University lecturers' agency in enabling student academic success

by

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Declaration of Originality

I, Zahida Myburgh, declare that the work contained in this dissertation is my own original work, and that I have not previously in its entirety or in part submitted it at any university for a degree. All sources have been identified and acknowledged by means of complete references.

ZMyburgh	25 November 2018
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SUMMARY

“One day when I sit on my stoep, I just want to know that I did my part.” (Brian)

University lecturers’ agency in enabling student academic success

The purpose of this study was to explore whether, and how, university lecturers act as key agents of change and transformational leaders. The study determined that lecturers operationalise a capability set (essentially comprised of knowledge, skills, experience and control over their environment) into functionings to enable student academic success, regardless of possible constraints. The successful navigation of constraints to lecturers’ initiatives to provide support is indicative of lecturer agency.

The focus was on intervention or support strategies in teaching and learning that enabled students’ academic success. Qualitative data for this case study were collected through semi-structured interviews with a purposive sample of science, mathematics and education lecturers at a university in Gauteng. The conceptual framework draws on the capability approach, which conceptualises human development and well-being in relation to human agency.

The study found that successful strategies can be sustainable and transferable to expand opportunities for academic success. The findings of this study confirm that lecturers act agentically by employing strategies that enable student academic success at university.

[169 words]

Key words: university lecturers; agency; student success

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ARS	Audience Response System
BRICS	A group of emerging economies which include Brazil, Russia, India, China and South Africa intended for cooperation, support and development amongst the respective member nations.
CHE	Council on Higher Education
DHET	Department of Higher Education and Training
PSET	Post-School Education and Training

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CHAPTER 1

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

In this dissertation, there will be an exploration of the teaching and learning, intervention and support strategies employed by university lecturers. The study will focus on whether and how the lecturers provided support regardless of any constraints that may exist at the institution. As will be discussed, the challenges faced by lecturers appear to arise from the demands of the public higher education massification context and are related to structural constraints and student academic performance. The focus of this study is the agency of lecturers in their efforts to improve student academic performance.

The need to improve student performance has received increased attention over the years as access to higher education widened to ensure equity "so that higher education becomes accessible not only to a wealthy minority but to all qualified individuals irrespective of socio-economic status" (Council of Higher Education, 2017, p.59).

Access to higher education is viewed as a social and cultural right of individuals (CHE, 2017b, p.57) and as Ssenyonjo said is "considered to contribute to equality, integration and social progress" (CHE, 2017b). Widening access to higher education has moved to the forefront of the political agenda following heightened #FeesMustFall student protests from 2015 to 2016 (Langa, Ndelu, Edwin & Vilakazi, 2017). Government has consequently been compelled to honour the provision in Section 29(1) (b) of the South African Constitution (Act No.108 of 1996) that everyone has the right "to further education, which the state, through reasonable measures, must make progressively available and accessible".

Financial support for disadvantaged students was catered for in the NDP 2030 (RSA, 2012, p. 61), and implemented, to provide "progressive" access to higher education. Following the #FeesMustFall campaign, a bigger and faster roll-out occurred for a greater number of indigent students so that they can pursue 'free' higher education (Pandor, 2018). By providing free higher education for the indigent and working class and access through bursary schemes for the "missing middle", those who are first-

time university entrants from households that earn up to R350 000 per annum (Pandor, 2018), there is opportunity for all who qualify for university entry to obtain a university degree and significantly improve their socio-economic circumstances if gainful employment is secured after graduation.

Education for all is viewed as the path to freedom and justice (Sen, 1999) and, as such, is an international and national imperative (RSA, 2012; UNESCO, 2016). The Strategic Development Goal (SDG4) to, "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all", contained in the Incheon Declaration (UNESCO, 2016), is echoed in the NDP 2030 (RSA, 2012, p.38). The NDP 2030 aims to realise an education system which is partly characterised by a higher education sector that allows for the fulfilment of human potential and contributes to rising income and greater productivity (RSA, 2012 p.38), which would, in my opinion, relate to a sense of personal or socio-economic well-being.

Higher education is viewed as the gateway to achieving a better life and a means of breaking the cycle of poverty as university graduates are more marketable and employable in the global knowledge economy (Akoojee & Nkomo, 2010; James, 2007; Kamola & Noori, 2014). However, national participation rates are low, and education does not guarantee socio-economic progress, but it is believed to be necessary for growth and social justice (Department of Higher Education and Training, 2013).

The increased global demand for access to higher education is mirrored in South African higher education institutions. Compared to the other BRICS countries (i.e. Brazil, Russia, India and China), South Africa's situation is similar to India's where enrolment figures have grown tremendously over the past decade (CHE, 2010; Cloete, 2016). For example, the VitalStats 2015 publication by the Council on Higher Education (CHE) indicates an increased total enrolment figure for science and education undergraduate programmes from 728 4289 students in 2010 to 798 235 in 2015, except a slight decline in 2014 (CHE, 2017a). The headcount enrolment figure shows an increase from 2015 to 2016 in the science and education fields of study (which are specific interest areas for this study). In the science, engineering and technology field there was an increased intake from 294 935 to 295 383 and in education, an increase from 170 550 to 176 986 (CHE, 2018).

Research indicates that widening access to tertiary education does not guarantee success (Cotton, Nash & Kneale, 2017; Lewin & Mawoyo, 2014). Unlike China, where widening access will probably translate into the highest number of university graduates in the world (Bloom *et al*, 2016) not merely due to higher population figures in that country but in terms of actual graduate output, South Africa is struggling with poor student retention and low throughput rates (CHE, 2015).

VitalStats 2015 shows that the total number of undergraduate qualifications awarded in 2015 only amounted to 140 135 (CHE, 2017a). The discrepancy between enrolment and graduation figures is clear considering that there was an enrolment increase from 2010 to 2015 (728 429 to 798 235 students). The throughput rate for 3-year degrees (in general), with first year of enrolment in 2011, was 58% in 2016 (CHE, 2018). The accumulative throughput rate for science was 51% in 2016 (for a three-year degree with first enrolment in 2011) (CHE, 2018, p. 81). The four-year education programme showed an accumulative graduate output of 72% in 2016 (with first year of enrolment in 2011) (CHE, 2018). The reality for South Africa is that inequalities still exist in broader society and are represented in the micro-cosmos of the university context (Ndelu, 2017).

The challenges faced by students at higher education level have contributed to high drop-out rates (CHE, 2015; Maree, 2015). This trend of low retention and poor performance has prompted government to stipulate equitable student access, academic success and throughput as a primary policy goal with concomitant block funding to ensure success of this endeavour; (DHET, 2015a, 2015b). Several initiatives, e.g. staff professional development and funding for student grants, have been implemented at national and institutional level to address the needs of students to achieve improvement in student retention, throughput and graduated cohorts (CHE 2016; DHET 2015a; RSA, 2012, p.40 & 50).

This study did not examine the throughput or graduation rates at the research site or possible constraints and the reasoning behind those institutional decisions, but investigated the constraints, and the ramifications of those, as experienced by lecturers. The study sheds light on how the constraints are navigated by the actors on this institutional stage.

1.2 PROBLEM STATEMENT

The aim of any tertiary educational institution is ideally to produce a graduated cohort, preferably at higher graduation rates than currently experienced (CHE, 2016; CHE, 2018; DHET, 2015a).

The throughput rates in the VitalStats 2014, 2015 and 2016 publications indicate that the graduated output has not significantly increased (CHE, 2016; CHE, 2017a; CHE, 2018). The literature review will highlight efforts to provide support to retain and graduate students. If all this effort is made, one would expect the outcome to be greater academic success. Research indicates that statistically the converse is true (CHE, 2015; DHET, 2015a).

The assumption for this study was that, if there is any real attempt at redress or transformation in terms of greater student academic success, it should start with the primary stakeholders, i.e. the student and the lecturer, and the effect of an academic relationship between the two parties. Lecturers are a direct line of support in the teaching and learning continuum at micro-level. The university lecturer is one of the closest sources or agents who can possibly effect change given the capability, opportunity and resources.

Lecturers engage with students regularly, can act as change agents (McGrath et al., 2016) and are arguably able to determine what is required for student success. Considering the vast amount of knowledge, skills and experience amalgamated by a faculty or department over years of teaching, one would expect to find best practices that enable student success and have proven to be reliable. Therefore, the academic concern for this study was whether, and how, lecturers act as key agents of change in effecting student academic improvement. This study explored whether lecturers operationalise their capability set, which could essentially be knowledge, skills, experience and control over their environment (see conceptual framework) into functionings (Sen, 1999) to enable student academic success.

The focus of the study was an exploration of strategies that prove to be effective in enabling student academic success according to the lived experience of lecturers at a South African university. A further concern was whether any of those strategies could be sustainable and transferred to other areas (for instance, other modules /

departments) to create opportunities for greater academic success or influence further study into student academic success.

1.3 RATIONALE FOR THE STUDY

The personal and professional interest in this study was motivated by my background as high school teacher and manager, and recent involvement with higher education quality assurance and regulatory bodies. An interest in the lecturer as change agent materialised when I followed the *#FeesMustFall* protests in the news. This was rekindled when I read for the module *Leadership and Management of Learning in Education* which is a component of the Master of Education programme. Different leadership styles were examined and the idea of being a transformational leader, a change agent, resonated with the idea of what a lecturer should be.

The academic rationale is to add to the body of knowledge pertaining to the topic of student access and success. This study will seek to identify and document strategies that have aided student academic success. Many studies have explored the reasons why some students do not succeed (CHE 2015; 2017a; Lewin & Mawoyo, 2014; Wilson-Strydom, 2015). Support can be provided, and bridging programmes can be implemented (including advocacy and support programmes at school level or at the nexus of high school and university entry). However, there is no guarantee for success since there are various factors or variables at play. The gap in the literature is thus that limited documented evidence exists of effective academic support strategies provided by lecturers in a South African context. Research indicates that many strategies are proposed or implemented (CHE, 2010; CHE 2015; Lewin & Mawoyo, 2014) but there is limited evidence of sustainability, transferability and review of those strategies. This study contributes towards ongoing research into student access and success in higher education.

1.4 RESEARCH AIMS

This study will, as previously indicated, focus on the lecturer as agent of change and explore whether she or he operationalises his/her capability to identify, design and implement an academic support, intervention and teaching and learning strategy that enables student success. The study will allow for lecturers' views and practices to receive prominence. Lecturers from the extended science programme and the

science and education faculties were invited for interviews to determine whether, and how, they provide the required support. These focus areas have been chosen for the skills shortages that have been identified in the workplace and the consequent national objective to graduate more students in those fields (DHET, 2015a; DHET, 2016). The National Planning Commission (RSA, 2012, p.28) advances the capabilities approach in the NDP 2030 in which key capabilities, including education and skills, have been earmarked as key elements required for socio-economic progress in South Africa (RSA, 2012, p.28).

1.5 RESEARCH QUESTIONS

1.5.1 Main Research Question

The main research question for this study is:

How does lecturer agency enable student academic success?

1.5.2 Research Sub-questions

The research sub-questions related to the main research question are:

a. When and how do university lecturers operationalise their capabilities into functionings to enable student academic success?
b. Which academic support strategies prove to be successful and why?
c. What are the enabling or constraining structural factors that influence lecturer agency?

1.6 CONCEPT CLARIFICATION

Tinto and Pusser (2006) indicate that terminology should be clearly defined so that one can eliminate confusion from one study to the next. For this study, certain concepts have been identified in relation to the objectives of this study or its conceptual framework.

The following key concepts, amongst others that will be clarified in the conceptual framework and data analysis, are applicable:

a) *Agency* refers to action to affect change. The CHE defines *agency* as “the power of individuals or groups to change their practices, conditions or contexts” (CHE, 2017b).
b) *Access* is defined as *access to learning* in a module once the student is accepted for tertiary education.

c) The term *success* for this study is defined as *completion of a module*.

1.7 OUTLINE OF CHAPTERS

This dissertation comprises the following chapters:

1. **Chapter 1**

An introduction and background to the study is provided. The research aim or purpose, rationale and research questions have been outlined.

2. **Chapter 2**

The literature review provides insight to international and national literature on the topic of access and success, and related concerns about the barriers faced by lecturers and students in the teaching and learning process.

3. **Chapter 3**

Chapter 3 provides an overview of the capability approach from which the conceptual framework is derived.

4. **Chapter 4**

This chapter provides an explanation of the epistemological and methodological paradigms, research design and ethical considerations for this study.

5. **Chapter 5**

This chapter presents the findings of this study, as well as analysis of the data.

6. **Chapter 6**

The final chapter of this dissertation presents the conclusion and recommendations based on the findings.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

The literature review is a review of research relevant to the topic of access and success, and the attempts made by lecturers in enabling student access to learning through the provision of academic support. An overview will be provided of the key issues that have been identified as constraints on student academic success since it offers context for the need for lecturers' intervention and support. Massification in the South African higher education context has brought about a variety of challenges as is presented in the literature. A synopsis of the constraints on lecturers in performing their work within a challenging academic environment is provided.

I have also deemed it necessary to seek a basic understanding of the transformational leadership style. As outlined in the rationale for this study, the transformational leader is, for me, synonymous with agency.

2.2 CONSTRAINTS ON STUDENT ACADEMIC SUCCESS

It is important to consider the barriers to student academic success to contextualise the need for lecturers' academic support initiatives. When reviewing the literature on the topic of student access and success, it was evident that there are various constraints, such as personal, financial, socio-economic, academic and systemic constraints that impede students' academic progress (CHE, 2015).

It is evident that numerous support mechanisms have been introduced to enable students' academic success (CHE, 2015; DHET, 2015a; 2015b). The themes that emerge in local and international literature regarding student access and success and challenges presented through the promotion of widening access to tertiary studies (Akoojee, 2010; Walton, Osman & Bowman, 2015) are *inter alia* constraints in student retention and throughput / graduation, e.g. academic under-preparedness (Maree, 2015) and lack of students' academic involvement (Tinto & Pusser, 2006); efforts made to fill knowledge gaps, e.g. university transitioning or orientation programmes (bridging the 'articulation gap' between high school and university; (Lisciandro & Gibbs, 2016; Mayet, 2016; Wilson-Strydom, 2015), summer or winter schools, foundation provision and extended curriculum programmes (Flores, 2014);

student participation levels / student engagement (Kahu, 2013; Schreiber & Yu, 2016) through peer tutoring groups or innovative teaching and learning practices (such as flipped classrooms or self-paced learning opportunities; (Garraway, Pahil & Sen, 2016; O'Flaherty' & Phillips, 2015); inclusion in institutional habitus to create a sense of belonging and acculturation so that students may feel part of the ethos and cultural practices of the institution (Lewin & Mawoyo, 2014; Tinto, 2017; Wilson-Strydom, 2015); and students' self-direction and self-management or independent learning (Bailey, 2013).

