STA211
Lecturer's Report and Course Evaluation 2013

The year 2013 marked the first time that I (Retha Luus) was both lecturer and coordinator of Statistics 211 (STA211) and it was a very challenging and learning experience. This report will highlight some of the challenges I was faced with as well as any proposed changes for the future.

The semester posted its first challenge with many of the students coming forward with time table clashes. Of the 104 registered students in the class, 32 indicated that they had clashes between STA211 and MAT311, IFS231, ACM231, ECO232 and MCR221, to name a few. Consequently class attendance was fairly poor (approximately 60% on average) and this also led to some changes in my planning. This really had a huge impact on the student's overall performance. Since a great proportion of these students are mathematically challenged, class attendance is essential for them to pick up the necessary mathematical techniques they require to successfully complete the Statistics course. Also, a few situations arose where faculty contacted me very late in the semester about students that were incorrectly registered for this course. The requirements clearly state that a student should have passed both first year Mathematics and Statistics to be admitted to the second year statistics course. Hopefully this problem will be resolved next year.

An unfamiliar site made its appearance at the beginning of the semester as students were using laptops and other devices during lectures. Prof. Blignaut investigated and was told by students that they have their textbooks on their respective electronic devices, but would not disclose how they came about having these electronic copies. On the positive side, the students save money by purchasing legal online copies. On the negative side, the lecturer cannot control what the student is truly doing on his or her computer and consequently the students are not engaged in the lectures and not very responsive to the lecturer at all. This makes the building of a relationship with your students very difficult.

This year I found the students to be very tardy for second years. Two of the lectures per week were at 8:30 and by the time the lecture had to start, there would be 10 students in the venue. By the end of the lecture there would be 50-60 students. This continued throughout the semester and even during other lectures the students will be sitting outside the venue and walk in late for the lecture. I shall make a point of enforcing stricter rules about this, making it clear that they have 15 minutes grace after which the venue will be locked. Hopefully this will address the problem sufficiently. I felt that this reflected very strongly their attitude towards studying and learning in general. Although the student comments are very positive (as shown in the course evaluation discussed at the end) and their performance was more than satisfactory, this is very disappointing and should be addressed somehow.

Finally, the biggest challenge faced with was the student's mathematical background, or lack thereof. I was shocked to find out how many students are either repeating first year mathematics or scored very poorly in the subject. It cannot be emphasized more strongly how important a strong mathematical background is to this course. There simply is not enough time to educate the students in mathematics as well as complete the course content. As a result the final section on the course outline had to be skipped since the time simply ran out. Either the course and its desired outcomes need to be reconsidered and restructured, or the Mathematics Department will have to inform us about where the problem lies. This cannot continue into the future.

Of the 104 students that registered for the course, 102 qualified to write the exam (CAM >= 40%). Two students missed the exam and a further 7 qualified to write the special/supplementary exam. Below is a summary of the students' performance:

CLASS AVERAGE MARKS
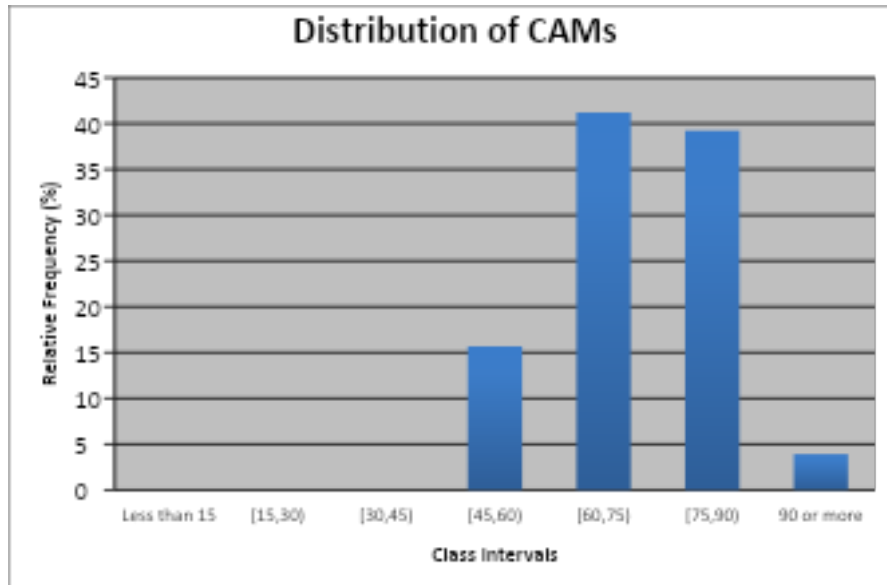
The CAM is calculated by taking 40% of the student's tutorial average and 60% of the test average. The test average is calculated by taking the average of the 3 best test marks. The average CAM is 72.53% and from the graph it is clear that the majority of the CAM's were between 60% and 75%. This is definitely too high and caution will be taken next year in this regard.
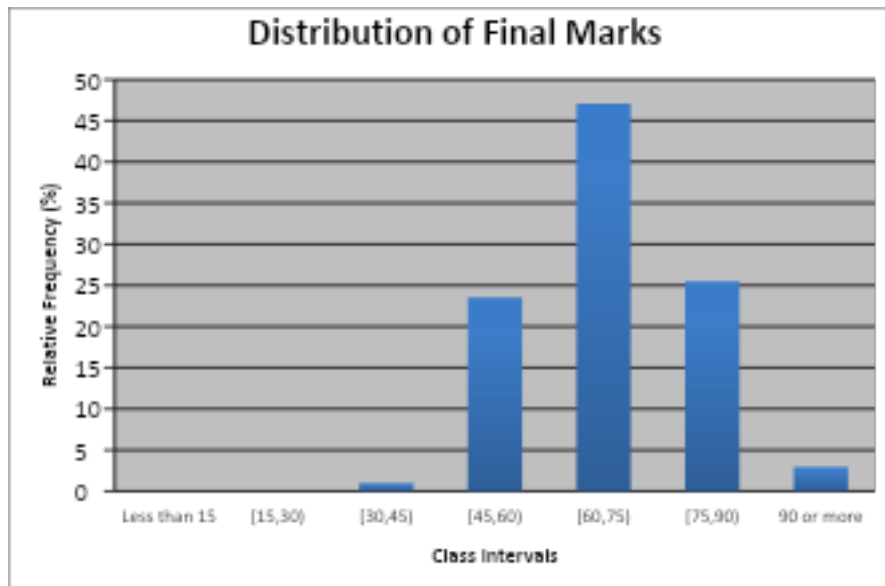
EXAM MARKS
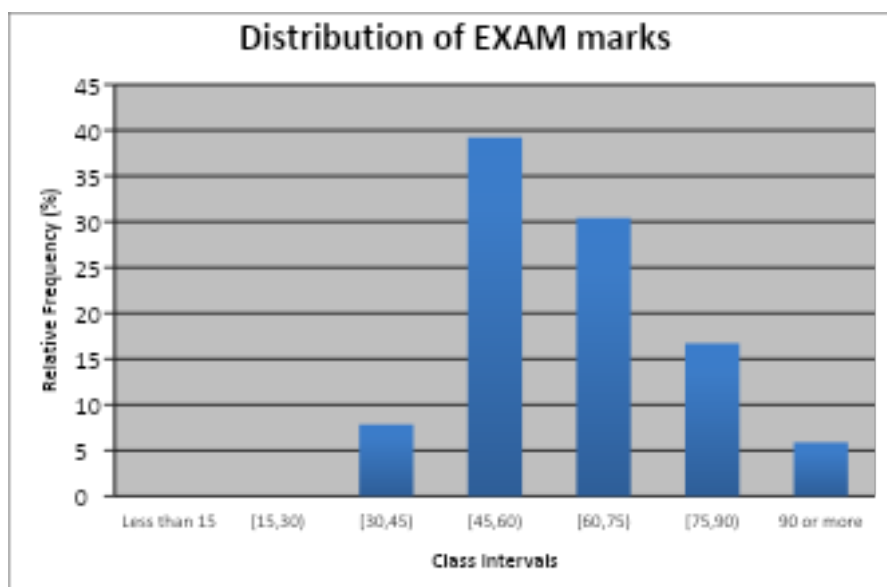
The students scored an average of 62.86% for the exam paper. One hundred students wrote the first exam of which 93 passed. The exam paper was their first test based on the entire syllabus covered during the semester and as such was quite challenging. The paper was made up of 25% theory and 75% application. The students clearly struggled with the probability questions as well as the identification of discrete probability distributions. They did, however, perform well in the questions based on work they

could memorize as well as basic integration. The students also find it difficult to prove results which is a concern and speaks of their lack of confidence in using mathematical techniques.

FINAL MARKS

Distribution of Final Marks

The final mark is calculated as 50% of the CAM and 50% of the exam mark. The class average is 67.70% with the largest proportion of students obtaining a mark between 60% and 75%. The graph below shows the distribution of the symbols obtained:

Symbol Distribution 2013
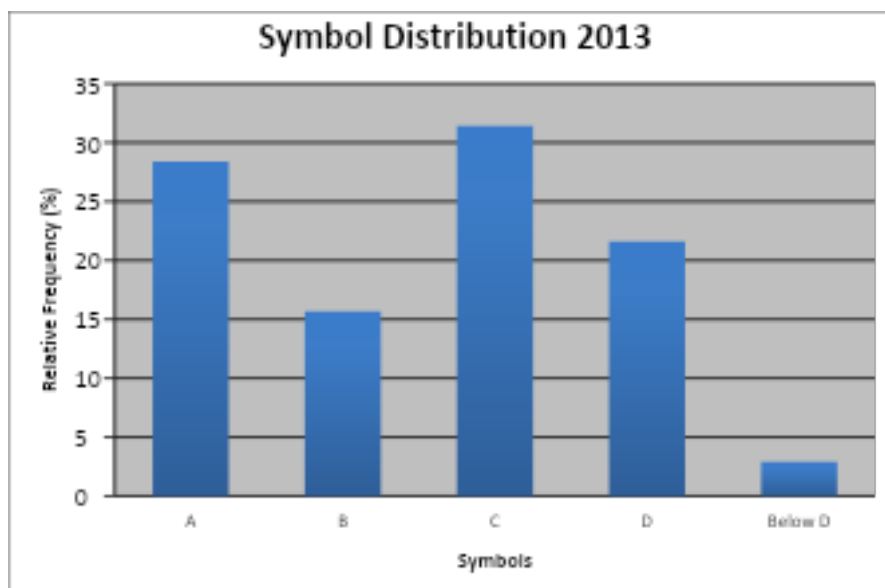
The majority of the students obtained a C-average (31.4%) for the course with 28.4% of the students managing an A-average. The overall pass rate for 2013 is thus 95% with only 2% failing, 2% not qualifying to write the exam and 1 student that did not write the special/supplementary assessment.

