

CHAPTER 6: RESULTS AND DISCUSSION

6.1 Introduction

In the previous chapter the research design and methodology were discussed at length, including the details of the different groups of population, and how they were selected and tested.

In this chapter the results that were found and analysed will be reported, as well as a discussion of the possible explanation as to why these specific results were found. This is necessary in order to be able to answer the research questions asked in chapter one, and to be able to make recommendations that will contribute towards the development of the field of discipline, and assist the NWU-management in making strategic decisions to benefit from these recommendations.

The large sample sizes used in this study had the effect that in most cases statistical significance was found, which did not necessarily imply importance in practice. In all cases p-values will be reported, but more emphasis will be placed on the interpretation of the effect sizes.

The most appropriate service quality measurement tool will also be discussed, as well as its possible application in the HEI environment.

6.2 Demographic data for the administrative staff members

There were 107 administrative staff members on the three different campuses that completed the questionnaires out of the total population of 146 (a response ratio of 73.29%). Sixty-seven staff members completed the hard-copy questionnaires, while 40 selected to complete the questionnaire on-line in the *e-Fundi* environment. Their employee numbers were used to control that they did not submit the questionnaires in both formats, or twice in the same format, but that data was not used for any other purposes. Their anonymity was therefore secured.

The summary of administrative staff members' participation can be found in Table 6.1 and the response rate differed from 68.18% on the Vaal Triangle Campus to 81.13% on the Potchefstroom Campus.

Table 6.1: Administrative staff participation in the study

<u>Campus</u>	<u>Potchefstroom</u> <u>Campus</u> <u>administrative</u> <u>staff</u>	<u>Mafikeng</u> <u>Campus</u> <u>administrative</u> <u>staff</u>	<u>Vaal Triangle</u> <u>Campus</u> <u>administrative</u> <u>staff</u>	<u>TOTAL</u>
Population	106	18	22	146
e-Fundi questionnaire	40	0	0	40
Hard copy questionnaire	46	6	15	67
Total response	86	6	15	107
Percentage	81.13%	33.33%	68.18%	73.29%

6.2.1 Gender

The majority of the participants were female (76.64%), as could be expected due to the nature of their jobs.

Table 6.2: Gender of staff participants

<u>Gender</u>	<u>n=</u>	<u>%</u>
Male	22	20.56%
Female	82	76.64%
Missing data	3	2.80%
TOTAL	107	100.00%

6.2.2 Age groups

The majority of the staff participants were in the 40-49 year age group (36.45%), followed by the 21-29 year age group (27.10%).

Table 6.3: Age groups of administrative staff

<u>Age group</u>	<u>n=</u>	<u>%</u>
21-29 yrs	29	27.10%
30-39 yrs	16	14.95%
40-49 yrs	39	36.45%
50-59 yrs	16	14.95%
60+ yrs	4	3.74%
Missing data	3	2.80%
TOTAL	107	100.00%

6.2.3 Employment status of administrative staff

It was also necessary to determine the employment situation of the administrative staff, as it could have been possible that there have been significant changes in the approach of temporary staff and permanent staff members.

From the Table below it is clear the nearly 75% of all the staff participants were permanently employed by the NWU.

Table 6.4: Employment status of administrative staff

Employment status	n=	%
Temporary	11	10.28%
Contract	12	11.21%
Permanent	80	74.77%
Missing data	4	3.74%
TOTAL	107	100.00%

6.2.4 Years of service at the NWU

The administrative staff members were also asked to indicate their years of service at the NWU, as it was necessary to use this as one of the determining factors in establishing a customer-centric approach.

From the Table below it is clear that nearly 75% of all administrative staff members have fewer than 10 years of service at the NWU. This might look contradictory to the age group demographic data, but can be justified in that most of the off-campus programmes at the NWU have been in existence for less than ten years and therefore many of these positions were only created in the past decade.

Table 6.5: Years of service of administrative staff

Yrs service	n=	%
0-5 yrs	48	44.86%
6-10 yrs	32	29.91%
11-20 yrs	13	12.15%
20+ yrs	8	7.48%
Missing data	6	5.61%
TOTAL	107	100.00%

6.2.5 Mother tongue

A surprisingly high number of administrative staff members are Afrikaans-speaking (85.98%), while none recorded English as mother tongue. Proficiency in English is, however, a prerequisite for employment and used in the majority of cases to communicate with off-campus students.

Table 6.6: Mother tongue of administrative staff members

Mother tongue	<i>n</i>	%
Afrikaans	92	85.98%
Setswana (Tswana)	4	3.74%
IsiXhosa (Xhosa)	2	1.87%
Sesotho (Southern Sotho)	3	2.80%
Missing data	6	5.61%
TOTAL	107	100.00%

6.2.6 Qualification levels of administrative staff members

Although a Grade 12-/matric qualification (and some experience) is sufficient for most administrative positions at the NWU, it is clear from the Table below that just 31.78% meet the minimum requirements, while nearly a third obtained degrees or higher degrees before/during their careers. Although it might not seem necessary, these qualified staff members are sometimes in a better position to give advice to students, or have empathy with them, because they have been students themselves.

Table 6.7: Qualification levels of administrative staff

Qual level	<i>n</i>	%
Gr. 12	34	31.78%
Dipl/cert	32	29.91%
B-degree	14	13.08%
Higher degr	22	20.56%
Other	2	1.87%
Missing data	3	2.80%
TOTAL	107	100.00%

6.2.7 Administrative staff's departments and faculties

All administrative departments and faculties formed part of the selected population, as indicated above. Table 6.8 below indicated the number of participants from all these departments.

The largest group (23.36%) are employed at the Faculty of Education Sciences of the Potchefstroom Campus, which is responsible for three of the seven off-campus programmes that formed part of this study. Therefore the larger representation can be declared.

Table 6.8: Departments and faculties of administrative staff

Campus and Faculty	n=	%
Mafikeng Academic Administration department	6	5.61%
Potchefstroom Academic Administration department	21	19.63%
Vaal Triangle Academic Administration department	5	4.67%
Mafikeng Faculty of Agriculture, Science & Technology	0	0.00%
Potchefstroom Faculty of Arts	2	1.87%
Vaal Triangle Faculty of Economical Sciences and Information	5	4.67%
Mafikeng Faculty of Commerce & Administration	0	0.00%
Potchefstroom Faculty of Economic & Management Sciences	14	13.08%
Vaal Triangle Faculty of Humanities	5	4.67%
Mafikeng Faculty of Education Sciences	0	0.00%
Potchefstroom Faculty of Education Sciences	25	23.36%
Mafikeng Faculty of Human and Social Sciences	0	0.00%
Potchefstroom Faculty of Engineering	1	0.93%
Mafikeng Faculty of Law	0	0.00%
Potchefstroom Faculty of Health Sciences	0	0.00%
Potchefstroom Faculty of Law	5	4.67%
Potchefstroom Faculty of Natural Sciences	10	9.35%
Potchefstroom Faculty of Theology	2	1.87%
Missing data	6	5.61%
TOTAL	107	100.00%

6.2.8 Job levels

Staff members were selected from all the different job levels (from assistants on the lower scale; to officials and managers) in the administrative environment, but secretaries with administrative tasks that dealt with students directly were also included. This was applied to the central Academic Administration departments on all three campuses, as well as the 15 different faculties and some of the schools in the faculties that employed administrative staff. Not all faculties and schools employed administrative staff, and in some cases the cooperation from specific faculties was non-existent.

Table 6.9 below gives an indication of the distribution of administrative staff among these departments. The largest groups of participants were administrative assistants at the Academic Administration departments (22.43%), followed by administrative assistants and secretaries at the faculties (both 20.56%).

Table 6.9: Job levels of administrative staff

Job level	n=	%
Admin manager (faculty)	9	8.41%
Coordinator (acad admin)	1	0.93%
Admin official (faculty)	9	8.41%
Admin official (acad admin)	11	10.28%
Admin assist (faculty)	22	20.56%
Admin assist (acad admin)	24	22.43%
Secretary (faculty/school)	22	20.56%
Secretary (acad admin)	1	0.93%
Other	2	1.87%
Missing data	6	5.61%
TOTAL	107	100.00%

6.2.9 Tasks conducted by administrative staff

Most of the participants are responsible for more than one administrative task in their dealings with the students. They were requested to indicate all the different administrative tasks that formed part of their key performance areas in their job descriptions, as it was necessary to determine which tasks were dominant and also whether there were any correlations to report. This implies that the totals when added up will exceed 100%.

Table 6.10: Tasks conducted by administrative staff

Tasks conducted by administrative staff		
Description	n=	%
Applications, admissions	33	30.8%
Registrations, records	47	43.9%
Examinations arrangements	31	29.0%
Curriculum changes, approvals	27	25.2%
Study guides	22	20.6%
Complaints, problems, requests	67	62.6%
Results, grading	41	38.3%
Assignments	27	25.2%

From this Table it is evident that nearly two-thirds (62.60%) of all administrative staff have to deal with complaints, problems and requests from time to time, which could be expected. The second most frequent task was dealing with registrations and student records (43.90%). It is therefore significant that complaints, problems and requests take up a larger component of these staff members' daily tasks, although it will most likely not be reflected in their job descriptions.

6.2.10 Administrative staff members' campus and mode of delivery

The student populations used in this study were asked to indicate their specific campus and mode of delivery. Some of the administrative staff members are responsible for

student groups from more than one mode of delivery and even more than one campus in some cases. The staff members were therefore asked to mark all the campuses and modes of delivery they are involved with, and just as with the previous Table, the totals will not add up to 100%, but exceed it.

Table 6.11: Campuses and modes of delivery administrative staff are involved with

Campus/mode of delivery	Y	%
On-campus (Mafikeng)	11	10.28%
Off-campus (Mafikeng)	8	7.48%
On-campus (Vanderbijlpark)	15	14.02%
Off-campus (Vanderbijlpark)	4	3.74%
On-campus (Potchefstroom)	47	43.93%
Flexi-programmes (Potch)	38	35.51%
Telematic Learning (Potch)	18	16.82%
Bursary programmes (Potch)	25	23.36%
SEDIBA-programme (Potch)	9	8.41%
School-based programmes	14	13.08%

From this Table it is clear that most of the staff members are involved with the on-campus programmes of the Potchefstroom Campus (43.94%), followed by the Potchefstroom Campus flexi-programmes (35.51%) and bursary programmes (23.36%).

6.3 Demographic data for the registrars

Qualitative interviews were conducted with the four registrars of the NWU (one on each campus, and one at the institutional level), which included standardised questions that also appeared in the questionnaires for the administrative staff members, but also more specific and open-ended questions.

Table 6.12: Demographic data for the registrars

Age Group		Employment status		Years of service		Mother tongue		Highest qualification	
21-29 yr	0%	Temporary	0%	0-5 yrs	50%	S. Sotho	25%	Grade 12	0%
30-39 yr	0%			6-10 yrs	0%			Diploma	0%
40-49yr	0%			11-20 yrs	0%			B-degree	50%
50-59yr	100%	Term	0%	20+ yrs	50%	English	50%	Higher degree	50%
60+ yrs	0%							Permanent	100%
Total	100%	Total	100%	Total	100%	Total	100%	Total	100%

All of the registrars are over fifty years of age and permanently employed. Half of them have more than 20 years of service at the NWU, and the other half less than five years service. The mother tongue of the majority (50%) is English, and all of them are in

possession of a bachelors degree (50%) or higher degree (50%). Two are male and two are female.

6.4 Demographic data for the students

The demographic data of the student participants in this study will be discussed in the next section.

A total number of 1,299 students participated in this study, which represents 4.2% of the total number of 26,432 undergraduate students of the NWU, according to the NWU Management Information System. The response rate at the larger campuses (Potchefstroom: 3.61% and Mafikeng: 3.65%) was the lowest, while the student response rate at the smaller, off-campus learning models was in most cases very near to the targeted ten percent. There were differences in the preferred method of completing the questionnaire, and just as with the case with administrative staff, it was determined by internet access (to be able to complete the questionnaire in the e-Fundi environment). Their student numbers were used to control that they did not submit the questionnaires in both formats, or twice in the same format, but that data was not used for any other purposes. Their anonymity was therefore secured.

The details of the different strata or groups were shown in Table 5.2.

6.4.1 Gender

Nearly two-thirds (63.17%) of the participants were female, while the overall percentage of female students at the NWU for 2009 is 66%, according to the NWU Management Information System.

Table 6.13: Gender of the student population

Gender	n=	%
Male	466	35.98%
Female	818	63.17%
Missing data	11	0.85%
TOTAL	1295	100.00%

6.4.2 Age group

As can be expected, the largest percentage of the population was in the younger age groups, as can be seen in the next Table.

Table 6.14: Age groups of the student population

<u>Age group</u>	<u>n=</u>	<u>%</u>
18-20 years	555	42.86%
21-25 years	327	25.25%
26-29 years	58	4.48%
30-39 years	128	9.88%
40+ years	210	16.22%
Missing data	17	1.31%
TOTAL	1295	100.00%

The largest group of students (42.86%) were in the 18-20 year age group, which can be expected as this study only used undergraduate students as participants. Another 25.25% of the student participants were between 21 and 25 years of age, which means that more than two-thirds of all student participants (68.11%) were younger than 26 years of age. The third-largest group (16.22%) were students older than 40 years.

The older students are most likely off-campus students enrolled for the different professional teaching and nursing programmes offered by the NWU. To confirm this, the age groups were analysed according to the different modes of delivery, which is indicated in Table 6.15.

Table 6.15: Age groups of on- and off-campus students

			Q2) Age group:					Total	% of Total
			(1) 18-20yrs	(2) 21-25yrs	(3) 26-29yrs	(4) 30-39 yr	5) 40+ yrs		
On- & off-campus students	On-campus students	Count	514	275	26	22	14	851	851
		% within on-campus	60.40%	32.30%	3.10%	2.60%	1.60%	100.00%	67.54%
	Off-campus students	Count	34	52	29	104	190	409	409
		% within off-campus	8.30%	12.70%	7.10%	25.40%	46.50%	100.00%	32.46%
Total		Count	548	327	55	126	204	1260	1260
		% within on- & off-campus	43.50%	26.00%	4.40%	10.00%	16.20%	100.00%	100.00%

Symmetric Measures

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	0.751	<0.001
	Cramer's V	0.751	<0.001
No of Valid Cases		1260	<0.001

Table 6.15 confirms that the majority of all on-campus student groups (60.40%) fall within the 18-20 year age group, while another 32.30% are younger than 26 years of age. This includes students from the Mafikeng, Potchefstroom and Vaal Triangle Campuses.

The off-campus students included students from the other seven learning models on all campuses and when their age groups were analysed (as reported in Table 6.16 above), it was found that the majority (46.50%) were older than 40 years and another 25.40% were between 30 and 39 years of age.

There are therefore major differences in the age groups of on and off-campus students, which are also confirmed by the significantly high Phi-value of 0.751.

6.4.3 Campus and mode of delivery

This is a very important demographic component of this study, due to the different learning models and support structures that exist at these campuses and programmes. It is therefore important to establish how the different groups are composed of.

From Table 6.16 it is clear that the three on-campus groups were the largest, with Potchefstroom students comprising 37.14%, Vaal Triangle students 17.22%, whilst 11.66% of the respondents were from the Mafikeng Campus. The different off-campus modes of delivery had a smaller total percentage of participants, although they achieved a larger percentage representation of their specific populations, as indicated in Table 5.2.