Local and international studies have indicated a wide range of support strategies employed by lecturers to enable student success, for instance summer schools or extended curriculum programmes (CHE, 2010; DHET, 2015a). A longitudinal study by Kilgo, Sheets and Pascarella, (2015) explored the influence of "high impact" educational practices on liberal arts educational outcomes and student academic performance. Two high impact practices yielded a positive correlation with improved academic performance, namely active and collaborative learning, and interaction with faculty. Kuh (2008) refers to the success of high impact practices, which includes first-year seminars that are built into the curriculum and involves regular interaction between small student-groups and academic staff. The purpose of first-year seminars is to develop skills such as critical thinking and academic literacy through collaborative learning activities (Kuh, 2008). The findings of these high impact practices indicate that regular staff-student interaction leads to improved student performance, which is of significance for this study since it illustrates that lecturers play a significant role in the academic progress of students.

In the United Kingdom, Cotton *et al* (2017) explored the reasons for retention and attrition amongst students at a UK university that received financial aid from government. Their research revealed that several strategies have been employed to ensure student retention, such as scholarships and bursaries for "non-traditional" students, enhanced monitoring and support for students, specialist subject teams and/or peer mentors. The study alluded to the transformation that has occurred in higher education, predominantly widening access, massification (large student numbers enrolled), fluctuation in financial support and high attrition rates. The study explored the resilience of students in the context of institutional habitus. These

concerns resonate in the South African educational landscape and it is, therefore, noteworthy for the context of this study.

The South African literature on student access and success reveal similar concerns as those found in international studies regarding student access and success (CHE, 2010; Kahu, 2013; Mouton, Louw & Strydom, 2013; Ramrathan, 2013). The promotion of widening access to university studies, the retention and throughput of students, and factors affecting student academic success (funding, student acculturation, student engagement, socio-economic circumstances, understanding of subject matter, effective study skills, etc.) are among the primary concerns for redress to enable student success (CHE, 2010, 2015; Maree, 2015; Walton *et al*, 2015).

Issues of academic under-preparedness and academic support initiatives through national and systemic attempts at redress are at the forefront of the considerations related to student access and success (CHE, 2015; 2016; DHET, 2015a; HESA [now Universities South Africa], 2014). Spaull (2013) argues that anyone from teachers to government can be singled out for the under-preparedness of students in the basic education system. Van der Berg, Spaull, Willis, Gustafsson and Kotze (2016) argue that accumulative constraints on student academic success at school level, such as weak teacher content knowledge and pedagogical skill, prevent academic progress. Following this argument, those constraints are presumably still prevalent at tertiary level if one considers the studies done on challenges that are faced by students (CHE, 2010; 2015).

Whether students' academic challenges are addressed or not, when accepted at tertiary institutions they become that institution's responsibility irrespective of being prepared or under-prepared, privileged or disadvantaged (Bozalek & Boughey, 2012). This study proceeded on the assumption that lecturers provide appropriate, adequate and timeous support to enable student academic success.

2.3 CONSTRAINTS ON LECTURERS' INITIATIVES

In considering lecturers as agents of change, it is important to reflect on the causal relationship between agency and structure, which can have multiple definitions, for example university context / institutional habitus or culture, physical or financial resources, power relations within a subject department, and so forth (Leibowitz,

Bozalek, Van Schalkwyk & Winberg, 2015; Leibowitz *et al*, 2012; Sewell Jr., 1992). Structures can be fixed, rigid or permeable constructs that can enable or constrain agency (Sewell Jr., 1992). According to Sewell Jr. (1992), “Structures shape people's practices, but it is also people's practices that constitute (and reproduce) structures”. Human agency and structure are, therefore, interdependent. Agency can be a response to a structural constraint or enablement (for instance, resources that can aid in the provision of academic support). Structure can arise due to agency, e.g. if enough lecturers operationalise their capabilities to enable student academic success, they may effectively transform an existing structure (Sewell Jr., 1992). The literature revealed the relationship between agency and structure in identifying, enabling or constraining influences on lecturer agency. Shay (2017) references Nancy Fraser who iterates that “institutionalised obstacles” must be removed for full and equal student participation to occur. Shay (2017) also references Morrow who iterates that students must receive “meaningful” access to “knowledge goods”, namely knowledge of the discipline. Two “institutionalised (resource) obstacles” were identified by Morrow and Fraser, i.e. “financial and epistemic”. These constraints have been established at the research site for this study as discussed in more detail later. Both must be overcome or navigated for full participation, access and success to occur (Shay, 2017). An intervention strategy incorporating “systemic levers of change” (Shay, 2017) should be implemented to improve student success.

In relation to structural constraints, Boyd and Smith (2016) explored the role and conflicting identity of the lecturer within the university environment, which is presumably made even more complex within the context of transformation. It was determined that balancing teaching, leadership and knowledge exchange could be stressful. Van Lankveld, Schoonenboom, Volman, Croiset and Beishuizen (2016) reiterate that the development of lecturer identity is an ongoing process of interpretation of who the lecturer considers him or herself to be and who they would like to become.

Other research has indicated that transformation, and its associated demands possibly imposed by the institution due to government and public pressure (Mouton, *et al*, 2013), might bring about psychological strain when lecturers seek to cope with “wide-ranging changes and developments in their labour processes” (Berry & Cassidy, 2013). There has consequently been growing concern about retaining

lecturers (DHET, 2015a; Msweli, 2012) in light of the “brain drain” of lecturers out of the country or the growing number of academics nearing retirement and the need for succession planning preferably at the same level of knowledge, skills and experience (Lewin & Mawoyo, 2014).

The idea of tension in academic identity is supported in the study by Albertyn, Machika and Troskie-de Bruin (2016) where they identify that lecturers are exposed to many tensions. For instance, they are expected to work within the massification model and at the same time provide quality teaching. They indicate that external pressure from the university environment impact the internal state of the individual (which would imply a possible impact on the inclination or ability to act agentically. Their research shows that lecturers are aware of their fundamental role in delivering quality education programmes aimed at successful student academic achievement. The study highlights that a lack of resources can constrain effective delivery of the curriculum. The study found that lecturers were concerned about students that needed support due to unfamiliarity with the level of academic work. Lecturers were also apprehensive about delivering to a diverse student population. They had to employ scaffolded and creative learning strategies to ensure that the needs of all students were met. Lecturers had to change from a lecturer-transmission to a student-centred approach where the student becomes the producer, not the passive recipient, of knowledge. The study found that, due to time constraints, lecturers remained in “survival mode” and simply delivered what was required.

The literature illustrates an increasing focus on the demands placed on lecturers in the workplace, i.e. an increased workload which involves more teaching time, supervision and administrative duties (CHE, 2015; HESA/USA, 2014) due to larger class sizes following widening access. There is also the lack of financial and physical resources at some institutions which might inhibit lecturers from functioning optimally in the work place (CHE, 2017b; Lewin & Mawoyo, 2014).

The DHET (2013), in the *White Paper for Post-school Education and Training* (PSET), acknowledges the constraints on academics:

> *Many factors affect academic work including publication pressure, the corporatisation of universities, greater administrative responsibilities, resource constraints, pressure to bring in outside funding, the growth and use of*

> *technology to support academic work, and the pressures of teaching in a context of low throughput rates. (*DHET, 2013)

Van Lankveld *et al* (2016) indicate that the wider context of higher education was generally described as having a constraining influence on academic identity. The challenges lead to stress (Barkhuizen & Rothmann, 2008; Bowen, Rose & Pilkington, 2016), "emotional labour" (Berry & Cassidy, 2013) and distress / disengagement / dissatisfaction (Rothmann & Jordaan, 2006) experienced by the fraternity. The feelings of discontent and dissatisfaction with internal and external pressures are bound to be exacerbated under unusual circumstances, such as the *#FeesMustFall* student protests, whereby students clamoured for fee-free tuition and decolonisation of the curriculum (Langa *et al*, 2017; Nathane & Smith, 2017; Vorster, 2016; Vorster & Quinn, 2017). There might have been a change in work processes or further work demands due to the demands which have led to curriculum and institutional language policy review (Le Grange, 2016; Vorster, 2016).

It is evident that many studies focus on tertiary institutions' attempts to produce academics that are better equipped as teachers. Support has been provided to lecturers, in the form of teaching and learning development and continuous professional development (CPD), to improve their skills so that they may be better able to facilitate student success (Bailey, 2013; Leibowitz *et al*, 2015; Lewin & Mawoyo, 2014). CPD and reward systems are intended to produce and incentivise a better calibre of lecturer capable of delivering the curriculum in innovative, effective ways, thereby enabling student success (CHE 2015; CHE, 2017b; DHET 2015a, 2016; Leibowitz *et al*, 2015). The CHE (2017a) highlights various formal and informal CPD opportunities found in international literature, such as: workshops, departmental work groups, collegial networks, peer review processes, scholarship of teaching and learning aimed at improving teaching and learning strategies, and so forth, aimed at improving lecturer competencies. Although opportunity exists for CPD, lecturers cite high workload and time constraints for not making full use of these opportunities created for them (CHE, 2017b).

The literature reveals that there are systemic, professional (CHE, 2015; 2017) and personal constraints experienced by lecturers which may affect their work performance. The agency of lecturers will be evident if they manage to circumnavigate

those barriers to provide appropriate academic support. The agency of lecturers stems from reflective practice since those who reflect critically on their practices have a pre-disposition to transformation (CHE, 2017b). The CHE (2017b) posits that “primary” or “corporate” agents of change can respond to institutional structure and culture in a transformative way due to reflexive practice and agency. The literature provides evidence of the agentic actions of lecturers despite the barriers experienced at tertiary institutions.

2.4 LECTURER AGENCY

A search on international studies, focused on lecturer agency when providing student support, produced two studies; namely Whitt (2007) at the University of Iowa, and Manalo, Marshall and Fraser (2010) in New Zealand, in which the researchers reported on effective educational practice within and/or across institutions to illustrate various intervention strategies implemented by university faculty. This was of interest for this study for two reasons: firstly, in Iowa, the focus was on support strategies that proved to be effective; and secondly, in New Zealand, the focus was on institutional and lecturer support strategies that proved to be successful at one tertiary institution and was shared amongst faculty across institutions in an attempt for the findings to be transferable and perhaps successfully applied on a larger scale.

In a transformational educational environment (characterised by greater student academic success), collegial leaders were identified by institutional leadership to have the demonstrated capability and initiative in instituting successful practices to effect change (McGrath *et al*, 2016). Lecturer agency is central to institutional transformation since the lecturer acts as intermediary between leadership and students to create operational impetus for improved academic performance (McGrath *et al*, 2016). Lecturers are often experts in their field, yet perhaps inexperienced in terms of being change agents (Bailey, 2013). However, they respond to educational demands in ways deemed necessary (McGrath *et al*, 2016).

Flores’ study of three public universities in the United States of America, namely the University of North Carolina in Charlotte, University of South Florida and University of California, Riverside indicates that intensive (six-week) summer bridging programmes aide in student access, retention and satisfaction. This was enhanced by transitioning programmes (from high school to university) and support programmes targeted at

addressing the specific academic needs of diverse learning groups (Flores, 2014). The First Year Learning Communities programme improved retention rates in the Science, Technology, Engineering and Mathematics (STEM) disciplines and achieved graduation rates of 55 to 65 percent (Flores, 2014). Those transformation initiatives were driven by leadership and implemented by lecturers. The most significant finding was that lecturers had high expectations of all students and that the students rose to the occasion (Flores, 2014). Lecturer agency is, therefore, key in unlocking student potential. One of the main constraints to agency would be the issue of funding (Flores, 2014) since this limited the availability, adequate distribution and provisioning of human resources (Lewin & Mawoyo, 2014).

In Aberdeen in the United Kingdom, Bailey (2013) conducted a study which was also precipitated by the view that "the perspective of teachers represents a gap in current pedagogical research". His interview with forty-eight university teachers explored the subjective, lived experience of a cross-section of faculty at a new university which had an agenda for widening access. The study examined the attitude and beliefs of lecturers regarding undergraduate student academic support. His findings indicate that lecturers perceived subject-embedded support strategies that are implemented progressively (scaffolded) as more appropriate and effective (Bailey, 2013). However, there was a lack of confidence or knowledge on how to provide that type of support which was further impeded by other constraints, such as: heavy workloads, an overloaded curriculum which permits restricted opportunity for embedded support and structural factors that impact overtly or subtly, amongst others (Bailey, 2013). Essop (Lewin & Mawoyo, 2014) views curriculum reform as necessary for intensive or appropriate academic support to enable student academic success. However, institutional planners see financial and human resource constraints as serious impediments to the design and implementation of intensive, curriculum-embedded support initiatives (Lewin & Mawoyo, 2014).

The agency of lecturers has evidently been closely linked to structure, in particular university context / institutional habitus and the enabling environment required for agentic functioning, e.g. appropriate and context-directed CPD and "teaching and learning enhancement policies and programmes" (Leibowitz *et al*, 2012).

Lecturer agency in enabling student success is not a novel idea or incidental to institutional requirements. The agency of lecturers has been related to the agency of students, a reciprocal relationship aimed at achieving student success (Bailey, 2013; Leibowitz *et al*, 2012). Notions of agency are central to the capability approach which will be highlighted in the discussion on the conceptual framework.

The actual opportunities for lecturers – that which is possible and doable – will be considered thus the value of available resources in aiding agency will receive attention. Lecturers ought to be capable, functional and practical within the educational context or structure, thereby exercising a measure of control over the educational environment. They should possess a measure of freedom or autonomy to choose (in terms of their knowledge, skills and evaluation of what the situation demands) to do what is best and viable, thereby acting agentically in response to structure.

Lecturers need to navigate constraints to assist students who experience academic challenges. This provides perspective on a situation where the student-lecturer relationship is fundamental in achieving improvement in the academic performance of a student at risk of not meeting the learning outcomes of a module (CHE, 2015; Kuh, 2008).