Although there were a few challenges to sort out at the beginning of the semester, in the end this turned out to be a very successful semester. I am however worried that should the emphasis be shifted to a more theoretical course, the pass rate would not be as high and certainly the class average would decline. Time should be spent on deciding what the desired accomplishment with this course is and then establish an action plan to implement in future. Students should be aware of the underlying

Mathematical theme in Statistics and should proceed with caution should they desire to further their studies in this area.

A course evaluation was conducted on Thursday, the 9th of May 2013, during the final class test of the semester and a total of 91 of the 104 officially registered students completed the departmental evaluation form. The evaluation form consists of 10 comments evaluating both the course (comments 7, 8, and 10) as well as the lecturer (comments 1-6, and 9) and the students rate each comment on an ordinal scale ranging from 1 (terrible) up to 5 (excellent).

The overall average for the course is 4.49 (out of 5) and for the lecturer is 4.58 with both corresponding to a good to excellent result. The lowest rating was 4.25 for "stimulation of independent thinking" and the highest ratings were 4.77 for "clear presentation of subject matter" and 4.76 for "overall quality of lectures". The lowest score could be contributed to the fact that this was the first semester that I taught the course and I perhaps focused too strongly on getting through the work and clearly explaining the difficult concepts than engaging the students.

COURSE EVALUATION

Overall Value of Tutorials					
	Terrible	Poor	Ok	Good	Excellent
Nr of Students	0	0	10	24	55
Average (out of 5)					
4.52					
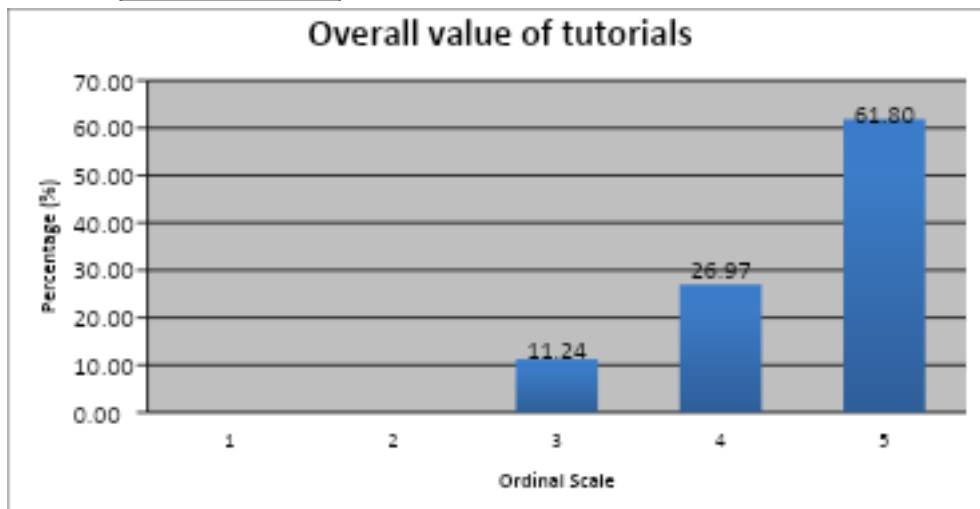
The majority (61.8%) of the students felt that the tutorials were excellently constructed and carried out. This is a very positive result, since the tutorials are their main source of practice for this component of the course.
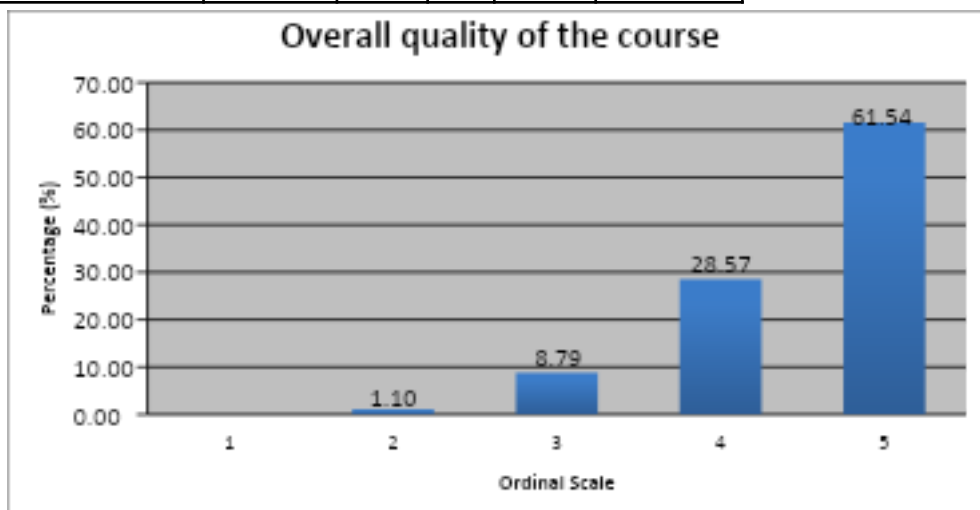
Average (out of 5)
4.45

Overall Value of Tests				
	Terrible	Poor	Ok	Good	Excellent
Nr of Students	2	1	6	27	55

Overall value of tests
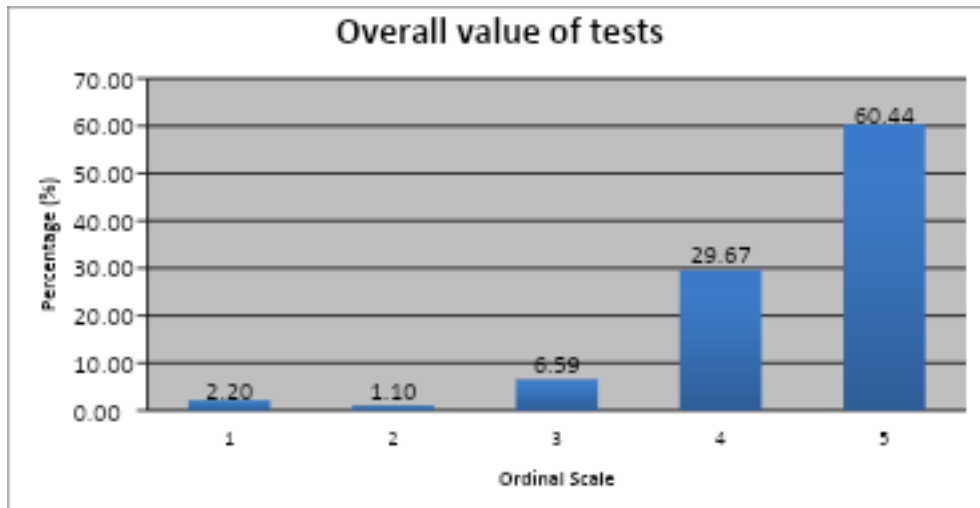
60.44% of the students felt that the tests were a good reflection of the material they had to study and tested their knowledge of the material excellently.

Average (out of 5)
4.51

| Overall Quality of the Course				
	Terrible	Poor	Ok	Good	Excellent
Nr of Students	0	1	8	26	56

Overall quality of the course

The students felt that the course was adequate and enriching, giving it an average rating of 4.51 and 61.54% of the students felt that the course maintained an excellent quality standard.
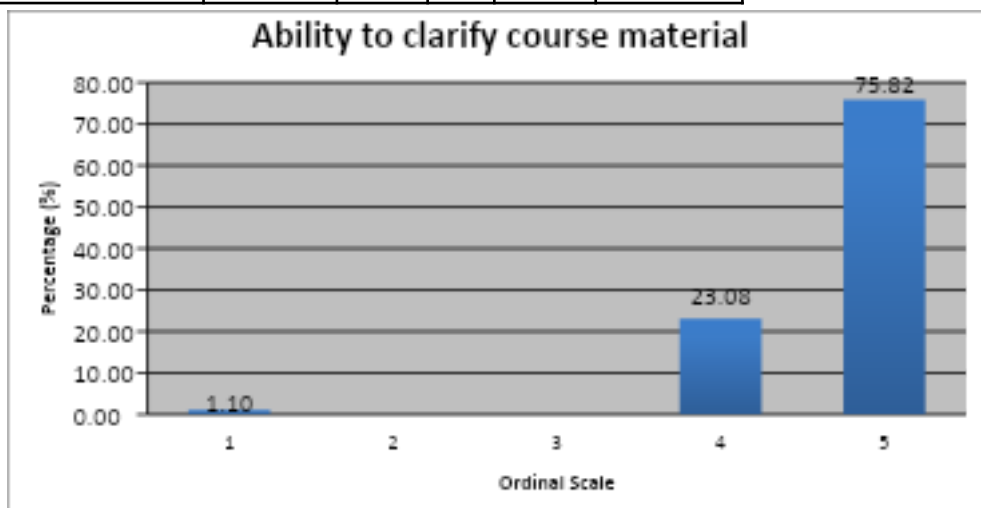
LECTURER EVALUATION

Average (out of 5)
4.77

| Clear Presentation of Subject Matter				
	Terrible	Poor	Ok	Good	Excellent
Nr of Students	1	0	0	17	73
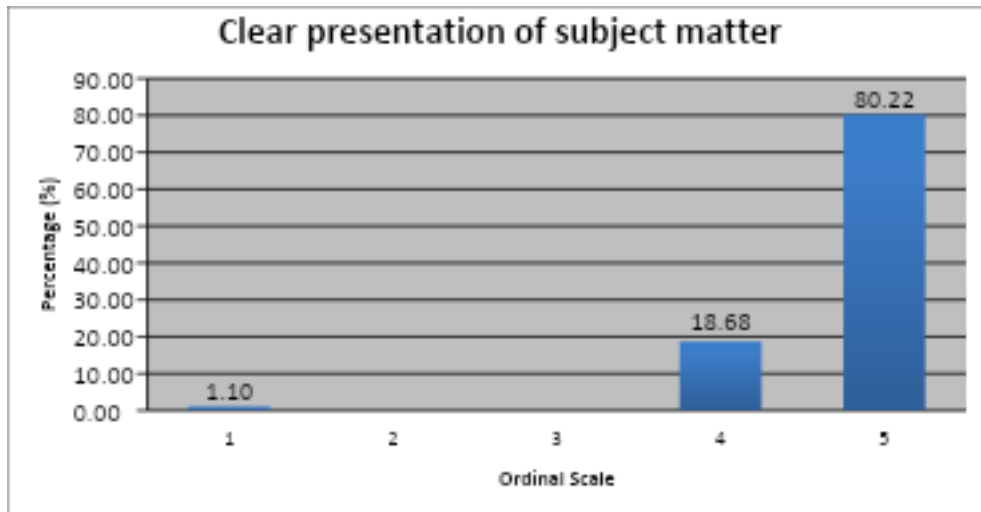
The majority of the students (80.22%) felt that the course was presented clearly and understandably.

