% (23)	51% (42)	45% (60)	65% (114)	57% (49)	51% (322)
2. Study further							
Agree	96% (104)	92% (36)	96% (78)	97% (129)	95% (167)	98% (84)	96% (598)
Disagree	2% (2)	8% (3)	2% (2)	1% (1)	2% (2)	2% (2)	3 % (12)

14.1.3 STUDENT EXPERIENCE

Generally on average the overall study experience of the 622 respondents was positive. This seems to indicate a high level of satisfaction with their study experiences (see Table 6). Although an overwhelming number of respondents have had a positive experience studying at MUT, there are areas that need to be addressed like library resources, sports activities, lecture venues, teaching and learning materials. Students' overall experiences, including experiences at residence, the facilities at the residences, health clinic care and counselling are also important factors in their persistence, retention and success. While the value of understanding this aspect of graduate perceptions of their university experience is acknowledged, it is not currently included in the Graduate questionnaire.

Table 6: Respondents' indicating positive student experience (Faculty of Engineering)

PROFILE/THEMES	CHEMICAL	SURVEYING	CM&QS	CIVIL	ELECTRICAL	MECHANICAL
Student experience (Standard of work, Work confidently, Oral & written skills, Conduct research, Study further)	96%	95%	96%	96%	94%	99%
Student experience (Technical skills, Computer skills, Learning materials appropriate, Library resources appropriate, Lecture venues appropriate)	93%	93%	92%	93%	94%	94%
Student experience (Workload manageable, Feedback on time, Feedback helpful, Clear guidelines on tasks, Problem solving skills)	93%	94%	93%	94%	93%	96%
Student experience (Student activities met their needs, Overall satisfaction with study experience, Skills & knowledge for world of work, Recommend anyone to study at MUT)	89%	92%	82%	90%	92%	91%

14.1.4 VIEWS ON IMPROVING THE QUALITY OF PROVISION AT MUT

In the qualitative section of the questionnaire, the themes that arose were similar to those of previous years and were grouped into the following themes: Infrastructure, Delivery/Human Resources, Curriculum/Teaching and Learning, Campus Activities and WIL**.** The Table 7 below indicates graduate responses (unedited) on how MUT can improve quality.

Table 7: Respondents' views on improving the quality at MUT (Faculty of Engineering)

INFRASTRUCTURE	DELIVERY/HUMAN RESOURCES	CURRICULUM/TEACHING AND LEARNING	CAMPUS ACTIVITIES	WIL
• Students want 24 hours access to computer labs. • Upgrading of lecture halls in size and space.	• Number of lecturers must be increased. • Introducing practicals for every module.	• Introduce Bachelor of Technology and Advanced Diplomas in all Departments. • Include mining, maritime and pulp/paper in the curriculum and more exposure to chemical industry. • There is a need for practicals to be done using the measuring wheel, on site measurements and dumpy level. • Have part time classes for S4. • Include Autodesk and AutoCAD computer aided programmes. • Improve on teaching students report writing necessary for the workplace.		• To have workplace programme agreements with companies to provide in-service training.

14.1.5 SUMMARY

It is imperative that the different faculties and departments engage with the findings and recommendations of this report to understand students' experiences, factors that affect their performance and employment as well as their uptake of further studies and to reflect on these

for the purpose of improving the student experience. Ultimately student success cannot be measured solely on graduation rates but also on how many graduates are able to find jobs, keep jobs, study further and have had a holistic university experience.

