

Students' Learning Experiences In Second Year Augmented Economics

By

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Declaration

I, **Jabulani Bhekokwakhe Stanley Zikhali** declare that:

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Signed:



Jabulani B. S. Zikhali

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Dedication

To my wife, Thembi, sons Vulindlela and Njabulo, daughters Zamangwane and Anele. My late parents Mrs Nelliah Zikhali and Mr. Magwaz' iNgulube Zikhali

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My most special thanks and appreciation go to my supervisors, Dr Frances O'Brien and Dr Veena S. Singaram for your guidance, patience in putting up with me, and your invaluable advices throughout this work.

The following people deserve a big thank you: my wife, Thembi, for your understanding and manning the castle during my long nights of burning the midnight oil.

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My dearest friend Alpha Zwane for your encouragement and motivation.

Lastly, and above all, all praise be to God Almighty for giving me the strength to persevere. Thus far I have come.

Abstract

This study is undertaken to investigate the students' learning experiences in second year Augmented Economics tutorials. Augmented Economics tutorials is a second year academic development (AD) programme for students in the extended Bachelor of Commerce degree.

The investigation into the students' learning experiences is done by interrogating the causal relationship between the learning environment at a higher education institution on the one hand and the student learning approaches and the students' performance outcomes on the other. The study focuses on the students in the AD programme who are enrolled in the extended Bachelor of Commerce degree.

The rationale for the study stems from the non-existence of research data on the effectiveness or lack thereof in the extended Bachelor of Commerce since the programme started in 2004. The study is intended to identify possible areas of strength and weaknesses in all the Augmented Economics modules.

The study uses Biggs' 3P theory of students' approaches to learning to explain the interrelationship between the presage, process and product variables. The Course Experience Questionnaire is used as an instrument with which to gather data from the second year Augmented Economics students. A questionnaire with 29 items was used, of which data from 26 of these items was used.

The study found strong positive linear correlations between the institutional factors but very weak positive and negative correlations between grade 12 and institutional factors. Significant gender difference in the deep learning approach but no gender difference in the surface learning approach was found. This study found that the second year Augmented Modules are perceived by the students as positively empowering them with generic skills.

The study recommends a relook at the curriculum structure and the workload as well as the assessment models being used in second year Augmented Economics. Further research is also recommended over a longer period and a bigger sample to establish the generalizability of this study's findings.

Table of Contents

Declaration.....	i
Dedication.....	ii
Acknowledgments.....	iii
Abstract.....	iv
List of Figures	ix
CHAPTER ONE	1
INTRODUCTION	1
Background to the study	1
1.2 Extended Bachelor of Commerce programme.....	3
1.3 Higher education challenges in South Africa	3
1.4 Manifestation of higher education challenges	4
1.4.1 Gross Participation rates.....	4
1.4.2 Throughput Rate	6
1.5 Focus of the study.....	9
1.6 The second year Augmented Economics modules.	11
1.7 Key research questions	12
1.8 Rationale for the study	13
1.9 Study limitations	14
1.10 The structure of this Study	15
Summary	16
CHAPTER TWO	17
LITERATURE REVIEW	17
Introduction.....	17
2 Theoretical framework	17
2.1. Learning experiences and academic outcomes.....	18
2.2 Conceptions of Learning	19
2.3 Student approaches to learning.....	20
2.3.1 Deep approach to learning	21
2.3.2 Surface approach to learning.....	22
2.3.3 Differences between deep and surface approaches	23
2.4 Student Course Experience.....	24
2.4.1 Good teaching.....	25
2.4.2 Clear goals and standards	27
2.4.3 Appropriate workload.....	27
2.4.4 Appropriate assessment	29
3. Generic skills	30
Summary	34

CHAPTER THREE.....	36
METHODOLOGY	36
Introduction.....	36
3.1. Data collection	36
3.1.1 The instrument	36
3.1.2 Sample Selection.....	39
3.1.3 Response rate	40
3.1.4. Data collection process	40
3.2 Data analysis	42
3.2.1 Scores.....	42
3.3. Ethical clearance issues.....	44
Summary	45
CHAPTER FOUR.....	46
DATA ANALYSIS AND INTERPRETATION	46
Introduction.....	46
4.1. Results And Analysis	46
4.1.1. The institutional and student variables	46
4.1.2 The effect of gender in student learning experience.....	48
4.1.2. Correlations between institutional presage variables.....	53
4.1.3. Learning approaches and outcomes variables	55
4.1.4 Correlations between the institutional variables, learning approaches and outcomes variables in the 3P model	57
4.2. Data Analysis And Discussion.....	59
4.2.1. The impact of student characteristics and institutional variables on student learning.....	59
4.2.2. The study approach variables.....	61
4.2.3. The relationship between the learning outcomes the students' learning environment and the formative experiences.....	62
4.3.4. The Correlations between the learning environment, the student factors and the learning outcomes.....	65
Summary	66
CHAPTER FIVE.....	67
CONCLUSION AND RECOMMENDATIONS	67
Introduction.....	67
5.1 Focus and rationale of this study	67
5.2 Learning environment and student performances	68
5.3 Student approaches to learning and outcomes.....	69
5.4 Study implications.....	69
5.5 Recommendations	69
5.5.1 Module structure	70
5.5.2 Appropriate assessment and approaches to learning	70
5.2.3 Augmented micro and macroeconomics modules articulation	71
5.6 Further and follow up research	71
Final remarks	72
Personal lessons	72

References	73
Appendices.....	83

List of Tables

Table 1:	Admission and programme requirements for extended and mainstream Bachelor of Commerce programmes	2
Table 2:	Alpha Test Coefficient Results.	38
Table 3:	Rearranged items to correct for negative reporting of the responses	43
Table 4:	Mean, standard deviation and Alpha coefficient values for the learning environment variables	47
Table 5:	Teaching environment, mean, standard deviation and p-value scores differentiated according to gender.	49
Table 6a:	Differences in mean values between respondents who passed and those that failed the June examination	50
Table 6b:	Differences in mean values between respondents who passed and those that failed the December examination	51
Table 7:	Gender differences in learning approaches and outcomes.....	52
Table 8:	Correlational scores on presage variables.....	54
Table 9:	Mean and standard deviation scores of the process and product variables	55
Table 10:	Composite correlational matrix	58

List of Figures

Figure 1.	Gross participation rates for students between the ages of 20 and 24.....	5
Figure 2:	Graduation rates by race between the years 2005 and 2010	7
Figure 3:	Headcount enrolments by field of study and race for 2005	8
	and 2010	8
Figure 4:	Curriculum structure between the extended Bachelor of	10
	Commerce and the mainstream Bachelor of Commerce	10
Figure 5:	Biggs' 3P Model of student learning approaches to learning	18
Figure 6:	Comparison between June and December assessment outcomes	56

List of Appendices

Appendix A: Letter to the Head of School of Economics and Finance

Appendix B: Approval from the Head of School of Economics and Finance

Appendix C: Invitation letter to the students and their informed consent form

Appendix D: Questionnaire

Appendix E: Ethical clearance letter

Appendix F: Frequency scores and subscales

Appendix G: Turnitin certificate

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

One of the key pedagogical research questions in education is about the link between the “teaching inputs and learning outputs” (Shanahan and Meyer, 2001:259). This question seeks to gain an understanding of factors that influence and impact on the students’ learning and academic performance and, whether these factors are different from the students’ and teachers’ perspectives. Learning outputs include students’ academic performances and students’ perceptions of their learning experiences. The inputs, on the other hand are both exogenous and endogenous to the student, both as an individual and a collective. Exogenous inputs refer to those variables that are external to the students, such as the curriculum, and the teaching and learning environment that is provided by the academic institution where the students are enrolled for their studies. Endogenous inputs refer to those variables over which the students have influence or control such as students’ attitudes towards their studies and their learning approaches. This study interrogates this link between learning inputs and outputs in the South African context by focusing on the students in the second year Augmented Economics tutorials in the extended Bachelor of Commerce programme at a South African university. The extended Bachelor of Commerce programme is commonly known as BCOM4 because of the minimum four years it takes to complete the studies.

Augmented Economics is one of the core modules offered to university students registered for the extended Bachelor of Commerce programme. The module is a supplement to the mainstream economics modules. Students enrolling in the second year Augmented Economics write the same examination as the students in the mainstream economics modules. The Augmented Economics is an academic development initiative intended to support student learning. The extended Bachelor of Commerce programme is intended for students from resource-disadvantaged schools (Lubben, Davidowitz, Buffler, Allies and Scott, 2010). The assumption is that had these students gone to well-resourced schools, they would have performed better in their high school grade 12 final examinations. These grade 12 examination results determine who gets admitted to university for studies, the fields of study

students can be admitted to at the university and consequently, the careers students can follow. As a result of attending poorly-resourced schools, the students from these schools are admitted into the extended Bachelor of Commerce programme with lower points than their counterparts from better-resourced schools, as shown in Table 1. Those students that attend better-resourced schools are admitted to the mainstream Bachelor of Commerce programme that has a minimum completion period of three years. A look at table 1 shows the differences in admission requirements between the extended and the mainstream Bachelor of Commerce programmes. These differences include socioeconomic conditions as proxied by the schools classification, and the academic performances between the under-resourced and well-resourced schools. For example, students from previously disadvantaged communities and schools are admitted to the extended Bachelor of Commerce with a minimum grade 12 aggregate points score (APS) of 28, compared to the mainstream's APS of 31.

Table 1: Admission and programme requirements for Extended and mainstream Bachelor of Commerce programmes

CRITERIA	EXTENDED BACHELOR OF COMMERCE PROGRAMME	MAINSTREAM BACHELOR OF COMMERCE PROGRAMME
Grade 12 mathematics ¹	Level 3	Level 4 OR 5 ¹
School decile ²	1-8	Any
Socioeconomic status	Previously disadvantaged	Any
Total aggregate point score	28	31
Programme duration	4 years	3 years

¹ Mathematics requirement is level 4 for Bachelor of Commerce general and level 5 for Bachelor of Commerce in accounting major.

² Alternatively, schools are classified into quintiles ranging from quintile 1 (decile 1) being the least resourced to quintile 5 (decile 10), being the most resourced. For the BCOM4, targeted schools are those in quintiles 1 to 3 (deciles 1 – 8).

1.2 Extended Bachelor of Commerce programme

The extended Bachelor of Commerce initiative is the university's response to the government policy of widening access to higher education to include students from those communities that were previously disadvantaged by the previous dispensation (DoE, 1997; DoE, Lubben, *et al*, 2010; Van der Berg, 2008). Government policy is stated clearly in outcome 7 of the National Plan for Higher Education in South Africa (DoE, 2001) which states that there is a need to increase "equity in access and success rates of students in higher education, which include increased enrolment numbers for identified groups like Black and female students" (p.10).

The policy imperatives mentioned above are informed by the current socioeconomic and political realities that include a high unemployment rate among the youth (70%) (Statsa, 2011), skills shortage in critical sectors of the economy (DoE, 2009; DoE, 2006; Erasmus and Breier, 2009) and high student drop-out rates in higher education institutions (CHE, 2007). In an attempt to give meaning to the policy of widening equity of access to higher education, the government funds initiatives like the extended Bachelor of Commerce programme at a number of South African higher education institutions. However, the push for an increase in student enrolment in higher education institutions presents these institutions with a number of challenges. One of these challenges is the increase in student failure and drop out rates. This increase raises questions about the students' preparedness for higher education, and curriculum responsiveness to the new students entering these institutions (CHE, 2007). Some of these challenges experienced by the higher education institutions are mainly originating from the inadequate primary and secondary schooling systems (DoE, 1997; CHE, 2007). A few of these challenges are briefly discussed below to give the context in which this study is conducted.

1.3 Higher education challenges in South Africa

Research shows that the challenges encountered and experienced in higher education institutions include poor student preparation. This is due to poorly equipped primary and secondary schooling system that does not prepare students for higher education (CHE, 2007; Van der Berg, 2008; Bezuidenhout, Cilliers, van Husen, Wasserman and Burch, 2011, Rollnick and Magadla, 2008). The poor schooling is manifested by the students' lack of critical thinking, low numeracy skills and inadequate academic literacy (Zikhali and Bokana,

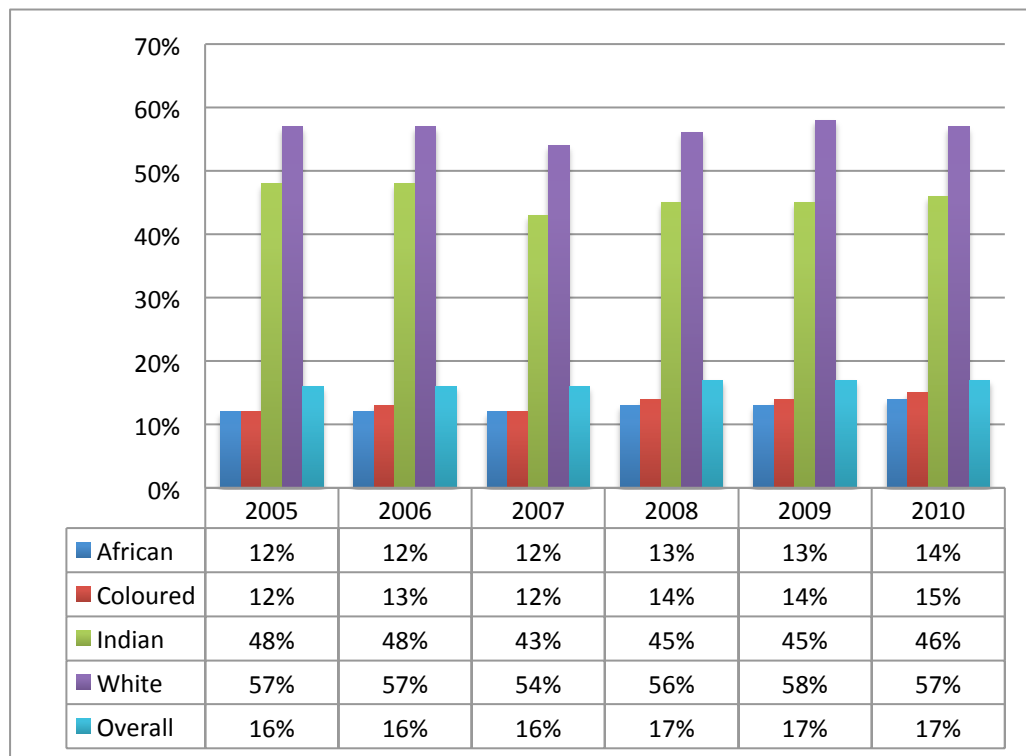
2012). Another contributing factor to higher education challenges is the poor socioeconomic conditions faced by many African communities (DoE, 2001; Van der Berg 2008). These are the communities that are targeted by the government in its policy of widening access and equity of access. Poor socioeconomic conditions experienced by students mean that these students do not have access to recreational facilities, live far from higher education institutions, and do not have an environment conducive to learning outside the university premises/facilities. These factors are, it is argued, contributing to high student drop out and failure rates at universities (CHE, 2009).

1.4 Manifestation of higher education challenges

1.4.1 Gross Participation rates

The problem of critical skills shortages is highlighted by the low gross participation rates in higher education by the South African youth aged between 20 and 24-years old. While the government's stated target of gross participation is 20% for South Africans aged 20 to 24 years old, (CHE, 2007, CHE 2009; CHE, 2012) the actual data in Figure 1 shows that there is still more work to be done to achieve this target. Compounding these challenges is the racial gaps in poor student performances as shown in Figure 1.

Figure 1. Gross participation rates for students between the ages of 20 and 24



Source: CHE 2012, p.2

Figure 1 shows a disturbing trend in that over 5 years, the overall gross participation rate is stagnant and only rose by 1% from 16% to 17% in 2008. It has since stuck to 17% from 2008 to 2010. Also, a racial decomposition of the overall gross participation rate shows that Coloured and African students have far lower gross participation rates than their White and Indian counterparts. As a result the overall gross participation for all South African youth has only marginally increased from 16% to 17% in the years 2005 to 2010. This, however is not to say absolute Figures of gross participation have not changed. Nevertheless, the increase in absolute numbers has not been substantial enough to cause a change in the ratio or proportional terms. The significance of this situation is that it also relates to higher education student drop-out, enrolment and throughput rates (CHE, 2007; CHE 2012). It is in this context, therefore, that the government policy advocates for deliberate strategies that will attract and support the students from the target groups at higher education institutions (DoE, 2001).

The immediate question is how can or should this situation be addressed? Government and higher education institutions' initiatives such as extended and/or alternative programmes seem to be part of the attempt to address the situation highlighted above and shown in Figure 1. A related phenomenon to the situation in Figure 1 and the foregoing discussion is that of student learning in higher education. In this regard, issues such as the students' approaches to their studies, and the factors affecting their learning and academic performance become topical. These issues are the core of the investigation by this study.