2.5 TRANSFORMATIONAL LEADERSHIP

The scope of this mini-dissertation does not permit in-depth evaluation of transformational leadership as opposed to other leadership styles. However, a consideration of the lecturer as change agent links with the idea of being a transformational leader as similar traits are identifiable. Bass' model of the four factors of transformational leadership summarises the key aspects of the transformational leadership style (Shatzer *et al*, 2014):

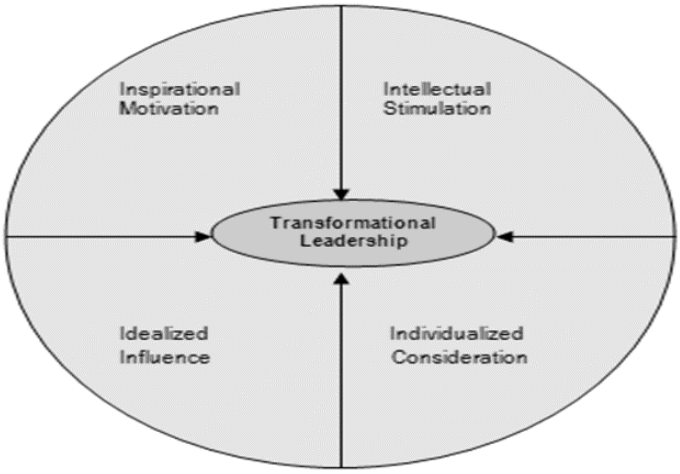

Figure1: BASS' TRANSFORMATIONAL LEADERSHIP FOUR-FACTOR MODEL

These traits, as exhibited by the participants (see Chapters 5 and 6), place them as transformational leaders within the Four-Factor model.

The following figure illustrates the qualities of a transformational leader.

Figure 2: CHANGE AGENT-CUM-TRANSFORMATIONAL LEADER QUALITIES

In Chapter 5, these qualities of the lecturers will become apparent when one examines their agentic functionings.

2.6 CONCLUSION

Although much has been said in international and local literature about the role and identity of the university lecturer as teacher and researcher, and how CPD and improved teaching and learning strategies can impact positively on student academic performance (CHE 2015; Schreiber & Yu 2016), there is not extensive literature or

published documented evidence in South Africa of the actual teaching and learning, support strategies and/or intervention techniques that prove to serve their function, i.e. to achieve their stated objectives. Tinto and Pusser (2006) indicate that there may be good concepts that do not necessarily translate into good action plans or might not be implemented properly. According to Essop a plethora of support strategies may, therefore, exist in theory or in practice (Lewin & Mawoyo, 2014).

This study has identified a gap in the literature where there is insufficient evidence of effective support strategies provided by lecturers that yield the expected outcomes in a South African university context. This study would tie in with the recommendation that further research on transformation within higher education institutions would illuminate lecturers' experience of higher education in a critical time of transformation (Bailey, 2013), and the influence of human agency on institutional change (Badat, 2007). It is, therefore, imperative for social justice that we examine those experiences and agentic actions in an era of transformation in South Africa (Karodia, Soni & Soni, 2016; Soudien, 2010) to determine the prospect for sustainable and transferable strategies that will enable continued student academic success.

CHAPTER 3
CONCEPTUAL FRAMEWORK

3.1 THE CAPABILITY APPROACH

The theory used as basis for the conceptual framework for this study is the capability approach. The capability approach was developed by Amartya Sen, an economist, and further developed by the philosopher Marta Nussbaum and others (Nussbaum 2011; Sen 1999; Walker, 2008). The capability approach is used to study human development in relation to human agency. This theory indicates that people have the capability to be and do what is best for themselves and others. By examining all options and choosing the most suitable option for agency, they transition their capability set into functioning by utilising the resources at their disposal.

The idea of agency features prominently in the capability approach (Calitz et al, 2016; Robeyns, 2005; Walker, 2005). Agency as defined by Sen (Walker, 2005) means to act in the interest of social justice by effecting change. Sen argues that a person's life can be richer and better in terms of well-being and freedom and that human agency can affect transformation through improving societal organisation and commitment (Sen, 1999). Walker (2010) refers to Sen who argues from an economic perspective that, even though human capital is imperative for human socio-economic development, people should look beyond economic progress to focus on human freedom. The expansion of human capability is brought about by the freedom and rationality to choose the life that you would value. Being successful is linked to one's social conditions. Walker (2005) references Sen who posits that an actual achievement or functioning is dependent on individual or institutional conditions or contexts. Academic success is, therefore, linked to academic context, i.e. the institution and its conditions for teaching and learning, as well as external factors that impact that space and its available resources.

Opportunity for agency is created through the resources at your disposal (Walker, 2010), therefore, those resources receive attention in this study. In line with Walker's notion (2010), this study considered which capabilities, coupled with available resources, matter in terms of developing lecturer agency. This study also considers the real opportunities, i.e. what is possible and doable considering structural constraints.

The concept of capability is defined in the tenets of the capability approach as the potential or opportunity to do or to function (Unterhalter, 2012; Walker 2005, 2010). The operationalisation of a capability is the functioning of a human agent within a particular context over a period of time. For example, if a student has the capability to read or write well, then she or he is able to choose whether they will function as literate university students. A capability is operationalised when the individual converts available resources – such as lecture notes or textbooks – into the real opportunity to achieve functioning. The ability to convert a capability into functioning is viewed as part of human agency, i.e. acting to effect change, including under circumstances that require societal transformation, where change could lead to the greater good or the opportunity to live a richer, better life in terms of socio-economic measures.

Simplifying the deliberation within the scope of this study, the capability approach links to how the university lecturer had the capability to do something constructive or proactive and whether she or he did so at the required time. In order to act or function, the lecturer need to consider the most viable course of action due to reflexive, critical thinking, the resources at his or her disposal and what was physically, or pedagogically possible at that point in time. Negative conversion factors (or structural constraints) such as inadequate funding, destruction of university property – for example during the 2016 #FeesMustFall protests (Langa *et al*, 2017) – and insufficient lecturer training, could act as barriers to the operationalisation of capabilities. The specific actions taken by the lecturer to provide academic support would be to create an opportunity for student academic success. As applied to the study, it would be expected of lecturers to have acted agentically to enable students to convert capabilities into functionings that lead to academic success.

3.2 THE CAPABILITY APPROACH WITHIN THE EDUCATIONAL CONTEXT

The operationalisation of capability into functioning depends on choice. A person has the required capabilities to make choices from available options (Walker, 2005). Therefore, if the university lecturer chose to act agentically, the students would have to be responsive and reciprocate by choosing to action their capability set to achieve academic success. This would translate to Unterhalter's observation (2012) that education has an "interpersonal impact", a reciprocity where others are benefited

through human agency. This study sought to determine whether the students benefited from the lecturer's agency.

Unterhalter (2012) argues that the capability approach views the function of education as three-pronged, namely, "instrumental, empowering and redistributive". Unterhalter views education as the driving force for change, and invaluable to human development and progress since it broadens the mind and horizons and opens the door to more valuable capabilities.

Unterhalter's view of the capability approach emphasizes the capacity for human progress, where capacity can be used interchangeably with capability. Unterhalter (2012) refers to Sen's economic argument that human development hinges on human agency, which incorporates skill, knowledge and effort, in expanding or amplifying production possibilities. Although Sen conceptualised the capability approach as an alternative to a primary focus on the human capital model (Sen, 1999), instead of an economic focus for this study, I explored the operationalisation of capabilities in amplifying educational opportunities.

It was therefore examined whether lecturers were poised on a state of alertness and responsiveness and whether that caused them to transition into active citizens in relation to students' academic needs. They would have enacted their capabilities as functionings within the educational context, thereby exercising a measure of control over their academic space. The capability approach which leads to human development, therefore, means movement from a potential state of being to an actual realisation of that state, to being capable to functioning to affect transformation in your own life and the lives of others.

Unterhalter (2012) further applies the capability approach to higher education pedagogies, arguing that educational teachings should be transformative and transcend the usual confines of teaching and learning spaces. There should be "critical engagement with knowledge" crucial to the formation of academic identity, institutional transformation and support for the well-being and agency of students.

In summary, human agency is the capacity to make informed and reflexive choices and acting thereupon. Therefore, this study would seek to understand the choices with which lecturers are faced, whether they deem it necessary to act, how they choose to act and why they make those choices.

3.3 CONCEPTUAL FRAMEWORK: BASIC CAPABILITY SET

The findings were measured against a selection of key concepts fundamental to the capability approach. The concepts that the researcher find relevant and applicable to the exploration of academic agency would be a selection of Nussbaum's list of ten capabilities, Walker's functional capabilities as positioned within the higher education framework, and Sen's three key concepts that are central to the capability approach, i.e. capability, functionings and agency (Walker, 2005, 2006, 2008 and 2010; Unterhalter, 2012). The researcher added three capabilities regarded as significant determinants for functioning. A list of nine capabilities has, therefore, been derived which relate to realising potential, i.e. becoming a functioning agent instead of merely having the capability.

This forms the conceptual framework that is used as a yardstick to evaluate the data and determine lecturer agency within the context of a (challenging) higher education environment.

The selected capabilities for this study are:

knowledge (Walker, 2008)	skill	experience	control over one's environment (Nussbaum, 2011)
• Knowledge of the subject or support strategies.	• "Critical thinking skills" (Walker, 2008) • application of skill through "imagination and thought" and "practical reason" (Nussbaum, 2011); • "practical reason" (Nussbaum, 2011): the ability to evaluate the context, situation and viable options; • displaying responsiveness, i.e. the ability to be proactive in handling a situation.	• Experience in dealing with institutional or academic barriers; • includes the state of alertness, i.e. expecting to act and being aware of the context or situation.	• The academic freedom or autonomy to act as deemed necessary due to responsiveness and the ability to be alert and empathetic to the student's need.

Figure 3: SELECTED CAPABILITIES

The following diagram illustrates a basic agentic capability model:

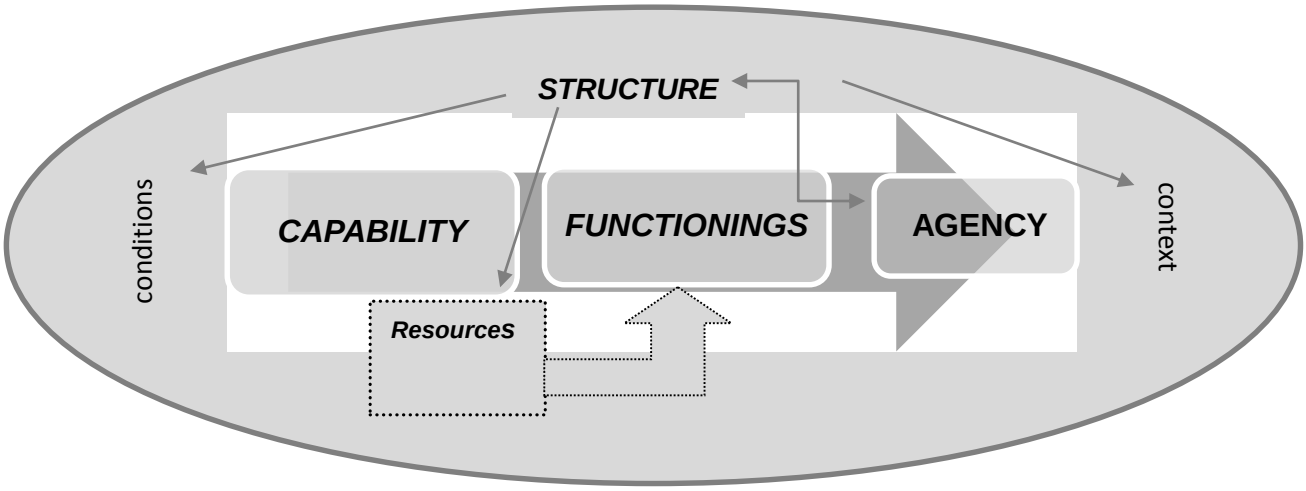

Figure4: BASIC AGENTIC CAPABILITY MODEL

The Basic Agentic Capability Model was used for data coding to organise and analyse the data. This study aimed to uncover which capabilities within the Basic Agentic Capability Model, either single or interdependent, enabled functionings which, in turn, are indicative of agency.

3.4 CONCLUSION

This chapter outlined the capability approach which underpins the conceptual framework of this study. The conceptual framework consists of a Basic Agentic Capability Model that was used as reference point for data analysis.

CHAPTER 4
RESEARCH METHODOLOGY

4.1 INTRODUCTION

The research methodology for this study will be outlined in this chapter. The research design, research methods, research instrument, data collection and data analysis processes will be discussed. A discussion on the ethical considerations for this study will be provided.

4.2 EPISTEMOLOGICAL PARADIGM

According to Mertens (2009, p.43), “The set of profound beliefs that each evaluator holds as his or her worldview about the nature of reality (ontology), the nature of knowledge (epistemology), and the nature of human nature (axiology), is reflected in the approaches he or she chooses to employ in practice—knowingly or unknowingly, consciously or unconsciously.” This study proceeded on the premise that there are various versions of ‘reality’, of ‘truth’, and that knowledge is built on discovery of these different versions.

This study is, therefore, located in the interpretivist paradigm. The interpretivist paradigm is characterised by the fact that there can be multiple interpretations of reality. Due to the interconnectedness between interpretivism and qualitative study (Thanh & Thahn, 2015) this methodological paradigm was a logical choice for the study. According to Thanh and Thanh (2015), “Researchers who are using interpretivist paradigm and qualitative methods often seek experiences, understandings and perceptions of individuals for their data to uncover reality rather than rely on numbers of statistics.” This study will explore the lecturers’ perceptions of the reality in which they found themselves and whether they managed that reality agentically.

4.3 METHODOLOGICAL PARADIGM

The qualitative methodology has been chosen for this study. The qualitative researcher studies things in their natural setting, according to Denzin and Lincoln, “attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them” (Creswell, 2007, p.36). The “process of research”

(methodology) chosen for this study determines “how we know what we know” (epistemology) about the “nature of reality” (ontology) (Creswell, 2014, p.54).