Table 6.16: Campus and mode of delivery of the student population

Campus/mode of delivery	n=	%
On-campus (Mafikeng)	151	11.66%
Off-campus (Mafikeng)	106	8.19%
On-campus (Vaal Triangle)	223	17.22%
Off-campus (Vaal Triangle)	74	5.71%
On-campus (Potchefstroom)	481	37.14%
Off-campus (Potchefstroom)	23	1.78%
Flexi-programmes (Potch)	124	9.58%
Bursary programmes (Potch)	53	4.09%
SEDIBA-programmes (Potch)	25	1.93%
School-based programmes (Potch)	16	1.24%
Missing data	19	1.47%
TOTAL	1295	100.00%

6.4.4 Language of delivery in class room/contact session

Just more than half of the students (51.58%) reported that the language of tuition in their class rooms or during contact sessions was English, while 40.62% indicated Afrikaans. A very small percentage (1.08%) specified Tswana as language of tuition, which may be students from the Mafikeng Campus .

Table 6.17: Language of delivery in class room/ contact session of the student population

Language	n=	%
1: Eng	668	51.58%
2 Afr	526	40.62%
3: Tswana	14	1.08%
4: Other	2	0.15%
Missing data	85	6.56%
TOTAL	1295	100.00%

6.4.5 Mother tongue

Students from all eleven official languages in South Africa participated in this study, although some of these groups were very small. This can be due to the fact that the study centres or tuition centres of the NWU are situated across South Africa.

Afrikaans-speaking students were the largest group (46.56%), with Setswana (Tswana) indicated as the second largest mother tongue at 20.08%. Only 5.10% of the students reported English as a mother tongue.

Table 6.18: Mother tongue of the student population

<u>Mother tongue</u>	<u>n=</u>	<u>%</u>
English	66	5.10%
Afrikaans	603	46.56%
Setswana (Tswana)	260	20.08%
IsiXhosa (Xhosa)	54	4.17%
IsiZulu (Zulu)	87	6.72%
Northern Sotho (Sepedi)	34	2.63%
IsiNdebele (Ndebele)	2	0.15%
Sesotho (Southern Sotho)	105	8.11%
SiSwati (Swati)	11	0.85%
Tshivenda (Venda)	10	0.77%
Xitsonga (Tsonga)	7	0.54%
Other	20	1.54%
Missing data	36	2.78%
TOTAL	1295	100.00%

6.4.6 Academic status of the students

This study was limited to undergraduate students only, but the duration of some programmes like the Bachelor's in Pharmacy (B.Pharm) and Bachelor's in Engineering (B.Eng) are four years, compared to the three years of most Bachelor's-programmes.

Some of the off-campus further education students are busy with a four-year programme which has Bachelor's degree status and is referred to as the NPDE (National Professional Diploma in Education). Their data was added to that of the other Bachelor's students.

Therefore a smaller number of undergraduate students would have indicated a fourth-year option.

The ACE (Advanced Certificate in Education) is very popular off-campus further education programme and a prerequisite for the NPDE. It is presented by the off-campus departments of all three campuses and is therefore a good basis to use when wanting to compare administrative support to the students.

Several off-campus nursing students are busy with one-year specialist diplomas in nursing management, while others are enrolled for the B.Cur-degree, which is similar to the on-campus B.Cur-degree. Their data was reported accordingly.

It was possible that some students might have misunderstood this question, although they were briefed very carefully. This may explain the relatively large numbers selecting *other* as an option (4.79%), while there was a similar number of missing data (4.56%) reported.

However, this still gives a good indication that students from all year groups and programmes participated in this study.

A third of the student respondents (33.20%) were busy with their first year of Bachelor's studies, with nearly the same percentage (15.29% and 15.21% respectively) enrolled for their second- and third years of Bachelor's studies. Another large group were the first year ACE-students, who comprised 11.89% of the respondents.

Table 6.19: Academic status of the student population

Program and year group	n=	%
1st year B-degree or NPDE	430	33.20%
2nd year B-degree or NPDE	198	15.29%
3rd year B-degree or NPDE	197	15.21%
4th year B-degree or NPDE	85	6.56%
1st year ACE	154	11.89%
2nd year ACE	38	2.93%
1 year diploma	72	5.56%
Other	62	4.79%
Missing data	59	4.56%
TOTAL	1295	100.00%

6.4.7 Faculty

There are 15 different faculties spread over three campuses. Some of them are unique to that campus, for example the Faculty of Agriculture, Science and Technology on the Mafikeng Campus, but others are the same, e.g. both the Potchefstroom- and Mafikeng Campuses have Faculties of Law and Faculties of Education Sciences. In both cases the modules and its contents have been aligned recently.

The faculties differ in size, but the selection of the participants was done to ensure an equal representation from the populations. The data reported here shows the participants per faculty as a percentage of the total group, and not as a percentage of the students per faculty itself.

The three largest represented faculties were the Potchefstroom Faculty of Health Sciences (15.29%), the Vaal Triangle Faculty of Humanities (13.90%) and the Potchefstroom Faculty of Education Sciences (12.12%).

Table 6.20: Faculties of the student population

Campus and Faculty	n=	%
Mafikeng Faculty of Agriculture, Science & Technology	20	1.54%
Potchefstroom Faculty of Arts	21	1.62%
Vaal Triangle Faculty of Economical Sciences and Information	92	7.10%
Mafikeng Faculty of Commerce & Administration	80	6.18%
Potchefstroom Faculty of Economic & Management Sciences	115	8.88%
Vaal Triangle Faculty of Humanities	180	13.90%
Mafikeng Faculty of Education Sciences	81	6.25%
Potchefstroom Faculty of Education Sciences	157	12.12%
Mafikeng Faculty of Human and Social Sciences	21	1.62%
Potchefstroom Faculty of Engineering	52	4.02%
Mafikeng Faculty of Law	52	4.02%
Potchefstroom Faculty of Health Sciences	198	15.29%
Potchefstroom Faculty of Law	41	3.17%
Potchefstroom Faculty of Natural Sciences	98	7.57%
Potchefstroom Faculty of Theology	28	2.16%
Missing data	59	4.56%
TOTAL	1295	100.00%

6.5 Research question 1: Will there be a significant association between the perceived customer experience encounter levels as delivered by administrative staff and received by the undergraduate students?

In order to determine whether there were significant associations between the customer experience levels delivered by the administrative staff, and how the students perceived it, this study looked at the results on the different campuses and modes of delivery, but also at specific service encounters in order to answer the research question.

6.5.1 Perceived customer experience levels of the students at the different campuses and modes of delivery

The undergraduate students were asked to rate specific, practical aspects of the customer service aspects on their particular campus or mode of delivery in order to establish the levels of customer service experienced and delivered and to answer the first research question. Participants were also asked to rate the customer service encounter at specific different administrative departments and service points, as well as at their faculties and schools.

6.5.1.1 Academic Administration (admissions)

The admissions section is the first administrative department students and prospective students would encounter when applying to enrol at the NWU, as the admissions- and registrations processes are two separate sections.

Table 6.21: Students' service experience at the Academic Administration (admissions) department

		Question 12.1: Service experience: Academic Administration (admissions)?							
		1. Very poor	2. Below average	3. Average	4. Above average	5. Exceptional	6. No experience	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	28 18.7%	28 18.7%	65 43.3%	21 14.0%	7 4.7%	1 .7%	150 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	10 9.6%	7 6.7%	48 46.2%	20 19.2%	17 16.3%	2 1.9%	104 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	5 2.3%	7 3.2%	91 41.6%	67 30.6%	44 20.1%	5 2.3%	219 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	5 7.2%	5 7.2%	29 42.0%	12 17.4%	14 20.3%	4 5.8%	69 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	5 1.1%	12 2.7%	125 28.1%	192 43.1%	96 21.6%	15 3.4%	445 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	.0%	1 4.8%	11 52.4%	5 23.8%	3 14.3%	1 4.8%	21 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	6 5.0%	3 2.5%	52 43.3%	28 23.3%	21 17.5%	10 8.3%	120 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	2 4.2%	1 2.1%	19 39.6%	11 22.9%	12 25.0%	3 6.3%	48 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	.0%	.0%	6 24.0%	8 32.0%	9 36.0%	2 8.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	.0%	1 7.7%	.0%	9 69.2%	3 23.1%	.0%	13 100.0%
Total	Count % within Q3	61 5.0%	65 5.4%	446 36.7%	373 30.7%	226 18.6%	43 3.5%	1214 100.0%	

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.465	< 0.0001
	Cramer's V	.208	< 0.0001
	N of Valid	1214	

In all cases the largest representative group of students per learning model per campus was marked on the following tables in this chapter in a dark shade of grey, and the second largest group in a slightly lighter shade of grey. The results of the Pearson's Chi-square test and measures of association are also indicated below each table and used to establish whether there are any significant associations between the groups.

The Phi coefficient-value indicates the degree of association between two values and a Phi-value of 0.3 to 0.7 is considered to indicate a positive association, as discussed in the previous chapter. The phi-coefficient can be used as an effect size to imply practical importance of the association. According to Steyn (2000:2), a value of 0.3 can be interpreted as a medium effect size, while values of 0.5 indicate a large effect. Therefore it is evident from Table 6.21 (where a significant Phi coefficient-value of 0.465 was calculated), that the students' customer service experience at the different admissions offices of Academic Administration at the NWU, is "average" in most cases, but that the majority of SEDIBA-students (36.00%) reported an exceptional experience. In the school-based students (69.20%) and Potchefstroom on-campus students (43.10%) most students had an above average experience, while the other learning

models and campuses all reported average experiences. . In total 36.70% reported an average experience, and another 30.70% an above-average experience.

6.5.1.2 Academic Administration (registrations)

Once students have been accepted at the admissions section, they can register at the next service Academic Administration department, the registration section. Student records are also kept here, which means that the students will not only interact with these offices every semester when registering their new modules, but also when any of their personal particulars have to be changed, or when they have any queries about their results and academic progress.

Table 6.22: Students' service experience at the Academic Administration (registrations/records) department

		Question 12.2: Service experience: Academic Administration (records)?							
		1. Very poor	2. Below average	3. Average	4. Above average	5. Exceptional	6. No experience	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count	23	42	54	24	5	1	149
		% within Q3	15.4%	28.2%	36.2%	16.1%	3.4%	.7%	100.0%
	(2) Off-campus (Mafikeng)	Count	6	10	45	24	15	2	102
		% within Q3	5.9%	9.8%	44.1%	23.5%	14.7%	2.0%	100.0%
	(3) On-campus (Vaal Triangle)	Count	3	16	84	68	48	2	221
		% within Q3	1.4%	7.2%	38.0%	30.8%	21.7%	.9%	100.0%
	(4) Off-campus (Vaal Triangle)	Count	4	3	31	16	11	4	69
		% within Q3	5.8%	4.3%	44.9%	23.2%	15.9%	5.8%	100.0%
	(5) On-campus (Potchefstroom)	Count	7	19	120	175	121	3	445
		% within Q3	1.6%	4.3%	27.0%	39.3%	27.2%	.7%	100.0%
(6) Flexi-programmes (Potchefstroom)	Count	1	2	9	4	5	1	22	
	% within Q3	4.5%	9.1%	40.9%	18.2%	22.7%	4.5%	100.0%	
(7) Telematic Learning (Potchefstroom)	Count	4	3	46	34	23	10	120	
	% within Q3	3.3%	2.5%	38.3%	28.3%	19.2%	8.3%	100.0%	
(8) Bursary programmes (Potch)	Count	1	2	17	12	14	2	48	
	% within Q3	2.1%	4.2%	35.4%	25.0%	29.2%	4.2%	100.0%	
(9) SEDIBA-programmes (Potch)	Count		1	4	7	11	2	25	
	% within Q3	.0%	4.0%	16.0%	28.0%	44.0%	8.0%	100.0%	
(10) School-based programmes (Potch)	Count			1	7	5		13	
	% within Q3	.0%	.0%	7.7%	53.8%	38.5%	.0%	100.0%	
Total		Count	49	98	411	371	258	27	1214
		% within Q3	4.0%	8.1%	33.9%	30.6%	21.3%	2.2%	100.0%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.482	< 0.0001
	Cramer's V	.215	< 0.0001
	N of Valid Cases	1214	

A very similar pattern is evident from Table 6.22 when compared to Table 6.20, with a highly significant Phi-value of 0.482, and the majority of the groups reporting an average experience. 44.00% of the SEDIBA students reported an exceptional experience, with 53.80% of the school-based students and 39.30% of the Potchefstroom on-campus students indicating an above average experience. It is not surprising that the students' experiences between the admissions- and

registrations/records-offices are similar, as these staff members are in most cases in the same reporting structure, and receive very similar instructions and training.

In total 33.90% reported an average experience, and another 30.60% an above-average experience.

6.5.1.3 Academic Administration (examinations) department

All students have to interact with the administrative staff at the examinations department throughout their studies.

Table 6.23: Students' service experience at the Academic Administration (examinations) department

		Question 12.3: Service experience: Academic Administration (examinations)?							
		1. Very poor	2. Below average	3. Average	4. Above average	5. Exceptiona	6. No experience	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	21 14.3%	19 12.9%	51 34.7%	32 21.8%	22 15.0%	2 1.4%	147 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	5 5.0%	7 6.9%	45 44.6%	30 29.7%	12 11.9%	2 2.0%	101 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	2 .9%	10 4.5%	67 30.3%	81 36.7%	55 24.9%	6 2.7%	221 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	3 4.4%	5 7.4%	18 26.5%	21 30.9%	17 25.0%	4 5.9%	68 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	2 .5%	21 4.7%	112 25.2%	176 39.6%	106 23.9%	27 6.1%	444 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3			9 42.9%	6 28.6%	5 23.8%	1 4.8%	21 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	3 2.5%	3 2.5%	37 31.4%	37 31.4%	27 22.9%	11 9.3%	118 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	1 2.1%	1 2.1%	15 31.3%	15 31.3%	9 18.8%	7 14.6%	48 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3		1 4.0%	5 20.0%	9 36.0%	10 40.0%		25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3			2 15.4%	8 61.5%	3 23.1%		13 100.0%
	Total	Count % within Q3	37 3.1%	67 5.6%	361 29.9%	415 34.4%	266 22.1%	60 5.0%	1206 100.0%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.371	< 0.0001
	Cramer's V	.166	< 0.0001
	N of Valid Cases	1206	

A slightly smaller Phi-value (0.371) was reported, but it is still considered to be of a positive association. Six of the groups reported an above average experience, which is more than the previous academic administration departments. The majority of the School-based group (61.50%) indicated an above average customer experience, with the same tendency observed in the Potchefstroom on-campus group (39.60%), Vaal Triangle on-campus group (36.70%), SEDIBA-group (36.00%), Telematic Learning group (31.40%), Bursary group (31.30%) and Vaal Triangle off-campus group (30.90%).

On average 29.90% of the respondents reported an average customer experience, and 56.50% reported an above average or exceptional customer experience.

6.5.1.4 Administrative staff at the faculty

Each of the 15 faculties have their own administrative staff structure, which has to deal with student enquiries on a regular basis, ranging from the selection of, and admission to specific modules, and particular requests from students. There is regular interaction with administrative staff at Academic Administration, as the same central computerised student system is used, but the reporting structures are different.