1.4.2 Throughput Rate

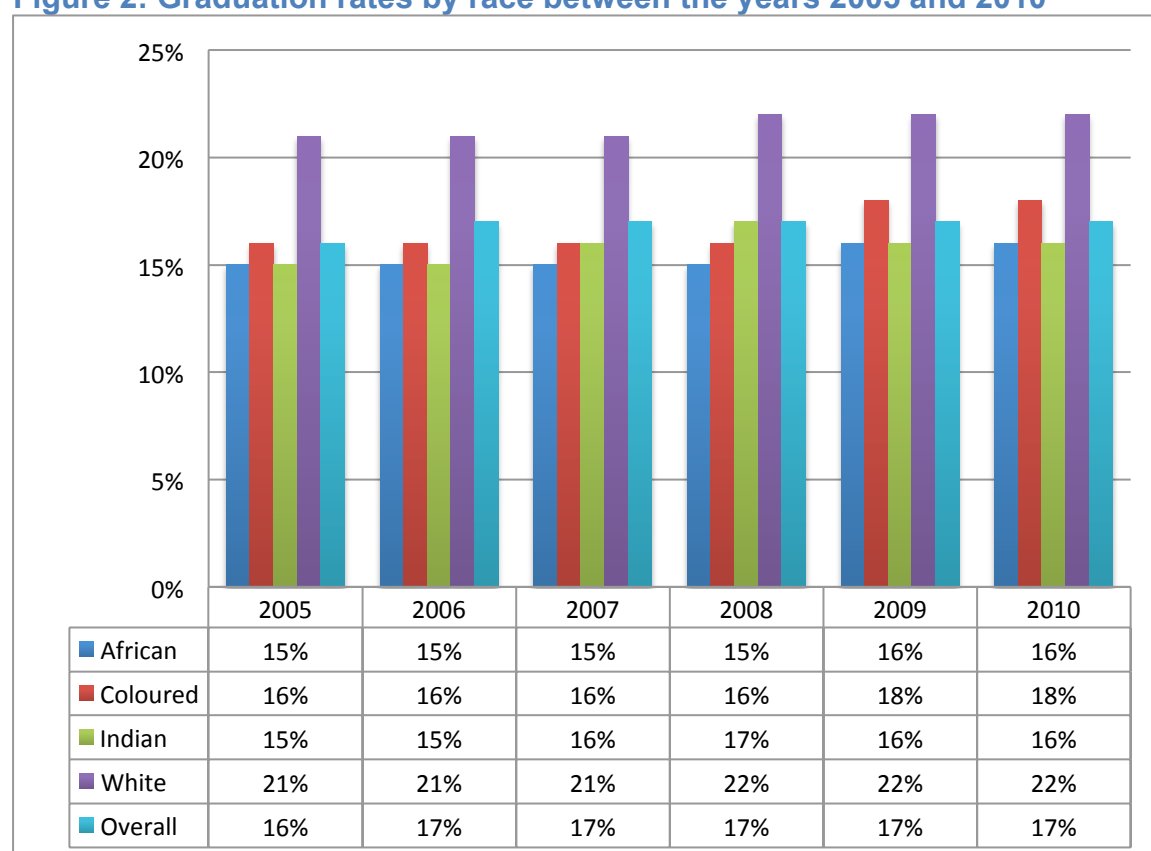
The number of the students that graduate from higher education institutions in South Africa is closely monitored. Of particular interest is whether the throughput rates are responding to the national imperatives identified by the government in the White Paper (DoE, 1997; DoE, 2001). Such a response should form part of the critical issues that are taken into account when admitting the students to higher education institutions. To do that the following should be paramount to the decision makers' minds when allocating resources and facilities to the students, and when developing and implementing the curriculum in higher education institutions. The issue of student engagement with the curriculum is of particular interest in this study, and is accordingly dealt with extensively.

A CHE (2007) study found that in South Africa, based on the year 2000 cohort, an average of only 28% of the students take a period of five years to complete their undergraduate studies. These undergraduate studies, however, require a minimum study period of three or four years. Another 22% take more than five years to complete their undergraduate or diploma studies. The remaining 50% were found to drop out before they completed their studies. Such staggering drop out and poor throughput rates have many consequences for South Africa's social order and stability, economic development and growth, knowledge production and skills development, to mention but a few.

The above situation is exacerbated by the racial disparity in student performances as manifested in higher education throughput rates. While the racial differences in the student performance do not form part of this study, it is worth highlighting these realities as they give the background to the need for academic programmes such as the extended Bachelor of Commerce programme being dealt with in this study. Figure 2 shows the data that is similar

to the CHE's study that was mentioned above, albeit in a different focus area, viz racial differences in academic performance.

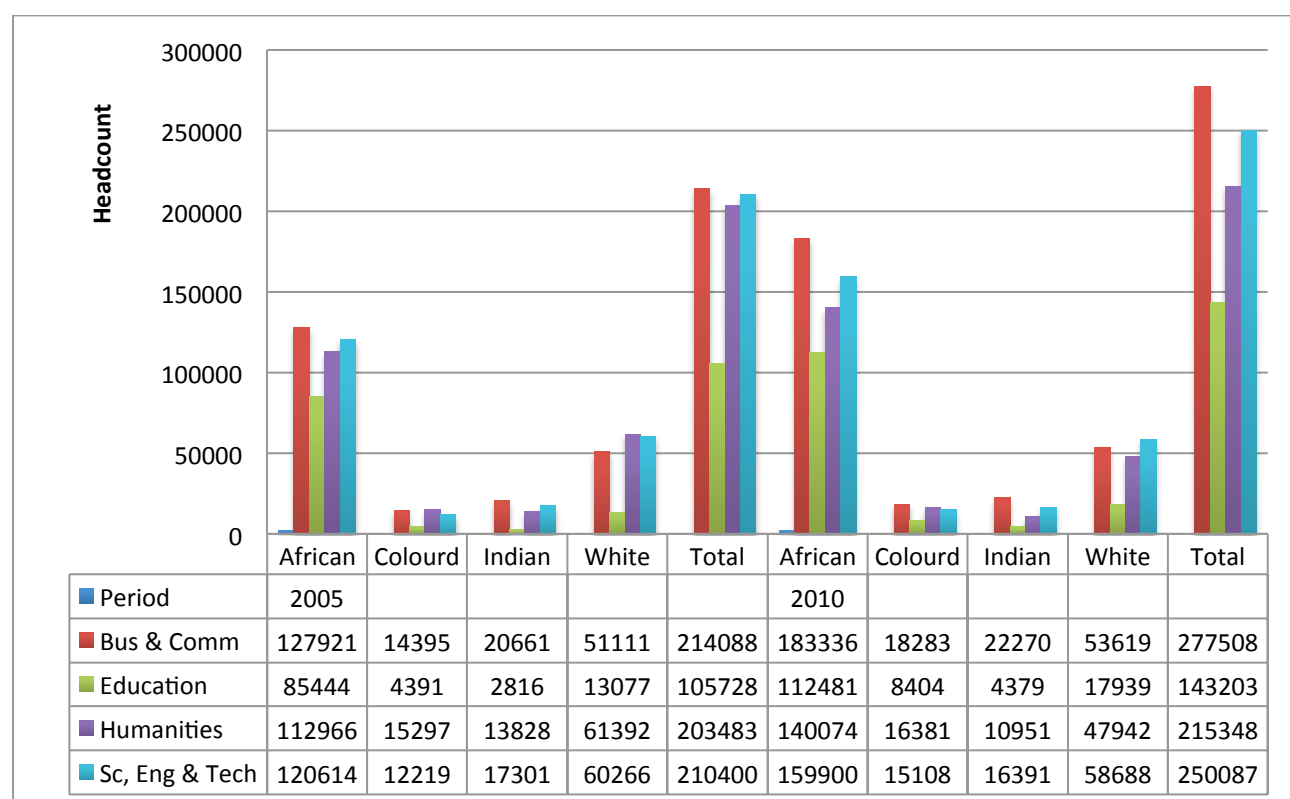
Figure 2: Graduation rates by race between the years 2005 and 2010



Sources: CHE, 2012, p.9

Figure 2 shows that the graduation rates of the different race groups. The data, according to CHE (2012) is for all traditional, contact teaching universities (as opposed to universities of technology, and excludes UNISA). The percentage figures are ratios of total number of students who enrolled at the university for the first degree. (CHE, 2012). Figure 2 shows that African students have the lowest completion rate (shown by graduation rates) of all the race groups at 16% in 2010, 1% below the average rate of 17%. The 2010 graduation rates both individual race groups and collectively, show a 1% increase over time from the 2005 Figures. Figure 3, however, shows a positive picture in absolute numbers; especially for Black and Coloured students that have increased from the 2005 figures to almost double in 2010 in such disciplines as business and commerce.

Figure 3: Headcount enrolments by field of study and race for 2005 and 2010



Source: CHE, 2012, p.25

More telling in Figure 3 is the increase in headcount for African and Coloured students in all the disciplines. These figures should auger well for the government's policy of widening access to higher education for the previously disadvantaged students. Viewed against the background of the skills shortages especially in such disciplines as business and commerce, and science, engineering and technology (SET) such increases in enrolments can do much to increase the supply of those critical skills which are in short supply in the South African economy (DoE, 2006; Erasmus and Breier, 2009). However, as demonstrated by the participation rates in Figure 2, the fact that Blacks take longer to complete their first degree programmes and the decline in White and Indian student enrolment between 2005 and 2010 especially in SET mitigate against the increase in enrolment figures for the Black and Coloured students.

The above situation means that one of the national imperatives identified in the White Paper (DoE, 1997): the need to improve throughput rates for Black and female students, is not

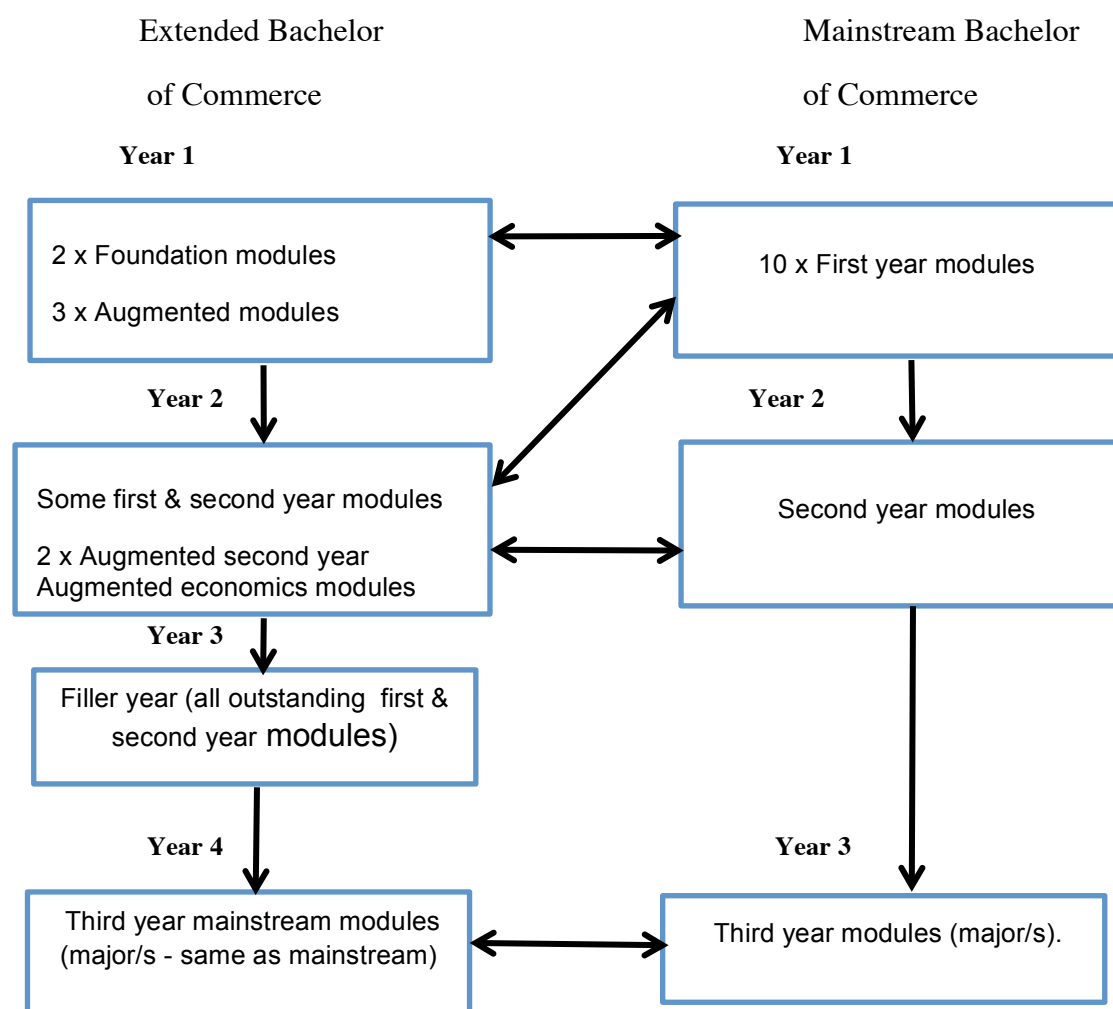
being met. Most recent statistics show that unemployment among Black³ youth is five times higher than that of their White counterparts (STATSSA, 2011). It is common knowledge that education improves people's potential to be employed. The data from STATSSA (2011) should not be surprising if dealt with against the backdrop of the data presented in Figures 1, 2 and 3. The main issue to be addressed against the foregoing discussion should be the strategies and initiatives that need to be implemented to address the situation as presented by the data already presented in Figures 1, 2 and 3. This study involves students on the programme that is attempting to address some of these issues that are highlighted in this discussion. Whilst it is not the focus nor the objective of this study to highlight the racial aspect of the problems, it is by default that the extended Bachelor of Commerce is only attended by Black students. The data and the foregoing discussion were presented to highlight the rationale behind the creation of the extended Bachelor of Commerce programme since all the students in this study are from this programme and just happened to be Blacks. However, the fact that these students are all Black, especially Africans is by default (i.e. their socioeconomic situations) and not the focus of this study. The focus of the study is on the programme irrespective of who are participating in it.

1.5 Focus of the study

Against the background of challenges faced by the South African youth, especially the Black students in higher education, this study focuses on the South African university students studying in an extended Bachelor of Commerce programme. The students are all registered for a second year Augmented Economics module. It was highlighted in Figure 2 that Blacks, have a low graduation rate even in business and management. Augmented Economics is a compulsory module for all students studying towards the extended Bachelor of Commerce programme, a qualification that falls under the business/management category in terms of CESM as shown in Figure 2. Students enrolled under the extended Bachelor of Commerce programme receive additional support both academically and administratively. The programme structure for the extended Bachelor of Commerce, shown in Figure 4, is intended to enable the students to build and improve on their numeracy and language literacy skills. These skills are assumed to prepare the students for the more demanding and complex mainstream and higher level modules (Zikhali and Bokana, 2012).

³ Blacks, in the South African context, refer collectively to African, Coloured and Asiatic race groups.

Figure 4: Curriculum structure between the extended Bachelor of Commerce and the mainstream Bachelor of Commerce



Adapted from Zikhali and Bokana, 2012

To help the students improve their numeracy, critical thinking and language literacy skills, there is heavy focus on foundational and augmented modules in the first year of their study. This provision of augmented and foundational modules is reduced during the students' second year to enable them to gradually assume the responsibility for their learning and become more independent. In the third year of study, there is no further structured academic assistance offered to the extended Bachelor of Commerce students other than that offered to all the students in the university system. However, the extended Bachelor of Commerce

students remain in the extended Bachelor of Commerce monitoring system until they complete their studies and graduate. This is done for student monitoring purposes.

1.6 The second year Augmented Economics modules.

Economics is one of the core modules that students must pass in order to graduate with a degree of Bachelor of Commerce. Students in other disciplines enrol in economics but not Augmented Economics. Augmented Economics is an academic development (AD) module intended for students in the extended Bachelor of Commerce degree. According to the faculty handbook, the second year Augmented Economics is pitched at intermediate level in terms of the module content, is divided into two modules: macroeconomics and microeconomics. These modules are offered separately each module over a semester. Students are required to have passed a first year introductory augmented macroeconomics module with 50% or higher before they can enrol for the second year macroeconomics, the same applies for microeconomics. Both second year modules are intermediate in terms of its content.

The second year Augmented Economics modules are offered as supplementary modules to the mainstream economics modules. While attendance at the mainstream modules is not enforced, attendance at the Augmented Economics modules is compulsory and students are required to attend a minimum of 80% of the tutorial classes in order to gain admission to the final examinations. The final examination consists of 50% multiple choice questions (MCQs) and 50% essays.

The tutorial attendance registers are kept and monitored by the university staff responsible for the management and administration of the extended Bachelor of Commerce. Tutors are responsible for the signing of the attendance registers by the students.

The first and second semester second year Augmented Economics are the only modules that are offered to the students in the extended Bachelor of Commerce in their second year. The students are expected to take up other modules their mainstream counterparts would have taken in the second year. Figure 4 shows the differences between the curriculum for the extended Bachelor of Commerce and the mainstream Bachelor of Commerce programmes. A closer look at Figure 4 reveals that students in the extended Bachelor of Commerce have a slightly lighter module load in their first and third years compared to their mainstream counterparts. This was intended to afford the extended Bachelor of Commerce students the

space to build their academic competencies by being offered additional academic support, while at the same time participating in some of the mainstream modules.

Progression from the first to the final year takes four years in the extended Bachelor of Commerce while it takes only three years in the mainstream. The first year in the extended Bachelor of Commerce is characterised by a heavily scaffolded tuition and a reduced workload compared to that of the mainstream. The scaffolding includes foundation and augmented modules, academic monitoring and non-academic support. The rationale behind this approach is that students in the extended Bachelor of Commerce should be supported to help them develop their linguistic, numeracy and critical thinking competencies as these are assumed to be lacking due to poor schooling in under-resourced and socioeconomically under-privileged communities (Bokana, 2010; Zikhali and Bokana, 2012). At the same time, these students are assisted so they can handle better the transition from high school to university learning and environments.

1.7 Key research questions

The major focus of this study was on the students that are enrolled in a second year Augmented Economics as part of their curriculum. The critical questions asked in this study were:

1. What institutional factors affected these students' learning experiences of Augmented Economics? For the purposes of this question, institutional factors were limited to those directly related to or having to do with the university in which the students were studying second year Augmented Economics.
2. How did the students experience learning in Augmented Economics tutorials? To answer this question, it was necessary to look at the role played by the students, and the influence these students had in their own learning.
3. Was there a relationship between students' learning experiences in Augmented Economics and learning outcomes? And what was the significance of that relationship?

These three research questions required the identification of factors that affected students' learning experiences, as experienced by the students themselves and from their perspective.

This approach marked a departure from the large body of research that shows studies dealing with students' experiences but mainly from the institutional or academics' perspective (Kember and Leung, 2008; McCullough, 2008, 2008; Frick, Chadha, Watson and Zlatkovska, 2010). This study focused exclusively on the students in the extended Bachelor of Commerce programme who had registered for the second year Augmented Economics modules. This was done so that these students' responses could be dealt with undiluted or not influenced by those of the other students not in the extended Bachelor of Commerce programme. This is very important for the extended Bachelor of Commerce programme as there are other students from the mainstream Bachelor of Commerce programme who also take part in Augmented Economics to help themselves cope with their mainstream economics modules. While the data from these students may be useful, it is not desirable in this study as these students may not have been exposed to the other modules and support initiatives of the Extended Bachelor of Commerce programme.