A qualitative study is the most suitable choice as this study has a central concern, a central phenomenon that is explored (Creswell, 2014, p.17) which is the agency of lecturers in providing academic support. Qualitative research permits the opportunity for rich data collection due to “multiple perspectives” of the phenomenon (Creswell, 2014, p.17). Research literature indicates that it is an observation of personal response and engagement of real, lived experiences by the participants (Briggs, Coleman & Morrison, 2012; Creswell, 2014, p.10; Mertens, 2009, p.234). The participants expressed their views through fifteen “open-ended” (Creswell, 2014, p.20 -21), semi-structured questions (see *Appendix A*) designed to elicit thick data. The findings can possibly provide ideas for revision or transformation of current practice.

Inductive reasoning is typical of qualitative study, whereby data is grouped into codes and themes (Creswell, 2014, p.99 & 234) and interpreted to gain perspective. The next chapter on data analysis will provide an outline of the coding and thematic organisation of the data.

4.4 RESEARCH DESIGN

The research design for this study is a case study. The case study is by nature exploratory (Creswell, 2014, p.23). This permits in-depth investigation to understand the situation or issue, which is bound by time and place (Briggs *et al*, 2012; Creswell, 2014, p.17; Mertens, 2009, p.144); meaning we can consider the various personal accounts of the participants about the reality that existed at a specific place and point in time. The lecturers hold their own version of reality (ontology) which may reflect commonalities as will be discussed in the chapter on data analysis. The case study was conducted in its “natural setting” (Creswell, 2007, p.37), i.e. three sites of delivery at the university.

The case study permitted data gathering over a sustained period. The case study is dependent on the relationship between the researcher and participant. A position of trust and openness can lead to rich data collection, whereas the converse can be detrimental to the quality and trustworthiness of the findings (Briggs *et al*, 2012). I found that the participants were warm and open to constructive engagement. I

provided insight to the set of questions before commencing the interview. At each interview formalities were handled, and the purpose of the interview was declared. Participants were interviewed in a familiar environment to allay any initial feelings of awkwardness and to afford the interviewees a measure of control over their circumstances.

This study might illustrate a theoretical understanding of the phenomenon (Briggs *et al*, 2012) which could be valuable for further study or implementation. The case study might highlight good, sensible, practical and/or creative academic practice that could assist with improving student academic performance and be translated to other subject departments within or across faculties.

4.4.1 Research site

Research was conducted at a historically advantaged, previously white Afrikaans-medium public institution in Gauteng, which is currently multi-racial and has English and Afrikaans as medium of instruction. The university has more than 50 000 students, nine faculties and a business school. The university is considered a world-class university and one of the biggest research producers in South Africa and Africa. The university is spread over seven campuses and the participants were interviewed at the campus where they were based (except for two cases due to unusual circumstances). Interviews were conducted at three campuses: main campus (*Campus A*), the education campus (*Campus B*) and the extended programme campus (*Campus C*).

Having viewed three of the seven campuses, it appears that the technology and facilities are adequate. The buildings are in good condition, the grounds are well-kept, and security is of a high standard, which corroborates the claims of participants that the university is a high-quality facility where participants and students feel safe.

Participants from the Science Faculty work in the following departments: Biochemistry, Genetics and Microbiology (an amalgamated department); Chemistry; Mathematics and Applied Mathematics; Physics; Statistics; Zoology and Entomology. Although there is a direct link between the Science-related subjects offered on the main and extended campus, the latter is regarded as a faculty on its own.

Participants from the Education Faculty work in the following departments: Department of Science, Mathematics and Technology Education, Humanities Education, Early Childhood Education and Educational Psychology.

4.4.2 Sampling

A case study was conducted with a purposive sampling of lecturers from the Science and Education faculties, and lecturers from the extended Science programme. The inclusion of the extended programme was not necessarily to draw comparisons with mainstream programmes but to gain insight into the type of support provided. The extended programme provides intensive support to students who did not receive entry to the mainstream programme.

The relevance of this sample is linked to the fact that producing graduates in both the Science and Education fields are a national priority in terms of the NDP 2030 (DHET, 2016; Shay, 2017). Occupations related to Mathematics and Science, for example a Statistician or Biochemist, are in “high” demand nationally (RSA, 2018). A shortage of skilled teaching professionals has been identified (DHET, 2016) and is rated in “higher” or “highest” demand in the recent National List of Occupations in High Demand: 2018 (RSA, 2018). One of the objectives of the NDP 2030 (RSA, 2012) is to “Increase the number of students eligible to study towards maths and science based degrees to 450 000 by 2030.” The aim is to achieve higher graduate output in human resource priority areas, such as engineering, health sciences, life and physical sciences and teacher education (DHET, 2016).

The participation of a cross-section of the lecturer population was canvassed, thereby gaining data which incorporates lecturers’ experience in terms of tenure and knowledge of the tertiary system and its challenges, as well as teaching and research experience. For this study, the main criteria for the selection of participants were:

1. A minimum of two years’ tertiary experience since it was presupposed that this would have permitted some insight into the type of support required.
2. Experience of teaching first-year students due to the concern about the high drop-out rate in this year of study (CHE, 2015).

Thirty-one lecturers from the Science Faculty and the extended science programme were invited to participate in the study. A list of names of lecturers was provided by the faculty's management office. The lecturers were invited individually via email. Thirteen lecturers participated. The participants are resident in the following departments: Mathematics and Applied Mathematics; Physical Sciences (Physics and Chemistry); Biological Sciences (Zoology, Biochemistry, Microbiology and Genetics); and Statistics. There were also participants from two support modules in academic and computer literacy.

Forty-five participants from the Education Faculty were invited to participate. The names of lecturers were selected at random from the university's website and contact was established via email. Five participants were interviewed.

There were a few constraints in securing the appropriate sample of participants for this case study, namely:

1. Time constraints – due to heavy workloads and research commitments, lecturers were unavailable;
2. Altogether fourteen lecturers who were invited to participate, did not teach first-year students, or had less than two years or no recent experience of teaching first-year students.

The respective Deans of the faculties consented to the study being conducted, and provided some administrative support through their offices, but the onus was on the researcher to secure willing participants. Interviews with participants spanned nearly four months, primarily due to the fact that there was a high dependence on the availability of lecturers and interviews were arranged as their schedules permitted.

The participants ranged in age from their late twenties/early thirties to one who was at retirement age at the time of interview. There were fifteen female and three male participants. All the participants are coordinators or co-coordinators and principal lecturers on the modules that they teach and play a leading role in the design and implementation of the module.

The participants are held in high esteem, either within their Faculty and/or the institution, in research and/or teaching and learning, locally and/or internationally. On the Education Faculty web page, in one of its newsletters, it was reported that a Senior Lecturer, a young female participant in this study, achieved a Y1 rating from

the National Research Foundation (NRF) which is awarded to a 'Promising Young Researcher' (http://www.nrf.ac.za/rating, 2018). One participant is rated an 'Internationally Acclaimed Researcher' and three participants are rated as 'Established Researchers' on the NRF Rated Researchers list, dated 20 April 2018 (http://www.nrf.ac.za/rating, 2018). Several of the lecturers have published recently in their respective fields and the rest are in the process of completing a research article or study or intend embarking on new research projects within the next year.

The following awards were reported on the university's website, in the Science Faculty's newsletters or the Science Faculty web pages. Two female participants were awarded a *Teaching Excellence and Innovation Laureate Award* in the team category in 2015. One of the pairing also represented her teaching team at an education conference in the United States of America in 2015 where they won a prestigious award for innovative higher education pedagogy. The project won bronze in the teaching category and centred on a scaffolded approach to teaching and learning, characterised by the development of critical thinking skills in an atmosphere that promotes and embraces respect, trust, diversity and nurtured intellectual ability. A male participant in the Science Faculty won the *Best First-year Lecturer Award* a few years ago. As part of a team of three, the participant and his colleagues also previously received an award for *Teaching Excellence and Innovation*. One of his colleagues, an experienced professor with long tenure, was also a participant in this study and is regarded by the Faculty as an expert on how to teach large-group classes. A male participant in the Science Faculty received the *Biotech Fundi Lifetime Contribution Award* for contribution in his field of speciality. A female participant affiliated to the Science Faculty was declared a category finalist in the National Science and Technology Forum (NSTF) Awards. Approximately five years ago, one of the female participants received a national award considered to be the highest form of recognition for contribution to education in a subject field. Her work focused on blended learning and an inquiry-based practical curriculum for her subject. The participant received recognition for teaching excellence and leadership.

Besides apparent teaching excellence and credible research status, the group of participants shared one distinct feature that became evident during my interaction with them: their passion for teaching.

The participants' demographics are reflected in the table below:

#	Pseudonym	Gender	Race	Age group	Faculty/ Department	Position	Length of service (years)
1	Tanya	F	White	55 - 60	Mathematics & Applied Mathematics (Statistics)	Senior Lecturer	15 to 20
2	Victor	M	White	60 - 65	Biological Sciences (Microbiology/ Biochemistry)	Professor	25 to 30
3	Kate	F	White	25 - 30	Extended programme	Lecturer - Contract	0 to 10
4	Helen	F	White	55 - 60	Mathematics & Applied Mathematics	Professor	20 to 25
5	Nirvana	F	Indian	30 - 35	Biological Sciences (Genetics)	Lecturer - Permanent	10 to 15
6	Oliver	M	White	25 - 30	Biological Sciences (Zoology)	Lecturer - Permanent	0 to 10
7	Gina	F	White	30 - 35	Education	Lecturer - Permanent	10 to 15
8	Lydia	F	White	55 - 60	Physical Sciences (Chemistry)	Senior Lecturer	20 to 25
9	Mahitha	F	Indian	25 - 30	Education	Lecturer - Permanent	0 to 10
10	Faith	F	White	30 - 35	Extended programme	Lecturer - Permanent	10 to 15
11	Retha	F	White	60 - 65	Extended programme	Professor	25 to 30
12	Brian	M	White	50 - 55	Extended programme	Lecturer - Permanent	15 to 20
13	Melanie	F	White	30 - 35	Extended programme	Lecturer - Permanent	5 to 10
14	Dineo	F	Black	55 - 60	Physical Sciences (Physics)	Associate Professor	20 to 25

15	Prisha	F	Indian	35 - 40	Science/ Education/ Extended programme	Lecturer - Permanent	5 to 10
16	Cikizwa	F	Black	40 - 45	Education	Lecturer - Permanent	10 to 15
17	Sarah	F	Indian	30 - 35	Education	Lecturer - Permanent	5 to 10
18	Nadine	F	White	30 - 35	Education	Lecturer - Permanent	5 to 10

- Please note that the age group is an estimate.

Table 1: Participant demographics

4.4.3 Research instrument

The research instrument was a set of fifteen semi-structured interview questions. The interview questions (see *Appendix A*) were structured to elicit a response on the following:

1) The type of support strategies;
2) The reasons for providing support;
3) The success of the strategy;
4) Whether strategies are sustainable and transferable;
5) The barriers experienced by lecturers.

4.4.4 Data collection methods and data documentation

The primary means of data collection was through one-on-one interviews. An interview lasted, on average, approximately one hour. The interviews were recorded with permission from the participants. Each audio-recording was transcribed and sent to the relevant participant to do member checking. Edits were incorporated before the document was uploaded on the Atlas.ti8 software.

4.4.5 Data analysis and interpretation

The Atlas.ti8 software was used for data coding and thematic grouping. Analysis was done according to the Basic Agentic Capability Model (as discussed in Chapter 3). Links were drawn with the literature reviewed for this study.

4.5 DATA VALIDATION

To validate data, qualitative researchers “routinely employ member checking, triangulation, thick description, peer reviews, and external audits” (Creswell & Miller,

2000). The qualitative analyst uses different lenses to look at the data and this multi-lens approach serves as validation exercise (Creswell & Miller, 2000). The confirmability, dependability and reliability of the data were established.

4.5.1 Reflexive practice

In this study, the practice of returning to the data was a lens used repeatedly throughout the writing process to ensure correct constructs, sensible explanations and interpretation. Patton called this validation method “validity-as-reflexive-accounting” (Creswell & Miller, 2000). Participants were asked for their views on recurrent matters that had come to light in other interview sessions.

4.5.2 Member checking

Another lens is that used by the participant. Since reality is a social construct, actively involving the participants in verifying the accuracy of how their reality was presented serves as a confirmation method (Creswell, 2009, p.223). The transcriptions were sent to the participants for member checking to ensure consensus, accuracy and trustworthiness. Member checking is regarded as a “transactional approach” which is indicative of “active interaction” between the enquirer and the participant (Cho & Trent, 2006). This interaction between the two parties secured a high level of trust and confirmability of the data.

4.5.3 Audit trail

There is a documented audit trail for this study. All data have been stored safely. The research journal was updated regularly, and notes were taken during the observation sessions.

4.5.4 Peer debriefing

Another measure of ensuring authentic and credible data is through peer debriefing or review (Creswell, 2009, p.224). Regular contact was held with the research Supervisor and Co-Supervisor. The supervisors’ feedback was incorporated.

4.5.5 Confirmatory interviews

Three interviews simultaneously served as confirmatory sessions. A session with a member of the Dean’s office on the extended programme served to establish whether the concerns expressed by some participants regarding a lack of sufficient staff and large student group sizes were valid.

Another session was held with a participant who plays a pivotal role on the computer literacy module which services the entire first-year population of the university (approximately 9 500 students in 2018). The participant coordinates the module and trains the assistant lecturers in the curriculum. The participant provides teaching and learning assistance when required. The interview addressed the concern regarding the lack of computer literacy skills of first-year students. The objective was to establish the nature of computer literacy support provided to students.

The third interview was held with an academic literacy lecturer. This session provided perspective on the concerns regarding the lack of academic skills and aimed to determine whether the required support was provided.

4.5.6 Document analysis

Some of the participants provided documentation for analysis after the interview or to view while the session was in progress (see *Appendix E*).

4.5.7 Lecture observation

A statistics lecturer arranged for observation of a first-year lecture in a large venue that accommodates 300 students. It is a follow-on second semester module, which is taught by two of the participant's colleagues. The participant taught the first semester module, to a class of approximately 600 students. The observation served to confirm some of the issues that had been discussed, *inter alia*: the use of group work in a large-group setting; use of the Clicker and its immediate feedback; interaction with the students; the scaffolded approach to teaching and learning; identifying and addressing content problems immediately in class following identification of common errors through group or Clicker feedback.