Table 6.24: Students' service experience at the faculty

			Question 12.4: Service experience: Faculty Administration?						Total
			1. Very poor	2. Below average	3. Average	4. Above average	5. Exceptional	6. No experience	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	18 12.1%	21 14.1%	62 41.6%	27 18.1%	18 12.1%	3 2.0%	149 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	3 2.9%	9 8.8%	47 46.1%	24 23.5%	14 13.7%	5 4.9%	102 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	6 2.7%	8 3.7%	61 27.9%	71 32.4%	64 29.2%	9 4.1%	219 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	4 5.8%	3 4.3%	26 37.7%	17 24.6%	16 23.2%	3 4.3%	69 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	4 .9%	18 4.0%	101 22.7%	163 36.6%	135 30.3%	24 5.4%	445 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	.0%	.0%	7 35.0%	8 40.0%	4 20.0%	1 5.0%	20 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	4 3.4%	7 5.9%	45 37.8%	26 21.8%	24 20.2%	13 10.9%	119 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	.0%	1 2.1%	14 29.2%	13 27.1%	10 20.8%	10 20.8%	48 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	.0%	1 4.0%	6 24.0%	9 36.0%	9 36.0%	.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	.0%	.0%	1 7.7%	7 53.8%	5 38.5%	.0%	13 100.0%
Total	Count % within Q3	39 3.2%	68 5.6%	370 30.6%	365 30.2%	299 24.7%	68 5.6%	1209 100.0%	

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.392	< 0.0001
	Cramer's V	.176	< 0.0001
	N of Valid Cases	1209	

Again a slightly smaller Phi-value was found (0.392), and the experiences of the student groups were divided between average and above average experiences, with 53.80% of the School-based group, 40.00% of the Flexi-programmes and 36.60% of the Potchefstroom on-campus group and indicated an above average customer experience.

On average 30.60% of the respondents reported an average customer experience, and 54.90% reported an above average or exceptional customer experience.

6.5.1.5 Administrative staff at school level at the faculty

All Schools have a small administrative component, which consists in most cases of a secretary and some assistants. They deal mostly with the recording of assignment and test results onto the central computerised student system, and student enquiries and results.

Table 6.25: Students' service experience at school-level at the faculty

			Question 12.5: Service experience: School Administration at Faculty?						Total
			1. Very poor	2. Below average	3. Average	4. Above average	5. Exceptional	6. No experience	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	12 8.1%	20 13.4%	61 40.9%	32 21.5%	21 14.1%	3 2.0%	149 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	6 5.9%	6 5.9%	43 42.2%	31 30.4%	13 12.7%	3 2.9%	102 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	2 .9%	8 3.7%	66 30.3%	74 33.9%	60 27.5%	8 3.7%	218 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	4 5.9%	4 5.9%	27 39.7%	11 16.2%	18 26.5%	4 5.9%	68 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	6 1.4%	10 2.3%	115 26.0%	166 37.6%	119 26.9%	26 5.9%	442 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	1 4.5%	1 4.5%	8 36.4%	6 27.3%	4 18.2%	2 9.1%	22 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	5 4.3%	9 7.7%	42 35.9%	23 19.7%	26 22.2%	12 10.3%	117 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	3 6.4%	1 2.1%	16 34.0%	9 19.1%	11 23.4%	7 14.9%	47 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	.0%	1 4.0%	9 36.0%	7 28.0%	8 32.0%	.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	.0%	.0%	3 23.1%	6 46.2%	3 23.1%	1 7.7%	13 100.0%
Total	Count % within Q3	39 3.2%	60 5.0%	390 32.4%	365 30.3%	283 23.5%	66 5.5%	1203 100.0%	

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.332	< 0.0001
	Cramer's V	.149	< 0.0001
	N of Valid Cases	1203	

The Phi-value of 0.332 was smaller than with the administrative departments reported before, and the experience of the majority of the students was again between average and above average in all groups. The majority of the Mafikeng off- and on-campus students (42.20% and 40.90% respectively), as well as the majority of the Vaal Triangle off-campus group (39.70%) reported an average customer experience, while the

majority of students at the School-based programme (46.30%) and the Potchefstroom on-campus group (37.60%) indicated an above average customer experience.

On average 32.40% of the respondents reported an average customer experience, and 53.80% reported an above average or exceptional customer experience.

6.5.1.6 Administrative staff at the distribution centre

Students at all learning models and on all campuses receive study guides for all their modules and therefore interacts with the staff members of the different distribution centres. On-campus students collect their study guides in person, while the study guides of most off-campus students are couriered to them. Exceptions include the school-based and SEDIBA-students, who collect their study guides during scheduled study schools on the Potchefstroom Campus.

Table 6.26: Students' service experience at the distribution centres

		Question 12.6: Service experience: Distribution Centre?							
		1. Very poor	2. Below average	3. Average	4. Above average	5. Exceptional	6. No experience	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	33 22.1%	20 13.4%	35 23.5%	36 24.2%	22 14.8%	3 2.0%	149 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	10 9.8%	9 8.8%	34 33.3%	27 26.5%	22 21.6%	.0%	102 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	7 3.2%	18 8.2%	68 31.1%	63 28.8%	60 27.4%	3 1.4%	219 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	4 5.7%	5 7.1%	29 41.4%	17 24.3%	12 17.1%	3 4.3%	70 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	22 4.9%	42 9.4%	134 30.1%	133 29.9%	112 25.2%	2 .4%	445 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	.0%	1 4.5%	7 31.8%	6 27.3%	6 27.3%	2 9.1%	22 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	6 5.0%	5 4.2%	31 26.1%	39 32.8%	32 26.9%	6 5.0%	119 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	3 6.5%	2 4.3%	17 37.0%	9 19.6%	15 32.6%	.0%	46 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	.0%	.0%	2 8.0%	9 36.0%	14 56.0%	.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	2 15.4%	.0%	6 46.2%	3 23.1%	1 7.7%	1 7.7%	13 100.0%
Total	Count % within Q3	87 7.2%	102 8.4%	363 30.0%	342 28.3%	296 24.5%	20 1.7%	1210 100.0%	

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.340	< 0.0001
	Cramer's V	.152	< 0.0001
	N of Valid Cases	1210	

All student groups reported an average or above average experience at their relevant Distribution Centres, with 56.00% of the SEDIBA-students indicating an exceptional experience. The largest group of the Telematic learning and Mafikeng on-campus students (32.80% and 24.20% respectively) specified an above average customer experience, while 46.20% of the School-based programme, 41.40% of the Vaal

Triangle off-campus group and 37.00% of the Bursary group considered their customer experience as average. The Phi-value was a positive 0.340.

On average 30.00% of the respondents reported an average customer experience, and 52.80% reported an above average or exceptional customer experience.

6.5.2 Perceived customer experience levels of the students according to practical service encounter outcomes

Specific measurable and practical elements of the interaction between administrative staff members and students were identified in the research design, and then included in the questionnaire in an effort to accurately measure the students' customer experiences not only based on broad perceptions, but on more specific, realistic, day-to-day experiences.

6.5.2.1 Students' waiting time at the administrative desk

This study has reported the students' customer experience levels in general at the different administrative service departments up to now, but it was also deemed necessary to determine in a more direct and measurable way how they experience different components of their service interaction with administrative staff members.

One realistic way to determine this was to ask students to indicate the actual waiting time they experience on average when they had to deal with all staff members.

Table 6.27: Students' waiting time at the administrative desk

			Question 13: Students' waiting time at the administrative desk?						
			1. Immediately	2. Two to three minutes	3. Three to five minutes	4. Five to ten minutes	5. More than ten minutes	6. Not applicable	Total
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	8 5.4%	30 20.3%	23 15.5%	25 16.9%	50 33.8%	12 8.1%	148 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	14 13.7%	18 17.6%	14 13.7%	25 24.5%	21 20.6%	10 9.8%	102 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	34 15.5%	62 28.3%	47 21.5%	37 16.9%	21 9.6%	18 8.2%	219 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	8 11.4%	14 20.0%	15 21.4%	11 15.7%	16 22.9%	6 8.6%	70 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	79 17.8%	133 30.0%	108 24.3%	68 15.3%	29 6.5%	27 6.1%	444 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	7 33.3%	7 33.3%	1 4.8%	4 19.0%	1 4.8%	1 4.8%	21 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	15 14.3%	13 12.4%	6 5.7%	4 3.8%	8 7.6%	59 56.2%	105 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	25 52.1%	7 14.6%	2 4.2%	8 16.7%	4 8.3%	2 4.2%	48 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	14 56.0%	5 20.0%	2 8.0%	3 12.0%	.0%	1 4.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	2 15.4%	4 30.8%	3 23.1%	1 7.7%	1 7.7%	2 15.4%	13 100.0%
	Total	Count % within Q3	206 17.2%	293 24.5%	221 18.5%	186 15.6%	151 12.6%	138 11.5%	1195 100.0%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.597	< 0.0001
	Cramer's V	.267	< 0.0001
	N of Valid Cases	1195	

A highly significant Phi-value of 0.597 was determined, and the above Table clearly indicates visible association between the waiting time of students at the different campuses and learning models. The most positive experiences were reported by the SEDIBA- and Potchefstroom bursary students, who respectively reported that 56.00% and 52.10% of the students were helped immediately when reporting to an administrative desk for assistance. Although both groups are off-campus students,

they do visit the campus from time to time for study schools, and then have the opportunity to address administrative problems and queries. Four other groups reported an average waiting time of two to three minutes, but the largest groups of the Mafikeng on-campus students (33.80%) and Vaal Triangle off-campus students (22.90%) reported waiting times of more than ten minutes on average. Most Telematic students (56.20%) indicated “not applicable” to this question, as their learning model does not make provision for any study schools on campus and most of them that are in other provinces can only make use of telephonic or faxed enquiries.

On average 60.20% of the students waited five minutes or less to be served by administrative staff members.

6.5.2.2 Students’ waiting time on the phone

Telephonic enquiries are used by most off-campus students, but less frequently by on-campus students. It is still a good indication of the customer service experience of students, and also of the ability and willingness of administrative staff members to strike a fair balance between serving walk-in customers and also reacting quickly enough to customers who prefer to phone the service department.

Table 6.28: Students' waiting time on the phone

		Question 14: Students' waiting time on the telephone?								
		1. Immediately	2. Three to five rings	3. Up to 30 seconds	4. Up to one minute	5. Three to five minutes	6. Phone ignored	7. Not applicable	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	11 7.5%	21 14.3%	18 12.2%	16 10.9%	25 17.0%	19 12.9%	37 25.2%	147 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	20 19.4%	24 23.3%	6 5.8%	10 9.7%	14 13.6%	9 8.7%	20 19.4%	103 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	29 13.2%	44 20.1%	30 13.7%	34 15.5%	20 9.1%	12 5.5%	50 22.8%	219 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	14 20.3%	13 18.8%	6 8.7%	3 4.3%	14 20.3%	4 5.8%	15 21.7%	69 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	49 11.0%	83 18.6%	46 10.3%	50 11.2%	39 8.7%	16 3.6%	163 36.5%	446 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	9 39.1%	5 21.7%	1 4.3%	2 8.7%	3 13.0%	2 8.7%	1 4.3%	23 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	24 19.7%	24 19.7%	18 14.8%	10 8.2%	19 15.6%	14 11.5%	13 10.7%	122 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	24 45.3%	10 18.9%	4 7.5%	2 3.8%	4 7.5%	5 9.4%	4 7.5%	53 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	6 24.0%	10 40.0%	1 4.0%	2 8.0%	2 8.0%	1 4.0%	3 12.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	4 30.8%	5 38.5%	1 7.7%	1 7.7%	.0%	.0%	2 15.4%	13 100.0%
Total		Count % within Q3	190 15.6%	239 19.6%	131 10.7%	130 10.7%	140 11.5%	82 6.7%	308 25.2%	1220 100.0%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.380	< 0.0001
	Cramer's V	.155	< 0.0001
	N of Valid Cases	1220	

As mentioned above, some on-campus students do not make use of this method of interaction with administrative staff (25.20% of all student respondents selected this option). The off-campus students that did make use of it, reported a fast response time, varying from the immediate answering of a phone in three cases (45.30% of the Bursary group, 39.10% of the Flexi group and 19.70% of the Telematic group), and the answering of a phone within three to five rings in another two groups (40.00% of the SEDIBA group and 38.50% of the School-based group). In general 56.60% of the students reported an answering time of one minute or shorter. The Phi-value was 0.380, which is within the range of a positive association between the values.

6.5.2.3 Students' experienced time required to resolve a problem

Another measuring tool that was devised to determine students' customer experience, was to request them to indicate the average time it took administrative staff to resolve their problems. This is related to the waiting time, but can indicate a higher level of staff commitment, and lead to enhancement or worsening of a customer experience.

Table 6.29: Students' experienced time required to resolve a problem

		Question 15: Time required to resolve problem?							Total	
		1. Immediately	2. Less than one day	3. One to three days	4. Three to five days	5. More than a week	6. Problem unresolved	7. Not applicable		
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	4 2.7%	12 8.2%	31 21.1%	12 8.2%	49 33.3%	25 17.0%	14 9.5%	147 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	18 17.5%	12 11.7%	13 12.6%	6 5.8%	28 27.2%	10 9.7%	16 15.5%	103 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	24 10.9%	50 22.7%	56 25.5%	26 11.8%	19 8.6%	11 5.0%	34 15.5%	220 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	9 13.2%	16 23.5%	9 13.2%	7 10.3%	7 10.3%	5 7.4%	15 22.1%	68 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	56 12.6%	117 26.2%	117 26.2%	32 7.2%	38 8.5%	10 2.2%	76 17.0%	446 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	11 50.0%	3 13.6%	2 9.1%	2 9.1%	1 4.5%		3 13.6%	22 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	31 25.4%	29 23.8%	19 15.6%	8 6.6%	11 9.0%	6 4.9%	18 14.8%	122 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	26 50.0%	12 23.1%	1 1.9%	3 5.8%	1 1.9%	3 5.8%	6 11.5%	52 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	13 52.0%	5 20.0%	2 8.0%			1 4.0%	4 16.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	2 15.4%	7 53.8%	2 15.4%				2 15.4%	13 100.0%
Total		Count % within Q3	194 15.9%	263 21.6%	252 20.7%	96 7.9%	154 12.6%	71 5.8%	188 15.4%	1218 100.0%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.506	< 0.0001
	Cramer's V	.207	< 0.0001
	N of Valid Cases	1218	

A highly significant Phi-value of 0.506 was found, with the largest group of Mafikeng on- and off-campus students (33.30% and 27.20% respectively) reporting that it took

on average longer than a week to get their administrative problems resolved. On the other end of the scale, four groups reported that the majority of their problems were resolved immediately. This included students from the SEDIBA, Flexi, Bursary and Telematic programmes (52.00%, 50.00%, 50.00% and 25.40% respectively).

In general 58.20% of all the students reported that their problems were resolved within three days or less after it was reported.

6.5.2.4 Students' experienced number of visits to resolve a problem

A related method to determine students' customer service experience was to establish the number of attempts, visits or calls to an administrative service department a student had to make before a problem was resolved. This is also a good indicator of customer experience levels, as the students' frustration levels might increase and their satisfaction levels decrease every time they have to return to the service desk, or make another telephone call to NWU administrative staff.