14.2 FACULTY OF MANAGEMENT SCIENCES DEPARTMENTAL LEVEL ANALYSIS

The Faculty of Management Sciences consists of the following departments:

- Office Technology
- Accounting and Law
- Public Administration and Economics
- Marketing
- Human Resource Management

Each department produced graduates in the following programmes:

- Advanced Diploma in Office Technology Management and Technology
- National Diploma in Office Technology Management and Technology
- Bachelor of Technology in Cost and Management Accounting
- National Diploma in Cost and Management Accounting
- National Diploma in Accounting
- National Diploma in Finance and Accounting (Public)
- National Diploma in Public Management
- Advanced Diploma in Marketing
- National Diploma in Marketing
- Advanced Diploma in Human Resource Management
- Bachelor of Technology in Human Resource Management
- National Diploma in Human Resource Management

14.2.1 ACADEMIC PROFILE

The Table 8 below indicates that after conducting a manual count the total number of participants from the Faculty of Management Sciences was 880. Of the 880 participants identified in the Faculty the departmental breakdown of participants is as follows: Office Technology 14% (120), Accounting 35% (305), Public Administration & Economics 14% (120), Marketing 20% (172) and Human Resource Management 19% (163). The highest participation in Faculty came from the Department of Accounting and the lowest was from Departments Office Management & Technology along with Public Administration & Economics respectively.

Table 8: Respondents' academic profile (Faculty of Management Sciences)
*The numbers in the table have been rounded off

PROFILE/ THEMES	OFFICE TECH	ACCOUNTING	PUBLIC ADMIN	MARKETING	HUMAN RESOURCE	TOTAL
1. Field of study:	14% (120)	35% (305)	14% (120)	20% (172)	19% (163)	100% (880)
2. Qualification obtained:						
NDip	73% (88)	88% (268)	99% (119)	88% (151)	77% (126)	85% (752)
BTech	0%	11% (34)	0%	0%	0%	2% (34)
AdvDip	23% (28)	0%	0%	9% (16)	22% (36)	11% (80)
PGDip	0%	0%	0%	0%	0%	0%
3. Year of enrolment:						
2013	5% (6)	14% (43)	5% (6)	3% (6)	5% (8)	6%(69)
2014	6% (7)	25% (75)	11% (13)	6% (10)	9% (14)	11% (119)
2015	54% (65)	20% (61)	61% (73)	54% (93)	44% (72)	47% (364)
2016	2% (2)	3% (8)	0%	7% (12)	4% (7)	3% (29)
2017	29% (35)	27% (81)	17% (20)	23% (39)	34% (56)	26% (231)
Other	1% (1)	9% (28)	3% (3)	4% (7)	2% (4)	4% (43)
4. Involved in further studies:						
Full time	18% (21)	18% (55)	7% (8)	24% (42)	36% (59)	21% (185)
Part time	10% (12)	11% (34)	3% (3)	11% (19)	10% (17)	9% (85)
No further studies	71% (85)	70% (213)	90% (108)	60% (103)	52% (84)	67% (593)

The total number of graduates in 2018 was 2361. In the Faculty the majority of graduates (85%) obtained their National Diploma qualification. The departmental breakdown of the overall number of National Diploma graduates is as follows: Office Technology 73%, Accounting 88%, Public Administration & Economics 99%, Marketing 88% and Human Resource Management 77%. The highest number of National Diploma qualifications was obtained from the Department of Public Administration & Economics. Of the 880 participants identified 11% from the Department of Accounting achieved the Bachelor of Technology qualification. While 22% from Human Resource Management, 9% from Marketing and 23% of Office Technology graduates received the Advanced Diploma qualification.

The table reflects the year of entry for all respondents in the Faculty. The table indicates those who began their studies in 2015 and finished in the minimum time of three years including those who began in 2013 and 2014 and therefore took five/more than five and four years respectively to finish their qualifications.

In the Department of Office Technology of the respondents who graduated in 2018, 54% did so in minimum time, 6% in 4 years, 5% in 5 years and 1% took more than 5 years to complete their qualification. For the Department of Accounting of the respondents who graduated in 2018, 20% did so in minimum time, 25% in 4 years, 14% in 5 years and 9% took more than 5 years to complete their qualification. Similarly of the respondents who graduated in 2018 in the Department of Public Administration & Economics, 61% did so in minimum time, 11% in 4 years, 5% in 5 years and 3% took more than 5 years to complete their qualification. For the Department of Marketing of the respondents who graduated in 2018, 54% did so in minimum time, 6% in 4 years, 3% in 5 years and 4% took more than 5 years to complete their qualification. In the Department of Human Resource Management of the respondents who graduated in 2018, 44% did so in minimum time, 9% in 4 years, 5% in 5 years to complete their qualification and 2% took more than 5 years to complete their qualification.