A second observation was conducted in a tutorial setting for the same module and first-year cohort. The tutorial incorporated pre-tutorial activity, a Question-and-Answer session at the beginning of the tutorial and a formal test at the end. The lecturer had provided a set of questions on the *Blackboard* Learning Management System for the students to work through in preparation for the test. During the Q&A session step-by-step mathematics workings were shown on two large-screen projections. Three assistant lecturers were in attendance to provide support. The tutorial design since it consolidated learning acquired in the lecture. The students were benefited by having a set of similar questions for practise; having the

opportunity in the Q&A session to address concerns prior to writing the test and doing an open-book test.

The lecture and tutorial observations illustrated the use of different teaching and learning strategies to create conditions where students can successfully engage with the learning material. There was also evidence of support embedded in curriculum delivery, namely scaffolded lecturing, peer discussion and formative assessment opportunity.

4.5.8 Data triangulation

The triangulation of data was achieved with interview data, observation notes, document analysis and confirmatory statements made by the participants. The trustworthiness of the data was established.

4.6 RESEARCH ETHICS

The anonymity of participants was guaranteed, and confidentiality will be preserved. Participants were assured of voluntary participation and exit without repercussion. Their written consent was obtained prior to interview. No participant was placed under any obligation to participate.

Respect for the boundaries of the site and participants is paramount in ensuring a harmonious relationship (Creswell, 2014, p.73), therefore interviews were conducted once the Dean of each Faculty had given permission, and at a time and place suitable to the participants. University rules were taken into consideration and the time frame of interviews depended on the participant's schedule. Participants were apprised of the research scope and purpose for the process to be transparent.

The Ethics Committee of the Faculty of Education provided research clearance. The Ethics Committee seeks to ensure that the research complies with expectations of professional conduct and protection of intellectual property (Singh & Stückelberger, 2017). Data will not be misused or falsified (Creswell, 2014, p.77) or shared beyond the boundaries of what is acceptable for this type of study. This study employs politically correct and academic language to make it accessible to a wider audience and appropriate for publishing in peer reviewed journals (Creswell, 2014, p.76).

4.6 LIMITATIONS OF THE STUDY

4.6.1 Disadvantages of a case study

Although rich in data due to personal interaction with participants, the case study limits the investigation since it is bounded by time and activity (Creswell, 2014, p.17). This case study focuses on the individual's experience at the exclusion of others. It is an isolated observation or examination for which findings cannot simply be generalised. I have, therefore, looked carefully at links with broader issues to determine whether the findings could be transferable or lead to 'enhancement of practice' (Briggs *et al*, 2012).

4.6.2 Challenges experienced during data collection

This research was dependent on the responses of willing participants. Since lecturers are very busy due to several commitments, interviews had to be scheduled around their availability, which meant that time in the field had to be extended. Invitations were sent in stages so that the group size would be manageable and there would be no diary booking conflicts. Time constraints were endemic to the process.

4.6.3 Delimitations

This study, as a delimitation of its scope, focused on the agency of Science and Education lecturers at a South African university in Gauteng, therefore the findings from this compact study cannot be generalised.

4.7 CONCLUSION

In this chapter, paradigmatic views and methodological processes were explained. The process has revealed that perseverance and careful planning are required to reach the objective of successful data collection. The rapport with the participants allowed for rich, thick data collection and alleviation of the fears of a novice researcher. Confidence was built in the value of the inductive process.

CHAPTER 5

DATA ANALYSIS AND INTERPRETATION

5.1 INTRODUCTION

In this chapter, the qualitative data obtained during this study will be discussed and analysed. Data analysis was done using the ATLAS.ti8 qualitative data analysis software. The research aims, research questions and conceptual framework for this study served as guidelines during the data coding process. Twenty-five codes were identified and used to code the data. The coded data was then thematically organised according to three themes that emerged. The three themes outlined below correspond with the research sub-questions:

1. Barriers or constraints to lecturer agency (linked to research sub-question 3);
2. Strategies that enable student academic success (linked to research sub-question 2);
3. Lecturer agency (linked to research sub-question 1).

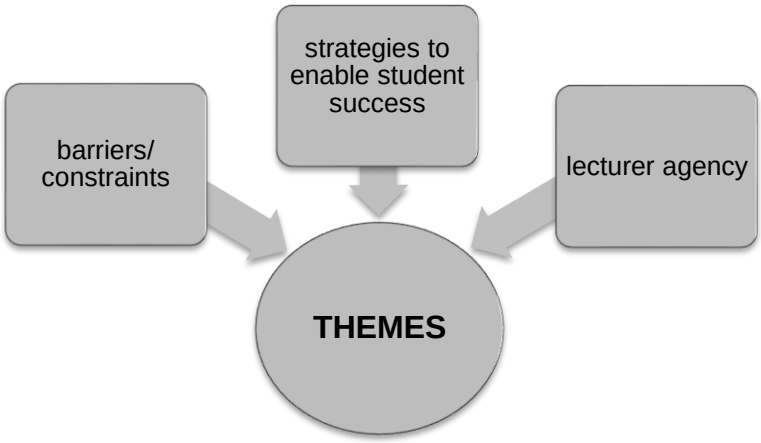

Figure 5: RESEARCH THEMES

The research themes illustrate how the data collected during fieldwork show links with the literature review which include the following:

1. A synopsis of the constraints on lecturers in doing their work within a challenging higher education context;
2. How lecturers navigate constraints to assist students who themselves face challenges;
3. Perspective on how the student-lecturer relationship is fundamental and instrumental in the endeavour to achieve student academic success.

This study might reflect ideas that have come forth in the literature. This study is not unique within the national and international widened access research context, but it may be distinct through the recount of lecturers' lived experience at this local research site.

Inductive coding (Maree, 2007) was used. Some segments of data were labelled with different codes as they could be interpreted or be relevant in different ways. Maree (2007, p.107) refers to this type of coding as "co-occurring codes".

The data was analysed and interpreted "from the whole to the part and back to the whole" (Gadamer, in Maree, 2007, p.101). This method of analysis is referred to as the hermeneutic tradition, which is a means of making sense of textual data (Maree, 2007).

5.2 BARRIERS OR CONSTRAINTS TO LECTURER AGENCY

For this study, barriers or constraints are defined as any challenge or hindrance to lecturers' attempts to effect positive change in a situation. Participants conveyed the challenges that they experienced.

For this theme, two main areas of challenge, or sub-themes, were identified. Firstly, challenges experienced due to the nature of the job or association with a Department and Faculty which include barriers within the institutional context (structural barriers). The latter would refer to physical, financial and/or human resource constraints. These constraints could constitute negative conversion factors which are institutionally imposed and beyond the lecturer's control. Negative conversion factors can inhibit or prevent agency. They could also be students' own constraints that negatively affect the student-lecturer relationship.

5.2.1 Faculty challenges

a) Time constraints

One of the biggest challenges mentioned by the participants is time constraints through:

i. Heavy workloads

So, I had two students in my office who came to talk to me about difficulty in adapting and the workload being overwhelming. …At (Campus C), if I had that

situation, I would spend time with them but in this position where you have 2000, I refer them to the Student Advisor. (Tanya)

Another academic confirmed that*, "…we don't have time and there are many students…" (Victor).* This implies that it is difficult to give one's attention to a particular matter that affects individual students. The heavy workload is due to having more students and related to that, more administration, teaching time, marking, and so forth.

Another concern was that, even though the participant had worked on the extended science programme, she found that she could not easily transfer those skills, knowledge and experience to the mainstream programme. The participant acknowledged that the extended programme catered for smaller groups in a module (approximately 250 students in the module previously taught) compared to 2000 students currently taught in the mainstream programme:

It's a challenge for me to learn and find methods to implement that will work for large groups. (Tanya)

The participant is not the only lecturer who experiences this challenge. This is probably what motivates other participants to constantly review practice and implement revised or new ideas. The search for large-group solutions in the massification model is continuous because it is stymied by negative conversion factors, such as budgetary and staff constraints.

ii. Teaching and research

Participants indicated that they divided their time between teaching and research and sometimes might find themselves not having enough time for either pursuit, as explained by three academics below:

The more time you put into teaching and planning your teaching, the less you have for research. (Tanya)

It's a full-time job running a course like this, with 1500 students. It's the size of a high school. And yet you've got to. And you can't let go of your research. (Helen)

It's difficult to split your time between research and teaching…(Kate)

The conflict in lecturers' roles and identity as reflected in the literature (Boyd & Smith, 2016) is apparent in these lecturers' lived experience.

iii. Time constraints in tutorial sessions

Tutorial sessions are usually fifty minutes each which inhibits the planning of frequent group work activity, incorporating more scaffolded exercises or formative assessment opportunities whereas a double session would have accommodated those.

iv. Interruptions to the teaching programme

A participant indicated:

> *Then we have Easter break and long weekends which interrupts class time. (Victor)*

Planned or unscheduled interruptions to class time can, therefore, delay curriculum delivery.

v. Large class sizes

Teaching large classes affects the ability to provide individual student attention and early identification of at-risk students. There is not enough time to attend to the various needs of students in a large group:

> *I mean, we have time constraints obviously and you don't always recognise in time when a student needs help… (Kate)*

An academic could distinguish between the extended and mainstream programmes since she taught on both:

> *There are just too many numbers... I can even make a comparison where I used to lecture (another module). This is (the mainstream module). (The other module) is your foundational extended year programme where class size is a maximum of maybe a 100 – 150. I knew individuals. … It is very difficult to get to that level of working one-on-one with the students... (Nirvana)*

One participant was frank in saying that there was no identification of at-risk students in her module since the first-year Chemistry group consisted of 1200 to 1400 registered students and that it was practically impossible to ascertain individual student challenges in such a large group. The at-risk students were included in a

one-size-fits-all approach to teaching and learning. The lecturer has embarked on a research project to investigate whether the common strategy is disadvantaging the students. Many of the participants identify at-risk students after the first semester test results are known, or when persistent absenteeism is noted. Warning signals or 'red flags' are prevalent in all departments to which the participants are affiliated. For example, in the Early Childhood Education Department, the lecturer has a student assistant that 'red flags' persistent absenteeism or under-performance. In the educational psychology and computer literacy departments, the module coordinator performs the same task, whereas other departments might have an administrator to do so.

b) Class and classroom sizes

The issue of time constraints linked to teaching large student groups, in some cases 1500 – 2000 students, poses many challenges if one considers the number of lectures, tutorial and practical sessions that should be held to service that many students.

The venue size, particularly laboratories for practical sessions, would be a primary consideration and with that, the health and safety aspect as well. None of the participants indicated dissatisfaction with the status of the technical or physical facilities or the maintenance thereof. The concern is that there are not enough large venues to accommodate the large student groups.

> *We also need bigger venues if we want to continue with the capacity that we are taking... We teach a lot of theoretical… but none of the practical. Apart from the online interactive labs, that's all they're actually getting exposed to. If we had better facilities where the lab sizes could accommodate our kids …Simply isolating DNA…to have the resources... and safety to do it, is simply impossible. (Nirvana)*

As indicated by the following participant, the only alternative is to repeat laboratory sessions which is time consuming:

> *It would be nice if I could have a larger practical venue, for example, because the lab that we use – the first-year lab – can only take 120 students. That forces us to have nine repetitions of each practical. (Oliver)*

A science participant indicated that wet laboratory sessions have been replaced by virtual laboratories where the students access an online platform that is included with the prescribed textbook package. Access to the virtual laboratory is an additional cost for the student.

> *We need institutional buy-in for the electronic access to the textbook … The university is saving money on reduced purchase of wet lab stock. With that savings in mind, I asked… in a meeting whether the university would subsidise the R150 electronic textbook access for students and got a flat refusal. (Victor)*

The appeal was lodged to ensure that all students received access to the electronic platform. The participant discovered that students were being negatively affected due to lack of funds. The participant had to intervene by approaching the student finance office for support.

> *They couldn't do the virtual laboratories, they couldn't do the connect assignment. They fall behind. … I started to negotiate with DESA till eventually the university agreed to an advance … It was almost R900 per student that had to be advanced. (Victor)*

This raises concern about how to prepare science students properly for the workplace if they do not get hands-on or virtual experience of laboratory work.

The virtual laboratory might be a reasonable substitute, but at extra cost to the student, one should consider whether it is value for money. Without the necessary funds the student experience may be diminished. The student could also be penalised for non-participation as the virtual laboratory session has to be completed for a score to be received. This score is then presented at the tutorial session where the student's grade is recorded.

According to Victor:

> *The virtual laboratory assesses whatever would be tested in a wet lab, even deducting marks for not placing the dirty pipet in the washbasin… The programme only provides a printout of the report if you've worked through the whole experiment.*

It is, therefore, a viable solution to a physical constraint.

c) Resources

Students are required to purchase their own textbooks. However, some students who are receiving student funding via the NSFAS initiative cannot purchase textbooks immediately.

> *(O)ne of the reasons why students are at risk of not meeting learning outcomes this year, is because they cannot afford to buy the textbook. This is because the NSFAS bursary pays out too late… (Victor)*

Product costs vary. In the case of a mathematics module, the cost for access to an online platform is calculated in foreign currency:

> *It doesn't come for free. It's also an international product, not a South African product, so it is dependent on the exchange rate. (Helen)*

The clicker (an Audience Response System [ARS]); (Caldwell, 2007) is utilised in some of the science modules. The cost of the clicker is added to the student's account, which is why some lecturers do not use it even though they regard it as a versatile device, e.g. it can capture attendance (for a participation mark) and provide immediate feedback for formative assessment activities.

> *We already have the WebAssign that is added to the fees. Now we add the clicker… That becomes quite pricey. (Helen)*

The clicker is a hand-held device that allows a response, in real time, to multiple-choice questions with a click on A, B or C, etc. The benefit of utilising such a tool is weighed against the cost of the product and the cost of software licensing. The clicker is a means of formative assessment in the large-group class as it provides immediate feedback to the student and lecturer and assists in determining whether students have grasped a concept.

The clicker is not compulsory therefore learners are not necessarily disadvantaged. An education lecturer uses the idea of the clicker in class:

> *(W)e didn't want the students to buy clickers because they are very expensive, so they used colour cards. Each student … had a yellow paper for A and green paper for B and so on. (Gina)*

Research indicates that the clicker is a preferred teaching tool in large-class settings and across different subjects due to the fact that it can be used at any academic level; serves to enhance or promote active learning, participation and class enjoyment; improves attendance, retention and accountability; and has "a strongly positive effect on learning outcomes when combined with peer or cooperative learning" (Caldwell, 2007).

d) Staff constraints

Participants confirmed that there were budgetary constraints in their respective departments this year which have had ramifications. Most notably are staff constraints, which affect them directly. One of the main concerns is the reduction in the number of tutors which reduces yearly. This places a bigger load on the remaining number of tutors, or even the lecturers who manage some of those duties themselves.