1.8 Rationale for the study

Since the start of the extended Bachelor of Commerce programme in 2004, there has never been any in-depth or rigorous evaluation of the programme. Modules offered in the programme have never been evaluated to determine if they are achieving the desired outcomes or impact. At least there is no evidence of such an exercise and the author of this study is best placed to know of any such activity because of the employment responsibilities. This observation is considered valid by the author of this study due to his extensive, day-to-day involvement in the extended Bachelor of Commerce programme since 2004. The lack of research in second year economics in South Africa is also highlighted by Horn, Jansen and Yu (2011).

Course and module evaluations serve as important feedback tools in course reviews and the effectiveness of teaching (CHE, 2004); Griffin, McInnes, Coates and James, 2003). The absence of such evaluations deprives module and programme designers of invaluable information about the strengths and weaknesses of the programme, the modules and the need for keeping or updating the modules. Furthermore, evaluations provide feedback to the academics and the support staff involved in the management, the delivery of those modules and the student assessments (CHE, 2007).

This study is undertaken as a preliminary exercise to explore how the students experience learning in second year Augmented Economics. The CHE (2004:59) points out that “[s]tudent learning is arguably the core business of the higher education (HE) endeavour, and students are key participants in the learning process. Therefore student opinion on courses ... is one of the most direct measures of teaching and learning quality”. It is therefore hoped that the findings of this study will be a useful indicator and provide some feedback about the Augmented Economics tutorials to the decision makers as to:

- Whether effective learning does take place in the second year Augmented Economics tutorials;
- How students approach learning and teaching in second year Augmented Economics;
- Any shortcomings in the second year Augmented Economics teaching and learning; and
- What roles do the students assume in their learning in the second year Augmented Economics.

It is important that the information about the Augmented Economics modules is received from the students as they form an important constituency of the stakeholders in teaching and learning in higher education.

1.9 Study limitations

There are three major limitations to this study:

The first is the size of the sample and the population. At a sample size of 37, and a total a total population of 110, the numbers are fairly limited. However, studies have been conducted on similar numbers and the results have been accepted as credible, valid and reliable (Loyens, Gijbels, Coertjens and Cote, 2013). It is of note though that a number of studies have been conducted using significantly bigger numbers. The justification that can be advanced in this study is that the available student numbers are limited to those registered in the extended Bachelor of Commerce programme at the institution. The generalizability of the findings due to the sample size could be of concern especially if these findings are to be generalised over other institutions and different programmes.

The second limitation is the focus of the instrument used on student perceptions only without probing such factors and variables as the tutor qualities and tutoring skills. Whilst some of

these qualities and skills are inferred in some of the items on the questionnaire, they are not direct enough to make a meaningful assessment of the individual tutors' contribution to the students' learning experiences in second year Augmented Economics. A further questionnaire would have been necessary to capture this aspect but such an exercise is outside the scope of the instrument used in this study.

The third limitation is the scope and time-frame of the study. To be thorough in probing students' learning experiences in second year Augmented Economics, a longitudinal study would have yielded a clearer picture of the students' input. However, such a study would require to be undertaken over a period of time. Such a period of time would not be feasible under the time frame allowed for this study, neither is such in-depth data a requirement for this study.

The fourth limitation is the presage information on the students' factors, such as their intrinsic and extrinsic motivational factors. These factors would have contributed to the better understanding of the relationship between learning outcomes and learning outputs. However, as Smith and Ranchhod (2012) pointed out, it is very difficult to find suitable proxies for measuring these variables and yet their omission increases the possibility of data bias.

1.10 The structure of this study

This study is presented over five chapters that are divided and subdivided, respectively into a number of topics and subtopics. Specifically, this dissertation is presented over five chapters as follows.

Chapter two discusses the research work that has already been done on the topic of student learning experiences. This is done by discussing the literature review of research that has made major contributions. The literature review presented in chapter two is not exhaustive, but a selection of some of the work that has been found to be more relevant in terms of the focus, vigour and depth. The theoretical framework on which this study is framed is also discussed in Chapter two.

Chapter three presents the methodology employed for the dissertation enquiry. In this chapter, participants are identified and their characteristics presented. The methods and techniques used to gather and process the research data are also discussed.

In Chapter four, the findings are presented and discussed, based on an analysis and interpretation of the data..

The conclusion of the study and the recommendations based on the findings from the data are presented in Chapter five, which is the final chapter of the study.

Summary

Chapter one introduced the purpose of this study by first dealing with both the socioeconomic and academic challenges in the South African higher education landscape. The purpose of the study was given as the investigation into the students' learning experiences in the second year Augmented Economics, and the justification was that the impact of the module as an intervention has never been assessed. The study is premised on the three critical research questions that are aimed at dealing with the phenomenon from the students' point of view as the students have first-hand knowledge of the factors that affect them in terms of their learning and their learning outcomes.

The next chapter looks at the educational research that has been undertaken on the subject of student learning.

CHAPTER TWO

LITERATURE REVIEW

Introduction

Chapter one introduced the topic, background and the rationale for undertaking this study. This chapter will review, though not exhaustively, the literature that has been published on the subject of student learning. While this study deals with university students, the published literature also includes research and studies done on lower level learners such as those in primary and high school education. The literature being reviewed in this chapter focuses on factors affecting student learning and the relationship between student learning and academic outcomes.

2 Theoretical framework

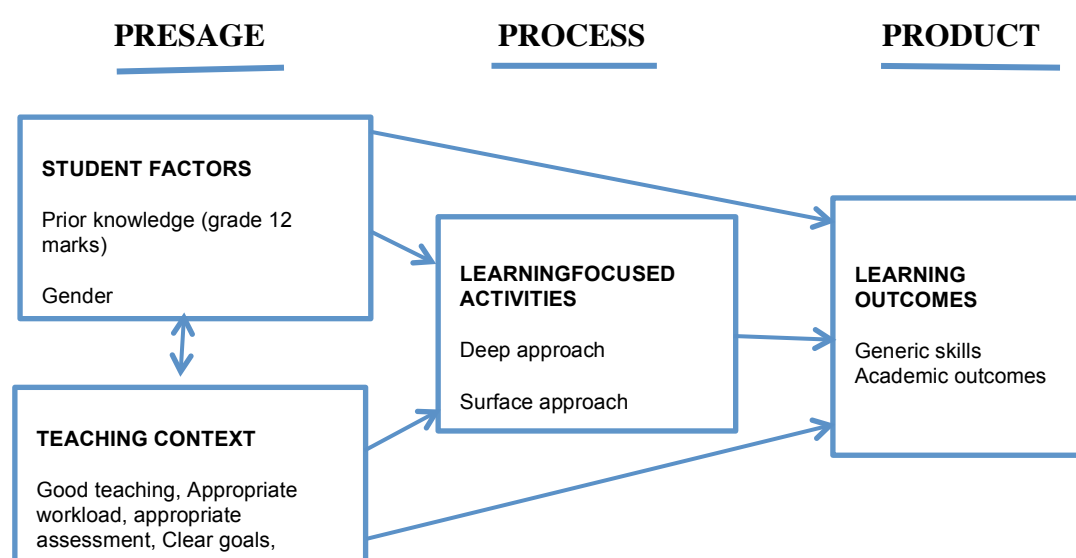
In the questionnaire there are statements that seek to establish students' learning approaches, as advanced by the Biggs' (1987) student approaches to learning theory that is discussed in detail later in this chapter. The results from the students' responses (Appendix F) to those statements show that:

1. Personal involvement in the learning by activities benefit the students and there is long-lasting knowledge acquisition;
2. Students see an increase in their knowledge stock as a benefit to themselves.

Based on these two points, an observation is made from the students' responses showing that students develop their learning into short term and long term objectives. An example of short term learning objectives include learning in order to succeed in the exercise. The two points in the preceding paragraphs were observed from the students' responses about their approaches to deep learning. These observations are also confirmed by Byrne, Flood and Willis, (2002). In their study of the relationship between the accounting students' learning approaches and outcomes, Byrne *et al* (2002) found that deep learning is characterized by the intention to understand. There is vigorous interaction with the content of the subject and that there is a relationship between new ideas and previous knowledge.

Using individual items, the questionnaire probes different factors that affect the students' learning experiences. The three key research questions of this study seek to establish how the students experience learning in second year augmented economics; the institutional factors that affect students' learning; and the relationship between the students' learning experiences and their learning outcomes. To answer these questions this study relies and draws heavily on John Biggs' (1987) students' learning theory, the 3P model, as shown in Figure 5.

Figure 5: Biggs' 3P Model of student learning approaches to learning



Source: Biggs (1987); Biggs, *et al*, (2001)

Biggs' 3P model postulates that there is a direct and causal link between the students' performance and the three variables of presage, process and product.

2.1. Learning experiences and academic outcomes

Research in student learning experiences and learning outcomes shows a number of approaches by which these learning experiences are measured and assessed. Depending on the paradigm, theoretical and conceptual frameworks being adopted, these studies use either quantitative, qualitative or mixed methods (Cohen, Manion and Morrison, 2007; Cavana, Delahaye and Sekerat, 2001; Neuman, 2011).

Literature on students' experiences of learning is dominated by studies of course experience (Ramsden, 1991; Biggs, Kember and Leung 2001) and of the study approaches adopted by students (Ramsden, 1991; Lyon and Hendry, 2002; Vermunt, 2005; Diseth, 2007; Guner and Riza, 2008; Law and Meyer, 2011; Dolmas, Wolfhagen and Ginns 2010). Both groups of studies include the relationship between course experience, learning approaches and the learning outcomes. As Kyndt and Cascallar (2011) found in their study of factors affecting student learning, there is no conclusive empirical evidence on factors that affect how students experience learning and how these experiences relate to learning outcomes. This finding is also confirmed by Hamilton and Singwhat (2013) in their research on blended teaching in higher education. Some authors like Biggs (1991), Ramsden (2003), and Kember and Leung (1998) found, using quantitative methods that a strong relationship exists between certain student learning experiences and learning outcomes. Others such as Lizzio, Wilson and Simmons (2002) have found contradictory relationships between learning experiences and learning outcomes depending on the discipline in which a course is located.

The preceding discussion reveals the wide and divergent nature of paradigms prevailing within the subjects of student learning, learning experiences and learning outcomes. Literature on these topics is further reviewed below by attempting to focus on each of these topics separately.

2.2 Conceptions of learning

Students' conceptions of learning are considered to be crucial factors in student learning outcomes (Biggs, *et al*, 2001; Chiou, Liang and Tsai, 2012) in that they influence the students' academic performance. Chiou, *et al*, (2012) consider conceptions of learning as generally referring "to an individual's understanding or belief about learning" (p.168). Entwistle, *et al*. (2004) differentiate between concepts and conceptions of learning. *Concepts* refer to traditionally accepted and widely used terminology that has a shared meaning within a particular community. On the other hand, *conceptions* of learning is an individual-specific concept, whose meaning and interpretation differs from individual to individual, depending on each individual's sociocultural predisposition and prior knowledge. The importance of the concepts and conceptions of learning will become clear later when analysing the data of this study as the questionnaire has items that relate to this phenomenon.

2.3 Student approaches to learning

The pioneers of research in the student approaches to learning (SAL) are Marton and Saljo (1976) and Biggs (1987). Others who have made significant contributions include Kember and Leung (1998), Trigwell, Prosser and Waterhouse (1999) Biggs, *et al*, (2001) and Duff (2004). The research on SAL is based on the work done by educational psychologists Marton and Saljo (1976) that gave rise to the recognition of two distinct groups of students. The one group seeks to understand the material being learned and the other group wants to reproduce the material being learned. Research in SAL has developed further and seeks to understand and explain the causal relationship between student learning, learning strategies and their academic performance (Duff, 2004). Entwistle (1990) describes approaches to learning as involving the individual student and the learning environment to which the student is exposed, meaning that an approach to learning is an individual-student specific phenomenon. When seeking a causal relationship between student approaches to learning and the outcomes of learning, a positivist paradigm of educational research has often been adopted (Cohen, *et al*, 2007; Neuman, 2011). This study also follows a positivist approach as it attempts to explain the same causal relationship using quantitative data.

The main focus of SAL is on students' strategy, their motive for learning and the factors that affect that strategy and motive (Duff, 2004; Phan and Deo 2007). These phenomena are determined by establishing:

1. The approach students adopt or choose when faced with a learning task;
2. The rationale, reason or justification for learning: whether it is to succeed in an assessment, increase knowledge or to acquire a specific skill in order to execute a task.

To explain the constructs of SAL, researchers in the field of student learning (Biggs, 1987; Ramsden, 1991; Biggs and Tang, 2007; Entwistle and Tait, 1990) have identified three dominant study approaches by the students, namely :

- (i) Deep learning
- (ii) Surface learning
- (iii) Strategic.

These three approaches to learning are briefly discussed below to highlight the differences between them and their relationship with the learning outcomes. The strategic approach to learning will not be discussed in this study because research on this learning approach has yielded contradictory and mixed results, according to a number of studies quoted by Duff (2004). The focus is, instead on the other two approaches to learning, *viz.* the deep learning and the surface learning approaches.

2.3.1 Deep approach to learning

First identified by Marton and Saljo (1976), and later confirmed by Biggs (1987) and Ramsden (1991) the deep approach to learning is characterized by the students' search for meaning and understanding of the concept and material being learned. Goel (2009: 280) argues that "deep learning requires learners to create integrated, coherent and trans-contextually transferrable meaning at deeper contextual and revelational levels". This brief discussion of the deep approach to learning shows that this approach requires students to be active participants in their learning processes in order to gain deeper meaning and to make their own contributions to their learning process. In the deep learning approach, the students become active participants in both the learning and knowledge creation and increment.

For these learners to be active participants and make meaningful contributions to the learning process, they need to draw from their sociocultural background and experiences. As Goel (2009) indicated, students as human beings continually give meaning to both the external and the internal world, and themselves. Human beings construct the relationship between these two phenomena based on their experiences. The relationships between the meaning students construct about the world and themselves is most relevant to this study's research question about internal and external factors that influence these students' experiences of learning in second year Augmented Economics.

Prior experience to multi-faceted and complex situations is most likely to influence students to adopt a deep approach to learning (Goel 2009; Parpala, Lindblom, Komulainen, Litmanen and Histo, (Parpala, Lindblom, Komulainen, Litmanen, & Hirsto, 2010)2010). When students adopt a deep approach to learning, their learning outcomes are argued to be of high quality and long-lasting (Biggs, 1979; Entwistle, and Hounsell, 1979; Ning and Downing, 2010). Biggs (2001) conducted a study that further sought to establish if there was any relationship between the deep approach to learning and academic performances by the students. In that

study, Biggs (2001) found a strong relationship between the quality of the outcomes and the deep approach to learning by the students.

2.3.2 Surface approach to learning

According to Goel (2009: 8), a surface approach to learning is natural but not automatic, and “is driven by voluntary and/or involuntary efforts made in response to stimulating experiences”. Students’ responses to learning are therefore informed and influenced by the learning contexts. These contexts raise students’ awareness about their inadequacy of knowledge (i.e. knowledge gap). Kyndt, Dochy, Struyven and Cascallar (2011) describe surface approach to learning as being characterised by intentions that are extrinsic to the learning tasks at hand.

Biggs (2001) Entwistle, McCune and Walker (2001), Ramsden, 2003; Goel (2009) and Kyndt *et al* (2011), give the following characteristics of the surface approach :

1. Learning is superficial;
2. Learning is incoherent;
3. The meaning of learning and material being learned is disjointed; and
4. Emphasis is on the outcome rather than on learning.

Surface learners thus tend to reproduce learned material and learn by rote. These are the main characteristics of surface approaches to learning and have been highlighted by other researchers (Furham, Swarmi, Arteché and Charmoro-Premuzic, 2008; Laird, Kuh and Scwarx, 2008).

A surface approach to learning has been associated with courses that require the execution of repetitive tasks such as in science, mathematics and in such academic training as engineering (Biggs, 1979; Ramsden, 2003; Sharma, Mendez and O’ Brien, 2005). Interestingly, very few studies on students’ learning approaches have been done in commerce or management courses other than, to a limited extent, in accounting (Duff, 2004; (Lucas & Mladenovic, 2004) and Mladenovic, 2004; Horn and Jansen, 2008). Yet economics is one of the most common courses studied by students in commerce and management especially in their first two years, irrespective of the area of specialisation. It is this lack of extensive research in student experiences of learning economics that has motivated this study.

2.3.3 Differences between deep and surface approaches

From the above literature review on the two student approaches to learning, the major differences that can be highlighted between deep and surface approaches to learning are motive and strategy. Those adopting a deep approach to learning are intrinsically motivated. The knowledge they acquire is long-lasting and they adopt a constructive strategy, characterised by cognitive engagement (Pintrich and De Groot, 1990). Constructive in the sense that they want to engage with the learning material by creating and increasing their knowledge. They want to give meaning to the learning material they are engaged with. On the other hand, those employing a surface approach to learning are motivated by success in the assessment (i.e. learning outcome) and adopt a strategy involving the reproduction and memorization of the learned material, without necessarily linking it to its context (Biggs, 1987; Pintrich and De Groot, 1990).

As will be discussed in more detail in section 2.5, Biggs' (1987) 3P model provides this study with the theoretical framework on which to base the data analysis and interpretation. The 3P model postulates that students' academic performance is a function of both the approach to learning and the student-specific as well as institutional variables. These three main factors, namely presage, process and product, each contain a number of variables.

Based on Biggs (1987) 3P model, the learning approaches adopted by students are dependent on presage: prior knowledge, experience and metacognition. The main determining factors of the process (i.e. the learning strategy) are both the personal and institutional factors. This determination by Biggs (1987) and Ramsden (1991), later reinforced by Duff (2004) has major implications on how institutions teach and on the course objectives. Where emphasis is on the product, as is the case in South Africa where throughput rates are used as indicators of good performance (CHES 2007), succeeding in examination is the main focus of academic performance. From such analysis, it can be argued that students are most likely to focus more on the outcomes than on knowledge acquisition. This situation manifests in students who graduate with poor appropriate and generic skills that should have been developed during the students' formal learning lives. The lack of these skills is highlighted by Smith and Kruger (2008) as a concern in the South African business community.