Table 6.30: Students' experienced number of visits to resolve a problem

		Question 16: Number of attempts to have the problem resolved?							Total	
		1. Immediately	2. Once	3. Twice	4. Three times	5. More than three times	6. Problem unresolved	7. Not applicable		
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	3 2.1%	16 11.0%	24 16.6%	23 15.9%	42 29.0%	18 12.4%	19 13.1%	145 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	8 7.9%	29 28.7%	10 9.9%	13 12.9%	22 21.8%	8 7.9%	11 10.9%	101 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	14 6.5%	62 28.7%	48 22.2%	26 12.0%	15 6.9%	6 2.8%	45 20.8%	216 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	6 8.8%	19 27.9%	11 16.2%	4 5.9%	4 5.9%	4 5.9%	20 29.4%	68 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	57 12.8%	129 28.9%	82 18.4%	32 7.2%	34 7.6%	5 1.1%	107 24.0%	446 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	9 39.1%	7 30.4%	1 4.3%		2 8.7%		4 17.4%	23 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	22 18.3%	40 33.3%	22 18.3%	7 5.8%	8 6.7%	3 2.5%	18 15.0%	120 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	13 24.5%	22 41.5%	4 7.5%	2 3.8%	3 5.7%	2 3.8%	7 13.2%	53 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	7 28.0%	10 40.0%	2 8.0%			1 4.0%	5 20.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	2 15.4%	5 38.5%	3 23.1%				3 23.1%	13 100.0%
	Total	Count % within Q3	141 11.7%	339 28.0%	207 17.1%	107 8.8%	130 10.7%	47 3.9%	239 19.8%	1210 100.0%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.447	< 0.0001
	Cramer's V	.183	< 0.0001
	N of Valid Cases	1210	

A significant Phi-value of 0.447 was reported and a relatively similar pattern was observed, when compared to the previous Table. The largest group of Mafikeng on-campus students (29.00%) indicated that they had to contact administrative staff members more than three times before their problems were resolved, while eight other groups indicated that one visit was sufficient to get their problems resolved.

A total of 56.80% of all the students reported that their problems were resolved within three days or less after it was reported.

6.5.2.5 Administrative staff members' presence during lunch times

This demonstrable component of practical customer service towards students was also measured, although there are no requirements at most administrative departments that there should always be staff members present during lunch times to assist students. This question did not only refer to walk-in enquiries (as is mostly the case with on-campus students), but also to the staff members' availability to answer a telephonic enquiry during lunch time, mostly for off-campus students.

Table 6.31: Administrative staff members' presence during lunch times

		Question 17.1: No administrative staff members present during lunch time?				
		1. Yes	2. No	3. Not applicable	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	116 77.9%	21 14.1%	12 8.1%	149 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	53 52.0%	38 37.3%	11 10.8%	102 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	147 68.1%	37 17.1%	32 14.8%	216 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	29 42.0%	24 34.8%	16 23.2%	69 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	133 30.0%	197 44.5%	113 25.5%	443 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	3 13.0%	17 73.9%	3 13.0%	23 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	24 20.7%	56 48.3%	36 31.0%	116 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	8 16.3%	36 73.5%	5 10.2%	49 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	7 28.0%	13 52.0%	5 20.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	5 38.5%	5 38.5%	3 23.1%	13 100.0%
	Total	Count % within Q3	525 43.6%	444 36.8%	236 19.6%	1205 100.0%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.444	< 0.0001
	Cramer's V	.314	< 0.0001
	N of Valid Cases	1205	

At both the on-and off campus administrative desks of the Mafikeng- and Vaal Triangle Campuses the majority of students (77.90%, 52.00%, 68.10% and 42.00% respectively) reported that there were no staff members present during lunch times. This also confirms that these large groups of students attempted to resolve an administrative problem during lunch time and expected staff to be available.

On the Potchefstroom Campus and at service desks of the other learning models the majority of students confirmed the availability of administrative staff during lunch times, but (as can be seen in column 3) only 19.60% of all students did not attempt to contact staff during lunch times. A positive associated Phi-value of 0.444 was reported.

It is, however, evident that there are large enough groups of students with the need to contact administrative staff during lunch time and therefore line managers should schedule their staff's lunch times to ensure that there is always someone available for students. This need might arise from students with full or busy time tables, or part-time working students with no other time available to contact the service desk during the day.

6.5.2.6 Administrative staff members' presence during tea times

Although the presence of staff members during tea times sound less important during tea times, it might indicate what approach or mentality towards good customer service exists in a specific administrative department.

Table 6.32: Administrative staff members' presence during tea times

		Question 17.2: No administrative staff members present during tea time?				
		1. Yes	2. No	3. Not applicable	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	88 59.1%	48 32.2%	13 8.7%	149 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	36 35.6%	51 50.5%	14 13.9%	101 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	71 32.9%	97 44.9%	48 22.2%	216 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	15 21.7%	35 50.7%	19 27.5%	69 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	68 15.3%	259 58.3%	117 26.4%	444 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	2 9.1%	18 81.8%	2 9.1%	22 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	8 6.9%	61 52.6%	47 40.5%	116 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	7 14.0%	34 68.0%	9 18.0%	50 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	0 .0%	20 80.0%	5 20.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	1 7.7%	10 76.9%	2 15.4%	13 100.0%
Total	Count % within Q3	296 24.6%	633 52.5%	276 22.9%	1205 100.0%	

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.399	< 0.0001
	Cramer's V	.262	< 0.0001
	N of Valid Cases	1205	

Only 22.90% of all student respondents indicated that they did not attempt to contact administrative staff during tea times (column 3), indicating a need that there should be staff members available at these times. At the Mafikeng Campus 59.10% of the on-campus students indicated that there were no staff members available during tea times. Again line managers should ensure that staff takes turns during tea times to

have someone available for students contacting their department throughout the day. The Phi-value of 0.399 can be considered as a positive association between the variables.

6.5.2.7 Longer working hours for administrative staff members' during peak times

Students can encounter longer waiting times during the commencement of both semesters, and this study also wanted to establish whether some administrative departments stays open longer during these peak times.

Table 6.33: Longer working hours for administrative staff members' during peak times

		Question 17.3: No longer working hours for administrative staff members during peak times?				
		1. Yes	2. No	3. Not applicable	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	73 50.0%	52 35.6%	21 14.4%	146 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	35 35.7%	43 43.9%	20 20.4%	98 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	64 29.8%	91 42.3%	60 27.9%	215 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	15 22.1%	33 48.5%	20 29.4%	68 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	121 27.4%	197 44.6%	124 28.1%	442 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	2 10.0%	14 70.0%	4 20.0%	20 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	14 12.0%	56 47.9%	47 40.2%	117 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	8 16.7%	28 58.3%	12 25.0%	48 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	4 16.0%	12 48.0%	9 36.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	1 7.7%	8 61.5%	4 30.8%	13 100.0%
	Total	Count % within Q3	337 28.3%	534 44.8%	321 26.9%	1192 100.0%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.251	< 0.0001
	Cramer's V	.177	< 0.0001
	N of Valid Cases	1192	

A total of 26.90% students did not attempt to receive service after normal hours in peak times, and a similar pattern as is the case with tea times is observed. Exactly fifty percent of the on-campus students from Mafikeng reported that there were no staff members available after hours during peak times, but at all the other campuses and learning models the majority of students indicated that administrative staff members were available during these times. The Phi-value of 0.251 indicate a positive association between the variables.

6.5.2.8 Administrative staff members' presence on Saturdays during peak times

Another practical way to ensure efficient and prompt customer service for students is to have staff available on Saturdays during peak times. This component was therefore also measured.

Table 6.34: Administrative staff members' presence on Saturdays during peak times

		Question 17.4: Administrative staff members working on Saturdays during peak times?				
		1. Yes	2. No	3. Not applicable	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	103 69.6%	19 12.8%	26 17.6%	148 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	45 45.9%	29 29.6%	24 24.5%	98 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	61 28.4%	70 32.6%	84 39.1%	215 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	16 23.9%	27 40.3%	24 35.8%	67 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	104 23.6%	172 39.0%	165 37.4%	441 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	4 20.0%	7 35.0%	9 45.0%	20 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	26 22.4%	30 25.9%	60 51.7%	116 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	7 14.6%	26 54.2%	15 31.3%	48 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	8 32.0%	5 20.0%	12 48.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	1 7.7%	6 46.2%	6 46.2%	13 100.0%
	Total	Count % within Q3	375 31.5%	391 32.8%	425 35.7%	1191 100.0%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.366	< 0.0001
	Cramer's V	.259	< 0.0001
	N of Valid Cases	1191	

The majority of students (64.30%) indicated that they did attempt to contact the NWU on Saturdays during peak times for administrative issues (the totals of columns 1 and 2 combined), and the largest groups of the Mafikeng students indicated that there was no service available (69.60% of on-campus students and 45.90% of off-campus students). Again it is evident that administrative service departments should be open on Saturdays during peak times to render services to students, as a positive Phi-value of 0.366 between the two variables was reported.

6.5.2.9 Additional administrative staff members at service desks during peak times

The option of line managers to move more staff members to service desks during peak times was also measured, as it can affect the customer experience of students, and is easily observable by customers

Table 6.35: Additional administrative staff members at service desks during peak times

		Question 17.5: No additional staff members during peak times?				
		1. Yes	2. No	3. Not applicable	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	102 69.9%	29 19.9%	15 10.3%	146 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	42 42.4%	29 29.3%	28 28.3%	99 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	97 45.1%	63 29.3%	55 25.6%	215 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	24 35.8%	18 26.9%	25 37.3%	67 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	164 37.1%	164 37.1%	114 25.8%	442 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	4 20.0%	11 55.0%	5 25.0%	20 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	10 8.9%	24 21.4%	78 69.6%	112 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	9 18.4%	28 57.1%	12 24.5%	49 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	1 4.0%	14 56.0%	10 40.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	5 41.7%	5 41.7%	2 16.7%	12 100.0%
Total	Count % within Q3	458 38.6%	385 32.4%	344 29.0%	1187 100.0%	

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.411	< 0.0001
	Cramer's V	.291	< 0.0001
	N of Valid Cases	1187	

The majority of off-campus students from the Telematic programme (69.90%) and the Vaal Triangle Campus (37.30%) could not rate this issue, most likely because they make use of more telephonic interaction with their service departments. As was observed with similar customer experience-related questions above, the majority of Mafikeng students (69.90% of the on-campus students and 42.40% of the off-campus students), as well as the Vaal Triangle on-campus students (45.10%) indicated that they did not observe this customer service strategy.

There were student groups that reported this positive customer experience: the majority of flexi-programme students (55.00%), bursary-students (57.10%) and SEDIBA students (56.00%) did observe additional staff members at service desks during long queues. This is therefore another useful strategy line managers should consider to improve the customer experience of students. The Phi-value was 0.411, which indicates a positive association.

6.5.3 The association between the customer experience levels experienced by the students, and delivered by administrative staff members

The perceived customer experience levels as delivered by administrative staff also need to be reported in order to attempt to establish if there would be significant differences between it and the perceived customer experience levels as encountered by the undergraduate students, which has been reported above.

T-tests were performed and effect sizes for the differences in means calculated. Steyn (2000:2) gives the following guidelines for the interpretation of effect size (Cohen's d-value):

d ≈ 0.2:	small
d ≈ 0.5:	medium
d ≈ 0.8:	large

Staff members were asked to answer the questions by rating their colleagues' typical response to the different service environments, to minimise the risk of the "halo-effect" (which could have been the risk if they were asked to rate their own service levels).

T-tests were performed and no practical significant differences were found when comparing the staff members' and students' opinions on the customer service levels rendered and experienced at the different service departments (from question 12; as can be seen in Table 6.37), with effect sizes smaller than 0,25. This can be considered as an indication that the populations have approximately the same opinion about the customer service levels at the NWU.

However, when specific, more measurable customer-staff interactions were compared (questions 13 to 17), medium and larger effect sizes were found. This can be due to

the fact that both groups (students and administrative staff members) might have indicated their ideal situation: students might require even shorter waiting times, quicker resolution of their problems, and longer operational hours; while staff might require more time to resolve students' problems effectively, and would not like to work longer hours, or have their tea-, lunch times and weekends interrupted.

Table 6.36: The correlation between the customer experience levels experienced by the students, and delivered by administrative staff members

Question	Mean (staff)	Mean (students)	T-value	P-value	Std. deviation (staff)	Std. deviation (students)	Effect size
Q12.1) Rate admin dept service levels (admissions)	3.65	3.54	1.02	0.3097	0.92	1.03	0.11
Q12.2) Rate admin dept service levels (records)	3.78	3.58	1.80	0.0719	0.84	1.05	0.19
Q12.3) Rate admin dept service levels	3.93	3.70	2.10	0.0356	0.72	1.00	0.23
Q12.4) Rate admin dept service levels (faculty)	3.96	3.72	2.10	0.0358	0.84	1.03	0.23
Q12.5) Rate admin dept service levels (school)	3.81	3.69	1.07	0.2833	0.79	1.01	0.12
Q12.6) Rate admin dept service levels (distribution)	3.72	3.55	1.32	0.1881	0.90	1.17	0.14
Q13) Time: assist students at desk	1.94	2.80	-6.24	<0.0001	1.04	1.33	-0.65
Q14) Time: assist students op phone	1.81	3.05	-7.33	<0.0001	0.81	1.63	-0.75
Q15) Time: student problem resolved	2.11	2.97	-5.45	<0.0001	0.78	1.53	-0.56
Q16) Number of contacts: student problem resolved	1.91	2.88	-6.47	<0.0001	0.71	1.41	-0.69
Q17.1) No admin staff present: lunch time	1.80	1.76	0.54	0.5927	0.49	0.76	0.05
Q17.2) No admin staff present: tea time	1.06	1.98	-13.25	<0.0001	0.31	0.69	-1.34
Q17.3) Not longer open: peak time	1.56	1.99	-5.51	<0.0001	0.73	0.74	-0.57
Q17.4) Not open: Saturdays (during peak time)	1.65	1.91	-2.98	0.0029	0.91	0.82	-0.28

From the above Table it is clear that the biggest differences are visible in the second part (from questions 13 to 17.4), dealing with the perceived customer experience levels according to practical service encounter outcomes. Statistically significant (p-values <0.0001) and medium to large effect sizes were recorded for six different service encounter scenarios, when comparing the practical and measurable service levels offered by staff and experienced by students. This includes the time it takes to assist students at the desk, the time it takes to assist students on the phone, the time and

number of contacts to get a problem resolved, as well as the claim that there are no administrative staff members present during tea times and that there are not longer service hours during peak times. In all of these scenarios the staff gave themselves a significantly more positive rating than what they received from the students.

6.6 Research question 2: Will there be an association between a positive customer experience encountered by students, and the students' loyalty, intentions to study further and their advocacy intentions?

It was necessary to establish whether there is an association between a positive customer experience encountered by students, and their own loyalty, intentions to study further, as well as their advocacy intentions, in order to answer the second research question.

6.6.1 The customer experience levels of the students

The students had to select one of several options to indicate how they experienced the reaction of administrative staff members when they were approached with a problem. The response-options of the staff were practical and realistic.