Average (out of 5)
4.73

| Ability to clarify Course Material				
	Terrible	Poor	Ok	Good	Excellent
Nr of Students	1	0	0	21	69

75.82% of the students felt that the lecturer had the ability to explain the material in such a way that they found it understandable.

Average (out of 5)				
4.46				
Interactivity Lecturer/Students during Lectures				
	Terrible	**Poor**	**Ok**	**Good**	**Excellent**
Nr of Students	1	2	5	29	54

Interactivity lecturer/students during lectures
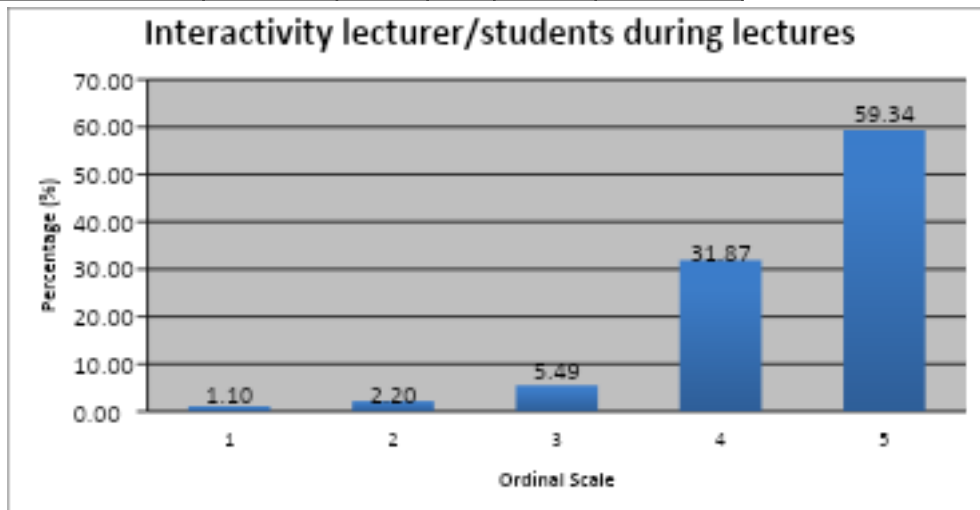
This comment received the lowest evaluation from the students. Although 59.34% felt that the interaction between the lecturer and the students was excellent, I also felt that the interaction was not satisfactory. This will be addressed in future.

| Average (out of 5)				
4.63				
Contribution of Knowledge of Subject				
	Terrible	**Poor**	**Ok**	**Good**	**Excellent**
Nr of Students	0	0	5	24	62

Contribution of knowledge of subject
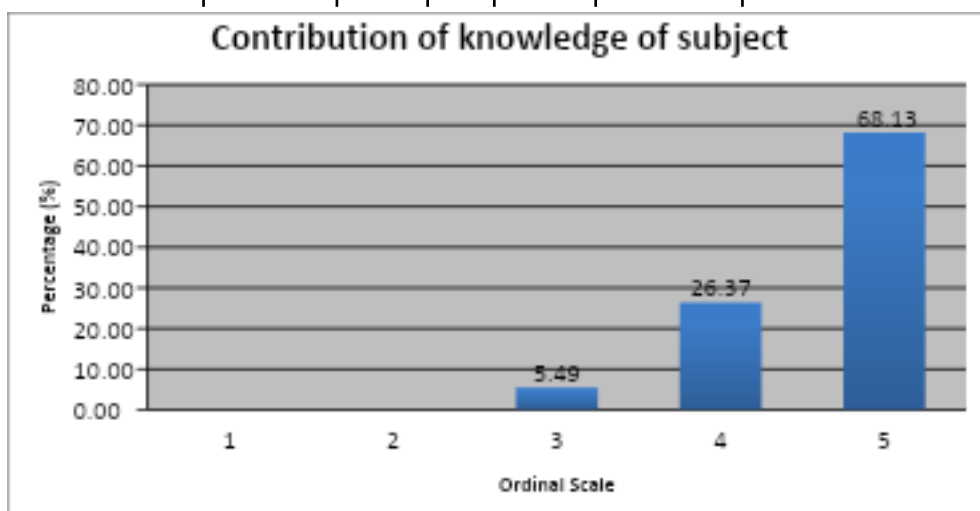
Almost 70% of the students indicated excellent contribution to their knowledge of Statistics.

Average (out of 5)				
4.44				

| Contribution to Interest in Subject				
	Terrible	Poor	Ok	Good	Excellent
Nr of Students	0	1	6	35	48

Contribution to interest in subject
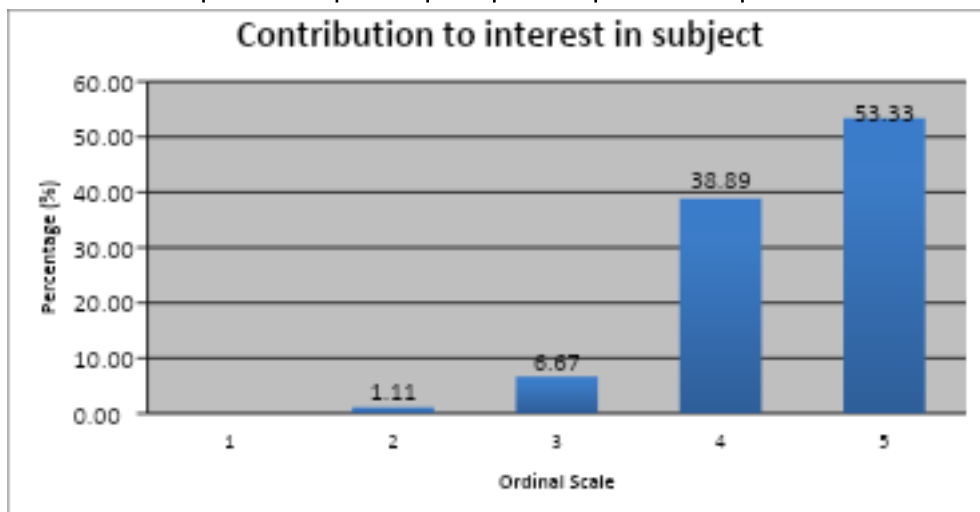
More than 50% of the class felt that their interest in Statistics has deepened and that they are curious about what lies ahead in the future. I feel that this rating should be higher. Unfortunately due to the mathematical and theoretical nature of this course the students are not adequately stimulated. Perhaps attention should be paid to developing the course in such a way that the students feel equipped for applying statistics in the real world.

Average (out of 5)				
4.25				

Stimulation of Independent Thinking				
	Terrible	Poor	Ok	Good	Excellent
Nr of Students	1	0	14	36	40

Stimulation of independent thinking
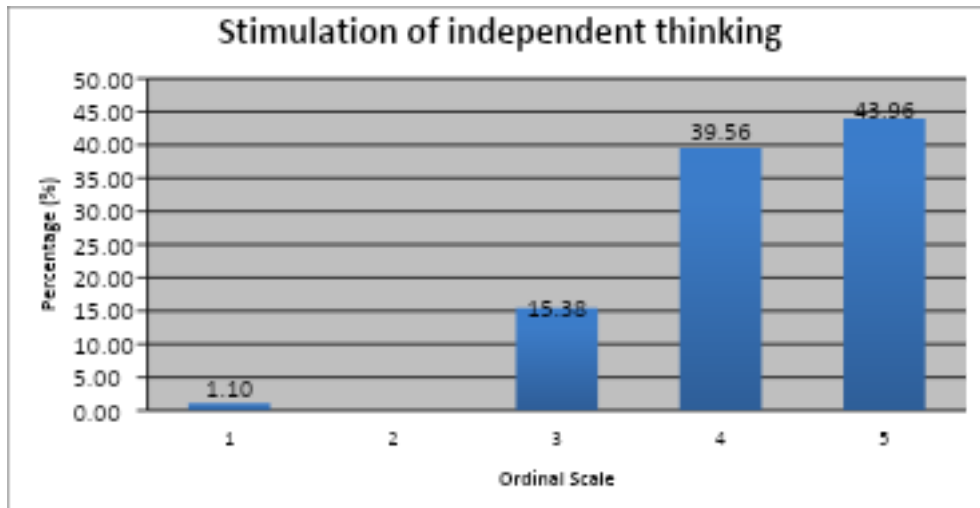
Approximately 84% of the students indicated good to excellent stimulation of their independent thinking. Although this is a very high proportion of the class, I feel that if a proper practical component could be worked into each week's tutorial, the students will have the chance to apply their theoretical knowledge more appropriately and hence increase their independent thinking.

Average (out of 5)
4.76

Overall Quality of the Lectures					
	Terrible	Poor	Ok	Good	Excellent
Nr of Students	0	0	2	19	69

Overall quality of the lectures
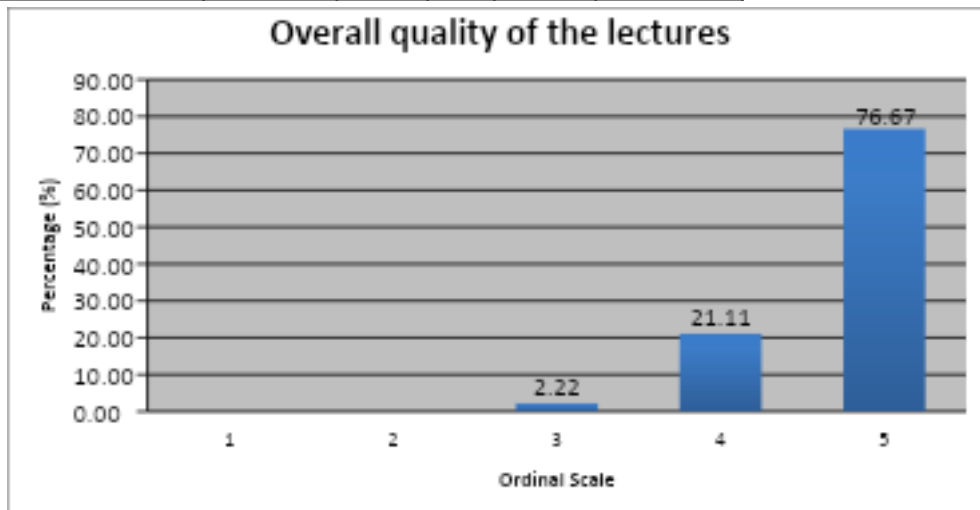
All the students felt that the quality of the lectures was at least good with more than 75% of them indicating excellent quality. I am very satisfied with this result since I strive during each lecture to teach the material to the best of my ability.