The 2015 statistics seems to indicate that a significant number of students took the minimum number of years to complete their qualifications. Obtaining WIL placement could possibly be a reason affecting some students from graduating on time. The Employer Satisfaction Survey, could possibly provide some guidance in identifying some of the reasons along with providing a better understanding as to how departments can better prepare students for the working world.

Of the 880 respondents in the Faculty 21% are engaged in fulltime further studies while 9% are studying part time. The respective departmental breakdown of those involved in fulltime and part time further studies is as follows: Office Technology 18% & 10%, Accounting 18% & 11%, Public Administration & Economics 7% & 3%, Marketing 24% & 11% and Human Resource Management 36% & 10%. Those pursuing no further studies was as follows: Office Technology 71%, Accounting 70%, Public Administration & Economics 90%, Marketing 60% and Human Resource Management 52%. The majority of the respondents (67%) were not involved in any form of further studies. The reasons behind the high percentage of students who are not pursuing further studies (it seems at any HEI), will have to be investigated further by the departments.

14.2.2 EMPLOYMENT STATUS AND FURTHER STUDIES

The Table 9 below indicates that of the 880 respondents in the Faculty of Management Sciences only 14% are currently employed. The employment status of those employed is as follows: Office Technology 23%, Accounting 11%, Public Administration & Economics 12%, Marketing 15% and Human Resource Management 10%. Office Technology was identified as the department with the highest employment rate (23%) while the Department of Human Resource Management was noted with the lowest employment rate (10%). In the Faculty of Management Sciences from the respondents that do not have jobs, only 30% are engaged in further studies.

It can be inferred from the 85% unemployed that a large percentage of respondents do not have jobs and that a small percentage of those unemployed are actually engaged in further study. There could be many reasons for this. This might suggest that industry does not require graduates in this discipline or at this NQF level of study.

It was also noted that most students in the Faculty (93%) are stimulated to study further as responses are positives from all departments. There is a tiny portion (1%) of participants that are self-employed. This may imply the need to expose students to some kind of business and project management related programmes in the curriculum. The low percentage of self-employed graduates points towards the possible need for the University to make a concerted effort to focus on the development of entrepreneurial skills in academic programmes.

In addition to the above the regular 'employment' of WIL students annually fills the gap thus, reducing the need for full-time employees. The Employer Satisfaction Survey, may provide much-needed information that may assist in ascertaining reasons for this.

Table 9: Respondents' employment status & further studies (Faculty of Management Sciences)

PROFILE/THEMES	OFFICE TECH	ACCOUNTING	PUBLIC ADMIN	MARKETING	HUMAN RESOURCE	TOTAL
1. Employment status:						
Employed	23% (28)	11% (35)	12% (14)	15% (25)	10% (17)	14% (119)
Self employed	0%	2% (6)	0%	2% (3)	0%	1% (9)
Unemployed	77% (92)	86% (262)	88% (106)	83% (143)	90% (146)	85% (749)
2. Study further						
Agree	97% (116)	91% (280)	95% (114)	88% (152)	93% (152)	93% (814)
Disagree	3% (3)	5% (14)	4% (4)	10% (17)	4% (7)	5% (45)

14.2.3 STUDENT EXPERIENCE

Generally, from the responses, it appears that the overall study experience of the 880 respondents was positive. This seems to indicate a high level of satisfaction with their study experiences (see Table 10). Although an overwhelming number of respondents have had a positive experience studying at MUT, the survey identified areas that require development. These include library resources, sports activities, lecture venues, teaching and learning materials. Students' overall experiences, including experiences at residence, the facilities at the residences, health clinic care and counselling are also important factors in their persistence, retention and success. While the value of understanding this aspect of graduate perceptions of their university experience is acknowledged, it is not currently included in the Graduate questionnaire.