A few studies have been conducted in South Africa on the factors that impact (either positively or negatively) on student academic performance (Horn and Jansen, 2008; Horn and

Jansen, 2009; Parker, 2006, Smith and Edward, 2007; Smith and Ranchhod, 2012). Whilst the number of these studies is limited and the majority is on first year economics, the findings are useful as they can be generalised to other courses. These studies provide insight into how different teaching strategies and approaches affect student performances. However, these studies focus mainly on the institutional factors, which are exogenous to the students. Horn and Jansen (2008) for example, discuss the impact of the summer school programme mainly from the institutional perspective, which deals mainly with teaching as opposed to student learning. On the other hand, Parker (2006) focused on the student characteristics to the exclusion of the process variables. Smith and Edwards (2007) and Smith and Ranchhod (2012) focused their studies on the impact of academic development programmes on students' academic performance. The latter studies focused mainly on the assessment to the exclusion of such institutional variables as good teaching, clear goals and appropriate workload. Also, the studies mentioned above were not conducted from the students' perspective, a major difference to the current study. This study on students' learning experiences in second year Augmented Economics addresses the question of student learning by including both the student-endogenous and student-exogenous variables well as the learning strategies. This study deals with all the 3Ps found in Biggs model of student learning, which is discussed further in Section 2.5 of this chapter.

2.4 Student Course Experience

SAL is but one of the areas researchers have and continue to look at to try and explain the relationship between student learning and learning outcomes. Previous discussions in this study showed that this SAL is a student-focused and student-specific construct (Duff, 2004). It is influenced by motive and strategy as determined by the student. But what about cases or instances when the situation determines the strategy and the motive for the student? This section deals with such instances when factors determining the motive and strategy are dictated from outside the student's control.

To measure how students approach their learning, researchers solicit students' perceptions of their learning experiences. The theoretical justification for this approach is that student factors and institutional factors jointly impact on the learning and teaching processes. These processes in turn, impact on the students' resultant learning outcomes, as observed by Hamilton and Singwhat (2013) in their study of the impact of blended teaching on the student

performance. Also, soliciting students' perceptions of their learning experience allows the students to express how they perceive the relationship between their personal variables and the learning environment as represented by the institutional factors such as teaching, assessment, workload and clear goals for the module. A number of studies including Lizzio *et al* (2002) have shown that students' positive perceptions of the teaching environment have positive influence on both the academic (quantitative) and non-academic (qualitative) learning outcomes

The Course Experience Questionnaire (CEQ) is the instrument that is used to quantitatively measure students' learning experiences. The responses to the CEQ are used to generate the information about both the student-determined and institutional factors affecting student learning experiences and learning outcomes. The CEQ has been widely used in the Western and Australian universities as an academic performance indicator (Webster, Chan, Prosser and Watkins 2009; Ramsden, 1991) and as an accountability tool for reporting to governments (Lyon and Hendry, 2002). The CEQ is widely used according to Ning and Downing (2011:766) to "assess students' learning experience... The instrument is designed to collect data from the perspective of the student". Students' learning experiences are analysed using four subscales of the CEQ that are aimed at measuring different focus areas affecting learning (Ramsden, 1991; Griffin, *et al*, 2003; Ning and Downing, 2011). These four subscales are :

1. Good teaching
2. Clear goals and standards
3. Appropriate workload
4. Appropriate assessment

The literature on these four scales is reviewed in the following sub-sections by looking at each subscale individually. Each subscale has a number of items that seek to capture students' response variability. This study uses the CEQ as an instrument for data gathering.

2.4.1 Good teaching

Good teaching is a highly subjective topic, hence the plethora of teaching theories and ever changing paradigms in the teaching discourse (Bloemer, Hodkinson and Billet, 2004). Put differently, what is good teaching is dependent on the individual's standard used to define

what good teaching is. The question about good and not good teaching is also highly contested, depending on the respondent's paradigm and perception of the phenomenon of teaching (Bezuidenhout, *et al*, 2011, Diseth, Pallesen and Larsen, 2010).

Researchers have found a strong relationship between students' perceptions of good teaching and their conceptions of learning (Kember, Jenkins and Ng, 2004). In a number of studies about the relationship between students' learning experiences and academic performance, statistically significant results have shown that students' perceptions about good teaching are positively correlated to their good learning outcomes (Duff, 2004; Kember, *et al*, 2004; Ellis, Goodyear, Brillant and Prosser, 2008; Diseth, (Diseth A. , Pallesen, Brunborg, & Larsen, 2010) Brunborg and Larsen 2007). For example, in a study of the relationship between course experience and good teaching, Duff (2004) found that 75% of those students who perceived learning to be an engaging exercise, identified student-based teaching as promoting good learning and learning outcomes. On the other hand, those students who thought their teachers were putting more emphasis on the outcomes, had a poor perception of teaching, a finding confirmed by Kember and Wong (2000).

In South Africa, Scott and his colleagues (CHE, 2007) have identified the under-preparedness of both the secondary teachers and the lecturers as one of the main contributors to poor teaching and student learning. As a consequence, the students are deemed to be poorly prepared for university education, or at university the students graduate with inadequate skills, take longer to graduate or are being academically excluded due to poor academic performance (CHE, 2007; CHE, 2012; Smith and Kruger, 2008). So there is a strong relation between good perceptions about good teaching and learning outcomes as highlighted by the White Paper's emphasis on the development of students' intellectual capacities through learning (DoE, 1997).

Good teaching is also a focus of the Higher Education Quality Committee (HEQC) through its emphasis on quality assurance in teaching (HEQC, 2002). It is therefore clear that the question of good teaching is of great concern in the South African education system in general and higher education in particular. It is this connection between good teaching and the students' performance that forms part of the investigation in this study.

2.4.2 Clear goals and standards

The goals and standards subscale of the CEQ is intended to measure the quality of a course from the students' point of view (Risser, 2010, Frick *et al*, 2010; Biggs, 1987). Factors being considered in this subscale include the objectives of the course and the competency, which the students are expected to demonstrate or achieve (Lyon and Hendry, 2002). In a study about students' conceptions of learning, and clarity of goals, Lyon and Hendry (2002) concluded that providing students with clear learning outcomes helped enhance students' curiosity and reduced uncertainty about what was expected of the students in terms of performance standard. In the same study, Lyon and Hendry (2002) identified uncertainties and lack of clarity of goals as the major impediments to students' positive learning experiences. The need for clarity of goals and standards was further confirmed by Trigwell and Prosser (1991) in their findings of strong positive correlation between clear course objectives and learning outcomes. In another study that included Webster and Watkins (2009), it was found that students who had clear goals also had higher scores in assessments.

The clear goals and standards subscale of the CEQ shows the importance that should be given to this subscale when developing courses and designing the curricula. In this study, one of the questions seeks to establish whether students understand the goals and standards of the second year augmented economics. The literature review shows that this is one of the variables that has not received adequate attention from the South African researchers. The search done by the author of this study on various search engines, including Google Scholar and the Ebscohost yielded results that were of limited use. However, since teaching has been found wanting by many in South Africa (CHE, 2007 and CHE, 2012; Smith and Kruger, 2008), it can be argued that clear goals and standards will also be of major concern.

2.4.3 Appropriate workload

When a course is developed, notional hours are included to indicate the total amount of time students are expected to spend on the module to achieve the stipulated learning outcomes. These notional hours include lecture attendance time, study time, practicals time and examination time. From this study researcher's experience, the reasoning behind notional hours is that students who allocate the sum total of notional hours are expected to have gained enough of the competencies targeted in the course aims. Kyndt, *et al*, (2011) however, argue that it is difficult to determine objective workloads. The use of study hours as a proxy for

workload assumes that all students learn at the same pace and have the same level of grasping and processing information. Alternatively, allocating hours of study assumes that all students share the same learning characteristics. Other variables that affect workload include students' learning styles, study approaches, prior learning experience and motivation (Garmendia, Guisasola, Barragues and Zuza, 2008). In the South African context, socioeconomic factors impact on workloads. Students known to the researcher prior to this study have identified difficult home conditions, for example, as compromising their ability to cope with their workloads.

Confirming the difficulty of using study hours to allocate and measure workload, Kember (2004) dismissed this notion on the grounds that time allocated is not the same as the actual time utilised undertaking a learning activity. Other researchers such as, Entwistle and Ramsden (1983) identified two categories of workload. The first category is about the psychophysical demands that are placed on the individual student. These are psychological, physical and social demands the individual student deals with as a result of engaging in the learning activities. For example, the groups of people a student lives and interacts with as a result of the learning will be categorised as social pressure.

The second category on workload relates to the actual execution of the learning activities by the individual student. This category takes into account the amount of work and the time it takes to complete that work. Kember (2004) rejected the use of hours as a measure of appropriate workload on the basis that such an approach creates perceived workload as opposed to the actual amount of work. According to Kyndt, *et al*, (2011: 395), "perceived workload is a feeling by the individual student of the pressure for workload that particular student is subjected to in order to achieve the stated learning outcomes". The picture emerging from the different views on what appropriate workload is shows one thing: there is no agreement on the definition.

The perception of appropriate workload is also dependent on the respondents' frame of mind, the context in which the student views the workload and the prevailing circumstances (Gijbels and Stryf, 2008). While appropriate workload is not an easy subscale to measure, it is nonetheless an important variable to consider in student learning experiences. Ning and Downing (2011), have added time management and concentration as important factors in perceived workload. In this regard, Ning and Downing (2011) argued that students who manage their time appropriately and have good concentration spans are most likely to have

positive perceptions about their workload. These students do not perceive their workload as overwhelming or unduly pressurizing (Mottet, Parker-Raley, Beebe and Cunningham, 2007). In this study, respondents were asked about their workload. This was done to establish if there was any relationship between this variable and the students' academic outcomes.

2.4.4 Appropriate assessment

Hargreaves (2007) defines assessment as a measurement of the learners' achievement and progress in a learning environment. Assessment, in other words, measures progress or the successful attainment or failure of attainment of desirable outcomes that are a direct result of the learning activity. Hargreaves' definition of assessment makes it a requirement that there is a direct link between assessment and learning since assessment is intended to ascertain the attainment of certain competencies that would have been acquired through learning. In this regard, assessment plays a pivotal role in student learning.

Boud and Fakhikov (2006) identified tensions caused by mismatches between the tools used in learning assessment, the rules used in learning and the assumptions students have about learning goals and the uncertainty about the assessment objectives. These tensions include failure of assessment to adequately and intellectually challenge the students being assessed, and to sometimes differentiate between what the student knows and understands and what the student is expected to know and understand.

Kember (2004) argued that "assessment which tests understanding ...inspires students to work hard and long towards high quality learning outcomes" (p.182). This raises a question whether there is assessment that does not test students' understanding or levels of competency. To answer this question, Edwards and Bruce (2004) suggest reflective assessment that will help enhance students' learning strategies to achieve desirable outcomes such as developing generic skills. Reflective assessment, according to Edwards and Bruce (2004) differs from traditional (or summative) assessment in that it is part of student learning. Assessment in this case is not intended to establish or ascertain whether students have attained the required level of competency in the subject. It is rather part of the learning strategy that is designed to allow the students to approach learning through deep enquiry.

Reflective assessment is an alternative to traditional, summative assessment, which is somehow 'retributive' if students do not show the expected level of competency on the

course outcomes (O'Sullivan, Harris, Hughes, Toohey, Balasooriya, Velan and Kumar, 2012). In a study by Ruohoniemi and Lindblom-Ylande (2009) on the relationship between assessment and academic outcomes, it was found that alternative assessment such as portfolio assessment was sighted as enhancing learning and leading to better learning outcomes. In this instance, portfolio assessment refers to an assessment practice whereby students wrote a self-reflective report on their academic performance highlighting their areas of academic weaknesses and how they intended rectifying those weaknesses. These students' reports formed part of their works' assessment. The main advantage that can be deduced from this kind of assessment is the acknowledgement and acceptance by the students that they have deficiencies and the students become part of the solution to those learning or performance deficiencies.

Hargreaves (2007) also differentiates between formative and summative forms of assessment. Formative assessment is deemed to encourage student learning and contributes to positive learning experience as it seeks to enhance learning, provide feedback and is a collaboration between the student and the teacher. Formative assessment is an on-going activity that is part of the learning process. On the other hand, summative assessment measures what the students have learned at a predetermined period in time. Summative assessment, Hargreaves (2007) argues, is outcomes-focused and promotes rote learning and assesses declarative knowledge without requiring students to understand the context in which that knowledge is framed. Summative assessment does not require students to reflect on personal experiences. Students whose academic performance is assessed summatively are concerned with reproducing the learned material even though they may not be able to apply the knowledge. The graduates' inability to apply the learned skills is highlighted by Smith and Kruger (2008) as a major concern to the employers of South African university graduates.

3. Generic skills

Biggs' student approaches to learning theory is an integrated attempt to explain the various factors that influence student learning (Biggs, 1993). The main thrust of the 3P model is on student learning. The 3P model attempts to explain the learning processes and the learning outcomes from the students' perspectives. It is this focus of Biggs' 3P model that made it most attractive to this study in that the study seeks to explain the learning experience from the students' perspectives.

At university level, students engage in both discipline-specific as well as non-discipline specific modules. Discipline-specific modules like the Augmented Economics are intended to help students gain in-depth and specialist knowledge in their areas of specialization. Non-discipline-specific modules are intended to enrich the students by broadening their knowledge and their generic skills. Where students perceive the knowledge they acquire from their academic training to be relevant to their areas of specialization and transferable to other areas that may not even be academic, they “perceive their studies to have fostered the development of generic skills identified as being valuable outcome of university education” (Lyon and Hendry, 2002:344). Other authors (Smith and Kruger, 2008) have concurred with Lyon and Hendry’s view and argued that university training should include non-academic skills which are also considered by employers as crucial. Such skills improve university graduates’ employability (Smith and Kruger, 2008). In their studies of the employability of graduates in South Africa, Smith and Kruger (2008) and Raftopolous, Coetzee and Visser (2009) identified the following generic skills as among the most valuable when seeking employment:

- Basic skills including literacy and numeracy;
- Communication skills which include conflict management and negotiation;
- Management skills such as planning, organising and decision-making;
- Intellectual skills such as analysis, critical thinking, creative thinking and problem-solving;
- Interpersonal skills like team work, networking and competitiveness.

These skills are not necessarily taught or assessed in lectures but they form a vital part of learning as seen when students are given assignments as individuals and as groups, for instance. In the Augmented Economics tutorials, these skills are indirectly enforced by requiring the students to submit their assignments and are penalised if the assignments are submitted after the deadline. Compulsory tutorial attendance is another form of developing students’ generic skills in that they are required to work as teams during tutorials, an experience they will otherwise not know if they are not attending the tutorials.

The two constructs of SAL and the four subscales of CEQ form a vital foundation from which to interrogate the relationship between the students’ learning experiences in second year Augmented Economics and their learning outcomes as manifested by their academic

performance in the form of examination marks and generic skills. This is the objective of this study and CEQ provides data that is useful towards measuring students' perceptions about both the student and institutional factors affecting student learning experiences, as has been established through the literature review earlier in this study.

Based on Dunkin and Biddle's presage-process-product mode (Zhang and Bernardo, 2000) the term student approaches to learning was first identified by Marton and Saljo (1976) when learning was qualitatively differentiated according to how students perceived the requirements of their learning tasks, and their perceptions of the learning strategies that were required to accomplish those learning tasks.

The tenet of the student learning theory is the recognition and acceptance of the role played by formative experiences which are acquired through prior learning experiences, in determining the present learning strategies (Figure 5), and the impact of the learning environment on student performance (Duff, 2004). In turn, these learning strategies influence the outcomes of the learning process which in an education setting are the academic outcomes and generic skills. The student learning theory includes the role the educational environment and the individual student's attributes play in the learning process. In this study, the educational environment is represented by such factors as appropriate assessment of the Augmented Economics, good teaching by the tutors of the Augmented Economics, the appropriate workload that students had to do in the module, and the clear goals of the module. the students' factors include the students' grade 12 marks, their ages and gender.

There are three constructs of the student approaches to learning theory. They are presage, process and product (see Figure 5). Biggs referred to these constructs as the 3P model (Biggs, 1987, Biggs *et al*, 2001). According to Biggs and other researchers each of the three constructs has a number of variables that influence the learning process. The two subscales of the presage constructs are correlated in that they influence each other (Biggs 1987; Zhang and Bernardo, 2000; Biggs *et al*, 2001). The example or scenario below demonstrates the bidirectional relationship nature between the presage subscales.

A student's response to the teaching method (i.e. teaching context) may be influenced by that student's prior knowledge of the subject. In turn, the student's prior knowledge of the subject may influence how teaching takes place. For example, certain concepts in augmented economics such as the elasticity of demand, require students to have prior knowledge of

calculus. Teaching students without prior knowledge of the calculus will affect how the module is taught in terms of the terminology used and the duration of the teaching.

The above scenario shows the bidirectional relationship between the presage subscales or variables. The influence of the presage variables on the process variables can be observed in a scenario where a learning task needs to be performed. For example, if there is an econometric problem, the student will be required to reproduce the formula, thereby adopting a surface approach to learning. In this case the student responds to a process variable by employing a student-context variable in the form of a learning style and prior knowledge. On the other hand, the learning approach adopted, which is either the surface or the deep approach to learning, will also be influenced by that student's perception of the teaching the student received from the teacher as well as that student's prior learning experience and ability.

Lastly, the learning outcomes are influenced by the approach adopted in the process variables stage of the student learning. The learning outcomes for the students in this study are the June and December examination results, and the generic skills the students acquire from the Augmented Economics tutorial classes. If the learning outcome is perceived by the student to require a reproduction of learned work, as is the case with quantitative modules like mathematics and science, that require the reproduction of formulae, the student will be expected to adopt a surface, reproductive learning approach, which in turn is influenced by the teaching approach and the student's ability to employ the required strategy (process variable). These scenarios while not exhaustive, demonstrate the relationship between the 3P model and the influence one construct or set of constructs (or variables) has on other constructs or variables.

In this study the students' input about their learning was solicited using a questionnaire as an instrument for data gathering. The students' responses were analysed and explained using the student approaches to learning theory and the 3P model as the theoretical framework. The 3P model posits that the students are better placed to provide accurate information about their learning experiences and perceptions because they have first hand, primary knowledge and information on the phenomenon (Biggs, 1993). In this study, Biggs' 3P model is used to explain the students' learning experiences in second year Augmented Economics in terms of the relationships between the three relational constructs that Biggs (1987) found to impact on the student learning experiences. These constructs are presage, process and product variables.