STUDENT COMMENTS

- The format of Stats 211 could be a solution to Maths 105. In terms of setup
  - No of Tests
  - Tut tests
  - 2 semesters (semester module)
- Lecturing is TOTALLY SATISFACTORY.
- MAY GOD BLESS HER AND HER FAMILY, ALL THE TIME.
- R Luus is the boss! Makes every lecture fun and interesting.
- Really enjoyed the course. Thanks Mam!
- This was good. And she can teach for sure. Regards students.
- In my opinion Mrs Luus is the best lecturer I have had at UWC.
- She is amazing wishes to continue with her for next semester.
- One of the best lecturers ever. Thank you Mrs Luus.
- STA211 just isn't for me, hence the code 3 quality of the course. Overall, I think Ms Luus is a very good lecturer, with a good ability to make the theorems and examples very easy to understand. Makes me regret not going to all her lectures ☺ Would personally like to thank her for her teachings.
- Mrs Luus is a very good lecturer and very understanding but the practice time table and availability of computers is a drawback. Otherwise the teaching staff are good. Tutors are always blunt they don't help they don't know the work.

- Mrs Luus is a good lecturer, she made me to fall in love with stats. I like the way she lectures. I am happy that she will still be our lecturer for second semester. I hope she goes with us to 3rd year stats.
- I enjoyed lectures, class notes are legible and understandable.
- Would like to have Mrs Luus for STA 221 next semester.
- Not particularly stats but most of UWC's online site there is constantly issues, for example it not working.
- This course was fantastic, and our lecturer was great.
- The lecturer was just amazing.
- Very good lecturer.
- STA211 should be 40 credits: 20 credits SAS and 20 credits STA211 as it was last year.
- She is good ☺
- I feel that there was too little interaction with the class.
- Course is too easy. Not at my level ☺

It was refreshing teaching a challenging course such as STA211 and I look forward to teaching, improving and adapting it in future.

_____   _____

R. Luus   Date
Lecturer

STA211
Lecturer's Report and Course Evaluation 2014

A total of 60 students registered for the module and 37 of them completed the evaluation questionnaire. Of the 60 students, 49 (82%) passed the module, 7 (12%) failed after the supplementary exam and 4 (7%) did not qualify to write the exam.

The scope of the course covered most of the sections in chapters 1 – 5 of the prescribed textbook Mathematical Statistics with Applications by Wackerley, Mendenhall and Scheaffer (7th edition). The students completed weekly tutorials, both written and computer, which contributed 20% towards the semester mark. Furthermore the students wrote 3 class tests, counting 80% of their semester mark, and a sick test was scheduled for those students that missed any of the tests and provided proper documents for missing the tests. Finally, the semester mark was calculated by taking 10% of the average of the student's 11 written tutorials, 10% of the average of the student's computer marks as well as 80% of the student's class test average. This resulted in a class average of approximately 60%.

Fifty-six students qualified to write the exam and all 56 students wrote. The average of the exam was approximately 58% and 2 students qualified to write the supplementary exam. Both of these students passed the supplementary.

The course outline provided at the beginning of the semester informed students of what was expected of them each week. This included the tutorial problems to be completed each week as well as the work covered in the weekly computer practical. Furthermore the students were supplied with weekly class notes (Google Drive) as well as the solutions to the weekly tutorials (Google Drive) after the submission date of the tutorials. Note that tutorial exercises discussed in class were not necessarily shared on Google Drive. The lecturer feels that perhaps the students are receiving too much material and consequently become too lazy to do the work themselves. This should probably be changed in future.

Once again class attendance was fairly average (approximately 60% on average). I still feel that this reflects very strongly their attitude towards studying and learning in general. Although the student comments are once again very positive (as shown in the course evaluation discussed at the end) and their performance was more than satisfactory, this is very disappointing and should be addressed somehow. Since a great proportion of these students are mathematically challenged, class attendance is essential for them to pick up the necessary mathematical techniques they require to successfully complete the statistics course and especially for developing their mathematical thinking for further statistics courses.

This year the first year mathematics prerequisite was applied very strictly. Unfortunately a few situations still came up where faculty contacted me very late in the semester about students that were incorrectly registered for this course. This is really unacceptable.

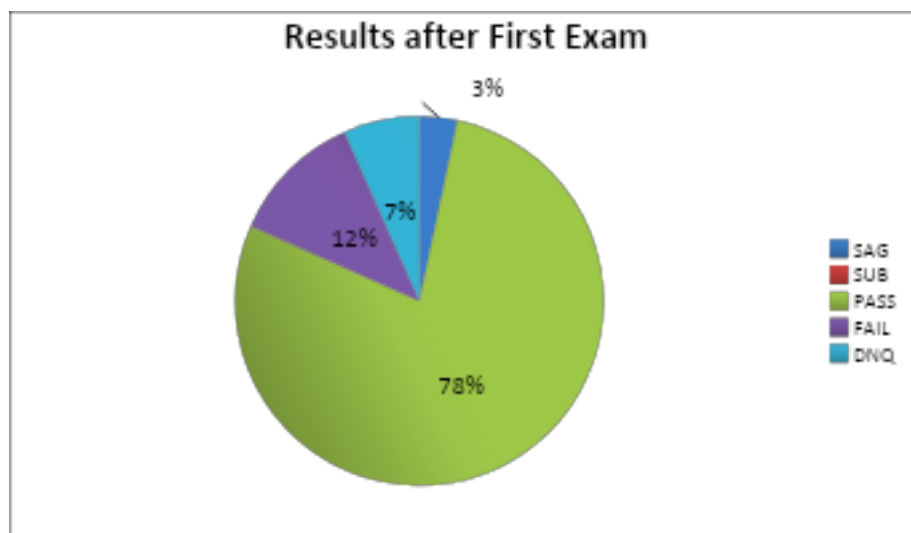Below is a summary of the students' performance:

Comparison of CAM and Final Mark
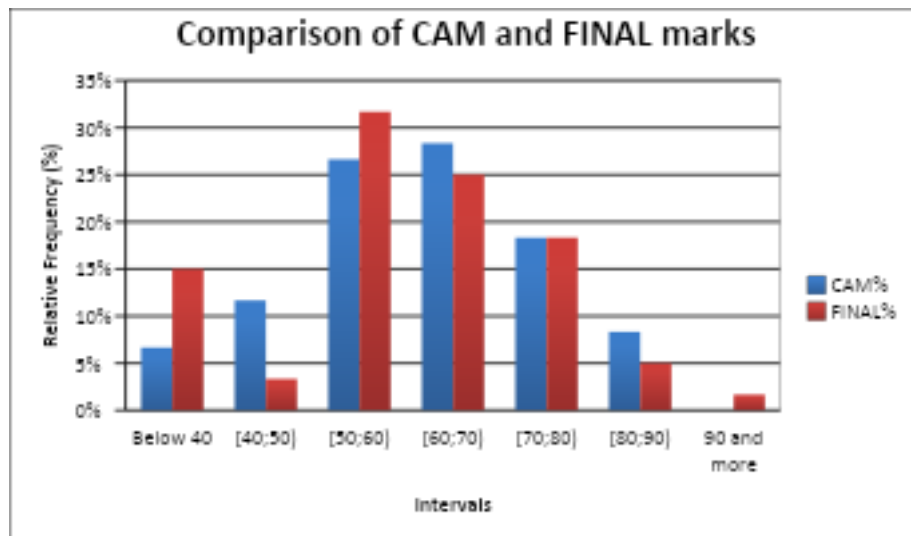
There is a very high correlation between the students' CAM and their final marks (88%). This shows that students were working consistently throughout the semester and continued to work hard in the exam.
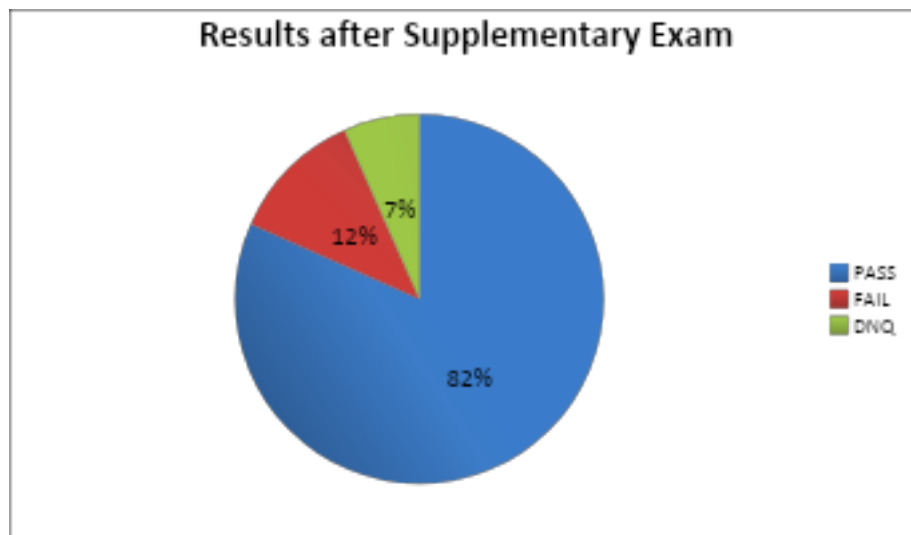
Results after First Exam

EXAM		
	Freq	**%**
SAG	2	3%
SUB	0	0%
PASS	47	78%
FAIL	7	12%
DNQ	4	7%

After the first exam 47 students (of 56) passed, 2 qualified to write the supplementary exam and 7 students failed.

Results after Supplementary Exam

| 2nd CHANCE ASSESSMENT		
	Freq	**%**
PASS	49	82%
FAIL	7	12%
DNQ	4	7%

The two students that wrote the supplementary clearly studied very hard and were determined not to fail this module. The paper was definitely more complex than the first exam with specifically proofs counting more. Both students did extremely well in the supplementary.

This brought the final pass rate to 82% with 18% failing STA211 in 2014.

Symbol Distribution

SYMBOL DISTRIBUTION		
	Freq	**%**
A	10	17%
B	6	10%
C	15	25%
D	18	30%
E	0	0%
F	2	3%
G	9	15%

Symbol Distribution 2014
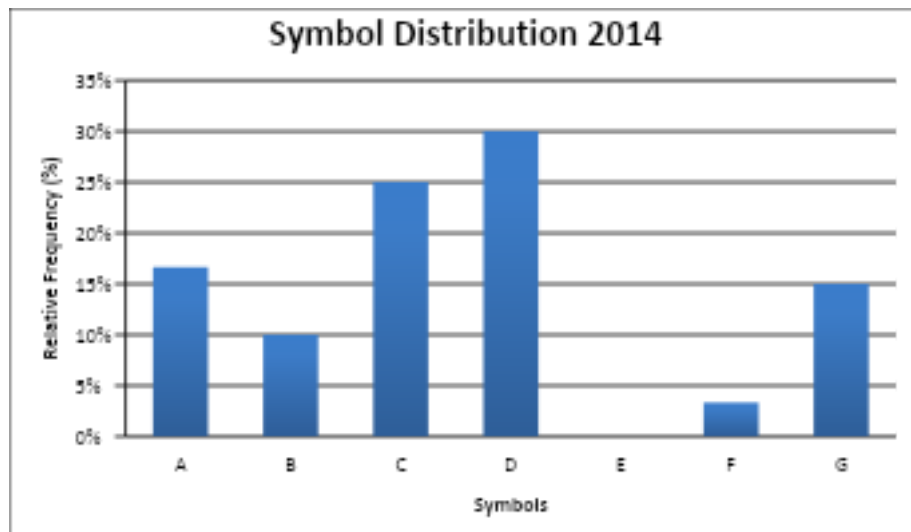
27% of the students obtained either an A or a B for the course with 55% obtaining a C or a D. This is a significant change from 2013 where 44% obtained an A or B and 53% a C or a D. See graph below for the 2013 symbol distribution.