Table 10: Respondents' indicating positive student experience (Faculty of Management Sciences)

PROFILE/ THEMES	OFFICE TECH	ACCOUNTING	PUBLIC ADMIN	MARKETING	HUMAN RESOURCE
Student experience (Standard of work, Work confidently, Oral & written skills, Conduct research, Study further)	96%	93%	96%	95%	97%
Student experience (Technical skills, Computer skills, Learning materials appropriate, Library resources appropriate, Lecture venues appropriate)	93%	86%	88%	87%	90%
Student experience (Workload manageable, Feedback on time, Feedback helpful, Clear guidelines on tasks, Problem solving skills)	92%	88%	94%	91%	92%
Student experience (Student activities met their needs, Overall satisfaction with study experience, Skills & knowledge for world of work, Recommend anyone to study at MUT)	90%	83%	88%	85%	87%

14.2.4 VIEWS ON IMPROVING THE QUALITY OF PROVISION AT MUT

In the qualitative section of the questionnaire, the themes that arose were similar to those of previous years and were grouped into the following themes: Infrastructure, Delivery/Human Resources, Curriculum/Teaching and Learning, Campus Activities and WIL**.** The Table 11 below indicates graduate responses (unedited) on how MUT can improve quality.

Table 11: Respondents' views on improving the quality at MUT (Faculty of Management Sciences)

INFRASTRUCTURE	DELIVERY/HUMAN RESOURCES	CURRICULUM/ TEACHING AND LEARNING	CAMPUS ACTIVITIES	WIL
• Technology advancement. • WIFI must work. • More lecture venues. • Extend library hours and add laboratories.	• Number of lecturers must be increased. • Better bus services required.	• Introduce Bachelor of Technology and Advanced Diplomas in all Departments. • Provide students with enough pastel/payroll training, books. • Improve on teaching students computer skills. • Introduce online learning. • Have more practicals and tutorials. • Providing more research related assessment to students. • More interaction via social media. • Study material in the library needs to be updated. • Improve the research programme.	• More sporting activities. • Offer more bursaries for outstanding student performance.	• Recommending students to companies.

14.2.5 SUMMARY

It is imperative that the different faculties and departments engage with the findings and recommendations of this report to understand students' experiences, factors that affect their performance and employment as well as their uptake of further studies and to reflect on these for the purpose of improving the student experience. Ultimately student success cannot be

measured solely on graduation rates but also on how many graduates are able to find jobs, keep jobs, study further and have had a holistic university experience.

14.3 FACULTY OF NATURAL SCIENCES DEPARTMENTAL LEVEL ANALYSIS

The Faculty of Natural Sciences consists of the following departments:

- Agriculture
- Community Extension
- Chemistry
- Nature Conservation
- Information and Communication Technology
- Environmental Health
- Biomedical Sciences

Each department produced graduates in the following programmes:

- National Diploma in Agriculture in Animal Production
- National Diploma in Agriculture
- National Diploma in Community Extension
- Bachelor of Technology in Analytical Chemistry
- National Diploma in Analytical Chemistry
- Master of Nature Conservation
- Postgraduate Diploma in Nature Conservation
- Advanced Diploma in Nature Conservation
- Bachelor of Technology in Nature Conservation
- National Diploma in Nature Conservation
- National Diploma in Information Technology
- National Diploma in Environmental Health
- Bachelor of Technology in Biomedical Technology
- National Diploma in Biomedical Technology

14.3.1 ACADEMIC PROFILE

The Table 12 below indicates that after conducting a manual count the total number of participants from the Faculty of Natural Sciences was 368. Of the 368 participants identified in the Faculty, the departmental breakdown of participants is as follows: Agriculture 24% (87),

Community Extension 8% (29), Chemistry 11% (41), Nature Conservation 14% (52), Information & Communication Technology 24% (88), Environmental Health 7% (24) and Biomedical Sciences 13% (47). The highest participation rate (24%) in this Faculty came from the Departments of Agriculture and Information & Communication Technology. The lowest participation rate was noted from the Department of Environmental Health.