As already highlighted at the beginning of this section, Biggs' 3P model provides a conceptual framework within which the relationship between the institutional and personal factors that affect student learning experiences can be explained. These situational (institutional) and personal (student-specific) variables in turn, influence the approaches students adopt in their learning and studying. The approach to studying and learning affects how students perform in their academic assessment. It is the attraction of this conceptual framework in providing the constructs within which students' learning experiences can be investigated and explained from the students' perspective that makes this theoretical framework the most suitable for this study. In particular, the 3P model enables an interrogation of the inter and intra relationships of the variables across the model as the model captures both the behavioural and the cognitive aspects of the student learning processes.

Of note in the South African literature on student learning experiences is the lack of evidence of research on student performance in second year economics in general (Horn and Jansen, 2009). As Smith and Ranchhod (2012) noted, even less research has been done on the impact of educational interventions on economics and other subjects especially on students from socioeconomically disadvantaged communities. This study addresses both challenges by using the internationally developed CEQ instrument as well as conducting this research on an education intervention module attended by socioeconomically disadvantaged students. While the majority of the literature consulted on student learning in South Africa does not differentiate between student learning and teaching, this study focuses on student learning in order to deal with the subject from the students' point of view. This is the primary objective of Biggs' 3P model (Biggs, 1987; Biggs, 1993) as posited in the SAL theory.

Summary

To provide the foundation and the basis for answering the research questions, chapter two presented the factors affecting student learning experiences and offered a theoretical framework for the study. The student learning factors are their approaches to learning (SAL) and their experiences of the modules. The SAL has two sub-variables, namely, deep and surface approaches to learning. These two sub-variables were discussed in a comparative manner, highlighting the differences and characteristics as well as their contexts. The major differences between the deep and surface approaches to learning are that the deep approach to learning is characterised by the search for meaning and is intrinsic to the student. The surface

approach to learning on the other hand is characterised by repetition and reproduction of the learned material without necessarily understanding it.

The theoretical framework that underpins this study is Biggs' (1987) 3P model of the student approaches to learning theory. The justification or the rationale for using the 3P model was the equilibrium the model maintains between the three variables of student learning. These variables are the presage, process and product. These variables are interrelated and are discussed from a student's perspective since learning is experienced by the student. As the purpose of this study is to provide preliminary findings on the students' learning experiences in the second year Augmented Economics, the 3P model provides the most ideal theoretical framework as it deals with the casual relationship between the different constructs of learning (Biggs, 1993).

CHAPTER THREE

METHODOLOGY

Introduction

Chapter three presents the methodology used in this study to gather, analyse and interpret the data. The study is located within the positivist paradigm. This paradigm is characterised by its emphasis on the deterministic and causal relationships between human behaviour and the results of that behaviour (Neuman, 2011; Cohen, *et al*, 2007). In this instance, this study seeks to determine the relationships between the 3Ps and the questionnaire is used as a data gathering instrument.

As in any good study, the goodness of measure is an important criterion in establishing whether the instrument used actually measures the variables that are theorised (Cavana, *et al*, 2001; Punch, 2005) in the literature and in this study. The data validity and consistency as the goodness of measure are also addressed in this chapter. The first point in this chapter deals with the data collection instrument.

3.1. Data collection

3.1.1 The instrument

Various instruments have been used to solicit students' input about their learning. These instruments range from Ramsden's (1991) Course Experience Questionnaire to a variety of variants of study skills inventories including Entwistle and McCune's (2004) Approaches and Study Skills Inventory (ASSIST), and Biggs' (1987) Study Process Questionnaire (SPQ), among others. This study used the Course Experience Questionnaire instrument to gather data that was used to explain the students' learning experiences in second year Augmented Economics. A variant of the CEQ has been used in South Africa (Watkins and Mboya, 1997) to test its validity on Black South African students.

In this study, the questionnaire used is an adaptation of Ramsden's (1991) CEQ and Entwistle, Tait and McCune's (2000) Student Approaches to Learning (SAL). These two instruments comply with Biggs' 3P model and both focus on the presage, process and product variables of the 3P model (Ramsden, 1991; Biggs, 1987), as shown in Figure 5. The 3P model postulates that students' prior academic knowledge, learning environment, gender and their course experience together with students' approaches to learning are critical determinants of the students' learning outcomes. Learning outcomes may be academic (examination results) and non-academic (generic skills).

The CEQ instrument and its variants have been widely used in student learning research (Gordon, 1999; Lyon and Hendry, 2002; Diseth, 2007; Webster, *et al*, 2009; Chiou, *et al*, 2012). In this study, the wording has been adjusted to be second year Augmented Economics module-specific. However, phrases have been left intact so the meaning and stated objective of each and every item on the questionnaire are not changed or influenced in anyway.

The main advantage of the CEQ instrument is that it has already been extensively tested for internal consistency, validity and credibility when it was developed (Biggs, 1987) and used by various researchers (Chiou, *et al*, 2012; Diseth, Pallesen, Hovland and Larsen, 2006). Many studies done using the CEQ instrument have yielded the results that show validity and consistency (Ramsden, 1991; Biggs and Tang, 2007; Duff, 2004; Diseth, 2007). Where there were errors or flaws, these have been rectified by subjecting the CEQ instrument to more rigorous tests (Diseth, 2007). For these reasons, the CEQ instrument has been chosen to ensure that the outcome of this study passes the validity, consistency and credibility tests (Burnett and Dart, 2000).

However, to confirm the internal consistency of the data in this study the Cronbach alpha test coefficients of the seven sub-scales were computed using the SPSS version 19 computer software programme. The results show Alpha coefficients ranging from 0.034 to 0.805, as shown in table 2

Table 2: Alpha Test Coefficient Results.

VARIABLE	SUBSCALE	
Presage	Clear goals	0.166
	Good teaching	0.787
	Appropriate workload	0.487
	Appropriate assessment	0.429
Process		
	Deep approach	0.034
	Surface approach	0.034
Product		
	Generic skills	0.805

To measure the internal consistency of the items within each of the variables, (i.e. whether the items within each of the variables are intercorrelated – they are all measuring related characteristics or factors), the Cronbach Alpha scores were calculated. The closer to the value 1 the score, the more internally consistent the items are. The converse also holds.

The questionnaire used in this study consisted of 29 items; 26 of these items are grouped into the variables that are subscales of the 3Ps (variables) of the Biggs' model. The 3Ps and their subscales are shown in Table 2 and they required respondents to select statements they agreed or disagreed with or indifferent to.

These statements were categorised in the Likert scale from 1 to 5: with 1 indicating strong disagreement; 2 indicating disagreement; 3 indicating neither agreement nor disagreement; 4 indicating agreement and 5 indicating strong agreement with the statement to which a response was sought. The advantage of using the Likert scale was that respondents were asked to quantify their perceptions and thoughts. However, it should be noted that the Likert scale is a subjective measure and ranks the responses in no hierarchical order. This means that responses that have been assigned the value of 1 are not less important or have lower value than those that have been assigned any other figure, e.g 3 or 5.

Of the remaining 3 items in the questionnaire, two were qualitative, open-ended statements that asked the respondents to state their opinions about the quality of the Augmented Economics tutorials, how these could be improved and the last item asked the students about the number of the tutorials they missed. The responses to the last three items were not used in

this research because these responses were so varied, and, in many instances, incomplete, that further investigation would be required if these responses were to be used. A possible correlation (negative or positive) between the learning approach, the learning outcomes and the number of tutorials missed could have been established and analysed had the respondents fully responded to the relevant item in the questionnaire.

The instrument design for this study was not intended for follow up on respondents. However the students' responses may serve as a launch-pad for further research in future.

3.1.2 Sample selection

In 2011, there were 110 students registered in second year Augmented Economics. The students in Augmented Economics are a subgroup of the mainstream students studying for a Bachelor of Commerce programme.

The students in the second year Augmented Economics tutorials were targeted because they have been at the university for at least three semesters, equivalent to 1.5 years. As such, the assumption of this is that these students have a good understanding of the university teaching and learning system and processes (Eley, 1992), as opposed to first year students who would be grappling with transition from high school to university life and education.

The approach used in this study's sample selection is what Cavana *et al*, (2001) call judgement sampling – a situation where only the subjects best suited/placed to provide the required information are selected. In this case, the students registered for second year Augmented Economics were best placed to provide information regarding learning experiences in second year Augmented Economics tutorials.

3.1.2 Sample characteristics

The participants comprised of 14 (38%) males and 23 (62%) females. Their ages ranged from 19 to 25 years. The grade 12 scores ranged from 26 to 36 points. This range is lower than that of the mainstream students' whose grade 12 marks range from 31 to 42. The minimum grade 12 aggregate point score (APS) required to register for a bachelor of commerce programme in the mainstream is 31 points. The demographic and biographical data was obtained from the university records during this researcher's normal activities at the

place of employment. The researcher was required to work with students' biographical data on a regular basis and as a result, that data was always at the researcher's disposal.

3.1.3 Response rate

70 questionnaires were distributed to the students who volunteered to participate. Of these, 40 (57%) returned their questionnaires. Of the 40 questionnaires returned, 3 (7.5%) were incompletely filled-in. These 3 questionnaires were not used in the generation of the results of this study due to the missing information. The requirement for each questionnaire to be processed was that all the 26 items that were on a Likert scale had to be responded to. For the data to be valid and credible when using the Likert scale, a minimum of between 10 and 30 respondents is required (Cavana, 2001). In this study, there are 37 respondents, representing a response rate of (53%) of the students who volunteered to participate in the questionnaire, and (34%) of the total second year Augmented Economics student population.

3.1.4. Data collection process

Attitudes, experience and perceptions are highly subjective variables. As such, quantifying them can yield varying results. However, asking respondents to answer a battery of items provides the researcher with summative answers that even out the individual item measurement errors (Cavana, 2001). Generally, questionnaires have no right or wrong answers since they seek to understand or solicit a respondent's views, opinions or perceptions. This study questionnaire is no different in that there are no right or wrong responses. This characteristic of the questionnaire assures respondents not to fear the possibility of being poor performers, in terms of their responses.

The questionnaire offered the researcher and the respondents a number of advantages in this study:

- As the questionnaire had to be completed by the students, they were not subject to possible variations in instructions from the researcher, for example, the paraphrasing of the item statements (Pribyl, 1994).
- The elimination of researcher-bias since all students were responding to the same items without the researcher's voice which may vary from one student respondent to

another. For example, the researcher may emphasise different items to different respondents, thus resulting in different responses by different respondents but to the same items.

- Responses were easy to tabulate when collecting data from the questionnaire. This was more so once the format of data recording or tabulation was created.
- The questionnaire was cost-effective and time-efficient. Once the questionnaire was printed, there were no further financial outlays like in telephonic or face-to-face interviews. These latter methods of data collection are also time consuming as the researcher would have had to engage the students at a time that would have been convenient usually to the respondent and may not be convenient to the researcher.

There are also disadvantages for using a questionnaire as a data collection instrument. These disadvantages, according to Pribyl (1994) include the following:

- Lack of detailed information about the responses since the respondents were choosing their responses from a given list. In this study's questionnaire, respondents were given 5 choices ranging from 1 to 5 for each item. This disadvantage was minimised by first engaging with the potential participants whereby this researcher explained the items and their respective responses. This was done in an effort to ensure that respondents understood the issues being raised by the questionnaire items. However, there is no guarantee that the problem may not have arisen when the students completed the questionnaire of this study on their own.
- Misinterpretation and misunderstanding of the questions is another disadvantage of the questionnaire that may lead to unintended responses being advanced. This possible disadvantage was addressed in this study questionnaire by explaining the items in the questionnaire and inviting the respondents to ask questions during the information session and at any time during the completion of the questionnaire.

This study's researcher requested and obtained permission from the head of the school to involve the second year Augmented Economics students in this research (see Appendices A and B). The researcher visited the students in their tutorial groups and briefed them on the

nature, and the purpose of the research. A letter confirming the purpose of the research and the role of the students was also read (refer to Appendix C). Students were then invited to participate by answering the questionnaire (refer to Appendix D). Furthermore, the students were informed that their participation was voluntary, and that they could withdraw their participation from the research at any stage before the processing of their responses by the researcher of this study. Also, students were informed that their names and identities would not be revealed in the study or its findings and that their responses to the questionnaire would be kept in a safe place at the university for 5 years; thereafter, they would be destroyed. These conditions also apply to the electronic data relating to this study. Once the students had decided that they wanted to volunteer to participate in responding to the questionnaire, they were requested to complete and sign the consent letter confirming and acknowledging their voluntary participation in the research (refer to Appendix C).

After the volunteering students had signed their letters of consent, the researcher distributed the questionnaire to respondents to complete in their own time and return the completed questionnaire to the researcher within five days. For five days from the fifth day after handing out the questionnaire to the students, the researcher collected the completed questionnaires from the students at the beginning of the Augmented Economics tutorials.

All the questionnaire sheets that were returned by students, with the letter of consent duly completed and signed, were checked to establish if all the items had been responded to. Those questionnaire copies that were returned with the consent letter separated were then stapled with the letters of consent from the student respondents.

3.2 Data analysis

3.2.1 Scores

The SPSS computed the raw scores from the respondents and produced the following data:

- Mean scores;
- Standard deviation scores;
- P-value scores;
- Alpha values scores; and
- Frequency scores.

These scores provided the data from which observations and analysis of this study are based regarding the students' learning experiences of Augmented Second Year economics.

To ascertain the quality of the data, a number of tests needed to be performed. For example, to test the significance of the relationship between the variables, the t-test was computed using the SPSS computer software. Where the p-value was found to be equal or less than 0.05 (i.e. $p \leq 0.05$), the relationship was deemed to be statistically significant.

Where the result shows $p > 0.05$, the relationship is deemed to be statistically not significant in that the probability of an occurrence of an event may not be explained by the observed variable. In this study, the correlational phenomenon being observed is between the presage and product variables. If $p > 0.05$, then the presage variable does not explain the occurrence of the product variable (academic or generic skills outcome).

If $p \leq 0.05$, then the presage variable has a high probability to explain the product variable (academic or generic skills outcome). In short, at a $p \leq 0.05$ significance, there is a 95% chance that the presage variable has an effect on the product variable.

Scores

The statements requiring respondents' input in this study questionnaire are arranged both negatively and positively to prevent respondents from adopting a particular pattern in their responses. However, to standardise the interpretation of the responses, a re-arrangement of the negatively framed responses is necessary. This was done by the reversal of the scores.

In this study questionnaire, the following items in table 3 were negatively phrased and their responses have been accordingly reversed, from 5 to 1.

Table 3: Rearranged items to correct for negative reporting of the responses

ITEM	STATEMENT
4	The tutorial workload was too heavy
8	The tutorial sharpened my analytical skills
13	To do well in this module, all you really needed was a good memory
17	The tutorial staff seemed more interested in testing what I had memorized than what I had learned
25	There was a lot of pressure on me as a student in those tutorials

The scores from these items were reversed to standardise their interpretation. This reversal has no effect on the outcome of the interpretation as it standardizes the scores and not the outcome of the processing or computation of the scores. The reversal does not change the responses either.

The responses are grouped according to the subscales of the 3P subscales. To analyse and interpret the responses, the mean, alpha, p-value and the standard deviation scores are calculated from the responses and grouped according to the presage, process and product subscales. The response scores range from a minimum of 1 to a maximum of 5, in accordance with the Likert scale intervals of the questionnaire items.

The data was captured by first entering the respondents' biographical details: age and gender. The rest of the respondents' details such as grade 12 final examination, student numbers, and the second year augmented examination results were entered thereafter. The grade 12 results are an aggregate of all the subjects the students wrote in their grade 12 examinations, These details were obtained from the university record system. All the 26 items from the questionnaire requiring categorical responses were entered together with the responses from each of the 37 respondents.

3.3. Ethical clearance issues

Neuman (2011:130) points out that “researchers face pressures to build a career, gain prestige, advance knowledge, impress family and friends...” amongst other things. As a result of these pressures, there are sometimes temptations to take shortcuts knowing that “the odds of getting caught are small” (p.130). However, in the same vein, Neuman continues by warning of “public humiliation, a ruined career and possible legal action...” (p.130) if a researcher is caught engaging in an unethical research behaviour or action.

In light of Neuman's advice and warning, this researcher holds the issues of research ethics, individual rights to privacy, protection from any harm of any nature as a result of participating in this study, and the respondents' respect and dignity to the highest level. Cavana *et al* (2000) consider respondents' privacy and the confidentiality of their responses as one of the primary responsibilities of any researcher.

To conform to the University of KwaZulu-Natal's standards of research ethics, an ethical clearance was sought and written permission (refer to Appendix E) granted to conduct this study. To give meaning to the ethical clearance granted and this researcher's strong belief in conducting this research ethically, students were fully informed of their rights and their freedom to choose not to participate or withdraw their participation any time during the research. The students were also informed both verbally and in writing (refer to Appendix C), prior to them engaging in the research that their responses would be kept confidential. At the completion of this study, the dissertation was submitted to the Turnitin anti-plagiarism software to verify that this study is the researcher's original work. Appendix G is attached confirming that this work was not plagiarised.

Summary

In this chapter, the main focus was on the research methodology, how it affected this study and how the sample was selected. The rationale for choosing Biggs' CEQ was discussed as being the opportunity to get data about student learning from the students' perspectives. The instrument used to gather data from the second year Augmented Economics has 28 items consisting of 29 quantitative items and two qualitative items but the latter were not used in this study because some were incomplete.

The chapter also dealt with the sample selection and the reasons were given for selecting the second year Augmented Economics students. The reason given was that these students would have been exposed to university teaching long enough to form their opinions. The chapter ended by addressing the ethics in research. The researcher addressed the ethics issue by requesting and obtaining the ethical clearance from the university's ethics committee.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

Introduction

Following the methodology discussed in Chapter three, Chapter four deals with the data analysis and the results of that analysis are presented. The chapter is divided into three sections. Section 4.1 presents the different sets of data outputs focusing on the presage, process and product variables. In section 4.2 the data presented in section 4.1 is discussed and analysed. The chapter concludes by summarizing the data analysis and discussion presented in sections 4.1 and 4.2.

4.1. Results and analysis

The key research questions sought to establish the effect of the institutional variables on the students' learning experiences, the role students play in their learning and the relationship between students learning experiences and the students' learning outcomes in second year Augmented Economics. Biggs' (1987) 3P model posits that there is a relationship between the three constructs of presage, process, product and the student learning. The data processing undertaken using the methods discussed in Chapter three was done to answer the key research questions.