Symbol Distribution 2013
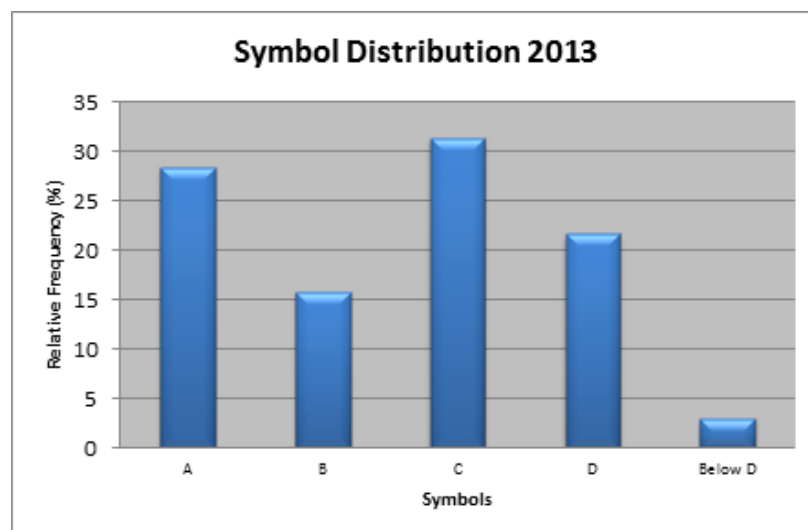
I feel the 2014 results are a better reflection of what should be obtained in a second year module.

To conclude, although 2014 once again achieved good results it is still a concern that students seem unwilling to put in the effort they will need to continue with when furthering their studies in statistics. Unfortunately statistics is not a module that can be "watched" via YouTube or explained through social media such as Twitter or Facebook. Students must come to class to be taught and coached by the lecturer, they should go home and further engage with the theory and then practice to apply their knowledge. It is very traditional but unfortunately it is the only way to successfully study statistics.

STA211
Course Evaluation 2014

A course evaluation was conducted on Tuesday, the 6th of May 2014, and a total of 37 of the 60 officially registered students completed the evaluation form. This gives a good indication of the average class attendance during this semester (approximately 60%).

The evaluation form served as a pilot study of the proposed Science faculty evaluation system. It consists of 2 sections namely a generic evaluation tool and a departmental evaluation tool. The generic tool consists of 10 comments evaluating the course from the student's perspective to be rated on an ordinal scale ranging from A (strongly agree) to E (strongly disagree). It also contains a section of 6 statements from which students can select all statements applicable to them. The departmental tool consists of 10 comments evaluating both the course (comments 7, 8, and 10) as well as the lecturer (comments 1-6, and 9) and the students rate each comment on an ordinal scale ranging from 1 (terrible) up to 5 (excellent). Note that the results from the second section of the generic evaluation tool are not analyzed and reported on here.

Below is the complete analysis and summary of the course evaluation questionnaire. After each section a short summary of the findings is provided.
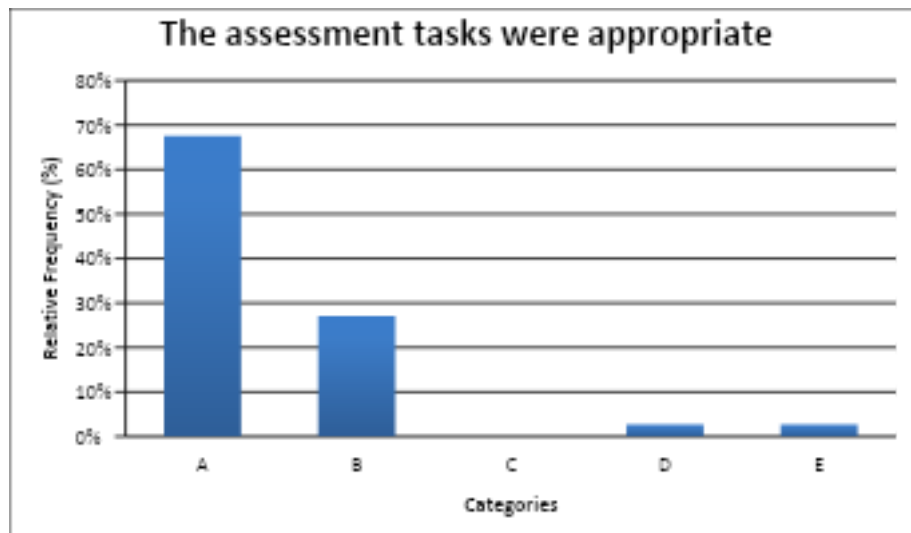
FACULTY GENERIC EVALUATION

Q1: What I have learned in this module will be helpful for me when I leave the university.

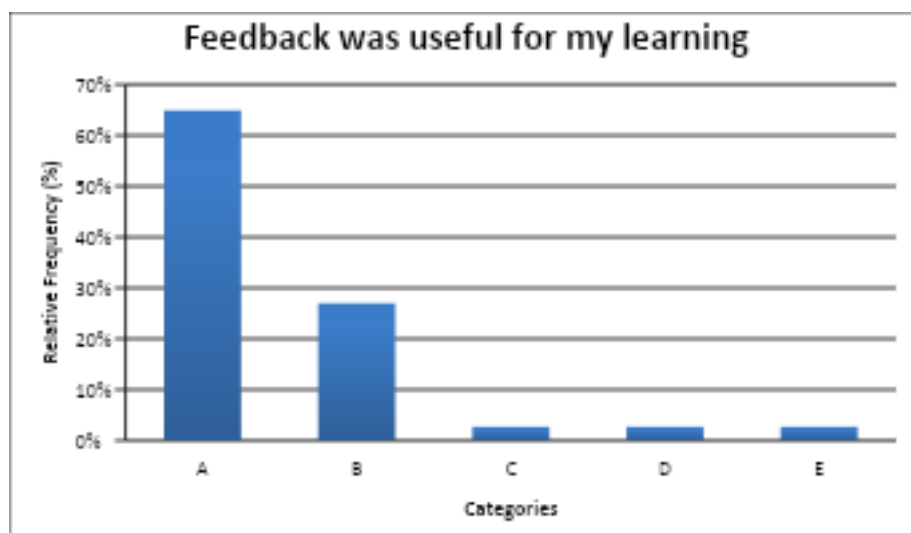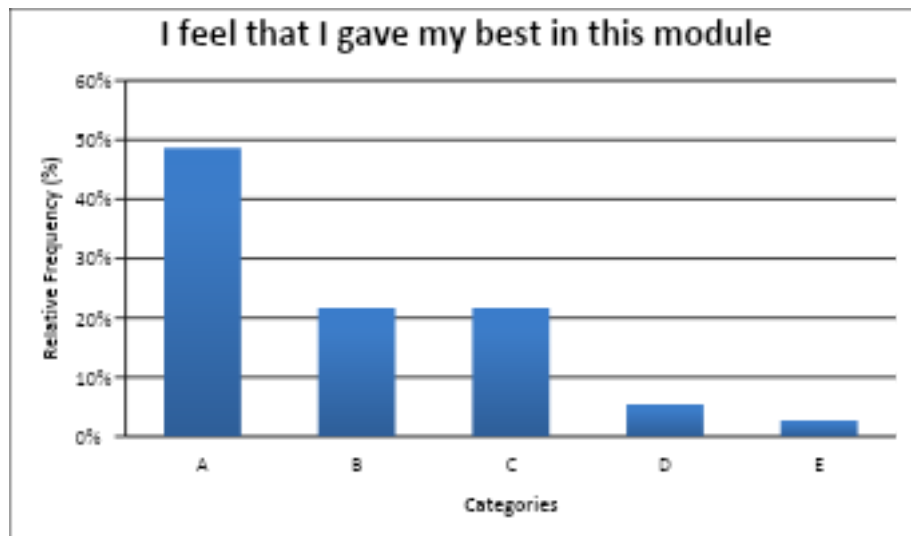**Q2**: **Learning outcomes of this module were clear to me.**
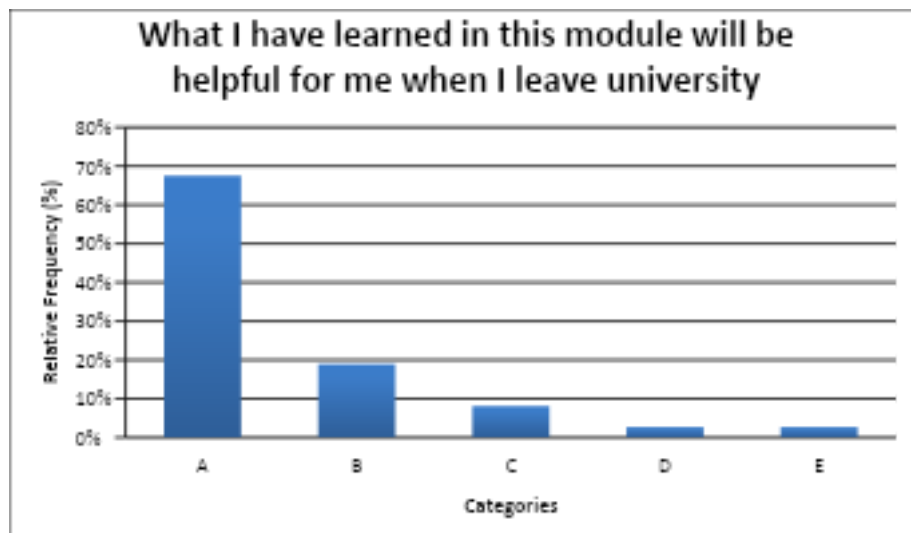
Learning outcomes of this module were clear to me