Table 12: Respondents' academic profile (Faculty of Natural Sciences)
*The numbers in table have been rounded off

PROFILE/ THEMES	AGRIC	COMM EXTENSION	CHEMISTRY	NATURE CONSERV	ICT	ENVIRON HEALTH	BIOMED SCIENCES	TOTAL
1. Field of study:	24% (87)	8% (29)	11% (41)	14% (52)	24% (88)	7% (24)	13% (47)	100% (368)
2. Qualification obtained: NDip	100% (87)	100% (29)	71% (29)	63% (33)	99% (87)	100% (24)	57% (27)	84% (316)
BTech	0%	0%	29% (12)	4% (2)	0%	0%	40% (19)	10% (33)
AdvDip	0%	0%	0%	15%(8)	0%	0%	0%	2% (8)
PGDip	0%	0%	0%	10% (5)	0%	0%	0%	1% (5)
Masters	0%	0%	0%	8% (4)	0%	0%	0%	1% (4)
3. Year of enrolment: 2013	17% (13)	7% (2)	20% (8)	12% (6)	10% (9)	0%	2% (1)	10% (39)
2014	31% (27)	17% (5)	22% (9)	10% (5)	17% (15)	0%	11% (5)	15% (66)
2015	14% (12)	52% (15)	10% (4)	37% (19)	51% (45)	96% (23)	45% (21)	44% (139)
2016	2% (2)	0%	10% (4)	0%	3% (3)	0%	34% (16)	7% (25)
2017	14% (12)	21% (6)	27% (11)	38% (20)	11% (10)	4% (1)	2% (1)	17% (61)
Other	17% (15)	0%	10% (4)	0%	5% (4)	0%	4% (2)	5% (25)
4. Involved in further studies: Full time	3% (3)	3% (1)	7% (3)	23% (12)	6% (5)	13% (3)	9% (4)	9% (31)
Part time	3% (3)	24% (7)	10% (4)	17% (9)	5%(4)	0%	9% (4)	10% (31)
No further studies	92% (80)	69% (20)	83% (34)	58% (30)	88% (77)	88% (21)	83% (39)	80% (301)

The total number of graduates in 2018 was 2361. In the Faculty the majority (84%) of graduates, obtained their National Diploma qualification. The departmental breakdown of the overall number of National Diploma graduates is as follows: Agriculture 100%, Community Extension 100%, Chemistry 71%, Nature Conservation 63%, Information & Communication Technology 99%, Environmental Health 100% and Biomedical Sciences 57%. Of the 368 participants identified, the Bachelor of Technology qualification was awarded from the following departments, Chemistry (29%), Nature Conservation (4%) and Biomedical Sciences (40%). While 15% of the graduates received the Advanced Diploma qualification, 10% received the Postgraduate qualification and 8% were awarded the Masters qualification from the Department of Nature Conservation.

The table reflects the year of entry for all respondents in the Faculty. The table indicates those who began their studies in 2015 and finished in the minimum time of three years including those who began in 2013 and 2014 and therefore took five/more than five and four years respectively to finish their qualifications.