The first exercise in this chapter is to present the data as computed by the SPSS having been extracted from the respondents' responses to the questionnaire and from the student records. A number of relevant scores were produced and will be analysed in this chapter. These scores are: the alpha scores, mean values, standard values, and the p-values.

4.1.1. The institutional and student variables

This section attempts to answer the first key research question which seeks to understand the role of the teaching environment in students' learning experience in Augmented Economics tutorials. This question requires an investigation into the students' perceptions about the teaching environment in their institution of higher learning, specifically in the Augmented

Economics tutorials. The answer to this question is addressed by computing the mean and the standard deviation values of the students' responses about their perceptions of the teaching environment.

As discussed in the literature review, the presage variables can be classified into two categories, namely internal and external to the students. Internal presage variables include those qualities, attributes and achievements students possess and have attained prior to engaging in the current learning. These are formative experiences and in this study, these variables are gender, age and grade 12 results. These are student-specific variables and they differ from student to student. External presage variables are those factors over which the students have no control, yet these factors affect the student's learning. Institutional factors such as assessment, workload, teaching and the goals of a module are examples of external teaching environment variables. Table 4 shows the institutional variables, their mean and standard deviation scores (descriptive statistics) as computed from the second year Augmented Economics students' responses (see Appendix F). The mean values are the aggregate of the responses from the battery of items. While Table 4 shows the mean and the standard deviation scores, Appendix F shows the variability and frequency of these responses to individual items.

Table 4: Mean, standard deviation and Alpha coefficient values for the learning environment variables

Variable	Subscale	Mean	Standard Deviation	Alpha coefficient
Learning Environment	Good Teaching	3.81	0.78	0.787
	Clear Goals	3.86	0.47	0.166
	Work Load	3.12	0.77	0.487
	Appropriate Assessment	3.30	0.97	0.429

The learning environment deals with the institutional variables over which the students in the second year Augmented Economics have no control. Table 4 shows the students have a

positive perception about the teaching in Augmented Economics as indicated by the mean score of 3.81. The second subscale dealt with clear goals. The response to the this subscale was also a positive mean score of 3.86 indicating the students agreed that they were well informed about what was expected of them in the second year Augmented Economics. The questionnaire also sought respondents' perceptions about workload that is exerted on them by the second year Augmented Economics. The students' responses to this subscale showed slight agreement that the workload was appropriate as indicated by a mean score of 3.12, which is closer to the midpoint of 3 on the Likert scale. All the variables show a liner positive to strong linear positive scores ranging from 0.166 for clear goals to 0,787 for good teaching. These results mean that the items measured unidirectional or similar variables.

When asked to rate their perception of the appropriateness of the assessment in the Augmented Economics, the responses obtained yielded a mean score of 3.30. This mean score of 3.30 is greater than 3 which is a neutral value in the responses of this study's questionnaire and therefore indicated that the respondents agreed with the statements that the assessment was appropriate. However, the standard deviation score of 0.97 indicates that there was a divergence of responses to the battery of items for this subscale. This divergence of responses can also be observed in Appendix F.

4.1.2 The effect of gender in student learning experience

Table 4 in the preceding section dealt with the students' perceptions of the four institutional (teaching) variables. This section combines the institutional as well as the gender variables to investigate these variables' impact on the students' learning experiences.

Table 5: Teaching environment, mean, standard deviation and p-value scores differentiated according to gender.

	Gender	N	Mean	Standard Deviation	p-value
Appropriate workload	Male	14	3.1190	.69929	0.991
	Female	23	3.1159	.82639	
Clear goals	Male	14	3.8214	.46439	0.714
	Female	23	3.8804	.47595	
Appropriate assessment	Male	14	3.5357	.88718	0.248
	Female	23	3.1522	1.00493	
Good teaching	Male	14	3.9167	.69106	0.530
	Female	23	3.7464	.84517	

Significant at $p \leq 0.05$

This section seeks to establish if there are gender differences in the students' perceptions of the institutional variables. To test the equality of means between the males and female students (two groups), the t-test is used. To establish the variability of responses to the items in the questionnaire, the mean and standard deviation scores of the respondents are calculated according to their gender and are shown in Table 5. It can be observed from Table 5 that there are no significant gender differences, with $p > 0.05$ for all the variables.

Table 6a: Differences in mean values between respondents who passed and those that failed the June examination

VARIABLE	OUTCOME	N	MEAN	STD DEVIATION	P-VALUE
	EXAMINATION				
Clear Goals	Fail	18	3.81	0.42	0.772
	Pass	19	3.86	0.59	
Good Teaching	Fail	18	3.71	0.86	0.468
	Pass	19	3.90	0.72	
Appropriate Workload	Fail	18	2.85	0.66	0.040
	Pass	19	3.37	0.80	
Appropriate Assessment	Fail	18	2.89	1.08	0.010
	Pass	19	3.68	0.67	
Deep Approach	Fail	18	3.92	0.71	0.930
	Pass	19	3.89	0.79	
Surface Approach	Fail	18	3.40	0.44	0.354
	Pass	19	3.24	0.62	
Generic Skills	Fail	18	3.86	0.76	0.208
	Pass	19	3.55	0.70	

The two groups being considered in Tables 6a and 6b are those who failed and those who passed their June and December examinations, respectively. As was the case with determining gender differences, the t-test is used here to establish if there are significant differences in the students' perceptions of the presage variables between those who passed and those who failed their examinations. Table 6a compares the mean values between successful academic outcomes, as proxied by the examination outcomes, and failure across the presage, process and product variables. The comparison shows that students who achieved a positive outcome in their June examination generally agreed with the statements about clear goals, good teaching, appropriate workload and appropriate assessment. Those students who passed agreed that the workload was appropriate (mean score 3.37) while those who failed their June examinations did not agree that the workload was appropriate (mean score 2.85). This difference between the responses of the students who passed and those who failed is highly significant, with the p-value of 0.04 (or 4%).

When comparing the mean values of 3.68 and 2.89 for the appropriate assessment subscale, the message is that students who passed their June examination agreed more than those who failed that the assessment in the Augmented Economics module was appropriate. This difference in the disagreements in the responses is highly significant with a p-value of 0.010 (or 1%).

The students who failed the June examination adopted both the surface and the deep approaches more than those who passed their examinations. These results about failing students being more deep learners than those that passed the examination is puzzling since a number of researchers associate good academic performance with a deep learning approach (Entwistle, 1990; Biggs, *et al*, 2001 and Duff, 2004). However, other researchers have found that quantitative modules like science and economics can promote surface learning since the students only need to execute the formulae. Students who did not succeed in their June academic outcome agreed that the Augmented Economics empowered them with the generic skills more than those who passed their June examination. This result is supported by the literature that argues that deep learning is associated with knowledge production, seeking of meaning and understanding of the learning material.

Table 6b: Differences in mean values between respondents who passed and those that failed the December examination

VARIABLE	OUTCOME	N	MEAN	STD DEVIATION	P-VALUE
	EXAMINATION				
Clear Goals	Fail	10	3.90	0.54	0.624
	Pass	27	3.81	0.51	
Good Teaching	Fail	10	3.62	0.96	0.367
	Pass	27	3.88	0.72	
Appropriate Workload	Fail	10	3.00	0.63	0.581
	Pass	27	3.16	0.82	
Appropriate Assessment	Fail	10	3.20	1.25	0.715
	Pass	27	3.33	0.87	
Deep Approach	Fail	10	4.05	0.55	0.480
	Pass	27	3.85	0.81	
Surface Approach	Fail	10	3.20	0.51	0.424
	Pass	27	3.36	0.55	
Generic Skills	Fail	10	3.72	0.84	0.911
	Pass	27	3.69	0.71	

The main difference between Tables 6a and 6b is the magnitude of the variances between the mean values. Some, like that of good teaching, are marginally bigger in the December examination depicted in Table 6b than for the June examination results depicted in Table 6a, between those who passed and those who failed.

Table 7: Gender differences in learning approaches and outcomes

VARIABLE	GENDER	N	MEAN	STD DEVIATION	P-VALUE
Clear Goals	Male	14	3.82	0.46	0.714
	Female	23	3.88	0.48	
Good Teaching	Male	14	3.92	0.69	0.530
	Female	23	3.75	0.85	
Appropriate Workload	Male	14	3.12	0.70	0.991
	Female	23	3.12	0.83	
Appropriate Assessment	Male	14	3.54	0.89	0.248
	Female	23	3.15	1.00	
Deep Approach	Male	14	4.25	0.61	0.026
	Female	23	3.70	0.75	
Surface Approach	Male	14	3.46	0.46	0.714
	Female	23	3.22	0.48	
Generic Skills	Male	14	3.87	0.58	0.268
	Female	23	3.59	0.81	

Table 7 shows the responses between the male and the female students. As there are two groups involved, the t-test will be used to calculate the equality of means between these two groups. Both the mean and the standard deviation scores for clear goals are not significantly different between the male and the female students. At a p-value of 0.714, the gender differences to the responses are not significant.

The situation is repeated in relation to the teaching in second year Augmented Economics. At a mean and the standard deviation of 3.92 and 3.75, respectively, both groups agreed that teaching was good. The p-value is 0.991, signifying that there are no significant gender differences in the students' perception of the teaching standard. The indifference in results may be due to the sample size being too small. However, it may also be due to the investigation not aggregating between the MCQ and the essay questions as other researchers (Smith and Ranchhod, 2012) have found gender differences between these two types of assessments.

The results for perception of the appropriateness of the workload are exactly the same at a mean of 3.12 between the male and the female students. These responses, when viewed from the standard deviation scores, are also not that much different at 0.70 for male and 0.83 for the female students. The p-value 0.991 confirms that there are no gender differences in the students' perception of the appropriateness of the workload.

The students' perception about their approaches to learning economics is different between the male and the female students. Male students, with a mean score of 4.25 agree more that they adopt a deep approach to learning. On the other hand, female students also agree that they adopt a deep approach to learning Augmented Economics. Female students' mean score of 3.70, is however, less than that of their male counterparts. That difference is highly significant with a p-value of 0.026.

There are no gender differences on the students' adoption of the surface approach to learning as shown by the mean values of 3.46 for the male students and 3.22 for the female students. The statistically not significant differences is confirmed by the p-value of 0.714

There is also no gender difference about the Augmented Economics module empowering them with the generic skills. The mean values for the responses are 3.87 for the male students and 3.59 for the female students with a p-value of 0.268 confirming that there is no significant gender difference in the students' perception about the generic skills they acquired from the second year Augmented Economics modules.

4.1.2. Correlations between institutional presage variables

In order to determine the existence and the strength of the correlations between the presage values, the Pearson Correlation test was performed. The results are presented in Table 8.

Table 8: Correlational scores on presage variables

	Good Teaching	Appropriate Assessment	Clear Goals	Appropriate Workload	Grade 12 Marks	Age
Good Teaching	-					
Appropriate Assessment	0.79	-				
Clear Goals	0.538	0.104	-			
Appropriate Workload	0.459	0.480	0.402	-		
Grade 12 Marks	0.720	-0.190	0.061	-0.074	-	
Age	-0.02	0.078	0.048	0.031	-	-

In Table 8, the Pearson correlation coefficients are calculated to test the strength of the linear correlation between the variables. These linear correlation results show a strong linear correlation of 0.79 between good teaching and appropriate assessment. There is a positive correlation of 0.538 between good teaching and clear goals. Good teaching has a strong positive correlation of 0.72 with grade 12 marks. Other variables show weak correlations of 0.45 (good teaching and appropriate workload), 0.10 (appropriate assessment and clear goals) and 0.40 (clear goals and appropriate workload).

There are very weak and negative correlation of -0.190 respectively, between appropriate assessment and grade 12 marks and -0.07 between appropriate workload and grade 12 marks. The weak correlation between grade 12 marks and the situational variables is also confirmed by Horn, *et al*, (2009) in their study of the impact of tutorials on the students' performances in second year economics.

Age as a student-specific characteristic has no linear or very weak linear correlation with all the institutional variables. These results confirm some of the findings reported by Duff (2004)

that show a weak and even negative correlation between high school marks and university academic outcomes. However, there are no conclusive findings on the relationship between the grade 12 and the students' university academic performance (Duff, 2004; Zhang and Bernado, 2000).

4.1.3. Learning approaches and outcomes variables

Table 9: Mean and standard deviation scores of the process and product variables

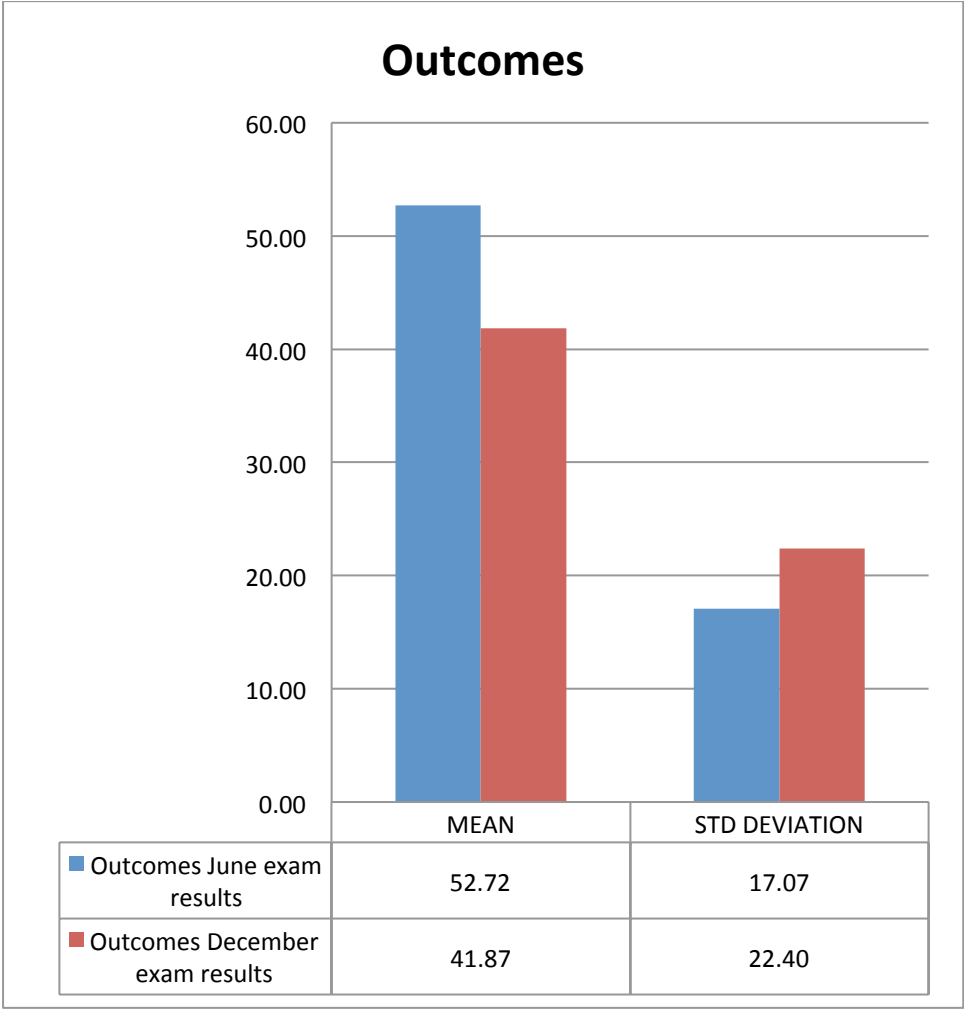
VARIABLE	SUBSCALE	SCORES	
		MEAN	STD DEVIATION
Approaches	Deep learning	3.91	0.74
Approaches	Surface learning	3.32	0.54
Outcomes	Generic skills	3.70	0.74
Outcomes	June exam results	52.72	17.07
Outcomes	December exam results	41.87	22.40

Table 9 shows the mean scores of both the deep and the surface approaches to learning as 3.91 and 3.32 respectively. The standard deviation values are 0.74 for the deep approach and 0.54 for the surface approach. The standard deviation results show that students in second year Augmented Economics tutorials generally agree that they adopt the surface approach to their learning more than they do the deep learning approach.

There are two variables that are being dealt with in the product variables. As already discussed under the theoretical framework section in Chapter 2, these two variables are examination outcomes and generic skills. Examination outcomes are objective and are not subject to students' perceptions. Examination outcomes are quantifiable. On the other hand, generic skills are subjective and are a function of the students' perceptions of their benefits from the second year Augmented Economics.

Table 9 shows the mean scores of the June and December examination outcomes as, respectively 51.95 and 41.00. The standard deviations for the same variables are 18.00 and 22.30, respectively.

Figure 6: Comparison between June and December assessment outcomes



4.1.4 Correlations between the institutional variables, learning approaches and outcomes variables in the 3P model

The third research question of this study (Was there a relationship between students' learning experiences in Augmented Economics and learning outcomes?) seeks to establish the relationship between the strategies students adopt in their learning of second year Augmented Economics and their academic outcomes.

This question addresses the relationship between the students' learning approaches and the academic as well as non-academic outcomes, as depicted in the 3P model. In table 10 the outcomes, (generic skills) show a positive correlation of 0.465 with surface approach and a positive correlation of 0.428 with the deep approach to learning. However, that positive correlation is highly significant with the p-values at 0.000 and 0.008, respectively. The linear correlation between generic skills and deep approach is weak but highly significant at a p-value of 0.008. Also, the correlation between generic skills and surface approach is highly significant at a p-value of 0.04.

There is a negative correlation of -0.120 between surface approach and June examination results, and a weak positive correlation of 0.125 between surface approach and June results. The correlation between deep approach to learning and the June results is positive but weak at 0.214 and both negative and weak at -0.157 between deep learning and December examination results. While these differences between the June and December results may be of note, the items in the questionnaire did not target either of the examination. It must be mentioned, however, that the questionnaire was conducted after the June examinations had been written and the results (outcomes) known to the students. The December examinations had not been written at the time of the completion of the questionnaire by the students.