Q3: **The assessment tasks were appropriate.**
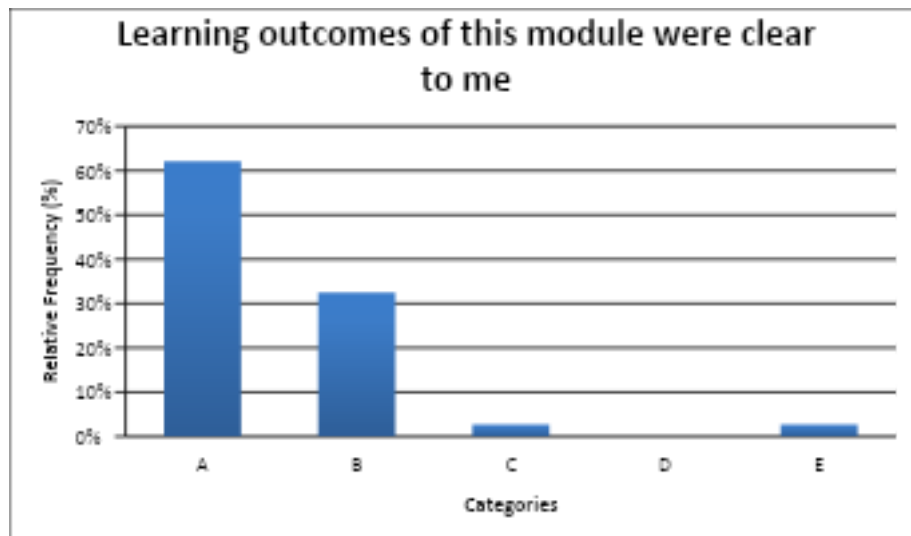
The assessment tasks were appropriate

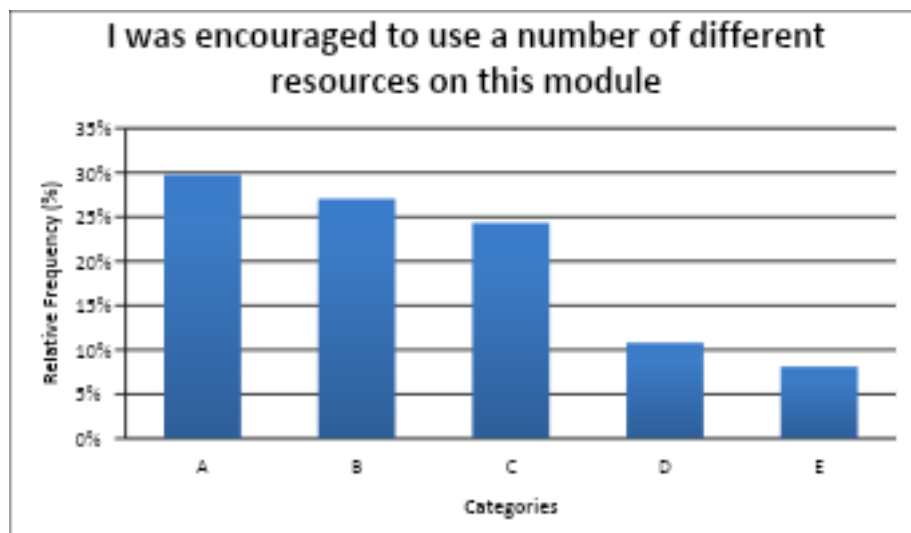**Q4**: **Feedback was useful for my learning.**

Feedback was useful for my learning
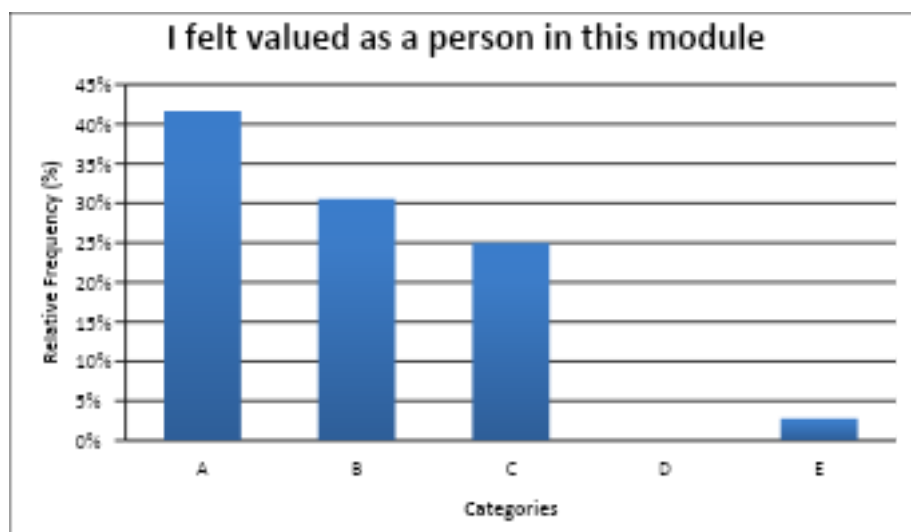
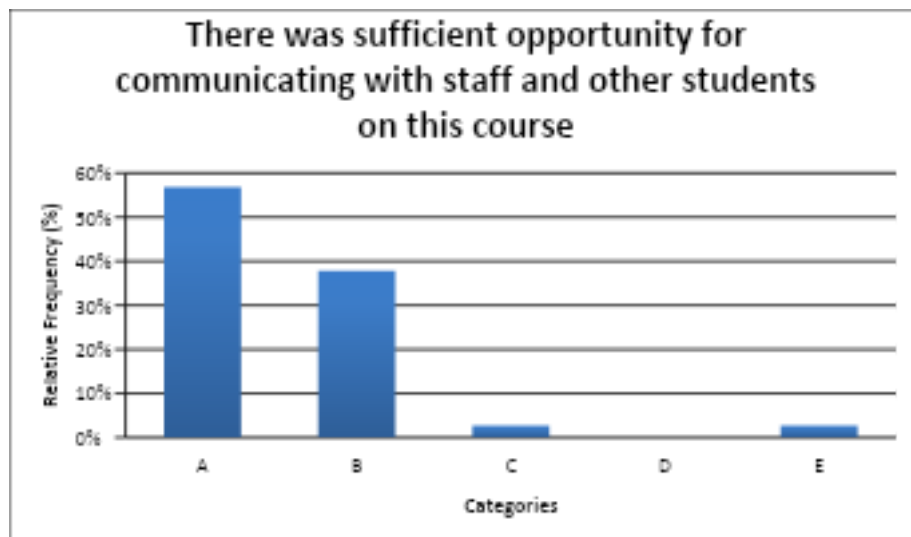**Q5**: **I feel that I gave my best in this module.**

Q6: **I was encouraged to use a number of different resources on this module e.g. social media, library resources, course readers.**
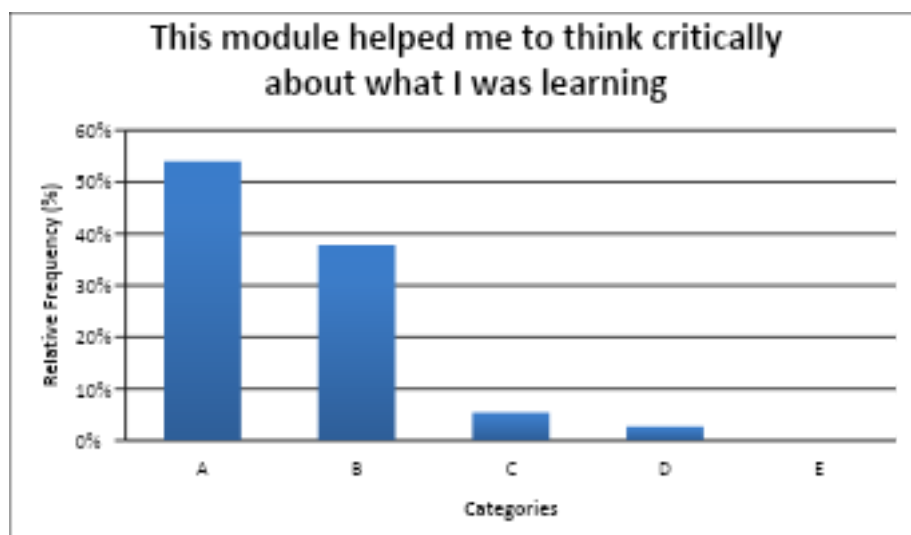

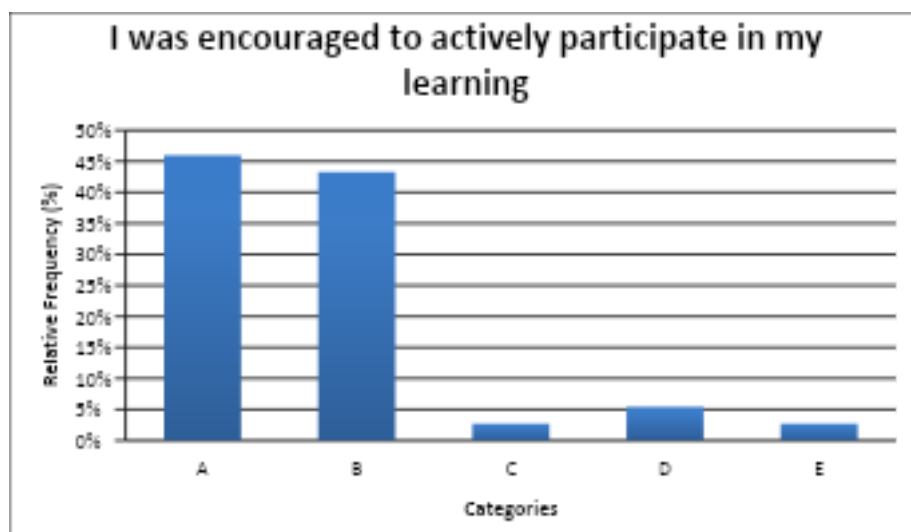**Q7**: **I felt valued as a person in this module.**

Q8: **There was sufficient opportunity for communication with staff and other students on this course.**

Q9: **This module helped me to think critically about what I was learning.**

Q10: **This module helped me to think critically about what I was learning.**

Summary of Faculty Evaluation

| CATEGORY	QUESTIONS									
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
A	68%	62%	68%	65%	49%	30%	42%	57%	54%	46%
B	19%	32%	27%	27%	22%	27%	31%	38%	38%	43%
C	8%	3%	0%	3%	22%	24%	25%	3%	5%	3%
D	3%	0%	3%	3%	5%	11%	0%	0%	3%	5%
E	3%	3%	3%	3%	3%	8%	3%	3%	0%	3%

68% of the students agreed strongly that what they learned in STA211 will be helpful when they leave university. Approximately 95% of the students at least agreed that the learning outcomes were clear to them with the same number agreeing that the assessments were appropriate although only 3% of the students felt that the assessment feedback was helpful for their learning. Although approximately 20% of the students failed the course, only approximately 10% felt that they did not give their best in the module. Finally, the majority of the students felt they were valued as a person, had ample opportunity for communication with the lecturer, and felt encouraged to participate in their learning.