Table 6.37: The customer experience levels of the students

		Q18: Customer service experience?							Total
		1) I received prompt and professional service from the	2) The staff kept me waiting on hold	3) I had to explain my request/ problem several times	4) The support staff members didn't know how to handle my	5) The support staff members had to ask others	6) Other	7) Not Applicable	
Q3: Campus/mode?	1) On-campus (Mafikeng)	Count 27 % within Q3: 18.4%	19 12.9%	47 32.0%	15 10.2%	15 10.2%	8 5.4%	16 10.9%	147 100.0%
	2) Off-campus (Mafikeng)	Count 44 % within Q3: 42.3%	11 10.6%	17 16.3%	5 4.8%	8 7.7%	4 3.8%	15 14.4%	104 100.0%
	3) On-campus (Vanderbijlpark)	Count 104 % within Q3: 49.1%	15 7.1%	35 16.5%	6 2.8%	16 7.5%	5 2.4%	31 14.6%	212 100.0%
	4) Off-campus (Vanderbijlpark)	Count 28 % within Q3: 45.2%	7 11.3%	6 9.7%	6 9.7%	2 3.2%	.0%	13 21.0%	62 100.0%
	5) On-campus (Potchefstroom)	Count 248 % within Q3: 55.9%	17 3.8%	51 11.5%	14 3.2%	27 6.1%	11 2.5%	76 17.1%	444 100.0%
	6) Flexi-programmes (Potchefstroom)	Count 15 % within Q3: 68.2%	.0%	.0%	2 9.1%	3 13.6%	1 4.5%	1 4.5%	22 100.0%
	7) Telematic Learning (Potchefstroom)	Count 62 % within Q3: 52.5%	9 7.6%	17 14.4%	4 3.4%	6 5.1%	2 1.7%	18 15.3%	118 100.0%
	8) Bursary programmes (Potchefstroom)	Count 37 % within Q3: 74.0%	3 6.0%	1 2.0%	2 4.0%	2 4.0%	.0%	5 10.0%	50 100.0%
	9) SEDIBA-programmes (Potchefstroom)	Count 20 % within Q3: 80.0%	1 4.0%	1 4.0%	1 4.0%	.0%	.0%	2 8.0%	25 100.0%
	10) School-based programmes	Count 11 % within Q3: 84.6%	.0%	1 7.7%	.0%	.0%	.0%	1 7.7%	13 100.0%
	Total	Count 596 % within Q3: 49.8%	82 6.9%	176 14.7%	55 4.6%	79 6.6%	31 2.6%	178 14.9%	1197 100.0%

	Value	Chi-square (p-value)
Nominal by Nominal	Phi Cramer's V N of Valid	.368 .150 1197 <0.0001 <0.0001

Nearly half of the students (49.80%) indicated that they received prompt and professional service from the administrative support staff members, with the staff from the school-based programmes (84.60%), SEDIBA programmes (80.00%) and bursary programmes (74.00%) getting the highest rating from the students. At the Mafikeng Campus the majority of students (32.00%) reported that they had to explain their request or problem several times. The Phi-value was 0.368, which indicates a medium practical significant association, according to Steyn (2002:13).

6.6.2 Value for money

Students were asked to indicate their opinion about the value for money they received, and rate it on a range varying from more value than what they paid for, up to less value for money.

Table 6.38: Students' value for money-opinion

		Question 21: Value for money (for students)?					
		1. Excellent - worth more than paid for	2. Good, worth paid for	3. Poor, not worth paid for	4) Not sure	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	12 8.2%	52 35.4%	56 38.1%	27 18.4%	147 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	14 14.3%	42 42.9%	17 17.3%	25 25.5%	98 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	26 12.4%	137 65.2%	33 15.7%	14 6.7%	210 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	10 16.9%	28 47.5%	6 10.2%	15 25.4%	59 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	68 15.5%	306 69.5%	36 8.2%	30 6.8%	440 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	8 38.1%	10 47.6%	.0%	3 14.3%	21 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	19 16.4%	70 60.3%	8 6.9%	19 16.4%	116 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	19 41.3%	17 37.0%	.0%	10 21.7%	46 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	8 32.0%	7 28.0%	1 4.0%	9 36.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	2 15.4%	10 76.9%	1 7.7%	.0%	13 100.0%
	Total	Count % within Q3	186 15.8%	679 57.8%	158 13.4%	152 12.9%	1175 100.0%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.438	< 0.0001
	Cramer's V	.253	< 0.0001
	N of Valid Cases	1175	

The majority of all students (57.80%) indicated that they considered the customer service they received as good value for money, and worth what they paid for, but the

largest group of students from the Mafikeng Campus' on-campus programmes (38.10%) rated the value for money as poor, and as worth less than what they paid for. One other group, the Bursary-students (an off-campus programme from the Potchefstroom Campus) regarded the value as exceptional and worth more than they paid for.

On average 73.60% of the respondents reported a good or excellent value for money when rating their studies, the related costs and the perceived customer experience levels. The reported Phi-value was 0.438, which indicates a positive association.

6.6.3 Students' loyalty levels

There is a direct link between customer satisfaction and loyalty, as indicated in the previous literature chapters. Students were therefore asked to rate their loyalty towards the NWU. This is particularly important, especially for the off-campus students, as the general feeling might be that off-campus students might not display the same loyalty levels towards the NWU as residential, on-campus students.

Table 6.39: Students' loyalty levels

			Question 21: Students' loyalty?				
			1. It's just another university	2. Relatively loyal	3. Loyal towards NWU	4) Very loyal towards NWU	Total
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	34 23.6%	29 20.1%	41 28.5%	40 27.8%	144 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	15 14.7%	36 35.3%	18 17.6%	33 32.4%	102 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	20 9.5%	58 27.5%	86 40.8%	47 22.3%	211 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	7 11.3%	16 25.8%	19 30.6%	20 32.3%	62 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	17 3.8%	52 11.8%	167 37.8%	206 46.6%	442 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	1 4.5%	5 22.7%	5 22.7%	11 50.0%	22 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	17 14.5%	27 23.1%	37 31.6%	36 30.8%	117 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	.0%	9 17.6%	16 31.4%	26 51.0%	51 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	1 4.0%	.0%	10 40.0%	14 56.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	1 7.7%	2 15.4%	7 53.8%	3 23.1%	13 100.0%
Total	Count % within Q3	113 9.5%	234 19.7%	406 34.1%	436 36.7%	1189 100.0%	

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.356	< 0.0001
	Cramer's V	.206	< 0.0001
	N of Valid Cases	1189	

The majority of all students (36.70%) indicated that they were very loyal towards the NWU, while the second-largest group (34.10%) considered themselves as loyal. The off-campus students of the Mafikeng Campus were the only ones where the majority of

the group rated themselves as relatively loyal. Less than ten percent of all students (including the off-campus students) considered the NWU “as just another university”. The reported Phi-value was a positive 0.356.

6.6.4 Students’ intention to study further

This study aimed to establish whether satisfied and loyal students would take their positive feelings towards the NWU a step further, by planning to continue their studies. Students were therefore asked to indicate whether they intend to study further at the NWU, although it is understood that this will not necessarily guarantee their future enrolments, and that several other, external factors can play a role in making such a decision.

Table 6.40: Students' intention to study further

		Question 23: Students' intention to study further?						
		1. Definitely	2. Agree	3. Low chance	4. Disagree	5. Not applicable	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	18 12.3%	30 20.5%	42 28.8%	45 30.8%	11 7.5%	146 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	40 38.8%	28 27.2%	15 14.6%	17 16.5%	3 2.9%	103 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	48 22.7%	90 42.7%	40 19.0%	19 9.0%	14 6.6%	211 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	20 31.3%	26 40.6%	7 10.9%	6 9.4%	5 7.8%	64 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	124 27.9%	170 38.3%	82 18.5%	32 7.2%	36 8.1%	444 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	16 72.7%	4 18.2%		2 9.1%		22 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	53 44.2%	41 34.2%	15 12.5%	6 5.0%	5 4.2%	120 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	33 64.7%	17 33.3%		1 2.0%		51 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	14 56.0%	10 40.0%		1 4.0%		25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	3 23.1%	6 46.2%	3 23.1%		1 7.7%	13 100.0%
Total	Count % within Q3	369 30.8%	422 35.2%	204 17.0%	129 10.8%	75 6.3%	1199 100.0%	

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.413	< 0.0001
	Cramer's V	.207	< 0.0001
	N of Valid Cases	1199	

Nearly two-thirds of all students (66.00%) indicated a positive chance of own further studies, but the largest group of the on-campus students from the Mafikeng Campus (30.80%) indicated that they did not intend to enrol for further studies, with a near-similar sized group (28.80%) indicating a low chance of further studies. The majority of

students from five of the other groups indicated a definite chance of further studies (with 72.70% from the flexi-programmes the largest group). A positive Phi-value of 0.413 was recorded.

6.6.5 Students' advocacy intentions

The highest level of customer satisfaction and loyalty is customer advocacy, as indicated in the literature chapters. Customer advocacy forms part of the discipline of relationship marketing, because it is a powerful marketing tool if satisfied and loyal customers actively recommend their institutions to other prospective customers

Table 6.41: Students' advocacy intention

		Question 24: Students' advocacy levels towards the NWU (intention to recommend the NWU to friends and family members)						
		1. Definitely	2. Agree	3. Low chance	4. Disagree	5. Not applicable	Total	
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	31 21.1%	47 32.0%	45 30.6%	23 15.6%	1 .7%	147 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	33 32.4%	44 43.1%	9 8.8%	15 14.7%	1 1.0%	102 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	74 35.2%	102 48.6%	20 9.5%	10 4.8%	4 1.9%	210 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	25 39.1%	26 40.6%	6 9.4%	6 9.4%	1 1.6%	64 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	312 70.7%	104 23.6%	12 2.7%	6 1.4%	7 1.6%	441 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	14 63.6%	7 31.8%	1 4.5%	.0%	.0%	22 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	71 59.2%	29 24.2%	11 9.2%	7 5.8%	2 1.7%	120 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	35 67.3%	16 30.8%	.0%	1 1.9%	.0%	52 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	14 56.0%	10 40.0%	.0%	1 4.0%	.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	11 84.6%	2 15.4%	.0%	.0%	.0%	13 100.0%
	Total	Count % within Q3	620 51.8%	387 32.4%	104 8.7%	69 5.8%	16 1.3%	1196 100.0%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.494	< 0.0001
	Cramer's V	.247	< 0.0001
	N of Valid Cases	1196	

More than half of all student participants (51.80%) indicated that they would definitely recommend the NWU to other prospective students, with a positively associated Phi-value of 0.494. The majority of students from six learning models/campuses confirmed

their strong advocacy level, while the majority of students from the other four groups agreed with the statement that they would actively recommend the NWU to other prospective students.

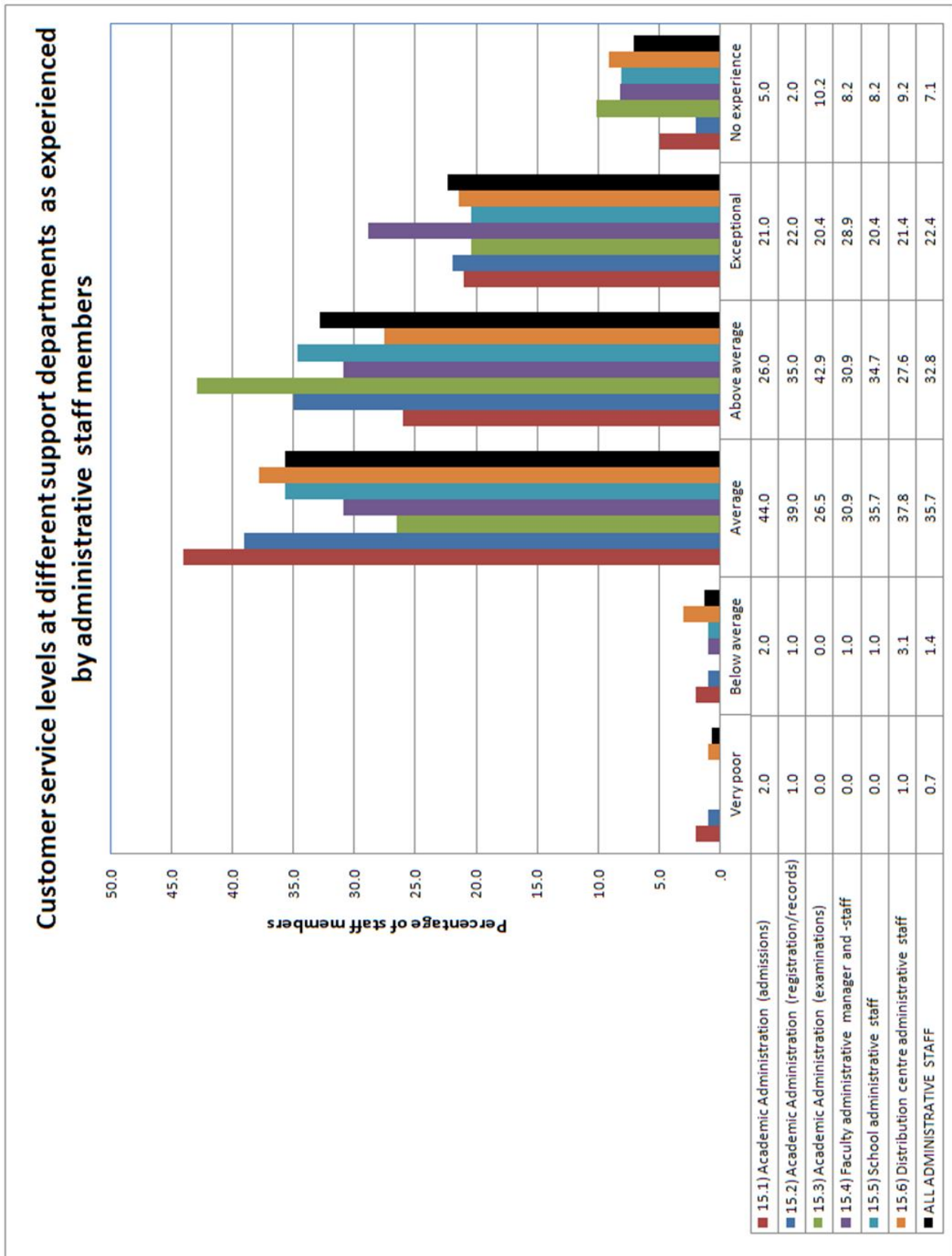
6.7 Research question 3: Will the administrative staff members strive to deliver satisfactory customer experience levels and will there be a strong association between their own customer experience levels, loyalty and advocacy intentions?

The third research question dealt with the intentions of the administrative staff to deliver satisfactory customer experience levels and the possible strong association between their own customer experience levels, loyalty and customer advocacy levels. The results of the administrative staff members, as well as their registrars (who are the executive management staff members responsible for the administrative staff members) will be reported in this section.

6.7.1 Administrative staff members' customer experience delivery levels

The administrative staff members were asked to rate the customer service levels delivered to students at the different service departments, as they experience their colleagues delivering it to the students. Some administrative staff members and departments were responsible for students from more than one learning model on the same campus, and in some cases even across campus-boundaries. It was therefore not possible to make a linear comparison with the students' customer experience levels at the campus and learning model levels. The staff members' own experienced service levels are therefore reported as a whole, and not per department. Because of the regular interaction between administrative staff members at the central academic administration department and the administrative staff of faculty- and school levels, most of them were able to rate the other department's staff members' customer service levels.