In the Department of Agriculture of those respondents who graduated in 2018, 14% did so in minimum time, 31% in 4 years and 17% took more than 5 years to complete their qualification. In the Department of Community Extension of the respondents who graduated in 2018, 52% did so in minimum time, 17% in 4 years, and 7% took 5 years to complete their qualification. Similarly of the respondents who graduated in 2018 in the Department of Chemistry, 10% did so in minimum time, 22% in 4 years, 20% in 5 years and 10% took more than 5 years to complete their qualification. For the Department of Nature Conservation of the respondents who graduated in 2018, 37% did so in minimum time, 10% in 4 years and 12% took 5 years to complete their qualification. In the Department of Information & Communication Technology of the respondents who graduated in 2018, 51% did so in minimum time, 17% in 4 years, 10% in 5 years and 5% took more than 5 years to complete their qualification. Whereas in the Department of Environmental Health of the respondents who graduated in 2018, 96% of them did so in minimum time. In the Department of Biomedical Sciences of the respondents who graduated in 2018, 45% did so in minimum time, 11% in 4 years, 2% in 5 years and 4% took more than 5 years to complete their qualification.

The 2015 and 2016 statistics seems to indicate that a significant number of students took three and four years to complete their three year diplomas. Financial constraints or successfully completing WIL placement could be possible reasons that affect students' time to graduation. The Employer Satisfaction Survey, could possibly provide some guidance in identifying some of the reasons along with providing a better understanding as to how departments can better prepare students for the working world.

Of the 368 respondents in the Faculty of Natural Sciences only 9% of the respondents are engaged in full time studies. The respective breakdown of those involved in fulltime and part time further studies is as follows: Agriculture 3% & 3%, Community Extension 3% & 24%, Chemistry 7% & 10%, Nature Conservation 23% & 17%, Information & Communication Technology 6% & 5%, Environmental Health 13% & 0% and Biomedical Sciences 9% & 9%. Those pursuing no further studies was as follows: Agriculture 92%, Community Extension 69%, Chemistry 83%, Nature Conservation 58%, Information & Communication Technology 88%, Environmental Health 88% and Biomedical Sciences 83%. It can be gathered that from the response rate, cumulatively only 9% were involved in further studies on a fulltime basis while 10% were involved in further studies on a part time basis. The majority of the respondents (80%) are not involved in any form of further studies. The reasons behind the high percentage of

students who are not pursuing further studies (it seems at any HEI), will have to be investigated further by the departments.

14.3.2 EMPLOYMENT STATUS AND FURTHER STUDIES

The Table 13 below indicates that of the 368 respondents in the Faculty of Natural Sciences, only 33% of the respondents are employed. The status of those employed is as follows: Agriculture 20%, Community Extension 7%, Chemistry 44%, Nature Conservation 35%, Information & Communication Technology 27%, Environmental Health 13% and Biomedical Sciences 87%. Biomedical Sciences was identified as the department with the highest employment rate (87%), while the department of Community Extension was noted with the lowest employment rate (7%).

In the Faculty of Natural Sciences only 33% of the respondents are employed. From the respondents that do not have jobs (65%) only 19% are engaged in further study. There could be many reasons for this. This might suggest that industry does not require graduates in this discipline or NQF level qualifications are no longer relevant in those industries. In addition to the above the regular 'employment' of WIL students annually may suffice to fill the gap thus reducing the need for full-time employees. The Employer Satisfaction Survey could provide much-needed information that may assist departments in ascertaining reasons for this

It was also noted that all students in the Faculty are stimulated to study further as responses are positive (94%) from all departments. There is a minimal percentage (1%) of participants that are self-employed. This may imply the need to expose students to some kind of business and project management related content in the curriculum. The low percentage of self-employed graduates points towards the need to include the development of entrepreneurial skills and attitude in the academic programmes.