DEPARTMENTAL EVALUATION

Q1: Clear presentation of subject matter.

Q2: Ability to clarify course material.
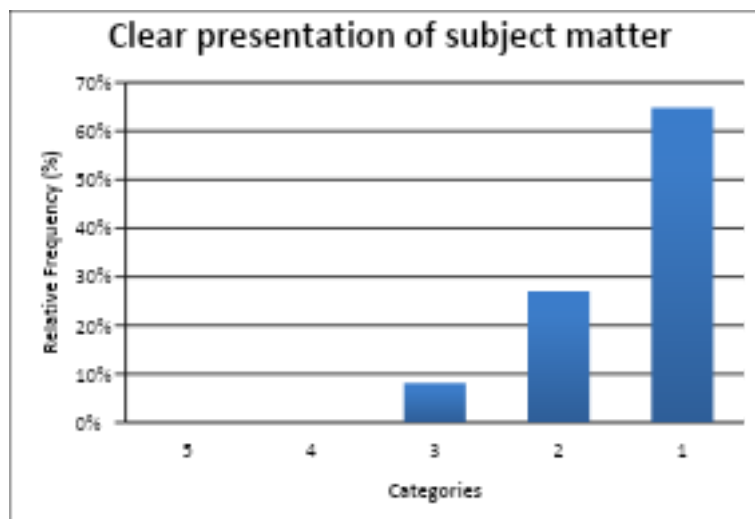
Ability to clarify course material
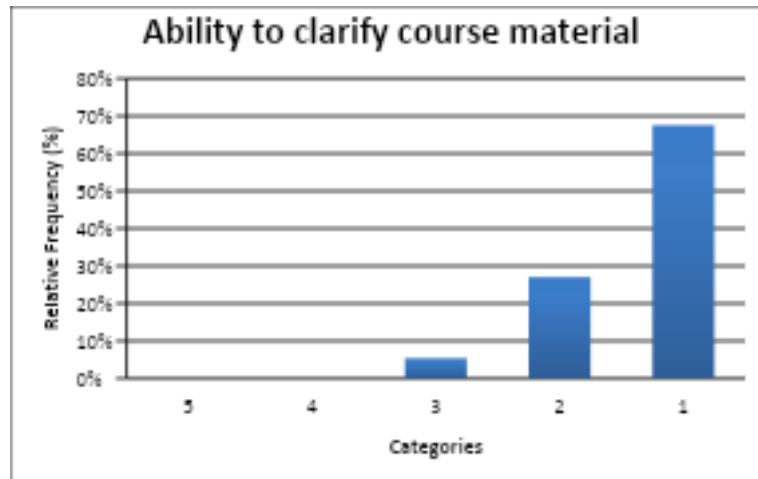
Q3: **Interactivity lecturer/students during lectures.**
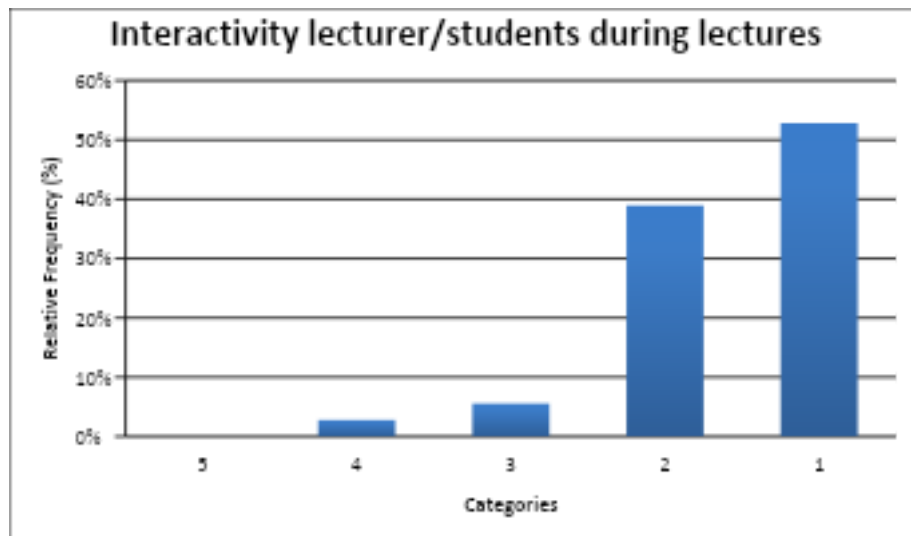
Q4: **Contribution of knowledge of subject.**
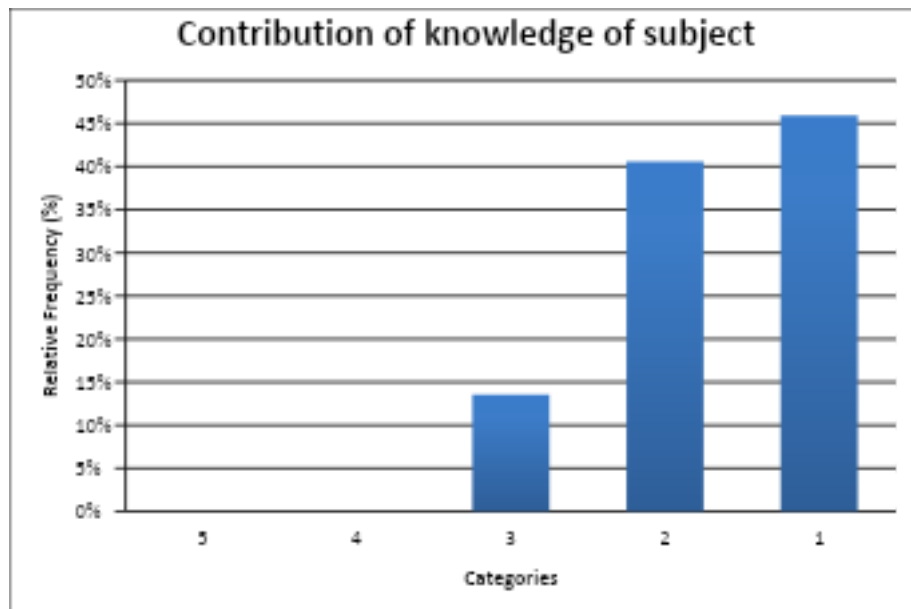
Q5: **Contribution to interest in subject.**
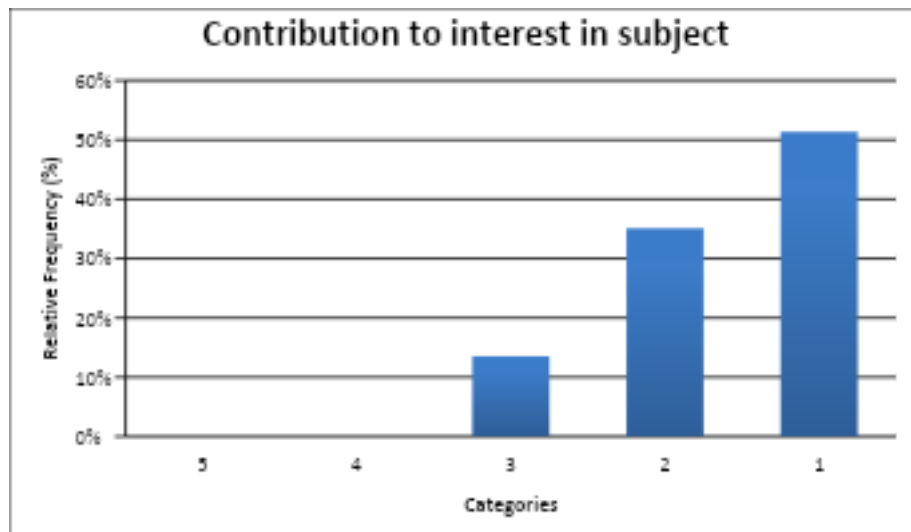
Q6: Stimulation of independent thinking.
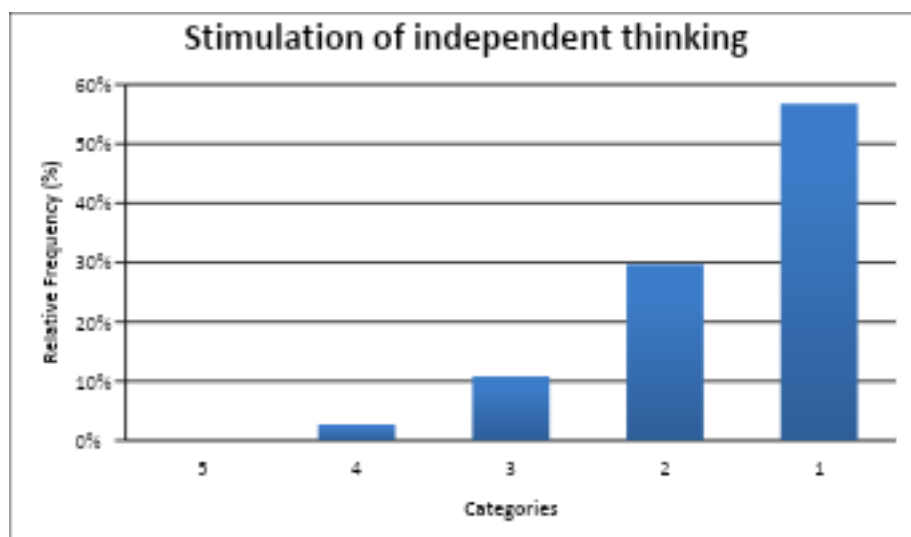
Q7: Overall value of tutorials.

Q8: Overall value of tests.

Overall value of tests

Q9: Overall quality of the lectures.
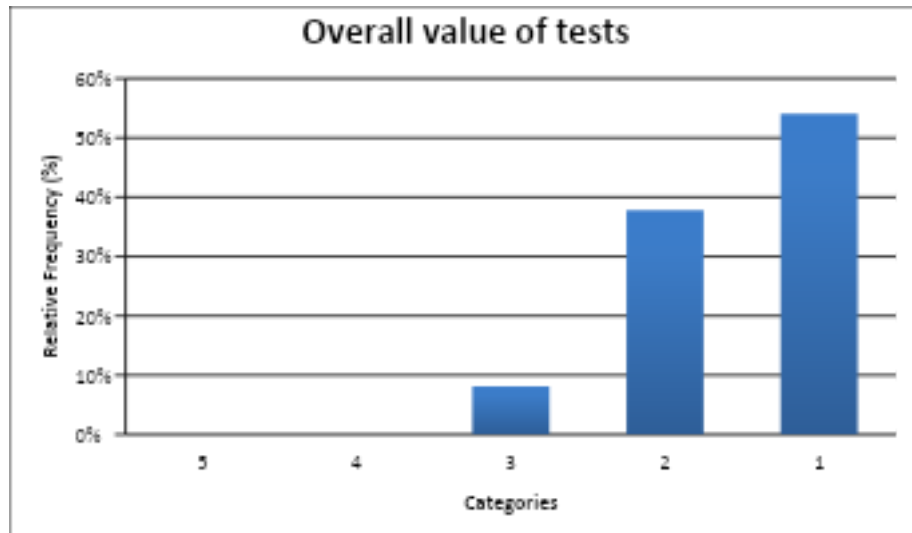
Overall quality of lectures

Q10: Overall quality of the course.