Figure 6.1: Administrative staff members' customer experience delivery levels



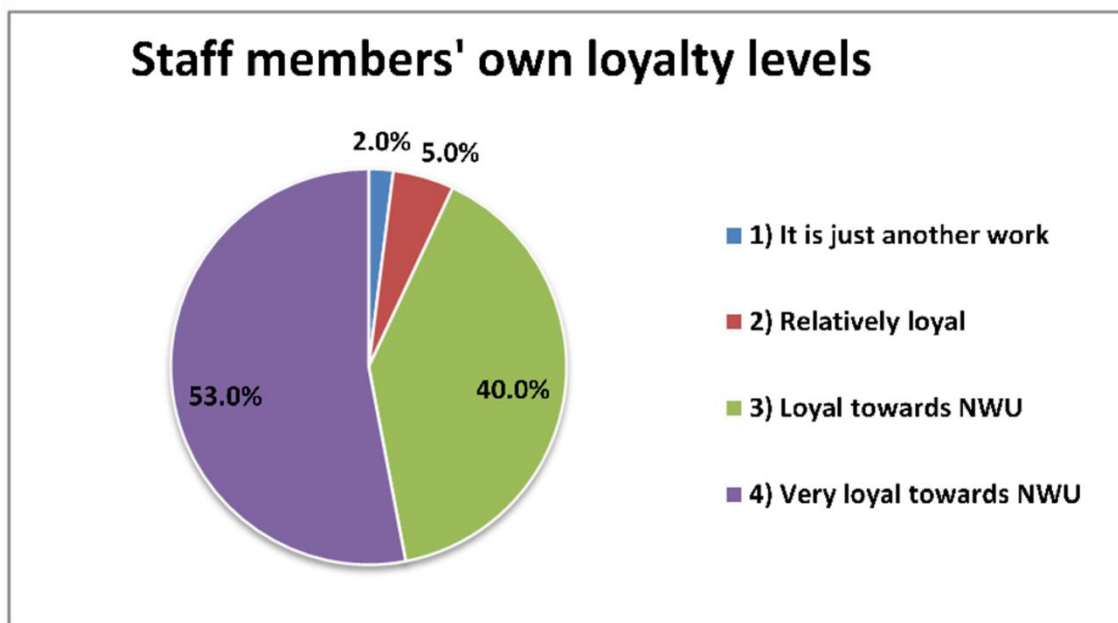
The majority of staff members rated their colleagues' service level as average (35.70%), with another 32.80% rating the customer service levels at the administrative departments as above average, and another 22.40% regarded the service levels as exceptional. Just over 7% gave no rating, most likely due to a lack of interaction with other departments.

The admissions office got the most average ratings (44.00%), the examinations office the most above average ratings (42.90%) and the faculties' administrative managers and staff the most exceptional ratings (28.90%).

6.7.2 Administrative staff members' loyalty levels

Loyal staff members might be more inclined to render consistent good quality service levels to customer and therefore it was necessary to determine the administrative staff members' loyalty levels.

Figure 6.2: Staff members' own loyalty levels



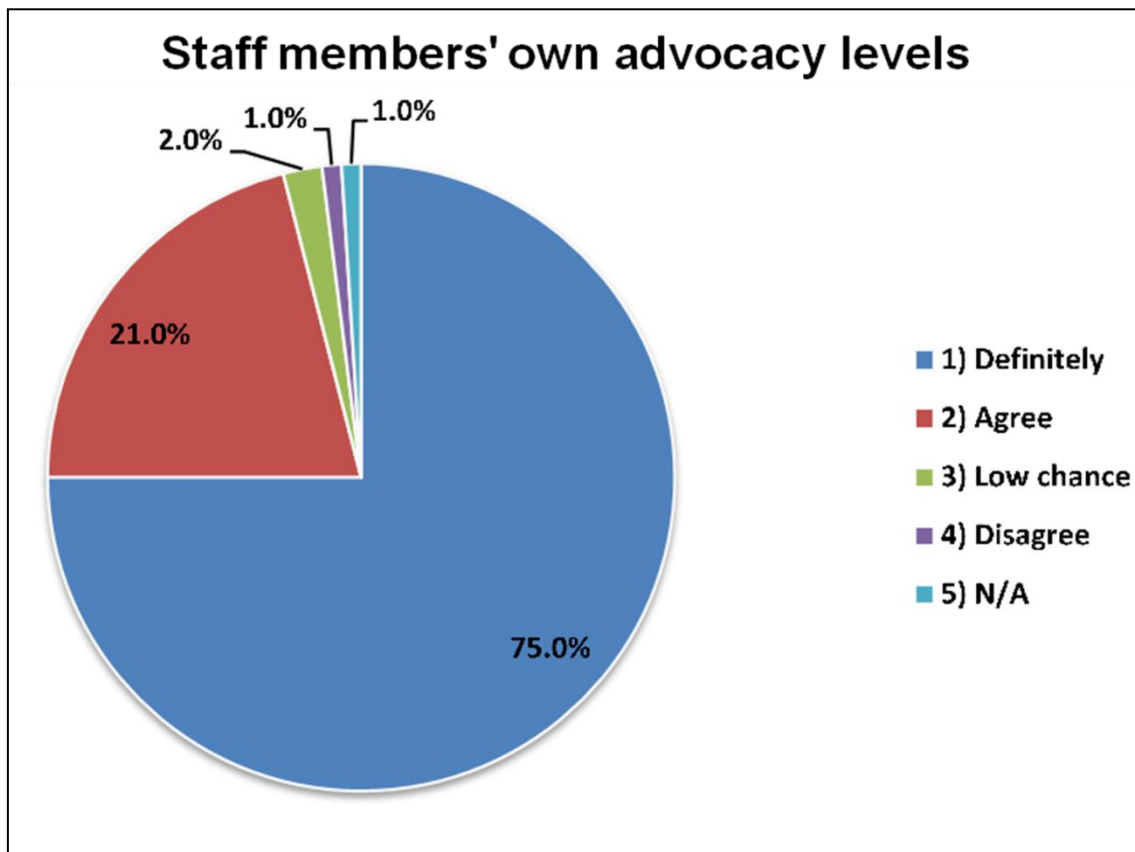
More than half of all the administrative staff members (53.00%) indicated that they were very loyal towards the NWU, with another 40.00% confirming that they are loyal staff members. Only two percent of the staff members showed no loyalty and indicated that they considered their work as "just another work".

6.7.3 Administrative staff members' customer advocacy levels

The customer advocacy intentions of administrative staff members are also of strategic importance to the NWU due to the fact that they interact with numerous prospective students. As a result of the separate applications and registrations processes at the

NWU, it is still possible that students who apply to enrol at the NWU (and are accepted) may still decide to register at another university. There are also several cases where prospective students may apply at more than one university to ensure their acceptance somewhere. If they then get accepted at more than one university, a very positive customer experience might just convince them to enrol at that particular university. Therefore the customer advocacy intentions of administrative staff members are vitally important.

Figure 6.3: Staff members' own loyalty levels

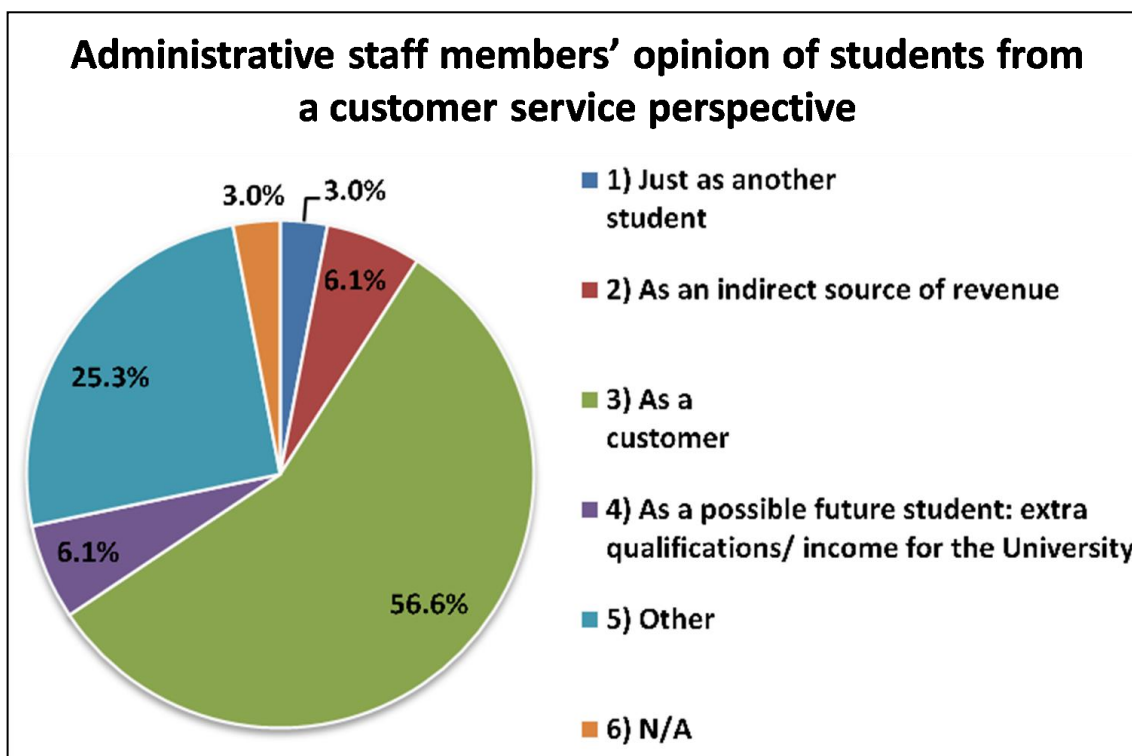


Exactly three quarters of all the administrative staff members strongly agreed with the statement that they would actively recommend the NWU to prospective students, with another 21.00% also agreeing with the concept of customer advocacy.

6.7.4 Administrative staff members' opinion of students from a customer service perspective

Administrative staff members were also asked to indicate how they saw students from a customer service perspective, as this could give a good indication of their intentions and approach towards the students.

Figure 6.4: Administrative staff members' opinion of students from a customer service perspective



The majority of administrative staff members (56.60%) indicated that they considered students as customers, with another 6.10% confirming the higher level of customer advocacy. A total of 25.30% of staff members selected “other”, which might indicate that they did not completely understand the question, or had a different perspective not provided for in this question. Only three percent confirmed that they see students “just as another student”.

6.7.5 The registrars' perceived customer experience encounter levels on their campuses

The structured interviews with the institutional registrar and three campus registrars were recorded and transcribed, while the questionnaire data was also analysed. Because the ethical principles of this study guaranteed participant's anonymity, there will only be referred to the four registrars as “Registrar A” to “Registrar D” in no particular order. Each part of the interviews is also indicated as separate items in order to ensure easier references to particular quotations they made. The full transcriptions are included in chapter 8 (sections 8.3.1 to 8.3.4).

The results of the structured questions of the above four questionnaires were analysed and the most relevant and important remarks in the open-ended questions were summarised in the following Table:

Table 6.42: Summary of registrars' open-ended questions

Topic	Registrar	Item no	Remark
NWU's organizational culture	A	54	We had a merger of two different institutions; also from different cultural backgrounds . We are still working towards a common NWU-culture and therefore it is too early in the process now for us to confidently say we have an organizational culture, you know, that has a buy-in of all the students and our customers. The students still approach things differently. You know, the old structures. So that culture is still "work in progress"
Operational plan's reference to "a client focus embedded in quality" executed in policies and in practice?	A	72	I think what we do, as part of our purpose, is to make a contribution to the nation , the public, and we do that in various ways. The contribution that we make in producing knowledge and research ... The contribution we make in terms of training, of people that go through our doors, in various disciplines, but particularly the training that we do as the second-largest distance education provider.
	A	72	We go to the heart of trying to improve the qualifications of teachers with focus on that quality .
	A	72	You can not define quality . It's like mercury, it's like beauty.
	B	67	When I talk about customers, I talk about students.
	C	70	Well, I think the (HEQC) audit has made a big difference. Before it was on paper, but it was not really something that has taken a code of, like it's happening now, because we have a gap register as a result of the audit. So each and every manager and director is responsible to take a look at the gaps and see to it that issues that are pointed out in the gap register are received.
	C	70	The other issue is that when we do performance appraisals , quality is more evident - where we can evaluate it - the performance of the staff. So it puts a focus on the value that the staff member has added or not. And the fact that it is discussed with the employee if it happens.
	D	93	... a policy is over-arching - it should be there in implementation phase where you have a stronger client-focus .

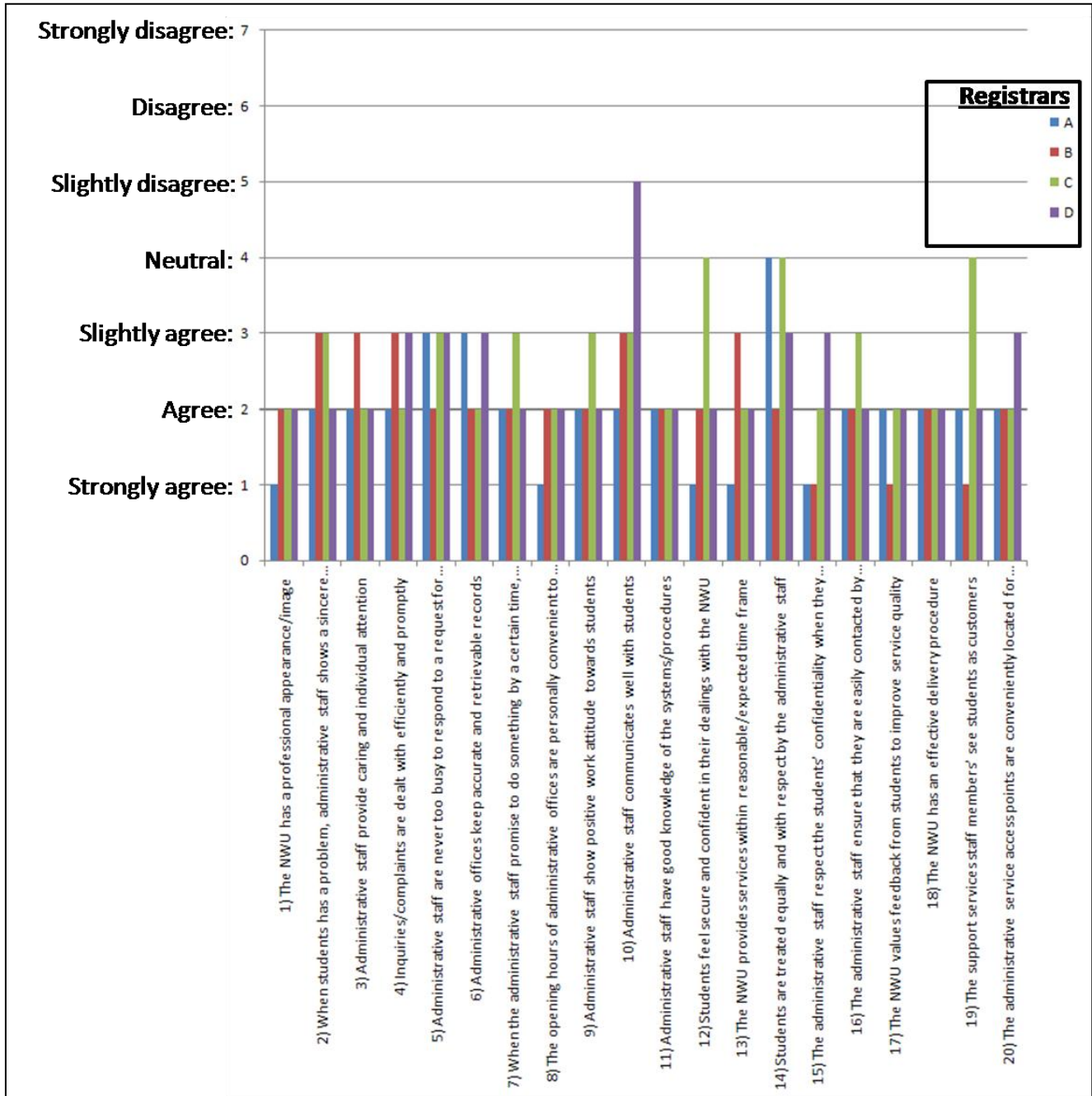
Comments about NWU and its commitment towards a customer-centric approach.	A	78	Have very clear standards ... respond to queries or enquiries within a particular time frame ... the approach to customer-centeredness must be guided by those standards, clear targets, measurable time-frames ... we must publish them in brochures, or on web sites, al over, and then keep to our side of the bargain.
	B	76	One of the problems to achieve that, is coordination and internal communication ... the need for a document management system .
	B	78	... stop the pillar-to-post syndrome – sending students from office to office without satisfaction
	B	78	The staff's attitude sometimes is a problem. ... a " civil service mentality " ... that approach where you close the counter and say "come back the next day"
	C	74	When we talk about customers, we talk about rendering a service that is of quality , that is value-based , where respect would come into play, where we'll have concern for their needs , where we will listen when they speak to us.
	C	76	The NWU will have a greater concern with customer care , because we will find ourselves competing more and more for students ... to understand that our customers are the ones that brings in other customers , that brings in business .. since individuals are responsible to drive quality in their departments, they are responsible to transfer that quality mindset to all the staff members ... we must all be committed to rendering a quality service ... we are just as strong as the weakest link .
	D	107	Their parents are very much involved. So the parents also want to feel "I received good value for money " ... communication to students and their parents should be clear, regular, to the point ... we must work towards the point where the community sees the university as an asset ... alumni who feel neglected , and who are not very well-informed ... as image builders and as our marketing agents ... that's a very good market we could explore .