Table 10: Composite correlational matrix

Presage-process-product correlation and degree of significance statistics										
Variables	Statistic	Generic Skills	Good Teaching	Surface Approach	Deep Approach	Clear Goals	Appropriate Workload	Appropriate Assessment	Marks June	Marks December
Generic Skills	Pearson Correlation	1	.759**	.465**	.428**	.547**	.204	-.104	-.069	-.085
	p value		.000	.004	.008	.000	.225	.540	.684	.617
	N	37	37	37	37	37	37	37	37	37
Good Teaching	Pearson Correlation	.759**	1	.582**	.191	.538**	.459**	.079	.140	.050
	p value	.000		.000	.259	.001	.004	.642	.409	.770
	N	37	37	37	37	37	37	37	37	37
Surface Approach	Pearson Correlation	.465**	.582**	1	.104	.450**	.137	.007	-.120	.125
	p value	.004	.000		.542	.005	.418	.967	.480	.460
	N	37	37	37	37	37	37	37	37	37
Deep Approach	Pearson Correlation	.428**	.191	.104	1	.261	.294	.281	.214	-.157
	p value	.008	.259	.542		.119	.077	.092	.203	.354
	N	37	37	37	37	37	37	37	37	37
Clear Goals	Pearson Correlation	.547**	.538**	.450**	.261	1	.402*	.104	-.073	-.112
	p value	.000	.001	.005	.119		.014	.541	.669	.510
	N	37	37	37	37	37	37	37	37	37
Appropriate Workload	Pearson Correlation	.204	.459**	.137	.294	.402*	1	.480**	.433**	-.033
	p value	.225	.004	.418	.077	.014		.003	.007	.846
	N	37	37	37	37	37	37	37	37	37
Appropriate Assessment	Pearson Correlation	-.104	.079	.007	.281	.104	.480**	1	.482**	.047
	p value	.540	.642	.967	.092	.541	.003		.003	.784
	N	37	37	37	37	37	37	37	37	37
Marks June	Pearson Correlation	-.069	.140	-.120	.214	-.073	.433**	.482**	1	
	p value	.684	.409	.480	.203	.669	.007	.003		
	N	37	37	37	37	37	37	37	37	
Marks December	Correlation Coefficient	-.085	.050	.125	-.157	-.112	-.033	.047		1
	p value	.617	.770	.460	.354	.510	.846	.784		
	N	37	37	37	37	37	37	37		37

*. Correlation is significant at $p = 0.05$ level.

The Pearson correlation coefficient scores are calculated to test the strength of linear correlations between each of the two variables, one on the column and the other on the row of Table 10.

The figures in Table 10 show the linear correlations between the presage, process and the product variables. These variables are presented in this composite format to show a full picture as these have already been discussed, albeit in separate segments. Generic skills as a product shows a strong positive linear correlation with good teaching. That positive linear correlation is highly significant with a p-value of 0.00. However, good teaching is positively but weakly correlated to both the June and December outcomes at, respectively, 0.14 and 0.05. Both the June and December linear correlations with good teaching are not significant with p-values at, respectively 0.684 and 0.617. While the linear correlation between the surface approach and generic skills is moderate at 0.465, and 0.582 between surface approach

and good teaching, these linear correlations are highly significant with the p-values of 0.004 and 0.000, respectively.

4.2. Data analysis and discussion

The results of the mean, standard deviation and the correlation matrix presented in table 10 present an interesting picture regarding how the students undertook and experienced learning in second year Augmented Economics.

4.2.1. The impact of student characteristics and institutional variables on student learning

Table 4 shows a strong affirmation of the importance of good teaching (mean 3.81 and a standard deviation of 0.78). The importance of good teaching is also highlighted by its strong and positive correlation with generic skills (0.79), positive correlation with surface approach to learning (0.582) and the clear goals (0.538). The positive correlation between the generic skills and the good teaching is a good indicator as it means tutors and academics who teach in the second year Augmented Economics are benefitting the students. The students' responses to questions on good teaching are also a reflection on the tutors' approaches to the tutorials, their readiness and willingness to always make a real effort to understand the students' questions, concerns and worries about the module (Appendix F). The students' responses are also in line with Chan's (2008), Biggs' (1999) and Biggs', *et al* (2001) findings that students regard good teaching as very important in their learning.

As the students studying Augmented Economics are generally from poor socioeconomic schools and communities, this positive response to the items in the questionnaire (table 4 and Appendix F) that sought students' responses on good teaching is important to this research in determining the usefulness of the tutorial system. The response may not tell much about the individual tutors, however it provides some measure on which to start interrogating how the tutorials take place in the second year Augmented Economics.

The students' responses to presage variables highlight the interaction between personal experiences and environment with which they interact (Vermut, 2005; Booth, *et al*, 1999). In

this regard, Vermunt (2005) pointed out that personal experiences cause consistency in students' approaches to learning, while environmental experiences cause the variability in students' approaches to learning. Taken further, Vermunt (2005) and Booth, *et al* (1999) observation means that how students approach their learning is on one hand determined by the environment or context but also affected on the other hand by the students' prior knowledge and experiences such as secondary schooling experiences. In this case of Augmented Economics, the teaching environment encourages students to vary their approaches between deep and surface learning approaches, depending on what they perceive to be required by the module, the tutor or the nature of the task at hand. The consistency with which they approach their learning is then attributable to their personal understanding of learning.

Assessment in second year Augmented Economics is by a combination of the multiple choice and the essay questions. As observed by Duff (2004), multiple choice question assessments may encourage rote learning. Against these characteristics it is possible that the students who adopted deep approach to learning (mean score of 4.05) are those who failed second year Augmented Economics. Students who passed second year Augmented Economics adopted surface approach to learning (mean value of 3.85). The mean value of the surface approach to learning for the students who passed their December examination is 3.36, marginally higher than 3.20 for the students who failed their examination.

The students who failed the second year Augmented Economics agreed in their responses that second year Augmented Economics taught them generic skills they will be able to utilise elsewhere. However, students who passed their examination agreed that good teaching was helpful. The mean scores between the students who passed and those who failed are 3.86 and 3.55 for June (Table 6a) and 3.72 for those who failed and 3.69 for those who passed the December examinations (Table 6b).

Whilst some research has been undertaken to determine and/or explain the gender differences in the presage variables on student learning, a number of studies have found no significant gender differences in the roles played by these variables in student learning. The results of this study, as shown in table 5 , have found no gender differences in the presage variables.

4.2.2. The study approach variables

Vermunt (2005) Chiou, *et al* (2012) Biggs (2001) and Entwistle (1991) have presented research findings backing the argument that students' approaches to their learning tasks are context based. In this regard, students adopt a learning approach they deem relevant at that particular point in time or situation. A student can switch between both the deep and surface learning approach in the same module. In this study, the enquiry sought to determine the relationship between the students' learning approaches and the student academic outcomes. The students' study strategies and motives are individual-specific, influenced by the individual student's presage variables. This study's results show that students who adopt a deep approach to learning have not done as well as students who adopt a surface approach to learning. While these results are not generally in line with the findings of a number of other studies on the topic, they are in agreement with some of the researchers who have found that quantitative modules promote reproduction and rote learning (Vermunt, 2005). Students are required to reproduce the learned material. As Augmented Economics is one of the quantitative modules, the results showing surface approach-oriented students doing better than deep approach-oriented is therefore not unexpected.

Table 10 shows the mean and the standard deviation values of the deep and surface approaches to learning, respectively. The mean value for deep approach to learning is 3.91, and is 17% bigger than that of surface learning, which has a mean of 3.32. It is significant that the deep learning approach has a higher mean value of 3.91 – this is higher than the surface learning approach's mean value of 3.32. This mean difference indicates that students tended to agree that they developed interest in Augmented Economics once they engaged with the subject. There was a 76% agreement with this statement by the student respondents. On another statement testing students' deep learning approach, 68% of respondents strongly agreed that when reading the new material, they were reminded of the material they already knew.

In the other statements relating to the surface approach to learning, less than 50% agreed or strongly agreed (Appendix F) that they studied economics to find jobs rather than out of love for the subject. 48.6% considered Augmented Economics as a subject to be a waste of time. The mean for the surface approach is 3.32, indicating that the students agree that they perceive themselves as adopting surface approach to learning. This is confirmed by a

frequency score of 56.70% of students who agree with the statement that they study economics by rote.

As was the case with presage variables, there is no significant gender difference between male and female students on the surface approach to learning. The mean values between male and female students are, 3.46 and 3.23 respectively and the p-value is 0.714. This gender indifference to surface approach to learning is similar to Bryne *et al* (2002) and Jackling's (2005) findings. However, the results change on deep approach to learning with male students scoring a mean of 4.25 compared to the 3.70 for female students. This difference is highly significant with a p-value of 0.026. An investigation of the performance outcomes will be interesting to establish if there will be any gender differences, and how significant those differences are. However, due to the gender numbers in the sample, that aspect of the investigation was not undertaken. These results indicate that male students are deeper learning approach oriented than their female counterparts. Male students by far felt that Augmented Economics tutorials became interesting once they got involved in studying the subject. The male students' responses were closer to the mean at the standard deviation value of 0.61, compared to the female students' 0.75. These results show a strong agreement by the male students that when they read Augmented Economics, they find a relationship between the new knowledge and the knowledge they already have.

On the other hand, the higher standard deviation score of 0.75 for the female students indicates a divergence in responses on their learning experiences. Researchers such as Zhiang (2000) and *et al* (1991) have found that male students tend to adopt a deeper approach to learning than the female students to.

4.2.3. The relationship between the learning outcomes the students' learning environment and the formative experiences.

The results from this study show no significant differences between students who passed their June examination in the following presage and product variables (table 7a):

- The differences in students' perception of clear goals and good teaching between the students that failed and those that passed their June examination are not significant, with the p-values for both variables and groups greater than 0.05.

- On the other hand, the differences in the students perceptions about good teaching and appropriate workload is highly significant at p-values that are greater than 0.05 for both groups.

The differences between those who passed and those who failed their December examination (table 7b) are all not significant as all the p-values are greater than 0.05.

While there was no question probing further as to why student who failed their June examinations perceive these examination as appropriate, it is interesting that those observations were not repeated in the December examinations. In other words students who failed their examination in December did not perceive the examination as appropriate assessment.

The perception of appropriate assessment by high-achieving students is confirmed by Lyon and Hendry (2002) in their study of nursing students' learning experiences in Ireland. In that study, it was found that students who did not do well in their studies tended to experience assessment as being inappropriate. These findings were also confirmed in Webster, *et al*, (2009) study of Hong Kong students' learning experiences across different modules. In that study, it was found that students that were identified as achievers had a positive perception about the appropriateness of assessment.

In this study, when students were asked to rate their perception of their approaches to learning, the results are different from the widely held view that deep learning students achieve good academic outcomes. Students who failed both their June and December examinations perceived themselves as more deep learning-oriented, with a mean of 3.91 for June (table 6a) and 4.05 for December (table 6b). However, the students who failed their examinations in both the June and December sitting agreed more than those who passed that the module empowered them with generic skills. It is, however, worth noting that none of these results are significant in that all the p-values are greater than 0.05.

The mean scores for students who passed their June and December examinations are lower than those for the students who failed in the same periods' examinations, with the means scores of, 3.89 and 3.85, respectively. As Ning and Downing (2011) and Gijbels and Stryf (2008) found in their research, students' approaches to learning are influenced by a number

of factors which include prior academic performance and the context as well as what students perceive to be required by the module for assessment. The results in this study may be explained by first looking at what is emphasised in the teaching and tutorial environments, and whether the assessment is aligned with the teaching.

A possible explanation may lie in the teaching emphasis in Augmented Economics. In the first year modules, assessment is executed using multiple choice questions and negative marking. The rationale for the negative marking aspect is that it is intended to discourage guessing the answers. However, as questions are recycled from previous examinations, students are somehow motivated to adopt a surface approach to learning in order to succeed at the assessment.

The findings in this study are in line with the findings Booth's, *et al*, (1999) that in some academic disciplines where learning is mechanical e.g. in accounting, a surface approach learning is most preferred. This is because the material being assessed requires the reproduction of the taught material. Augmented Economics is fairly quantitative in nature, and assessment requires students to reproduce a substantial amount of material. The findings in this study raise questions about the alignment of teaching with assessment, the articulation between the first and second year modules, and the assessment approach being used in economics.

The correlations between the assessment outcomes and the students' perceptions of the appropriateness of the assessment are also moderate and positive at 0.43 (June) but very weak at 0.05 for December. For the December assessment outcome, the figure of 5%, means that something else can explain the outcome other than the appropriateness of the assessment.

The contradiction displayed by this weak relationship is in contrast to many studies that show a strong relationship between appropriate assessment and successful academic outcome (Biggs, 1989). However, another study by Vermunt and Verloop (2000) and Jones-White and Kellogg (2010) found that students with low prior experience tend to lack clear learning strategies. In particular, Vermunt and Verloop (2000) found that:

- Students with low prior education experience tend to apply reproductive-directed learning. Reproductive-directed learning is characterised by rote learning and, memorisation.

- Students from large faculties, of which Economics is one, apply undirected learning strategies. Students applying the undirected learning strategies are unable to regulate their learning and require substantial external support in order to regulate their learning.
- Student that exhibit undirected learning behaviour achieve poor academic results.

The weak correlations between the presage (appropriate assessment) and the (academic outcomes) results are similar to Duff's (2004) findings in a study on the relationship between academic performance and presage and process variables. In that study, Duff (2004) attributed the failure of the presage and process variable to predict academic outcomes to students' poor prior academic scores. In this study, students learning Augmented Economics have lower scores than their mainstream counterparts and are deemed to have had inadequate educational preparation to deal with university studies. The contradictory product and the presage variables would be attributed to these poor prior academic achievements.

4.3.4. The correlations between the learning environment, the student factors and the learning outcomes

Table 10 shows the correlations between the institutional and student presage variable, the process variables and the product variables. By showing these variables together, the attempt is being made to answer the research questions about the students' learning experiences of second year Augmented Economics, the contributions made by the students in their learning and the institutional factors that affect student learning. Table 10 shows some of these relations through linear correlations. However, some of these variables are very weak to be used authoritatively. As an example, students' prior knowledge as demonstrated by their grade 12 scores has a positive linear correlation score of 0.48, but is negatively correlated with the December examination outcomes showing a negative correlation of -0.12 (June) and a weak though positive 0.13 (December) score. These scores are reversed in the deep learning approach as students perceive their learning approaches to be deep oriented for the June examination (0.21) and negatively correlated in December (-0.16). These findings confirm other researchers' findings (Poon, 2012; Gokcekus, 2000; Hamilton and Singwhat, 2013). that student approaches to learning are not fixed, but contextual and influenced by the student's perceived task requirements and the presage variables In the second semester (December

results), students study microeconomics while in the first semester, they study macroeconomics immediately after the same but more introductory module.

Summary

The discussion in this chapter first presented and tabulated data as it relates to the three constructs of the student learning theory. This was followed by the analysis, discussion, and interpretation of the data using graphs and tables to visualise the discussion. A picture emerged confirming the various research findings showing that student-learning experiences are contextual, dynamic and backward looking.

The next chapter is the conclusion of this study. The second thrust of the chapter deals with the recommendations based on the findings.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

Introduction

This chapter presents the summary of the findings, recommendations and the conclusion based on the data analysis of the preceding chapters and in the context of the literature review presented in chapter two.

5.1 Focus and rationale of this study

This study was motivated by the on-going discussion and questions about the effectiveness of such programmes as the extended Bachelor of Commerce in view of the amount of resources being allocated to it. In the absence of any documented research into how the programme is affecting its intended beneficiaries, this study seems the most obvious starting point.

To probe the experiences of the students in the Augmented Economics modules, this study focused on the factors that influence the students' learning experiences. The answers were sought by probing the following three key research questions:

1. What institutional factors affected these students' learning experiences of Augmented Economics?
2. How did the students approach their learning in Augmented Economics tutorials?
3. Was there a relationship between students' learning experiences in Augmented Economics and learning outcomes? And what was the significance of that relationship?

To answer the above three research questions, the CEQ as an instrument was utilised premised on Biggs' (1987) 3P model. From the data analysis in Chapter Four, the following summary of observations was deduced and reproduced in table 12.

5.2 Learning environment and student performances

Students generally perceived the learning environment in the positive light in that they agreed that

- There was good teaching, as demonstrated by a mean score of 3.81. There was no significant difference about positive perception of good teaching between the students who failed their June and December examinations and those who passed their June and December examinations. The p-values for the differences in responses are more than 0.05 ($p > 0.05$) for both examinations and both groups. This is a positive development for teaching in view of the extended Curriculum approach and assumptions that the students are underprepared.
- Students perceived the modules' goals as clear to them, with a mean score of 3.86 on the 5-point Likert scale. This positive perception was not significantly different between the students who passed and those who failed their June and December examinations at a p-value that is greater than 0.05.
- The students perceived the modules' workload as appropriate, with a mean score of 3.12. However, students who failed their June examinations perceived the workload as not appropriate (mean score of 2.85) while those who passed their June examination agreed that the workload was appropriate (mean score of 3.37). That difference is highly significant with a p-value of 0.040. This development is repeated in the students' perception of assessment. These results conform to Lizzio, *et al*, (2002) and Poon's (2012) studies which had similar findings.
- Students who passed their June examination perceived the module assessment as appropriate (mean score of 3.68) while those who failed did not perceive the assessment as positive (mean score of 2.89). This difference of perceptions is highly significant with a p-value of 0.010. This is an interesting outcome especially because it is not observed in the December assessment outcomes. The students participated in the study after the June examination but before the December sitting for the examination.

- Students' perceptions about generic skills were positive with a mean score of 3.70, indicating that the module equipped the students with more than just academic skills and knowledge.

5.3 Student approaches to learning and outcomes

This study confirmed some of the research findings that showed no significant gender differences in students' approaches to learning (Vermunt, 2005; Moor, 2005). The only significant gender difference observed in this study was on deep learning approach where male respondents agreed more (mean score of 4.25) than females (mean score of 3.15) that they perceive themselves as adopting a deep approach to learning. That difference is significant with a p-value of 0.026. An analysis of gender throughput rates could be interesting to study to determine if this significant difference in students' approach to learning translates to better performance by the male students.

5.4 Study implications

Augmented Economics is one of the modules that are offered to large student groups. The challenge with modules that are offered in large groups is that students do not get the opportunity to interact with the lecturers. As Vermunt and Verloop (2000) found out, students from large groups tend to exhibit undirected learning. This phenomenon, coupled with the findings by the same researchers (Vermunt and Verloop, 2000) that students with low prior academic experience exhibit unidirectional strategies to learn means that some students in augmented second year economics may be exhibiting the same behaviour of undirected learning.