> *I was amazed at a tutorial with 600 students in a class… it's got to do with staff restrictions, capacity. We are just too few. (Tanya)*
>
> *With tutors …every year we have less and less…We need the support. We don't have enough tutors. I end up doing a lot of what I would expect tutors to do... (Kate)*

As a direct line of support to students, complementary to the lecturers' efforts, fewer tutors poses a challenge in terms of the frequency and quality of support that is provided to the student.

For some lecturers, the tutorial session becomes a re-teaching session since certain concepts that were taught in class are not consolidated by the time the student reaches the tutorial session.

> *I personally see our tutorials almost as an extra lecture because you end up teaching again. (Tanya)*
>
> *The tutorials are really critical for the conceptual understanding which is for me the real learning. (Lydia)*

The contact tutor sometimes performs a dual role as e-tutor, or e-tutors can be hired separately to provide support on the university's LMS. Budgetary constraints affect

online support which many students require, particularly prior to a test or examination. Problems or queries can be posted on the discussion board or emailed for an e-tutor to respond within a specific turnaround time. However, the discussion board requires constant monitoring which becomes unmanageable due to lack of staff.

Some lecturers indicated reliance on the tutor to have the necessary knowledge and skill to make the tutorial session an enriching experience:

> *The tutor is very helpful… For such a large group – we're burning Bunsen burners, using strong acids – you need people who know what they're doing. (Mahitha)*

> *Finding the quality of tutors is the other constraint because that's where we're trying to get the staff: student ratio … because there's no way I can do more … So yes, money to pay them and quality people to do the work are probably the biggest constraints … (Lydia)*

A fellow participant shared the concern about obtaining the services of "quality people to do the work". The problem of finding well-trained lecturers for an academic literacy module is a recurring struggle if staff vacancies arise. It is also a challenge finding tutors with a good English foundation to assist in managing tutorial sessions on their own. The tutors assist with assessment and if they do not have the relevant knowledge, an added burden is placed on the lecturer to carry some of the load.

> *We have tutors that mark the first two drafts of the individual assignment…A lot of it is simply too difficult for tutors. … It's difficult to get the calibre of tutor that we need to do higher-level marking. A lot of it we do ourselves. (Faith)*

If the student does not take the initiative to request support in a tutorial session or the student's problem is overlooked due to the large-group experience, they could end up perpetuating a mistake or not having a problem clarified. Lacking the conceptual understanding would impact academic progress. If academic needs are not met by a direct line of support, added to possible other barriers, the student's chance of success is derailed.

Tutors attend to large tutorial groups and might over-extend their time if they consult on a one-on-one basis. Both the lecturer and the tutor sometimes feel overwhelmed by their responsibility.

> *I told a tutor … he was complaining to me about an 18-hour appointment for which he puts in 30 hours. I had to warn him against that. It's typical of what happens. (Tanya)*

> *Ms P is now the Head Tutor. She is busy. She has 1500 students. (Victor)*

To add to the barriers caused by budgetary constraints, it has been the experience of some participants that ad hoc support has also been reduced, as in the case of student faculty advisors who serve the extended programme:

> *One of the class reps …said we need more student advisors. The students are not coping, and the student advisors are fully booked for the semester. We need more people to help the students, teach them the coping skills. (Kate)*

It is ironic that this apparent shortage of support staff exists on the extended programme since it is designed to provide intensive support. It stands to reason that, if the students are not receiving the required support, their persistent personal predicament may adversely affect their academic performance, in which case any attempts by the lecturer to engage and support the student might be stymied.

One participant mentioned the effect of budgetary constraints on the administrative front. In their department, they have the added support of an administrator to assist with programme administration. However, the position is not permanent and may become redundant if the required funding is not sustained.

The precariousness of temporary positions is felt in other areas as well. Several lecturers that teach on the extended programme are employed on a contractual basis due to the annual release of funds by the DHET. The instability and uncertainty cause anxiety and discontinuity with the huge turnover of staff.

> *Yes, it's been difficult. Some years, until December… In the beginning it was extremely stressful. I think one year it was mid-December only when I got my contract… I know staff turnover with us has been a problem...you don't have*

that continuity, you don't have someone who buys into what we are actually trying to do there. (Kate)

In addition to fixed-term contractual employment and annual staff turnover, mainstream staff are contracted on the extended programme, which does not add to its stability:

… Normally the staff are not on campus (available for consultation) because they have contracts. They go in, they teach and they come back to (Campus A) where they do research. In an extended programme, you actually can't work like that. You need people there to give guidance, need to do consultation. (Kate)

The idea of intensive support is compromised in this way and leads one to wonder how many students go unsupported and how many of those achieve mainstream integration. The reasons for successful integration in mainstream cannot be attributed to any single intervention or support strategy that is provided. The idea of achieving "success" is also debatable since it has various connotations:

It depends what you mean by success. You don't know if it's your intervention that caused success or whether they woke up and did the work themselves. Some of these students are, what you call, 'last-minuters'. (Retha)

The only way to ascertain is by triangulating: using quantitative data, how much they've improved over the year; student feedback, linking that with lecturer feedback; and then getting an overall picture because the reality is there are so many variables. You really can't isolate it. (Faith)

It is, therefore, difficult to measure the success of a support strategy. It cannot easily be linked directly to results unless perhaps a form of pre-test and post-test is applied. As one participant indicated, some lesson material is completely unknown to students and cannot be added to a pre-test because the latter presupposes prior content knowledge.

Students' progress can be tracked and evaluated when looking at results:

There are two semester tests and about eight or more tutorial tests. They all make up the semester mark, so I can see if there's progress or not. (Brian)

One of the "measurements" of success according to the participants is to obtain students' feedback at the end of the module. All the participants indicated that they usually received positive comments. One participant found it worthwhile to compare the performance of his class with those taught by his colleagues. If performance in his class was better, it was an indication of what he had done "right". Several participants cited that much of their measurement of success is anecdotal. According to a participant on the extended programme, a special-budget, intensive qualitative-quantitative study might measure "success" of the programme otherwise the determinants of success remain speculation.

e) Heavy workload

The heavy workload limits time for reflection and evaluation:

> *There's no time for reflection. I always want to see the average, the pass rate, and that tells me a story. But, I don't have time to check last year's and to see if there's a trend because that takes time to go through the statistics. (Brian)*

It also makes attempts at support and intervention more challenging because the present staff need to do more. It seems that there is a disproportionate ratio for number of students to number of lecturers since there is apparently no increase in lecturer numbers as student numbers increase. This is a fact outlined in the *White Paper for Post-school Education and Training* (DHET, 2013:35):

> The rapid expansion of the university sector in terms of enrolment has not been accompanied by an equivalent expansion in the number of academics. This means that academic staff have experienced increased teaching loads and high student-to-staff ratios.

One of the participants indicated that, for her chemistry module which services 530 students, she was advised to use blended learning to cope with increased student numbers. The term "blended learning" at this research site refers to the use of both face-to-face and online teaching and learning strategies. The participant believes the pedagogical value of this modality should be examined in the literature and research on its efficacy should be presented before isolating it as a means to "solve" the large-group challenge. Blended learning is used in the flipped classroom model employed by several of the participants. Research indicates that the flipped classroom is a

means of improving self-directed learning, better student engagement and student satisfaction (O'Flaherty & Phillips, 2015).

> *Our lectures are also structured in … the flipped classroom where we expect them to prepare. There's a whole online system in place where they have to prepare, and you do your lecture problem-solving style...our tutorials are actually then an extension of our lectures because of … this flipped classroom model, which is supposed to be working well. (Tanya)*

The literature indicates that there is increased student and lecturer satisfaction with the flipped classroom model (O'Flaherty & Phillips, 2015). However, there appears to be conflicting views among a few participants on the value of the flipped classroom:

> *It also requires academic maturity from the students and … reward and incentive in the classroom. I tried it very, very briefly but it doesn't suit my philosophy on how teaching and learning happens. I want to give them the foundation and then they can go watch videos. (Melanie)*

The participant raised other reservations, for instance that the lecturer might have to unpack misconceptions in class (if students prepare by themselves beforehand) and should consider the context of implementing such a model. According to the participant, flipped classrooms might work well for student diversity in a developed country, but the South African diverse context might be different.

One of the participants who practises the flipped classroom model indicated that the results belie the effort that is put into lesson preparation. The literature also indicates that preparatory time for a flipped classroom strategy can be labour intensive on the part of the lecturer (O'Flaherty & Phillips, 2015). This reality was confirmed when I did observation of a statistics lecture on probability where the flipped classroom model was applied. It was clear from the PowerPoint notes that the lecturer had meticulously planned every slide in the sequence. The lesson, in its scaffolded presentation, effortlessly fell into place. The "effortlessness" is indicative of intensive lesson planning since links with prior knowledge and follow-on lectures were presented.

f) Staff dissatisfaction / identity conflict

It is not unreasonable to consider that staff constraints could add to staff dissatisfaction with increased teaching, marking and administrative loads. This is also prevalent in the literature where it has been found that increased demand creates possible stress, “emotional labour” and distress, disengagement or dissatisfaction (Barkhuizen & Rothmann, 2008; Berry & Cassidy, 2013; Rothmann & Jordaan, 2006). It is, therefore, understandable that a labour-intensive strategy like the flipped classroom might not be viewed favourably. Determining the effectiveness of the flipped classroom requires follow-up and follow-on activity linked to frequent revision of practice.

Reflexive practice is a key contributor to agentic action as found in the literature (CHE, 2017b). Funding (and related staff) constraints, and time constraints, could thus inhibit agentic action. These negative conversion factors could impact quality of service:

> *What is a reality is that our marks this semester have proven that we need more people. It is a university decision: Do they want throughput? Do they want quality? (Faith)*

These are valid questions that indirectly affect how the lecturer sees him or herself in the context of the institution. There seem to be underlying identity issues for these participants: To be a change agent introducing innovative practice that might improve student engagement and learning, or to follow the path of least resistance and employ traditional methods that require less effort? To produce more passes or produce more quality passes? The idea of tension in academic identity is iterated by Albertyn *et al* (2016) where it was found that lecturers are expected to work in the massification model without compromising or sacrificing quality. This could be an unrealistic expectation if systemic constraints provide obstacles to quality input and output.

g) Personal challenges

At least two participants suffered personal loss recently. In retrospect, it made them realise that they have made several compromises in the quest for doing a good job. A participant indicated that she regrets having sacrificed family time as:

> *I would always, always, 24 hours, open my computer… Why didn't I do it differently? (Tanya)*

The demands of the workplace often come at the expense of personal space and gratification. A few participants indicated that it was difficult to maintain a healthy balance between home and work, or just to lead a healthy lifestyle.

The demands at work could also be presented in the shape of conflict with one's peers. One participant indicated that her younger colleagues, whom she presumed would be excited about innovative ways of curriculum delivery, were more reluctant about participating in the flipped classroom initiative. She indicated that they found her to be over-thinking teaching and learning strategies, whereas she attributed her careful deliberation to her passion for teaching and trying to find the best way of helping the student. Her colleagues would, at times, resort to traditional teaching methods instead of following through on the agreed plan of action for the flipped classroom. For this reason, coupled with poor academic performance by the students, the idea to continue with the flipped classroom model has been put on hold.

> *I'm involved in that kind of research as well as my colleague. But we're two of a six-member and the other four lecturers are all young lecturers under extreme pressure for completing PhDs... So, it's really hard on them. …I think we've all done the same thing; it's the easiest way, least resistance. You just do as you've been taught. (Tanya)*

The participant found that change is met with resistance in her department. Any innovation that becomes time intensive and contributes to the dissatisfaction of staff is discouraged:

> *The moment you suggest that it implies work, it's a change, it's met with resistance. (Tanya)*

Staff members are consequently encouraged to resort to less time-consuming teaching practices to cater for other obligations, such as research.

5.2.2 Challenges through interaction with students

Participants viewed the challenges experienced by students to have a negative effect on the student-lecturer relationship, whether directly or indirectly. A barrier to student academic success, for this study, can be viewed as any personal, psychological, social, financial, and/or academic challenge.

Several constraints to student academic success have been identified in the literature, such as academic under-preparedness and a lack of adequate life skills and academic literacy skills (CHE, 2015). These constraints are evident in the findings for this study as will be discussed.

a) Lack of skills

It was clear from the account of the participants that students lack a range of skills that they deemed necessary for “survival” at university. A participant found that some students do not read the course material, and also neglect to read questions carefully, which contributes to poor performance in a test or examination. In addition to a poor reading culture and reading skills, study skills were lacking which compounded the problem. At least five participants indicated that thematic reading was required before a lecture or tutorial in preparation for the activities in class. However, there is a lack of adequate reading and summary skills to be able to absorb the information, and work with it critically or procedurally. Others do not read much of the material at all. This detracts from the quality of the lecture experience. Many students neglect to see the advantage of these preparatory exercises.

A few participants have noted that students seem to become overwhelmed by the amount of testing that happens across modules, particularly if there is more than one test scheduled per week. This was attributed to a lack of time management skills. Often, students submit work at the last minute. A few participants indicated that they address students on this tardy behaviour. As a result of a poor skill-set, the work produced by a student can be of poor quality. Not submitting work can have a negative impact on their semester mark or prevent them from sitting for examination because they do not meet the requisite entry requirement.

As one participant indicated, in the case of supplementary examinations:

If they've missed almost all the classes, they didn't do the online submissions, I'm not going to go look for those. I can't justify it because clearly they weren't pulling their weight. (Kate)

Students tend to underestimate the "volume and tempo" of the work. If this is viewed in conjunction with poor reading habits and study skills, then the possibility of under-performance becomes greater. One participant commented on the first semester examination:

We've just looked at the results now and our pass rate is terrible this time. So, they're not coping… My personal opinion is we're absolutely overloading content. We should do less at a deeper level and focus on quality instead of quantity. (Tanya)

It is believed that rote-study does not benefit a student at university level because of the scope and complexity of the work.