The following remarks made by the registrars in the open-ended questions need to be emphasised:

- There should be continued work to establish a common NWU culture (Registrar A; item 54)
- The NWU must contribute towards the nation by producing knowledge and research – to also improve the qualifications of teachers with a focus on quality (Registrar A; item 72)
- Students should be seen as customers (Registrar B; item 67 and Registrar C; item 76) who should receive a quality, value-based service, as well as respect, concern for their needs and being listened to (Registrar C; item 74).
- The HEQC audit led to a gaps register, which is a valuable tool for managers to attend to quality issues that are not up to standard (Registrar C; item 70).
- The performance appraisal process of staff members should include customer-focused activities (Registrar C; item 72).
- A more focused customer-centric policy should be implemented, but in a gradual way (Registrar D; item 93).
- Clear, measurable customer service standards and time-frames must be determined and published (Registrar A; item 78)
- The following potential problems and solutions were mentioned:
 - Weak coordination and internal communication (Registrar B; item 76),
 - The need for a document management system (Registrar B; item 76),
 - The “pillar-to-post”-syndrome, where students are sent from office to office without being helped, and the related “civil service mentality” of some administrative staff members delays helping students (Registrar B; item 78),
 - Other stakeholders like parents and alumni should also be included in communication strategies, on a clear and regular basis (Registrar D; item 107).
- There was a good understanding for the concept of customer advocacy, as confirmed by Registrar C (item 107), who stated that satisfied students/customers will bring in more customers, but that all staff members must be committed towards rendering a quality service. This was confirmed by

Registrar D (item 107), who claims that alumni can also be good image builders and marketing agents.

Figure 6.5: The registrars' opinions on the relevant components of the HedPERF service quality measurement tool



From the above figure it is evident that the registrars were in agreement with the majority of the first twenty statements, which were designed to determine the service quality in the HE-environment (from the HedPERF-model), and their answers ranged from “strongly agree” to “agree”. The only statement that a registrar (D) slightly disagreed with, was with the ability of administrative staff to communicate well with

students on that particular campus. Four other responses were neutral, namely “students feel secure in their dealings with the NWU” (registrar C), “students are treated equally and with respect by the administrative staff (registrars A and C), and “the support services staff see students as customers (registrar C).

Table 6.43: The registrars’ opinions on customer service policies and practices at the NWU

Registrar	References in the NWU-/campus mission statement to customer-centric approach and service quality?	NWU's organizational culture provides for a CEM-approach towards students and other customer groups?	Administrative staff receive formal customer service training?	HEQC-audit played major role to create awareness about service quality at the NWU?	Customer-centric approach and proven service quality output forms part of the Directors: Academic Administration's Key Performance Areas & job evaluation processes?
A	Yes	No	No	Yes	Yes
B	Yes	Yes	Yes	Yes	Yes
C	No	No	Yes	Yes	Not sure
D	Yes	Yes	Yes	Yes	Yes

According to the above Table there is some agreement between the registrars about different customer service policies and practices at the NWU, as the majority (75.00%) agreed that there are references in the NWU mission statement to a customer-centric approach and service quality, that the organizational culture provides for a CEM-approach towards students and other customers, that administrative staff receive formal customer service training from time to time, and that the directors who report to them are formally evaluated based on their customer-centric approach, as it forms part of their key performance areas. All registrars agreed that the HEQC audit contributed to create awareness about service quality at the NWU.

Table 6.44: The registrars’ opinions on customer experience levels and outcome of NWU students

Registrar	Difference in the customer experience level between younger and older students?	Difference in the customer experience level between on- and off-campus students?	Majority of students are loyal customers who will become customer advocates?
A	Agree	Agree	Agree
B	Disagree	Slightly agree	Agree
C	Agree	Strongly agree	Agree
D	Agree	Agree	Agree

The majority of registrars (75.00%) indicated that they expected to find a difference between the customer experience levels between younger and older students, while they were split 50%-50% on whether the same differences would be evident between

on-and off-campus students. This is in contrast with the findings reported in the next section (from research question four) which found that there were no significant differences in the perceived customer experience encounter levels between younger, on-campus students and older, off-campus students, as delivered by the academic administration departments. The registrars' perception about this was therefore inaccurate.

They all agreed that the majority of all students are loyal customers of the NWU who would actively advocate the university to their friends and family members, which is in line with the answer of research question two.

6.8 Research question 4: Will there be an association between the perceived customer experience encounter levels of younger, on-campus students and older, off-campus students?

The fourth research question dealt with the issue as to whether there would be an association between the perceived customer experience encounter levels between younger, on-campus students and older, off-campus students, as delivered by the academic administration departments.

There are significant differences in the age group distribution of on-and off-campus students, as was confirmed in Table 6.15, with 92.70% of all on-campus students younger than 26 years, and 71.90% of all off-campus students older than 30 years.

Table 6.45: The customer experience of on- and off-campus students

			Q18) Best description of customer experience at administrative department							Total
			1) Received prompt and professional service from the support staff	2) Was kept on hold/ waited	3) Had to explain request/ problem several times	4) Support staff members didn't know how to handle problem	5) Support staff members had to ask others	6) Other	7) Not applicable	
On- & off-campus students	On-campus students	Count % within On-campus	379 47.20%	51 6.40%	133 16.60%	35 4.40%	58 7.20%	24 3.00%	123 15.30%	803 100.00%
	Off-campus students	Count % within off-campus	217 55.10%	31 7.90%	43 10.90%	20 5.10%	21 5.30%	7 1.80%	55 14.00%	394 100.00%
Total		Count % within On- & off-campus	596 49.80%	82 6.90%	176 14.70%	55 4.60%	79 6.60%	31 2.60%	178 14.90%	1197 100.00%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	0.106	0.036
	Cramer's V	0.106	0.036
N of Valid Cases		1197	

The majority of on-and off-campus students (47.20% and 55.10% respectively) reported that they received a prompt and professional service from the administrative support staff at the NWU, which can be considered as a satisfactory customer experience. The significantly low Phi-value of 0.106 confirms that the fourth research question can be rejected, as there are no significant associations between the perceived customer experience encounter levels between younger, on-campus students and older, off-campus students, as delivered by the academic administration departments.

This can be explained by the fact that all campuses offer both on-and off-campus programmes and that the perceived customer experience encountered by students might be due to the service levels as delivered by the different administration departments on the campuses.

To test this possible explanation, the same age groups were cross-tabulated with the different campuses and modes of delivery, and then compared with the results of question 18, which was also used in Table 6.46 (above).

Table 6.46: Customer experience of students according to campus and mode of delivery

		Question 18: Best description of customer experience at administrative department?							Total	
		1. Received prompt and professional service	2. Was kept on hold / waited	3. Had to explain problem several times	4. Staff did not know how to handle problem	5. Staff had to ask others to help	6. Other	7. Not applicable		
Question 3: Campus/mode of delivery?	(1) On-campus (Mafikeng)	Count % within Q3	27 18.4%	19 12.9%	47 32.0%	15 10.2%	15 10.2%	8 5.4%	16 10.9%	147 100.0%
	(2) Off-campus (Mafikeng)	Count % within Q3	44 42.3%	11 10.6%	17 16.3%	5 4.8%	8 7.7%	4 3.8%	15 14.4%	104 100.0%
	(3) On-campus (Vaal Triangle)	Count % within Q3	104 49.1%	15 7.1%	35 16.5%	6 2.8%	16 7.5%	5 2.4%	31 14.6%	212 100.0%
	(4) Off-campus (Vaal Triangle)	Count % within Q3	28 45.2%	7 11.3%	6 9.7%	6 9.7%	2 3.2%		13 21.0%	62 100.0%
	(5) On-campus (Potchefstroom)	Count % within Q3	248 55.9%	17 3.8%	51 11.5%	14 3.2%	27 6.1%	11 2.5%	76 17.1%	444 100.0%
	(6) Flexi-programmes (Potchefstroom)	Count % within Q3	15 68.2%			2 9.1%	3 13.6%	1 4.5%	1 4.5%	22 100.0%
	(7) Telematic Learning (Potchefstroom)	Count % within Q3	62 52.5%	9 7.6%	17 14.4%	4 3.4%	6 5.1%	2 1.7%	18 15.3%	118 100.0%
	(8) Bursary programmes (Potch)	Count % within Q3	37 74.0%	3 6.0%	1 2.0%	2 4.0%	2 4.0%		5 10.0%	50 100.0%
	(9) SEDIBA-programmes (Potch)	Count % within Q3	20 80.0%	1 4.0%	1 4.0%	1 4.0%			2 8.0%	25 100.0%
	(10) School-based programmes (Potch)	Count % within Q3	11 84.6%		1 7.7%				1 7.7%	13 100.0%
	Total	Count % within Q3	596 49.8%	82 6.9%	176 14.7%	55 4.6%	79 6.6%	31 2.6%	178 14.9%	1197 100.0%

		Value	Chi-square (p-value)
Nominal by Nominal	Phi	.368	< 0.0001
	Cramer's V	.150	< 0.0001
		N of Valid Cases	1197

From this Table it is evident that there was only one group of students where the majority reported a less favourable customer experience (Mafikeng on-campus students: 32.00%), while the majority of all other groups indicated a favourable customer experience when interacting with administrative staff from the NWU. The Phi-value of 0.368 is therefore also significant.

6.9 Research question 5: Will the proposed NWU-PERF service quality measurement tool be a reliable and valid instrument to determine the participants' perceptions about customer service levels at the NWU as delivered by the academic administration departments?

The fifth research question aimed to answer whether the proposed NWU-PERF service quality measurement tool will be a reliable and valid instrument to determine participants' perceptions about customer service levels at the NWU as delivered by the academic administration departments.

Different service quality measurement tools were discussed in Chapter 4, and it was reported that Abdullah (2005:317) found the HedPERF scale to be more suitable for the HEI service settings, as it showed a better reliability, greater criterion and construct validity, as well as greater explained variance and better fit than other models, while Brochado (2009:181) found that the HedPERF-model presents a high level of internal consistency.

This study used the non-academic aspects of the HedPERF-model (part of the first factor in Figure 6.6) as basis (questions 21-33, 35-36) for the measuring instrument, as these questions were related to the administrative environment at HEIs. This model is shown next in Figure 6.6, in order to illustrate why only the non-academic aspects were used, as it falls within the scope of this study. The specific results of the factor analysis (factor loadings) obtained with the HedPERF-model were also used as a basis to compare with the newly-proposed NWU-PERF service quality measurement tool.

Figure 6.6: The HedPERF service quality model

The development of HEDPERF • F. Abdullah

Table 1 Results of factor analysis (factor loadings)

Variables	Factor 1 Non-academic aspects	Factor 2 Academic aspects	Factor 3 Reputation	Factor 4 Access	Factor 5 Program Issues	Factor 6 Understanding
1. Knowledgeable in course content		0.69				
2. Caring and courteous	0.34	0.73				
3. Responding to request for assistance		0.63				0.40
4. Sincere interest in solving problem		0.73				
5. Positive attitude		0.79				
6. Good communication		0.66				
7. Feedback on progress		0.62			0.37	
8. Sufficient and convenient consultation		0.59				
9. Professional appearance/image	0.34		0.50			
10. Hostel facilities and equipment			0.73			
11. Academic facilities	0.34		0.56		0.32	
12. Internal quality programmes			0.74			
13. Recreational facilities			0.77			
14. Minimal class sizes	0.36	0.33	0.38			-0.35
15. Variety of programmes/specializations					0.62	
16. Flexible syllabus and structure		0.31			0.71	
17. Ideal campus location/layout			0.46		0.32	0.40
18. Reputable academic programmes		0.31	0.48		0.38	
19. Educated and experience academicians	0.34	0.41	0.39		0.35	
20. Easily employable graduates	0.41	0.30	0.56			
21. Sincere interest in solving problem	0.77					
22. Caring and individualized attention	0.77					
23. Efficient/prompt dealing with complaints	0.73					
24. Responding to request for assistance	0.69					
25. Accurate and retrievable records	0.75					
26. Promises kept	0.80					
27. Convenient opening hours	0.69					
28. Positive attitude	0.74					
29. Good communication	0.75					
30. Knowledgeable of systems/procedures	0.64			0.39		
31. Feeling secured and confident	0.48	0.30		0.40	0.35	
32. Service within reasonable time frame	0.50		0.33	0.37	0.31	
33. Equal treatment and respect	0.44			0.57		
34. Fair amount of freedom				0.65		
35. Confidentiality of information	0.48			0.49		
36. Easily contacted by telephone	0.38			0.62		
37. Counseling services	0.35			0.49		0.40
38. Health services			0.51	0.31		0.40
39. Student's union	0.32			0.59		
40. Feedback for improvement			0.36	0.64		
41. Service delivery procedures	0.35	0.34	0.36	0.50		
Eigenvalues	8.28	5.53	4.85	4.27	2.55	1.26
Percentage of variance	20.2	13.5	11.8	10.4	6.2	3.1
Cumulative percentage of variance	20.2	33.7	45.5	55.9	62.1	65.2

Source: Abdullah (2006:576)

The results of the principal axis factor analysis with Oblimin rotation are reported in Table 6.47 as a pattern matrix. The first column refers to the question numbers as it appears in the questionnaire, the second and third column refer to the HedPERF variable numbers and factor loadings (as taken from Figure 6.6 above).