Table 13: Respondents' employment status & further studies (Faculty of Natural Sciences)

PROFILE/ THEMES	AGRIC	COMM EXTENSION	CHEMISTRY	NAT CONSERV	ICT	ENVIRON HEALTH	BIOMED	TOTAL
1. Employment status: Employed	20% (17)	7% (2)	44% (18)	35% (18)	27% (24)	13% (3)	87% (41)	33% (123)
Self employed	2% (2)	0%	2% (1)	4% (2)	2% (2)	0%	0%	1% (7)
Unemployed	77% (67)	93% (27)	54% (22)	60% (31)	69% (61)	88% (21)	13% (6)	65% (235)
2. Study further								
Agree	91% (79)	100% (29)	90% (37)	87% (45)	92% (81)	100% (24)	96% (45)	94% (340)
Disagree	7% (6)	0%	5% (2)	10% (5)	6% (5)	0%	2% (1)	4% (19)

14.3.3 STUDENT EXPERIENCE

Generally the overall study experience of the 368 respondents was positive. This seems to indicate that graduates have a high level of satisfaction with their study experiences (Table 14). Although an overwhelming number of respondents have had a positive experience studying at MUT, there are areas of concern. These include library resources, sports activities, lecture venues, teaching and learning materials. Students' overall experiences, including experiences at residence, the facilities at the residences, health clinic care and counselling are also important factors in their persistence, retention and success. While the value of understanding this aspect of graduate perceptions of their university experience is acknowledged, it is not currently included in the Graduate questionnaire.

Table 14: Respondents' indicating positive student experience (Faculty of Natural Sciences)

PROFILE/ THEMES	AGRIC	COMM EXTENSION	CHEMISTRY	NAT CONSERV	ICT	ENVIRON HEALTH	BIOMED
Student experience (Standard of work, Work confidently, Oral & written skills, Conduct research, Study further)	95%	98%	96%	92%	93%	98%	92%
Student experience (Technical skills, Computer skills, Learning materials appropriate, Library resources appropriate, Lecture venues appropriate)	83%	86%	92%	89%	83%	97%	90%
Student experience (Workload manageable, Feedback on time, Feedback helpful, Clear guidelines on tasks, Problem solving skills)	91%	88%	91%	94%	91%	94%	91%
Student experience (Student activities met their needs, Overall satisfaction with study experience, Skills & knowledge for world of work, Recommend anyone to study at MUT)	84%	81%	89%	88%	81%	90%	91%

14.3.4 VIEWS ON IMPROVING THE QUALITY OF PROVISION AT MUT

In the qualitative section of the questionnaire, the themes that arose were similar to those of previous years and were grouped into the following themes: Infrastructure, Delivery/Human Resources, Curriculum/Teaching and Learning, Campus Activities and WIL**.** Table 15 below indicates graduate responses (unedited) on how MUT can improve quality.

Table 15: Respondents' views on improving the quality at MUT (Faculty of Natural Sciences)

INFRASTRUCTURE	DELIVERY/HUMAN RESOURCES	CURRICULUM/ TEACHING AND LEARNING	CAMPUS ACTIVITIES	WIL
• Needs more equipment and laboratories • Lecture venues aided with more technical equipment. • Resource center to be open 24hours.	• Number of lecturers must be increased. • More tutors and practicals required. • More buses to take students to and from residences. • Student farms (livestock and crop) are required for skills and understanding.	• Introduce postgraduate studies in all Departments. • Provide students relevant study material • Improve on teaching students computer skills. • Improving students' skills in conducting research. • Updating the curriculum.	• Introduce more sport activities. • Involve Unizulu campus more in activities held at the university. • There should be field trips based on what was studied. • Add more workshops .	• Assist with WIL placement. • By introducing the WIL programme at an earlier stage of learning.

14.3.5 SUMMARY

It is imperative that the different faculties and departments engage with the findings and recommendations of this report to understand students' experiences, factors that affect their performance and employment as well as their uptake of further studies and to reflect on these for the purpose of improving the student experience. Ultimately student success cannot be measured solely on graduation rates but also on how many graduates are able to find jobs, keep jobs, study further and have had a holistic university experience.

15. RECOMMENDATIONS

The following generic recommendations are based on the findings in the report.

Recommendation 1:

It can be inferred from the statistics presented that a large percentage of respondents do not have jobs and that a small percentage of those unemployed are actually engaged in further study. It could also point to the economy of the country being static. It is recommended that the departments review and revise their curricula and determine the fitness of and for purpose of their programmes in terms of the relevance and currency of content, the NQF exit level along with industry requirements.