They're very used to being spoon-fed ... It's not a regurgitation system. You have to read, understand and apply. That's Bloom's taxonomy; that's the way you're going to understand the questions that are coming. (Nirvana)

The idea of 'coaching', for instance prior to a semester test, is not favoured by some participants.

These revision sessions are useful, but they're very close to coaching sessions… Although that is something I would want to have out of the way, it still works… for the majority of students on first-year level, I would say. (Tanya)

A few participants are not in favour of the university allowing late admission to students. Late entry linked to a possible poor skill-set will exacerbate the problem of under-performance in a module. According to one participant:

Mathematics is such that it builds, every week builds on the previous week and the pace at which we go is quite hectic. And it's a huge amount of work… it's an almost insurmountable problem to catch up three or four weeks' worth of work while you're continuing at the same pace. (Helen)

Besides the additional work created for the lecturers in either referring the student for support to the faculty student advisor or providing academic support themselves to bridge the gap upon late entry, there is the possibility that the pass rate can be lowered if these students do not cover all the work in time. Participants indicated that lecturers are held accountable for student performance. A few participants indicated that they had to ensure that the 'tail-end' of the class (i.e. under-performers) reached the required 50% pass mark at the end of the semester and that the "murky middle" (i.e. average performers) were encouraged to improve their results. There was little time or opportunity to pay attention to the top performers to ensure that they continue to excel.

> *And the pass rate of mathematics, because it's such a difficult subject, is always in question. Often it is not as high as people would expect it to be. So, yes, there is pressure on us, on the Department and obviously the Head of Department takes it seriously*. *(Helen)*

Another participant found that students lack certain numeracy skills which were seemingly never addressed at school level:

> *(T)he basic thing is that these students don't have a sense of numbers because they are using calculators from an early age. … If you don't know your tables… You cannot square or cube something… Those are primary school things. The single biggest problem year after year is fractions. They cannot work with fractions. (Brian)*

This presents as one of the foundational issues that serve as "binding constraints" to academic progress (Van der Berg *et al*, 2016). Students will also run the risk of not proceeding to the following semester (or year) module if passing one module is a prerequisite for another:

> *If you fail Mathematics, then you're in trouble because most of the time, you lose a whole year through failing a Mathematics module. (Helen)*

A "repeater" is an addition to the already large incoming student group and also adds to the number of "repeaters" who "clog" the system. According to the participant,

some students “carry” the module for a few years because “…*there’s something in you that’s mentally blocking you” (Nirvana).*

From the account of several participants, students seem to have a lack of coping or general life skills. A participant indicated that some students seemingly do not know how to handle failure and that a lot of pressure is applied by perhaps their parents for them to do well. They sometimes do not accept the responsibility of having to change negative into positive behaviour, disregard the ramifications of their own predicament through short-sightedness or the belief that someone else will sort it, or simply do not recognise their own problem. They might even adopt a negative attitude and mind-set towards a module because of a negative experience in a related module.

Students suffer from self-doubt and second-guess themselves, particularly prior to, or during a test or examination as relayed by a few participants.

> *The self-doubt. You see it over and over. The students can’t cope in tests because they doubt themselves all the time. One said to me, ‘Why am I looking at this test now and realise it’s so easy. Why couldn’t I see it when I was writing?’ (Kate)*

This is partly attributed to not learning the work properly, therefore, not understanding the work and partly to not applying reasoning skills. Despite participants’ best efforts, some students do not succeed. This could be due to disinterest, misplacement, or being more absent than present.

> *Those who drop out…I would dare to say there is no structure that would support them well enough. You know, really, the support that they do get and with all the opportunities and if they were university quality, they should pass. (Tanya)*

Failing a test or module could serve as a warning signal. For example, one participant related the incident of a female student who failed the module and then proceeded to become one of the best students in the following semester. For others, it might signal the end of the road in the programme or a turnabout in their career path:

> *… Sometimes they don't succeed, and I think they've made a wrong choice, career choice. And I think the 'not succeeding' should be a message that you need to find what really suits you… (Lydia)*

One participant was clear that sometimes the "hard truth" had to be spoken for a student to face reality:

> *Some students think I'm very rude when I say: You can't do Physics; go to marketing… Because we need people to realise what is best for them. And they should do that which is best for them. (Dineo)*

It is clear that students' lack of skills and misguided career interest can hinder lecturers from successfully providing support.

b) Personal and financial constraints

The participants indicated that students have their own personal, financial or psychological challenges that act as barriers to academic advancement and that the first year of university is *"...a bit of a roller coaster ride for many students. It's adapting to the work, the work pace, the level of the work, adapting to university life, being away from home" (Helen).*

Some students do not approach anyone for assistance or do so too late. One participant related how there have been more incidents of unplanned pregnancies since students do not always exercise caution when confronted with the freedom that they get away from their sheltered, protective environment. The participant related that one student contemplated abortion and was referred to the nurse on campus. Another female student apparently suffered from bipolar disorder and possibly even schizophrenia. The lecturer intervened and referred her for counselling. This added responsibility of providing pastoral care was also evident in other instances where the participant had to counsel a student before a supplementary examination because she was overcome with anxiety, and where a student had suffered a traumatic incident due to the gruesome death of his sibling.

Sometimes the psychological problem manifests in relation to under-performance in a module. A participant related that failing the first test can be a shock and students who consequently suffer from depression are referred for psychiatric support. It is

clear from the lived experiences of the participants that their scope of work has widened to encompass the role of “counsellor” and surrogate “parent”.

Some participants felt that first-year students lack maturity to handle the ‘freedom’ of university and that students did not have the sense of responsibility to manage themselves and their academic obligations. This had an adverse effect on their performance in class which means that sometimes stricter boundaries should be set.

> *If I think of this particular module… There was a year in which we didn’t make the practical sessions compulsory. We thought students would realise what the importance of this is because at some stage in their lives they’ve got to become independent … more mature learners, and maybe the first year is when we should cultivate this independent learning. There was a lot more freedom given to students. That proved not to be successful. It’s as if these first-year students are not capable, maybe they’re not inclined, to handle that amount of freedom. (Helen)*

Students do not attend class regularly. The trend of absenteeism is worse in some modules than in others. Lecturers address the problem of absenteeism. In the case of an unplanned pregnancy the lecturer invited a member of the Alumni, who had a similar experience, to make contact with the student for support and encouragement. The lecturer was available to provide academic support and helped the student to work out a plan of action to minimise the negative effect of absenteeism.

A participant in the Education Faculty had noted a student’s perpetual absence and followed up on the matter. The student had apparently suffered financial problems. The lecturer ensured that the student met with faculty administration to work at meeting her financial obligations and personally assisted the student in recovering lost work.

Human agency is, therefore, evident. For this study, human agency means to act to bring about change (Sen, 1999); make an informed and reflexive choice and to act on it; act from the premise of being empathetic and humane (identify with another person's experience; having consideration for others; looking beyond the academic concern and considering the context).

Various accounts were given by the participants whereby they relayed how their actions were prompted by empathy.

> *They're trying to cope in a world that they're not prepared for. Learn to recognise when they're taking chances … Laying the boundaries but being human at the same time. Just give them the support they need ... Then a lot more of them will be successful. They must just feel like they're not disappearing into the masses. That makes a big difference. (Kate)*

Human agency, therefore, manifests through empathetic response to the personal barriers that hamper students' academic progress. It relates to academic agency since the primary concern is that students should be able to concentrate on their work once those personal barriers have been navigated.

For example, a physics lecturer produced examples of students' homework during the interview session. She indicated that the students had failed to submit homework at the first request. The participant followed up and informed them that they could re-submit, although not all of them took the opportunity to do so. I mentioned that not many lecturers would permit a second chance. The participant responded by saying, *"I know …I do it because I want to do it" (Dineo).* She further stated that she wanted to ensure that they received the opportunity to correct their negative actions. The participant indicated that often the biggest problem was the irresponsibility of students (as previously discussed under lack of skills). When she calls them to her office to discuss their performance, many of them accept responsibility, although there are those who resist and claim their rights.

> *And it's not about colour; it is all students. And it is not about gender. It is all students. I call them and once students accept their responsibility, they will usually tell you where some things are going wrong...They get overwhelmed and do not know how to behave. Some of them really feel open about what may be the problem. (Dineo)*

The participant's motivation was that every student should at least reach the exam. Whether they pass or fail would then be up to them.

One participant indicated that certain modules are compulsory, but that the student might not regard it as important or relevant and preference is then given to the core modules of the programme.

> *(T)he...Department takes hours of our students' time. Many of them do (another module). Then they go just for that. It's hard for them... you'd rather prioritise that than your stats. (Tanya)*

Students therefore attend class as deemed necessary.

5.3 STRATEGIES THAT ENABLE STUDENT ACADEMIC SUCCESS

Participants reported various strategies employed to provide relevant support to students. It has been noted that sometimes the strategies overlap or are interlinked. Although there are attempts to provide support at the opportune moment, large class sizes and a shortage of support staff (for example, tutors) have been cited as reasons for late intervention or non-intervention.

Many of the strategies are intended to engage and motivate students to become independent, critical thinkers and self-starters and to develop various skills, including time-on-task, reading skills and so forth. A selection of strategies that could be viewed as transferable to any classroom setting has been chosen to illustrate the value of well-planned exercise. Practical demonstrations serve to reinforce theory. The lecturers work on the premise of moving from the familiar, personal space to the unfamiliar, unchartered space, thereby allowing the student to discover for him- or herself a way of understanding the subject content.

5.3.1 Teaching and learning strategies

A teaching and learning strategy, for this study, is defined as a method to deliver the curriculum, engage students and facilitate the dissemination of information for the purpose of understanding and application of skills, knowledge, values and attitudes.

All participants indicated that they utilise technology in the classroom to facilitate curriculum delivery. They felt that this enhanced their teaching. PowerPoint presentations are usually prepared in advance, projected on large screens in a lecture hall and later (or even before the lecture) uploaded on the university's *Blackboard* LMS. Even though these notes are provided, participants concurred that

class attendance was essential in making meaning of the notes as valuable discussion followed in class from pre-lecture and in-lecture activities. Another addition to the visual presentation in class was the use of a tablet. One participant has the theory projected on one large screen by using the tablet and keeps that projection static while demonstrating practical application of the theory on another screen. It was evident that the participants appreciated these resources as it assisted their attempts to appeal to different learning styles (i.e. audio-visual learners) and to engage students.

A science lecturer views herself as a visual learner and plans lessons in relation to real-life experience or popular culture (such as movies, songs, YouTube videos or Marvel comics). The objective is to make the subject current, "real" and relatable.

> *You watch a movie and it's impressed on your mind but if you read a textbook of 1000 pages, how much of it has really been absorbed and carried forward? (Nirvana)*

A Statistics lecturer posts podcasts, newspaper articles or any general item of interest on the LMS in an attempt to get students to read; stay in touch with what is happening around them; and have them relate the news item to the module. For instance, she used a podcast about a man who was attacked by a bear, shark and a rattlesnake to reinforce her lesson on probability. According to the participant:

> *If I just keep getting students to pass without them understanding it and how it fits into the real world, I'm not doing my job properly. (Kate)*

A practical activity employed by a Statistics lecturer is to have students do simple demonstrations in class to, for instance, do hypothesis testing and determine confidence intervals, e.g. students time how long they hold their breath and record the data. This involves preparatory, in-lesson and follow-up activity in the form of homework where students do all the calculations. It comprises peer collaboration and individual assignment. Another strategy is to have the students set up their own base theorem as a self-test of their knowledge and skill. To extend the strategy, students are encouraged to form a study group to exchange base theorems for individual application and "cement concepts".

A chemistry lecturer uses atom models for demonstration and asks students to construct their own models to develop spatial ability and be motivated through experiencing a sense of, "*Oh, this is doable*" *(Lydia).*

A participant in the Zoology Department found his Just-in-Time activity to be valuable as intervention strategy which fed into his teaching and learning strategy. This entailed giving a short assignment to students 24 hours before the lecture. Prior to the lecture, he would check and evaluate the results of that assignment, highlight the problem areas and focus on those concerns in the lecture. In areas where the students fared reasonably well, he would provide a brief overview or synopsis as they had already grasped the basics.

A participant in the Statistics Department uses the services of a support person to gather information on local challenges that are current and topical news items. For instance, data on the water scarcity in the Western Cape is used in lesson planning. This is done to have students relate to the familiar, to their unique South African or African context before embarking on solving unfamiliar problems. The lecturer has considered the call for decolonising the curriculum (Ndelu, 2017) which is currently on the university's transformation agenda. The textbook from an international publisher is also utilised and provides the international context from which she believes students should not disentangle themselves completely since they should be prepared for operating in a global context. The student experience is contextualised and situated within and beyond a classroom setting.

A science lecturer referred to an activity where participants were asked to respond to the question: How many H in "water"? A multiple-choice answer set included '1 H', '2 H', 'none' and so forth. There were different interpretations based on how a science class would answer the question versus a language class. The participant phrased his conclusion as follows:

> *It just goes to show that your learning model has to be correct. Your question must be presented in context. (Victor)*

Careful planning is, therefore, necessary.

5.3.2 Intervention strategies

An intervention strategy, defined for this study, is an action intended to enable positive transformation, prevention of a negative circumstance or an attempt to improve knowledge, skills and attitudes.

The participants applied pre- or post-test intervention strategies. A frequent response from participants was that the first real intervention occurs after the first semester test when results are available. At least five participants indicated that they would contact students via email and invite them to set up an appointment to discuss remedial action for under-performance. Students would also be advised to consult the faculty student advisor or the tutor. Very few students make use of the opportunity though.