Two factors were extracted for both the staff and student populations. The two extracted factors for students and staff differed to a smaller degree and the factor scores were therefore not comparable. These two factors could be identified as indicators of personal and impersonal service experiences and were reported in

separate columns for the students and staff members. The third column from the HedPERF non-academic model (Figure 6.6) and the factor loadings could therefore be compared with the last two columns from the NWU-PERF model.

The KMO measure of sampling (Kaiser-Meyer-Olkin) is used to test if the correlations between the variables are large enough, while the Bartlett's test of Sphericity determines if the correlation matrix is an identity matrix. The results indicate that the factor model is appropriate for factor analysis. The percentage variance explained by the two factors is also almost 70% for both staff and students. The KMO-values of 0.925 and 0.972 indicates a highly satisfactory factor analysis, as both values are higher than 0.9.

In Table 6.47 Cronbach alpha coefficients for both staff and students of larger than 0.8 were reported for both factors, indicating the reliability of the measuring instrument. The interpretability and reliability of the identified factors proved to be an indication of the relevance of the measuring instrument for customer satisfaction in HEIs.

Table 6.47: Pattern matrix of the exploratory factor analysis of the NWU-PERF-model

Question no	Hed-PERF variable	HEdPERF factor loading	Question	Staff component		Student component	
				Personal	Inpersonal	Personal	Inpersonal
Q11.2	21	0.77	When I have a problem, administrative staff shows a sincere interest in solving it	0.790		0.978	
Q11.3	22	0.77	Administrative staff provide caring and individual attention	0.880		0.967	
Q11.4	23	0.73	Inquiries/complaints are dealt with efficiently and promptly	0.697		0.856	
Q11.5	24	0.69	Administrative staff are never too busy to respond to a request for assistance	0.784		0.888	
Q11.6	25	0.75	I think administrative offices keep accurate and retrievable records	0.734		0.657	
Q11.7	26	0.80	When the administrative staff promise to do something by a certain time, they do so	0.714		0.748	
Q11.8	27	0.69	The opening hours of administrative offices are personally convenient to me	0.604			0.408
Q11.9	28	0.74	Administrative staff show positive work attitude towards students	0.698		0.661	
Q11.10	29	0.75	Administrative staff communicates well with students	0.615		0.628	
Q11.11	30	0.64	Administrative staff have good knowledge of the systems/procedures	0.599		0.443	0.422
Q11.12	31	0.48	I feel secure and confident in my dealings with the NWU		0.764	0.396	0.464
Q11.13	32	0.50	The NWU provides services within reasonable/expected time frame		0.909	0.310	0.537
Q11.14	33	0.44	Students are treated equally and with respect by the administrative staff		0.588	0.523	
Q11.15	35	0.48	The administrative staff respect my confidentiality when I disclose information to them	0.640			0.691
Q11.16	36	0.38	The administrative staff ensure that they are easily contacted by telephone	0.847			0.642
Crombach's Alpha				0.94	0.83	0.95	0.86
KMO measure of sampling				0.925		0.972	
Bartlett's test of sphericity (P-value)				<0.0001		<0.0001	
% Variable explained				68.8%		67.5%	

Because this adapted service quality measurement tool (the NWU-PERF) offers a factor analysis with two interpretable and consistent factors, it provided to be a reliable and valid instrument to determine participants' perceptions about customer service levels at the NWU.

The HedPERF non-academic score is the average count of all the questions proposed by Abdullah (2005:206), while the personal and impersonal columns report the factor scores of the service experiences (as reported in Table 6.47).

In order to be able to compare the non-academic components for staff and students a factor score of all items, similar to the component of the HedPERF, was calculated, namely HedPERF non-academic.

6.9.1 Comparison of perception of service delivery of staff and customer experience of students

Table 6.48 illustrate the results of an independent t-test between staff and students on the HedPERF non-academic component, in order to establish whether there are any differences between the perceived service delivery levels of the staff and students' perceived customer experience levels.

Table 6.48: Results of an independent t-test between staff and students on HedPERF non-academic component

Model (non-academic)	Staff		Students		p	Effect size
	Mean	Std	Mea	Std		
HedPERF	2.10	0.73	2.74	1.20	<0.001	0.54

The results in Table 6.48 indicates that staff's perception of service delivery is visibly better (medium effect size) than what students experience. A score of 2 on the questionnaire indicates that the respondent agree with the service experience-related statement, while a score of 3 indicated a slight agreement with the statement.

6.9.2 Comparison of components of customer experience for different campuses and modes of delivery

In Table 6.49 the analysis of variance (ANOVA), which determines whether the means of the different groups were equal and could be generalised on, of the HedPERF non-academic and its personal and impersonal components is shown.

Table 6.49: Results of an ANOVA on HedPERF non-academic and its personal and impersonal components

	Campus / mode of delivery	n	Mean	Std dev	p
HedPERF non-academic components	1) On-campus (Mafikeng)	151	4.0212 ^d	1.21474	<0.001
	2) Off-campus (Mafikeng)	106	2.9385 ^c	1.33818	
	3) On-campus (Vaal Triangle)	222	2.8862 ^c	1.04383	
	4) Off-campus (Vaal Triangle)	71	2.7324 ^{bc}	1.26725	
	5) On-campus (Potchefstroom)	466	2.4963 ^{bc}	0.96518	
	6) Flexi-programmes (Potchefstroom)	23	2.0890 ^{ab}	1.22269	
	7) Telematic Learning (Potchefstroom)	123	2.3782 ^{bc}	1.13252	
	8) Bursary programmes (Potchefstroom)	53	2.1517 ^{ab}	0.83805	
	9) SEDIBA-programmes (Potchefstroom)	25	1.6924 ^a	0.54353	
	10) School-based programmes	15	2.1956 ^{ab}	1.11255	
Total	1255	2.7462	1.20027		
Personal service experiences	1) On-campus (Mafikeng)	151	4.2748 ^e	1.32870	<0.001
	2) Off-campus (Mafikeng)	106	3.0278 ^d	1.48201	
	3) On-campus (Vaal Triangle)	223	2.9833 ^d	1.09354	
	4) Off-campus (Vaal Triangle)	71	2.7877 ^{cd}	1.34139	
	5) On-campus (Potchefstroom)	466	2.5416 ^{bcd}	1.01623	
	6) Flexi-programmes (Potchefstroom)	23	2.0470 ^{ab}	1.24338	
	7) Telematic Learning (Potchefstroom)	123	2.3813 ^{abc}	1.20149	
	8) Bursary programmes (Potchefstroom)	53	2.1629 ^{abc}	0.98272	
	9) SEDIBA-programmes (Potchefstroom)	25	1.6711 ^a	0.57174	
	10) School-based programmes	15	2.0711 ^{ab}	1.06241	
Total	1256	2.8197	1.29943		
Impersonal service experiences	1) On-campus (Mafikeng)	150	3.5689 ^d	1.20092	<0.001
	2) Off-campus (Mafikeng)	104	2.7853 ^c	1.15675	
	3) On-campus (Vaal Triangle)	221	2.7583 ^{bc}	0.99294	
	4) Off-campus (Vaal Triangle)	70	2.6915 ^{bc}	1.26405	
	5) On-campus (Potchefstroom)	460	2.3587 ^{abc}	0.85776	
	6) Flexi-programmes (Potchefstroom)	23	2.1344 ^{ab}	1.13346	
	7) Telematic Learning (Potchefstroom)	122	2.3380 ^{abc}	1.03492	
	8) Bursary programmes (Potchefstroom)	52	2.1323 ^{ab}	0.77095	
	9) SEDIBA-programmes (Potchefstroom)	25	1.8476 ^a	0.70072	
	10) School-based programmes	14	2.2786 ^{abc}	1.07787	
Total	1241	2.6038	1.08147		

(Foot note: Means with different superscripts differed statistically significant on a 3% level)

It is evident that the SEDIBA-group reported the highest satisfaction with customer experience of all the campuses and modes of delivery, whilst the Mafikeng on-campus students reported the lowest customer experience.

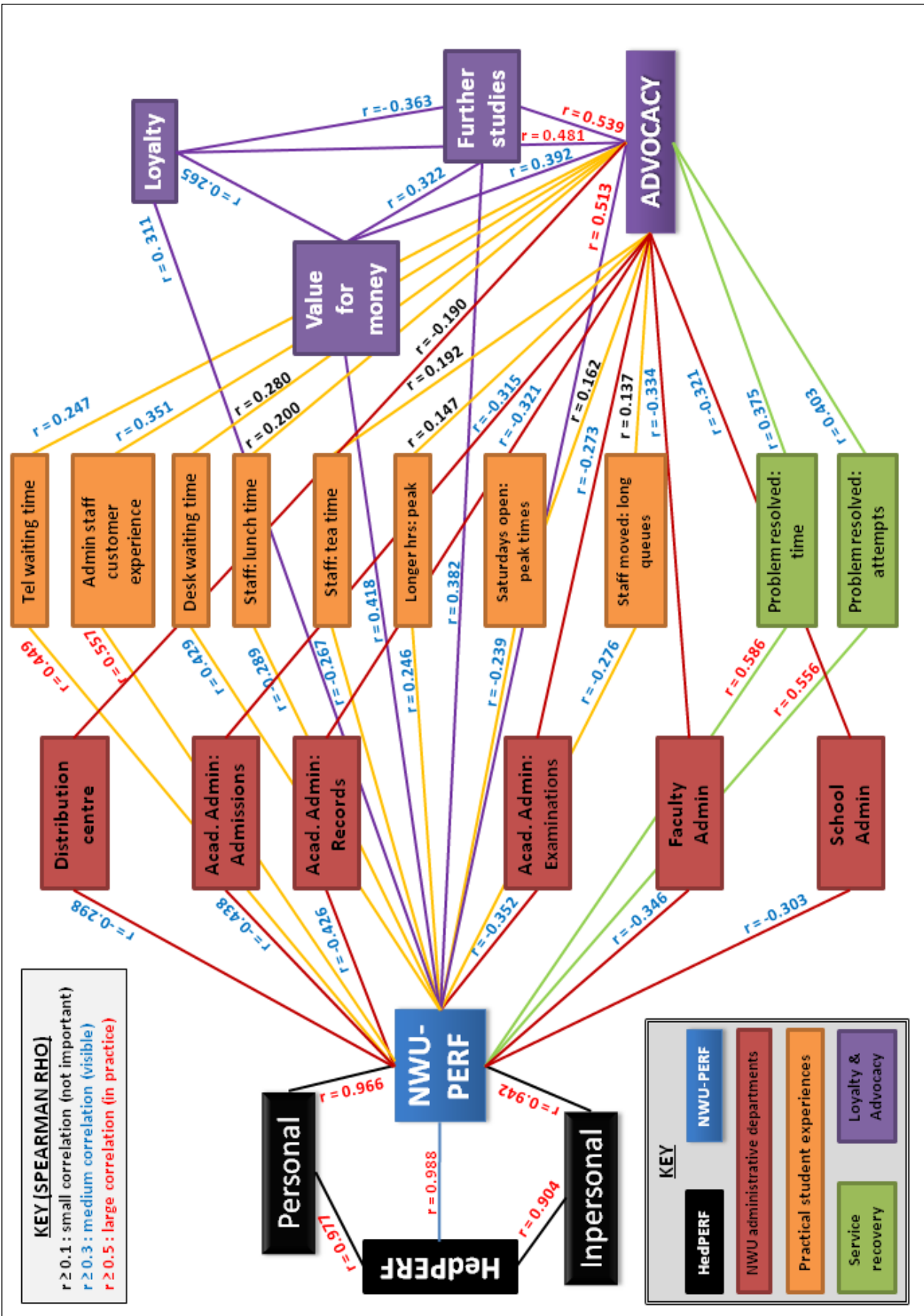
This was reported for the overall HedPERF non-academic, as well as for the personal and impersonal components. These results were confirmed in data from research question 1. Overall, students reported a lower satisfaction for the personal component (mean = 2.82) than for the impersonal component (mean = 2.60). The overall HedPERF non-academic has a mean of 2.75, indicating a satisfaction level of slight agreement with the customer service-related statement in the questionnaire.

6.10 Correlations of NWU-PERF with other service delivery items

In Figure 6.7 the correlations between the different factors to determine the Integrated Customer Experience Management at the NWU, based on the results obtained from this study, is illustrated by using the Spearman RHO-test.

Positive correlations were also found between loyalty and advocacy ($r=0.481$) and the intention to study further and advocacy ($r=0.539$).

Figure 6.7: The correlation between the different factors to determine integrated customer experience management at the NWU



A correlation of ≈ 0.1 is considered as small and therefore as not important, while a medium correlation (indicated with blue text in Figure 6.7) approximately 0.3. A large correlation of ≈ 0.5 or larger is indicated with red text. The colour of the lines between different factors, as well as the text blocks, indicates the different components and environments (administrative departments of the NWU in red, practical student experiences in orange, service recovery efforts in green and loyalty/advocacy elements in purple) of the customer experience environment at the NWU.

This illustrates a high correlation between the HedPERF and NWU-PERF models ($r=0.988$), as well as between NWU-PERF and customer advocacy ($r=0.513$), and the effectiveness of problem resolution from the administrative staff ($r=0.568$ for the time it took to resolve a problem, and $r=0.556$ for the shorter number of attempts to resolve a problem).

Medium correlations are reported between NWU-PERF and most of the practical student customer experiences, but a high correlation was found with the general customer experience provided by the administrative staff ($r=0.557$), while high correlations were also reported for both service recovery components (the time to have a problem resolved, and the number of visits before a problem was resolved). The Spearman RHO-values were respectively 0.586 and 0.566.

The correlations between the NWU-PERF service quality model and elements related to customer advocacy ranged between medium and high correlations, with values of 0.311, 0.418 and 0.382 reported for loyalty, value for money and the intention to study further. A very important and high correlation was found between NWU-PERF and the students' advocacy intention ($r=0.513$), which supports the relevancy and importance of the NWU-PERF model in the RM context.

A similarly high correlation was found between the intention to study further and the students' advocacy intentions ($r=0.539$), as well as between loyalty and advocacy ($r=0.481$). Medium correlations were reported between the other related elements, as indicated in Figure 6.7

It is evident from Figure 6.7 that the NWU-PERF service quality model is relevant and displays medium and high correlations with several components and environments that were tested in this study. The most significant correlation was between NWU-PERF and the students' advocacy intention, as motivated above.

6.11 Conclusion

The results of this study were reported and discussed in detail in an effort to answer the research questions of this study, and to make useful and valuable recommendations in the next chapter.

The perceived customer experience levels (as experienced by both the administrative staff members and students) were considered, and several practical aspects were emphasized. It was clear that students, in addition to normal office hours, have a desire for interaction with administrative staff during lunch times, tea times, as well as for longer hours during the week and on Saturdays during peak times, and also for practical improvements of customer experience levels.

The specific research questions stated in chapter one were tested and the specific results were reported and analysed in an effort to establish whether those research questions could be answered or rejected. The detailed conclusions to indicate whether the research questions has been confirmed or rejected will be discussed in the next chapter in tabular format.

Specific recommendations will be made and motivated to support the findings of this study, and to contribute further towards the study of relationship marketing, more specifically at the NWU.