Overall quality of course

Summary of Departmental Evaluation:

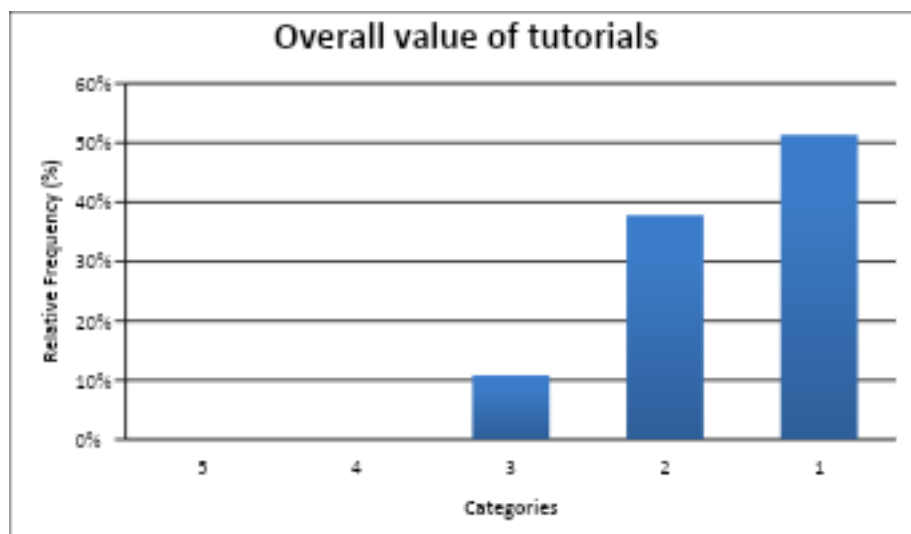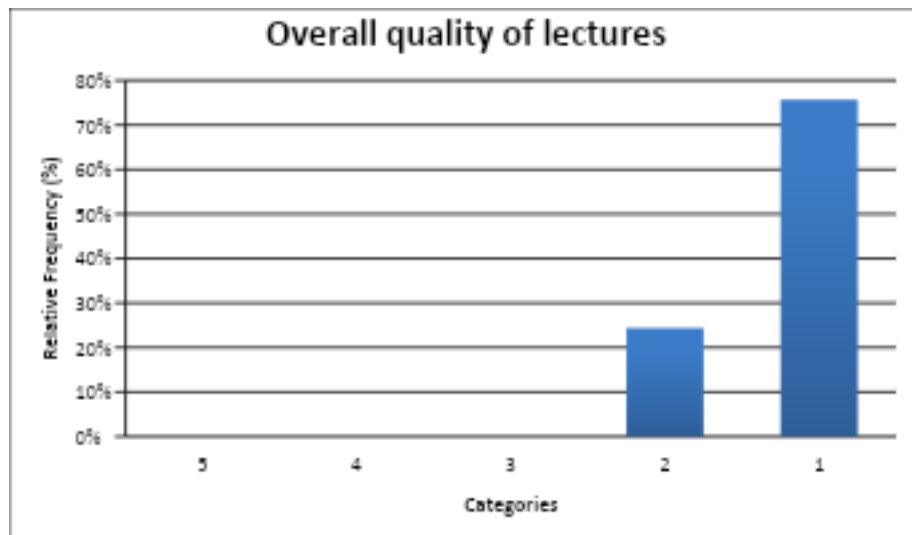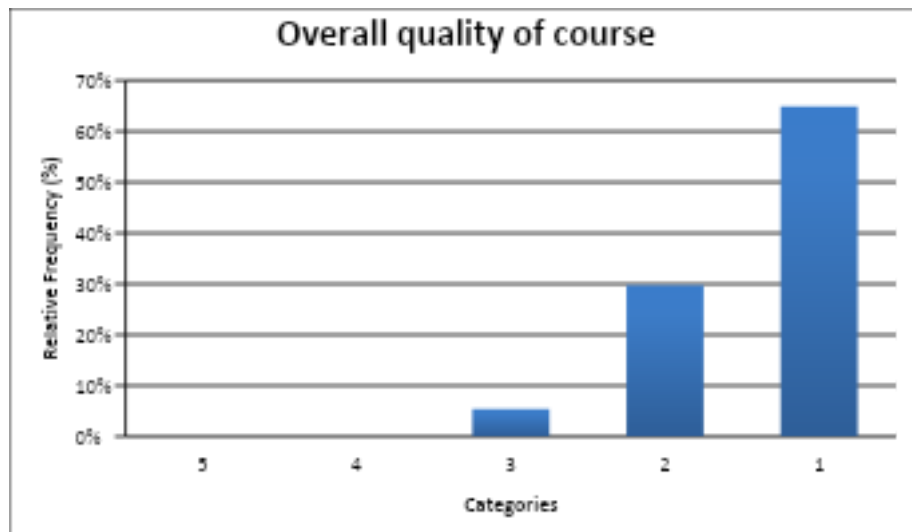| CATEGORY	QUESTIONS									
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
5	65%	68%	53%	46%	51%	57%	51%	54%	76%	65%
4	27%	27%	39%	41%	35%	30%	38%	38%	24%	30%
3	8%	5%	6%	14%	14%	11%	11%	8%	0%	5%
2	0%	0%	3%	0%	0%	3%	0%	0%	0%	0%
1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Most students felt that interactivity in class and the ability to clarify course material was either good (27%) or excellent (65%). Quality of lectures was rated as excellent by 76% and good by 24%. Overall value of tutorial content and tests was rated as excellent by 54% and good by 38% of the students. A large proportion of the students felt that the contribution to knowledge of and interest in the subject was either good (35%) or excellent (51%) while 57% rated stimulation of independent thinking as excellent and 30% rated it as good. The majority of the students rated interactivity during lectures as good (39%) or excellent (53%) and 95% rated the overall quality of the course as at least good.

STUDENT COMMENTS

● This module is excellent. Mrs Luus is excellent. The Stats department is excellent.

● Mrs Luus is one of the best lecturers I have ever encountered.

● Stats department needs lecturers like this one! Keep it up! Good job. She knows her work!

● Good course. I've grown to really enjoy this module, in fact it's my favorite module and I'm planning to major in Stats and further pursue a career.

● The course is structured, the lecturer really prepares for the lectures making it easy for us students to grasp the work and understand properly.

● I like the lecturer.

OVERALL (SHORT) SUMMARY

A course evaluation was conducted on Tuesday, the 6th of May 2014, and a total of 37 of the 60 officially registered students completed the evaluation form.

The faculty evaluation was graded on an ordinal scale from "A" (strongly agree) to "E" (strongly disagree).

FACULTY GENERIC EVALUATION TOOL					
QUESTIONS	A	B	C	D	E
What I learned in this module will be helpful for me when I leave university	68%	19%	8%	3%	3%
Learning outcomes of this module were clear to me	62%	32%	3%	0%	3%
The assessment tasks were appropriate	68%	27%	0%	3%	3%
Feedback was useful for my learning	65%	27%	3%	3%	3%

	5	4	3	2	1
I feel that I gave my best in this module	49%	22%	22%	5%	3%
I was encouraged to use a number of different resources on this module e.g. social media, library resources, course readers	30%	27%	24%	11%	8%
I felt valued as a person in this module	42%	31%	25%	0%	3%
There was sufficient opportunity for communication with staff and other students on this course	57%	38%	3%	0%	3%
This module helped me to think critically about what I was learning	54%	38%	5%	3%	0%
I was encouraged to actively participate in my learning	46%	43%	3%	5%	3%

As seen in the above table the students at least agreed with the questions posted to them by faculty. The strong points highlighted by receiving highest "strongly agree" here include "What I learned in this module will be helpful for me when I leave university", "Learning outcomes were clear to me", "Assessment tasks were appropriate", "Feedback was useful for my learning", and "There was sufficient opportunity for communication with staff and other students on this course". The lowest score was for "I was encouraged to use a number of different resources on this module e.g. social media, library resources, course readers".

The departmental evaluation was graded on an ordinal scale from "1" (terrible) to "5" (excellent).

DEPARTMENTAL EVALUATION TOOL					
QUESTIONS	5	4	3	2	1
Clear presentation of subject matter	65%	27%	8%	0%	0%
Ability to clarify course material	68%	27%	5%	0%	0%
Interactivity lecturer/students during lectures	53%	39%	6%	3%	0%
Contribution of knowledge of subject	46%	41%	14%	0%	0%
Contribution to interest in subject	51%	35%	14%	0%	0%
Stimulation of independent thinking	57%	30%	11%	3%	0%
Overall value of tutorials	51%	38%	11%	0%	0%
Overall value of tests	54%	38%	8%	0%	0%
Overall quality of lectures	76%	24%	0%	0%	0%
Overall quality of the course	65%	30%	5%	0%	0%

Once again students at least agreed with the questions posted to them. The majority of students gave an excellent score to "Clear presentation of subject matter", "Ability to clarify course material", "Overall quality of lectures" and "Overall quality of the course" with "Contribution of knowledge of subject" receiving the lowest number of excellent scores.

SYMBOL DISTRIBUTION		
	Freq	**%**
A	10	17%
B	6	10%
C	15	25%
D	18	30%
E	0	0%
F	2	3%
G	9	15%

2nd CHANCE ASSESSMENT		
	Freq	**%**
PASS	49	82%
FAIL	7	12%
DNQ	4	7%

The group was overall quite pleasant to work with. Some students unfortunately had to deregister very late due to not meeting the prerequisites and faculty incorrectly registering them. This is very unprofessional on faculty's side and should be rectified. There still seems to be lacks of diligence among the students since many students (40%) don't attend lectures. Hopefully they will realize their mistake once they continue to third year statistics.

EXAM		
	Freq	**%**
SAG	2	3%
SUB	0	0%
PASS	47	78%
FAIL	7	12%
DNQ	4	7%

Overall, 78% passed, 3% had to write the supplementary (and passed) exam and 19% failed. The final pass rate is thus 81% with 19% failing STA211.

R. Luus
Lecturer
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