Recommendation 2:

Articulation qualifications need to be developed to provide career paths for students to make them more employable. It is recommended that the slow development of articulating programmes be addressed as a matter of urgency and that Postgraduate programmes in niche areas be identified and developed.

Recommendation 3:

The low employment of graduates through the WIL programmes is a concern. The Employer Satisfaction Survey, could provide much-needed information that may assist in ascertaining reasons for this. It is recommended that going forward, the University also interview WIL employers on a rotational basis to elicit an in depth understanding of it may be able to better prepare MUT students for the world of work.

Recommendation 4:

Some graduates noted their concern with the time it takes to complete WIL thus delaying their graduation. It is recommended that the University investigate further the challenges associated with WIL placement and identify interventions to facilitate the coordination, placement and management of WIL.

Recommendation 5:

The low employment rate of graduates could be an indication of the static of the economy. It is recommended that Departments use the information gleaned from programme reviews (interviews with Alumni and industry representatives), Advisory Committees, WIL partners among others to ascertain reasons for the high unemployment rate of MUT graduates in

their respective disciplines/ fields and to put in place the appropriate interventions to improve the same.

Recommendation 6:

The high unemployment rates could also be attributed to students not being knowledgeable on how to search for and apply for jobs, perform in interviews or prepare a CV accordingly. The University can improve the quality of education by also offering students language workshops so that the students do not struggle in answering questions in interviews for employment.

Recommendation 7:

Generally the overall study experiences of the respondents were positive indicating a high level of satisfaction. Students' overall experiences, including experiences at residence and the facilities at residences, are also important factors in their persistence, retention and success. It is recommended that the University conduct a survey, annually to elicit student experiences outside of the formal teaching and learning environment. The University must then engage with findings of surveys with the aim of enhancing the overall student experiences.

Recommendation 8:

The University should provide more activities that encourage student engagement. It is also recommended that the activities and student participation in those activities be tracked to ascertain their effectiveness and impact on student retention and graduation.

In the qualitative section of the questionnaire, the themes that arose were similar to those of previous years and were grouped into the following themes: Infrastructure, Delivery/Human Resources, Curriculum/Teaching and Learning, Campus Activities and WIL**.**

Recommendation 9

Recommendation 9.1

Based on students' feedback in the qualitative section of the questionnaire, it is recommended the infrastructure provision be reviewed with a view to enhancing lecture venues, computer labs, equipment and WIFI access. The University should also look into improving access to computer labs and the University library.

Recommendation 9.2

The qualitative responses seem to indicate a need for improvement in the experience and qualification of staff as well as in the provision of more tutors to support student learning.

Recommendation 9.3

recommendations themed under Curriculum/Teaching and Learning include, fast tracking the introduction of postgraduate studies, providing appropriate study materials that are for each course of study, providing more practical lessons and opportunities for E-learning.

Recommendation 9.4

Graduates indicate that providing a farm for in-service training would provide students with opportunity for practical experience. A concerted effort needs to be made to liaise with companies in the workplace to improve the degree, structure and efficacy of the in-service training for students.

16. CONCLUSION

The 2018 Graduate Survey provides valuable information which can be used to achieve the University's mission to provide advanced, technology-based programmes and services that are career-and business-oriented in the broad fields of Engineering, Natural and Management Sciences for the upliftment of talented but mainly disadvantaged individuals. At the same time, MUT is on a quest to improve and position itself as an institution of choice for school leavers. In this context, the survey could be used as a framework for MUT's planning and development regarding infrastructure, staff provisioning, programme development and curriculum renewal, as well as for forging partnerships with industry, the private sector and other relevant stakeholders. It is hoped that the University Management and other stakeholders will use the feedback coming from its own graduates for further development at MUT.

Class of 2017

"Your education is a dress rehearsal for a life that is yours to lead"
Nora Ephron

NOTES