5.5 Recommendations

The findings of this study have highlighted a number of areas in Augmented Economics that need to be addressed as a matter of urgency if student performances are to improve. At least, by addressing these areas, factors negatively affecting student learning can begin to be eliminated.

5.5.1 Module structure

The findings show a strong correlation between some of the presage variables such as the appropriate workload, appropriate assessment and product variables such as generic skills and academic outcomes. A necessary step in the face of the demonstrated correlations will be to review the workload of the module by looking at the amount of work being covered relative to the period of the study.

5.5.2 Appropriate assessment and approaches to learning

The results from this thesis study show that the learning environment for second year Augmented Economics is not as supportive to the student learning. There is a weak correlation between clear goals and appropriate assessment, appropriate workload and grade 12 marks and appropriate workload and appropriate assessment. In a CHES (2007) study, it was found that by focusing more on student throughputs, more attention is paid to learning to pass at the expense of learning to know.

The use of multiple choice and negative marking in Augmented Economics may be encouraging the students not to demonstrate the knowledge they have acquired in studying Augmented Economics. Instead, the students faced with the pressure to do well in the examination will most likely want to reproduce the book content, thereby adopting the surface approach to learning. The pressure on the students to succeed is further exacerbated by the institution's rule that limit the students to three attempts at a module. If the student fails the module three times, that student is prevented from further studying for that module. Such a requirement, while there is merit to it, needs to be reviewed in light of its impact on student learning. Alternatively, a study should be undertaken on the rule's impact on student learning approaches of Augmented Economics.

The June academic outcomes show a weak correlation between deep learning and good academic outcomes in that the students whose responses suggest deep learning fared badly in comparison with students who indicated their approaches to learning as surface oriented. These results confirm the issue of assessment that encourages surface learning as opposed to

deep learning. The question has to be asked whether assessment is intended to foster knowledge acquisition or it is a tool through which students' rote learning is encouraged.

5.2.3 Augmented micro and macroeconomics modules articulation

All the students in the second year Augmented Economics would have passed at the very least, two augmented first year economics modules. By the time they register for and study second year Augmented Economics, they are expected to have understood the fundamentals of both macro and microeconomics. However, as shown by the June academic outcomes, there was a high poor academic performance rate in augmented macroeconomics assessment. It is interesting that second year augmented macroeconomics follow immediately after the first year augmented macroeconomics, an introductory level module and a prerequisite for second year augmented macroeconomics. The second year augmented microeconomics is offered in the second semester, a year after the end of the introductory augmented microeconomics.

How well do the first year Augmented Economics modules prepare the students for second year modules should be an interesting investigation. Such an investigation should also include the appropriateness of offering the second year augmented microeconomics module more than two semesters after the students studied its prerequisite.

5.6 Further and follow up research

This study has been conducted with a small number of students. A follow up study could yield further results to provide a trend and comparative analysis. Including a study on the tutors' teaching qualifications, experience and knowledge of the discipline as well as their development needs may yield richer data on students' learning experiences of Augmented Economics. Such data could help explain the role played by the tutorial staff in the knowledge generation by Augmented Economics students. Also, as the extended Bachelor of Commerce programme has not been reviewed with a view of establishing what has worked and what has not worked, such a follow up and a further research could yield useful data on these aspects.

Final remarks

This study was undertaken over one semester. Having analysed and reviewed the results, a thought has crossed the researcher's mind that a longitudinal study could have yielded a richer set of the data. However, such a study is outside the scope of this research but may be an answer to some of the questions or recommendations raised in the preceding section.

This study has shed some light as a preliminary research into student learning experiences in augmented second year economics. Much research in South Africa has focused on the programme without investigating learning at individual modules. This preliminary study should raise more interest in probing some of the micro issues raised at local institutional levels so that issues that may be institution-specific could be dealt with. By so doing, institution-specific solutions could be developed leading to institutional comparative advantages when issues of student learning are dealt with.

As this chapter was being written, a discussion document by the Council for Higher Education has been authored, looking at making programmes like the extended Bachelor of Commerce of which Augmented Economics is an integral part, a norm in the South African higher education. The CHE's document is a welcome step that will probably address and add to some of the issues raised in this study.

Personal lessons

Personally, this study has been an enriching exercise to the researcher in the quest for understanding student learning and the learning environment. The researcher has gained more insight and exposure to the literature and the massive body of research in student learning. This study has also aroused the researcher's interest in potential further research in the field of student learning.

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Appendices

Appendix A: Letter To The Head Of School Of Economics And Finance

EMS Programme
J026 – Suite 024
Faculty of Management Studies
University of KwaZulu-Natal
Westville Campus
Durban
4000

Telephone 031 260 1527 (work)
Cell 0827879105
Email: zikhali@ukzn.ac.za

12 September 2011

Prof. T. Jones
Head of School of Economics and Finance
Faculty of Management Studies: Westville campus
University of KwaZulu-Natal
Durban
4000

Dear Prof. Jones

REQUEST TO CONDUCT RESEARCH IN AUGMENTED ECONOMICS

I am doing research as part of my Master of Education (Higher Education) degree requirement at the University of KwaZulu-Natal. The topic of my dissertation is: Students' learning experiences in augmented economics tutorials. The purpose of the research is to examine whether students' learning approaches and their experiences of their tutorials affect their academic performance in the second year augmented economics module.

I hereby request your permission to conduct my research study with second year augmented economics students from both Westville and Pietermaritzburg campuses. I need tutors to give me about five minutes of their tutorial time to explain and ask students to complete the questionnaire. Participating students will complete the questionnaire during their own time either online or in hard copy. The completion of the questionnaire should not take more than 30 minutes.

There will be no material benefit offered to students for participating in this study. All information gathered from students for the purposes of this study will be kept confidential, in a lockable steel cabinet in an office at UKZN and will be destroyed at the end of five years from date of this study. Electronic data will be password protected and will be permanently deleted from any storage at the same time as the paper data. Participating students are free to withdraw from participation at any time during the study and there will be no consequences to students for such a withdrawal. This information will be made clear to students both in writing and verbally. A letter of consent will be handed out to students and all participants will be requested to sign that letter before they can be allowed to participate in the research study.

I attach hereto copies of the questionnaire, letter of consent to be handed to students and a consent form to be signed by students before they participate in the questionnaire and an ethical clearance approval letter dated 30 August 2011.

Your support and assistance in gaining access to the students is most appreciated.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Jabulani BS Zikhali', with a circular flourish at the end.

Jabulani BS Zikhali

Appendix B: Approval Letter (email) From The Head Of School Of Economics And Finance

From: Trevor Jones
Sent: 12 September 2011 03:47 PM
To: Jabulani Zikhali
Subject: Re: REQUEST FOR ACCESS TO STUDENTS

Dear Jabulani

I'm quite happy to support this. The second-year coordinator here at Westville is Marcel Kohler. He should be able to put you in contact with current lecturers, should you need them. In Pietermaritzburg, Varuna Bandu should be able to assist you. Be aware, though, that different modules are offered on the two campuses this year; the modules were swopped around in Pmb to fit in with sabbatical plans. I don't think this should materially affect your research, though.

Regards
Trevor

Appendix C: Invitation To The Students And Their Informed Consent Form

EMS Programme
J026 – Suite 024
Faculty of Management Studies
University of KwaZulu-Natal
Westville Campus
Durban
4000

Telephone 031 260 1527 (work)
Cell 0827879105
Email: zikhali@vodamail.co.za

06 October 2011

Dear UKZN Augmented Economics Student

I am conducting a research for the Master of Education degree at the University of KwaZulu-Natal in Pietermaritzburg, South Africa. My research topic is: Students' learning experiences of augmented economics tutorials.

The objective of the research is to examine if the ways you approach learning and the ways in which you experience the tutorials affect your academic performance. The research findings will be used to add knowledge to the discipline and field of student learning and teaching and not for any other purpose. There is no financial or monetary benefit to be gained from this study either by the researcher or participants.

I hereby request you to take part in this study by answering the questionnaire that will be handed to all willing participants. Secondly, I request your consent to access your academic, gender and age details from the university records. Please be advised that participation in this research is absolutely voluntary and you can withdraw from participating at any time during the research without being required to provide any reason for your withdrawal. There will be no negative consequences to you as a result of your withdrawal from participating in this research.

Your student number and other personal details will be kept confidential during and after the completion of this research. I require your student number so that I can link your questionnaire with your academic results. The information from the questionnaire will not have any effect on your academic results at all. All information gathered during this research will be kept in a lockable steel cabinet at the University of KwaZulu-Natal for five years to ensure that there will be no unauthorized access. This information will be destroyed by shredding at the

expiry of five years from date of research completion. Electronic data containing research information will also be destroyed by being permanently deleted from the electronic storage or electronic files where it will be kept for five years. During the five-year period of electronic data storage, the electronic files will only be accessible through a password which will only be given to authorized individuals such as the researcher and the supervisor.

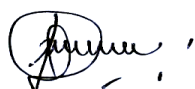
Should you be willing to participate in this research, please complete and sign the consent form below.

I am available at the above cellular and telephone numbers or email should you have any questions or need clarification on the contents of this letter. Please feel free to contact me or my supervisor:

Dr. Frances O'Brien at 031 260 2291,

Email: obrien@ukzn.ac.za

Yours sincerely



Jabulani Zikhali

I....., student number
.....am aware of the purpose and procedure of this research study as contained in the above letter and explained to me by the researcher. I am willing to participate voluntarily and am aware that there are no material benefits to be derived by me from my participation in this research study. I am also aware that I can withdraw from participation at any time during this research study, without having to give any reasons for such a withdrawal.

I am aware that the results from this research study will be used for the purposes of the degree requirements and that any personal identifying details that I provide in this research study will remain confidential.

Signature

Date

APPENDIX D: Questionnaire

Tutorial Group Number:

Student number:

Instructions: *In the following statements, please circle the number that BEST identifies your response to the questions, with 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree*

Course Experience Questionnaire*

- | | | | | | |
|---|---|---|---|---|---|
| 1. It was easy to know the standard of the work expected..... | 1 | 2 | 3 | 4 | 5 |
| 2. The tutorial helped me develop my problem-solving skills..... | 1 | 2 | 3 | 4 | 5 |
| 3. The module tutors motivated me to do my best in the module..... | 1 | 2 | 3 | 4 | 5 |
| 4. The tutorial workload was too heavy..... | 1 | 2 | 3 | 4 | 5 |
| 5. I learned some things in augmented tutorials by rote, going over and over them until I know them by heart..... | 1 | 2 | 3 | 4 | 5 |
| 6. I felt that augmented economics became interesting once I became involved in studying it..... | 1 | 2 | 3 | 4 | 5 |
| 7. In reading new material in augmented economics, I found that I was continually reminded of material I already knew, and saw the latter in new light.... | 1 | 2 | 3 | 4 | 5 |
| 8. The tutorial sharpened my analytical skills..... | 1 | 2 | 3 | 4 | 5 |
| 9. I concentrated on studying augmented economics largely with a view to the job situation in the future rather than because of how much it interests me..... | 1 | 2 | 3 | 4 | 5 |
| 10. I usually had a clear idea of where I was going and what was expected of me in the tutorial | 1 | 2 | 3 | 4 | 5 |
| 11. The tutors put a lot of time into commenting on my work..... | 1 | 2 | 3 | 4 | 5 |
| 12. I thought browsing around was a waste of time, so I only studied seriously augmented economics that is given out in the tutorial..... | 1 | 2 | 3 | 4 | 5 |
| 13. To do well in this module, all you really needed was a good memory | 1 | 2 | 3 | 4 | 5 |
| 14. The tutorial helped me develop my ability to work as a team member..... | 1 | 2 | 3 | 4 | 5 |
| 15. As a result of this tutorial, I feel confident about tackling unfamiliar problems..... | 1 | 2 | 3 | 4 | 5 |
| 16. The tutorial helped me improve my writing skills..... | 1 | 2 | 3 | 4 | 5 |
| 17. The tutorial staff seemed more interested in testing what I had memorized than what I had learned..... | 1 | 2 | 3 | 4 | 5 |
| 18. It was often hard to discover what was expected of me in the tutorials..... | 1 | 2 | 3 | 4 | 5 |

19. I was generally given enough time to understand the things I had to learn.....1 2 3 4 5
20. The tutorial staff always made a real effort to understand difficulties I may had with my work.....1 2 3 4 5
21. The tutorial was very theoretical and abstract.....1 2 3 4 5
22. Tutors normally give me helpful feedback on how I am doing.....1 2 3 4 5
23. My tutor was extremely good at explaining things.....1 2 3 4 5
24. The tutor worked hard to make the tutorials interesting.....1 2 3 4 5
25. There was a lot of pressure on me as a student in those tutorials..... 1 2 3 4 5
26. The tutorial staff made it clear right from the start what they expected from students.....1 2 3 4 5

27. How did you feel you benefitted from your tutor's approach to tutoring in the module? Please write below

.....

.....

.....

.....

28. What do you think need to be improved in the tutorials? Please write below

.....

.....

.....

29. If you missed any lectures, did you attend the tutorials connected with the lectures you missed? Yes / most / a few / rarely / No. Please choose one answer most relevant to you.

*Questions 1 – 26 have been adapted from Lyon, P. M. & Hendry, G. D. (2002).The use of the Course Experience Questionnaire as a monitoring evaluation tool in a problem-based medical programme. *Assessment & Evaluation in Higher Education*. 27 (4), p.351, and Gordon, S. (1999). An instrument for exploring students' approaches to learning statistics. Paper presented at the AERA Annual Meeting in Montreal, Canada.

**Some questions have been modified to suit the context in which this research is undertaken in terms of the discipline.

Thank you for your participation in this questionnaire.

Appendix E: Ethical Clearance



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30 August 2011

Mr JBS Zikhali (210555322)
School of Education & Development
Faculty of Education
Pietermaritzburg Campus

Dear Mr Zikhali

PROTOCOL REFERENCE NUMBER: HSS/0778/011M

PROJECT TITLE: The impact of students' learning approaches and experiences of augmented economics tutorials on their academic performance

In response to your application dated 24 August 2011, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Professor Steven Collings (Chair)
HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

cc. Supervisor: Dr F O'Brien

cc: Ms T Mnisi, Faculty Research Office, Faculty of Education, Edgewood Campus

Appendix F: Frequency Scores and subscales

				NEITHER			
		% VALID	STRONGLY	AGREE NOR		STRONGLY	
		RESPONDENSES	DISAGREE	DISAGREE	DISAGREE	AGREE	AGREE
1.	It was easy to know the standard of the work expected.....	100	2.70	8.20	37.80	40.50	10.80
2.	The tutorial helped me develop my problem-solving skills	100	0.00	5.40	10.80	59.50	24.30
3.	The module tutors motivated me to do my best in the module	100	2.70	0.00	2.70	35.20	35.10
4.	The tutorial workload was too heavy.....	100	8.10	35.10	24.40	18.90	13.50
5.	I learned some things in augmented tutorials by rote, going over and over them until I know them by heart	100	2.70	5.50	35.10	35.10	21.60
6.	I felt that augmented economics became interesting once I became involved in studying it	100	8.10	2.70	13.60	40.0	35.10
7.	In reading new material in augmented economics, I found that I was continually reminded of material I already knew, and saw the latter in new light	100	2.70	0.00	29.70	40.50	27.10
8.	The tutorial sharpened my analytical skills	100	0.00	10.90	24.30	43.20	21.60

9. I concentrated on studying augmented economics largely with a view to the job situation in the future rather than because of how much it interests me	100	10.80	10.90	35.10	35.10	8.10
10. I usually had a clear idea of where I was going and what was expected of me in the tutorial	100	0.00	2.70	16.20	54.10	27.00
11. The tutors put a lot of time into commenting on my work..	100	8.10	3.50	29.80	24.30	24.30
12. I thought browsing around was a waste of time, so I only studied seriously augmented economics that is given out in the tutorial	100	5.40	11.00	35.10	27.00	13.50
13. To do well in this module, all you really needed was a good memory	100	16.20	24.40	21.60	27.00	10.80
14. The tutorial helped me develop my ability to work as a team member	100	5.40	18.90	13.50	48.70	13.50
15. As a result of this tutorial, I feel confident about tackling unfamiliar problems	100	5.40	2.70	32.50	37.80	21.60
16. The tutorial helped me improve my writing skills.....	100	8.10	2.70	32.40	37.90	18.90
17. The tutorial staff seemed more interested in testing what I had memorized than what I had learned	100	16.20	45.90	19.40	10.80	8.10
18. It was often hard to discover what was expected of me in the tutorials	100	16.20	45.90	18.90	10.00	8.10

19. I was generally given enough time to understand the things I had to learn	100	0.00	5.40	51.40	27.30	16.0
20. The tutorial staff always made a real effort to understand difficulties I may had with my work	100	5.40	8.10	8.10	37.80	40.60
21. The tutorial was very theoretical and abstract	100	5.40	13.60	45.90	29.70	5.40
22. Tutors normally give me helpful feedback on how I am doing	100	5.40	18.90	21.60	21.60	32.50
23. My tutor was extremely good at explaining things	100	2.70	10.80	16.20	32.50	37.80
24. The tutor worked hard to make the tutorials interesting	100	0.00	8.10	27.50	27.50	37.80
25. There was a lot of pressure on me as a student in those tutorials	100	16.20	24.40	21.60	27.00	10.80
26. The tutorial staff made it clear right from the start what they expected from students	100	0.00	0.00	16.20	43.20	40.60

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**COLLEGE OF HUMANITIES
POSTGRADUATE OFFICE**

FROM: Dr Veena Singaram
School of Clinical Medicine

TO: Belinda Ann Davies
Postgraduate Officer
College of Humanities

**DECLARATION THAT CORRECTIONS HAVE BEEN EFFECTED TO THE
SATISFACTION OF THE SUPERVISOR**

Name of Student: Jabulani Zikhali

Student No: **210555322**

Degree (Discipline):

Master of Education (Higher Education)

Completion of Corrections (Date):

13 March 2014

I hereby declare that the corrections for the above mentioned student have been effected to my satisfaction.

Name of Supervisor: _Dr Veena S Singaram DATE: 13 March 2014



(Signature)