Some participants expect the tutor to provide support only if the students demonstrate that they have read on the topic. As the participant indicated:

> *I can identify students who are not reading. If you are not reading, we cannot give you answers. (Dineo)*

A participant who teaches on the extended programme adopts the same approach:

> *I will ask questions and lead that student to the answer. (Brian)*

Students are expected to demonstrate knowledge of the subject matter and that requires engagement with the reading material. As indicated earlier in the discussion, participants are not in favour of “spoon-feeding” students. However, there are doubts about the “calibre” or “quality” of students being enrolled, due to scepticism about the level of performance in the National Senior Certificate:

> *I am in mainstream where they are admitted according to entry requirements where they are considered, supposedly, ready for university. Because of the school situation, I don’t think a 60 necessarily means the quality of 60. Now that is my challenge. (Tanya)*

It is a common perception, as previously indicated, that students lack a variety of skills that impede their progress. Four participants indicated that there should be support from the very beginning when students register. A participant in the Mathematics Department indicated that they expect students to write a readiness

test during the orientation week. The test is based on school work and is used as a baseline assessment. The students are tested on their readiness or preparedness to embark on the calculus course. The test is currently in its second year of application due to the success of this early intervention strategy. Students are identified as at-risk if they achieve less than 60% in the test. Following this diagnostic activity, students are divided into groups and have to attend practical sessions for ongoing support. At least two out of four weekly sessions are specifically for at-risk student groups. The participant disconfirmed the notion that “labelling” made students become stigmatised as under-performers. She indicated that students from other groups have requested to join the “at-risk” group. The groups are smaller and only the experienced lecturers teach that group. The success of the practical session is evaluated at the end of every session whereby students are expected to do any one of three formative assessment tasks for which results are recorded and consistently monitored. The assessment could constitute a ten-mark class test, a three-point check test, or an online test for which students receive a password for access only if they have attended the practical session. Students are, therefore, compelled to attend.

The readiness test and practical groups form part of a four-pronged initiative whereby support is provided intensively. Students’ progress is tracked throughout the process. The practical groups are complemented and supported by “tutor sessions”. What makes these tutor sessions distinct is that five of the best postgraduate students are selected as tutors. Each tutor has to tutor two hours per week. The sessions are not strictly enforced but following the first semester test results, students were notified that they had to attend. The real benefit of these sessions is the individual attention that students receive. There are approximately 1500 students registered for the calculus module. Lectures are held with 300 to 400 students at a time. A practical session accommodates approximately one hundred students, whereas the tutor session services twenty students per session. The students, therefore, receive individual attention.

The fourth initiative is utilisation of the online homework system called *WebAssign* via the LMS. Students are assigned several calculus problems per week. Students receive three attempts at answering the problems. The problems are textbook-

based, and students are required to work on their own. The objective is to get the students to do follow-up activity after a lecture.

In a first-year chemistry module, as part of a special research project, funding has been obtained to employ more tutors as a means of providing better individual support to students in class:

> *Our labs couldn't assist the full class... There are 1,200 to 1,400 registered students...in the week that they don't have a practical, we call them in to a class tutorial. In the week that they have a practical and can't come to a tutorial, they have an online assignment. So, we're now keeping them up with the work all the way through. But class tutorial is compulsory for everyone...we have the strong students mixed with the at-risk students and then we get peer learning... It is a structured tutorial. We have ... trained tutors so we're working on a ratio of about thirty students to one tutor … (Lydia)*

This intervention was introduced in response to the realisation that insufficient support is being provided to first-year students.

5.3.3 Support strategies

A support strategy, for this study, is defined as an action intended to provide academic, psychological, and physical or other form of support to a student as required.

During the interview it became apparent that support is also embedded in the curriculum. The compulsory academic literacy module on the extended programme incorporates embedded support while ensuring that students are exposed to the required academic and language literacy skills.

> *This includes language, critical thinking, argumentation, research skills – that students need to be successful for the remainder of their university stay. To an extent, you can maybe call us a service module because we are there to help students do better in all their other modules, rather than just ticking off that they did a language module. (Faith)*

Based on the workbooks that were viewed during an interview, it was evident that the academic literacy module is comprehensive and follows a scaffolded approach to

teaching and learning. Besides study and time management skills, examining different learning styles, and other literacies there is a focus on grammar in the context of sentence and paragraph construction which links to academic essay writing. Referencing and paraphrasing skills are handled at the start of the module to induct the student in academic conventions. One of the written assignments, an academic essay, also follows the same approach by requiring the integration of one academic article in the first draft, followed by integration of more articles and the tutor's feedback on the different drafts until a final product is produced. The students, therefore, acquire proofreading, editing and critical thinking skills and the ability to synthesize large chunks of information into a coherent argument. A few sessions at the start of the year were also set aside to facilitate the development of computer skills which are required for the module. This is in addition to the compulsory computer literacy module that is offered to all first-year students (except those studying Engineering programmes where computer literacy is developed within the faculty).

In the computer literacy module, students are exposed to a range of computer literacy skills in addition to other academic literacies.

> *How to switch on the computer, how to navigate the Window, how to look for information, create a folder, unzip a folder… they need to know how to reference…how to search for books… what's a fair-use policy, plagiarism, ethics, and all of that…not only the office skills. (Prisha)*

The university wishes to produce literate graduates who are functional in all spheres of society. Computer literacy is, therefore, essential. The level of computer literacy skills varies in a class and the module coordinator has to devise means of trying to bridge the gap between high school and university and between students in a university classroom.

> *We will put them in a class where all of them are around the same literacy level. To try and bridge the gap a little bit. (Prisha)*

All the activities in the computer literacy module are linked to objectives and students have to meet those to pass. Simulated online training is provided for students to practise meeting the objective or parts thereof. Students need to ensure that they

attend contact sessions, complete all activities and repeat the module until they pass:

> *There's no exemption… because they must have these objectives. (Prisha)*

Students who have the required competencies are also accommodated:

> *If they know how to use formulas and functions, we also have exercises – advanced formulas and functions – for them to go and learn a skill… they can always get a higher skill on that same module. (Prisha)*

A participant who teaches on another compulsory academic literacy module stated that the purpose of the module is to:

> *...bridge the gap between high school and university, introducing to them what the university entails, what the expectations are, what is literacy. They then get to know that being literate is not the ability to read and write only. You can be literate in many different ways … it's…functionality. (Cikizwa)*

It is apparent that intensive support is available to provide first-year students with the knowledge and skills to eventually become productive members of the work force. Skills acquisition or development is addressed on every level as required. A Chemistry lecturer indicated that she tries to focus on conceptual development when students approach her for support.

> *I'll try and figure out where they didn't get the concept because they'll need the concept to solve the problem. They can't just learn a procedure. So, I'll go back down and see how far back in the syllabus… where they lost the plot. (Lydia)*

It is not only about knowledge transmission. The student should understand the fundamental concepts to draw links and think critically. A statistics lecturer dedicates one full lecture period to post-test feedback on questions that were difficult to answer. Another participant follows a similar procedure in the tutorial.

> *We actually took one entire tutorial session and I said to them, 'Here's a proof. There's actually six different ways to do the proof that I can think of. So, how are we going to approach this? If you can't study this, let's look at the logic behind it.' (Kate)*

Individual problems are apparently clustered for a whole-group solution.

> *You need to understand that if you have students in their numbers, more than 1500, you try to avoid individual at-risk students. You look for a group solution. (Victor)*

During the first-year statistics lecture observation, it was noted that peer-discussion was allowed before selecting an answer on the clicker. This is a practice followed by other participants as well.

> *I always allow them to discuss the question … In that way, peer instruction happens, and the monologue is interrupted … (Victor)*

A participant in the Zoology Department designed an App where students can be supported whether in or outside the classroom. The motivation is that students should be able to access information on their cell phone or computer irrespective of time or place.

> *One of my strategies was to separate the theoretical component from the practical identification component. For that I'm developing an App now for them for the practical... I think that will help because now they will have the information with them. They can access it at any time. (Oliver)*

The lecturer, therefore, saw the "practical reason" for separating theory from the practical component and decided to make the information easily accessible. He has collaborated with colleagues involved in education innovation to design the App.

An academic literacy lecturer also enjoys a close working relationship with colleagues in other departments to plan assignments that incorporate the theory from one subject and the associated academic literacies that would accompany such an assignment. Although the collaborative effort is time-consuming and requires careful planning and keeping abreast of developments in the relevant modules, it has proven beneficial for the student since it reduces the assignment load.

The computer literacy module coordinator found that collaboration with the university's disability unit has proven beneficial for both lecturers and students. Research into different disabilities has provided insight on how to accommodate the needs of those students. To that end, a computer laboratory is being adapted to

cater for the disabled student. At present, there are bigger screens for those with limited sight, and longer sessions with intermittent breaks for those with cerebral palsy. Since the lecturers are not trained in this area, they have had to rely on the disability unit for guidance on how they could effectively transmit the content to the students. The lecturers are then trained in the use of applicable software. The disability unit assists with the technology and testing while the lecturers attend to curriculum delivery.

Whether it is a collaborative or individual effort, careful planning and preparation is required. A chemistry lecturer indicated that she provides online support through posting ten-minute YouTube videos that have proven to be popular with students, especially before a test or examination. She produces the video herself and does a step-by-step explanation of how to solve a problem. The videos are purposefully short to ensure that students do not have to wade through unnecessary data to get what they need. A common problem area, or pivotal area that is core knowledge, is identified and a video on only that section is posted.

> *Know what is important. If you can distil that, put it out there in a package…My learning theory is to scaffold… Even if it hasn't been isolated as a problem, I'll still do a video. Then supplement it with areas where they have problems, or exceptions, irregularities. (Melanie)*

Another participant who also lectures in Chemistry indicated that she has the freedom to choose how she will support her students. As a means of getting them to engage meaningfully with resources, students are required to compare the textbooks they might use in a school setting. The motivation is to have students understand the content but also how they would teach it. There is also a WhatsApp group that is administered by the class representative which provides opportunity for immediate feedback and peer interaction and provides a platform to pose any question freely and "anonymously" to the lecturer.

An Educational Psychology lecturer shares the opinion that students should be skilled to become self-sufficient. A change in mind-set is required to transform self-doubt into belief.

> *If you feel in control of your life, you can do your best. That's what I try to do for my students – help them feel that sense of control in their life – break*

things down if necessary, explain it in different ways, whatever it may be, help it to be manageable for them. (Sarah)

The participant believes that changing one prospective teacher's mind-set will have limitless social impact.

You've helped one person … That strong teacher is going to go out – how many people will she have touched in her career? (Sarah)

The participant provides alternative coping mechanisms for various challenges that a first-year student might experience. She builds support strategies into her lectures, such as scaffolding content, drawing links to prior knowledge or related content, and building "knowledge networks". Audio-visual aids are used to accommodate different learning styles.

It is evident that the different needs of students are accommodated. It is also clear that "success" might not always be immediately achievable, measurable or concrete.

As the Educational Psychology lecturer succinctly stated:

I hand them the key. If they want to unlock the door, I don't have control over that. As educators, you plant a seed. That's part of what changing that state of mind is about… (Sarah)

It is evident that some students do require the change in mind-set to access the resources available to them. They need strength of will to change their own circumstances. By teaching them the skills, they are being assisted to develop that strength.

The findings indicate that the participants exhibited responsiveness to a particular situation. They were prepared to navigate barriers in a proactive manner. The participants exhibited alertness to the context that goes beyond academic confines. They exhibited knowledge, critical thinking, imagination and empathy, and active citizenship which Walker (2008) terms "functional capabilities". The lecturers had a certain measure of autonomy over their environment and could decide to act in the interest of the student without being mired in institutional red tape. They had the requisite knowledge of their subject, university processes and communication channels, and the student's problematic situation to decide which resources could be

utilised to address the problem. The participants followed a viable course of action due to reflexive, critical thinking, determining what was physically, humanly or pedagogically possible at that point in time. Through humane functionings, they enabled students' academic progress. Their human agency is thus linked to academic agency.

Academic agency involves identifying, designing and/or implementing a teaching and learning, intervention and/or support strategy that is specifically related to the module to enable student success.

It is necessary to place academic agency within the conceptual framework to clearly identify whether the lecturers are change agents. Besides evidence of this in the preceding discussion, more examples of academic agency were found:

- A lecturer who teaches professional development *(Nadine)* uses her knowledge and skills in foundational literacy, numeracy and classroom literacies to bridge knowledge gaps for her students and ensure that they are trained properly as foundational phase teachers. Students are being taught how to teach reading in the foundational phase for them to teach it properly when they go into schools.

  If you don't go back and sort that foundation…What is a building without a solid foundation? It will crumble. (Nadine)

- A chemistry lecturer *(Mahitha)* operationalised her capabilities (knowledge of laboratory equipment and chemicals; knowledge of, and skill in, conducting chemical experiments; knowledge of administrative processes with regard to lesson timetabling and venue bookings) into functionings (securing a science laboratory on *Campus B* as teaching venue and employing a knowledgeable and skilled tutor) by utilising available physical and human resource provisioning.
- An academic literacy lecturer who also teaches African languages *(Cikizwa)* collaborated with her colleague to plan a cultural event to promote the subject and inspire the students to become involved in the learning process, and also create awareness of the culture and traditions associated with the speakers of the language. She operationalised her capabilities (knowledge of the culture and organising skills) into functionings (a planned event) by utilising financial and physical resources.

The academic agency of two male participants in this study who are part of a subject team should be highlighted here.

Action taken by a participant *(Victor)* and his colleague *(Oliver)* in the Science Faculty serve as example of lecturer academic agency whereby all the capabilities listed in the conceptual framework were operationalised into functionings. The participants collaborated with two colleagues in the subject department. *Victor* attributed the success of the initiative to close teamwork and exemplary leadership by the Head of Department. A positive environment is seemingly a catalyst for positive, proactive action. *Oliver* believes that "every student can". In other words, if students can gain access to university, they have the capability to cope. They just need to be supported in how to do it. This positive mind-set is what inspired the participants and caused them to reconsider their own practices. As mentioned before, reflexive practice can lead to agency. Due to the assurance of confidentiality to all participants of this study, *Victor and Oliver* are unaware that they both participated in this study. Information supplied by *Victor* for document analysis brought this collaboration to light.

Victor related his experience of a few years ago when the pass rate in the module was very low. There was a need for serious intervention. The team of lecturers decided that they would devise a new learning model intended to provide the required support for students who had to re-sit for the exam. The learning model included the clicker as a teaching and learning tool. They implemented the learning model in 2013 when they held a Winter School for 180 students who achieved between 40 – 50%.

> *We did everything to make that learning model a reality so that we could implement it...Those students enjoyed it so much because suddenly the lesson was different. It was no longer a monologue and they were also prepared because they had already written an exam in the module. Their participation was built into the lesson so there wasn't a chance for anyone to fall asleep. We had 94% pass that time. (Victor)*

It is important to note that the participant and his three colleagues on the lecturing team teach on a first semester biological sciences module that is a prerequisite for second semester modules. The module aims to bridge the gap that stems from diversity in prior learning (at school level), provide a level academic footing for all students enrolled on the module and facilitate self-regulated learning in a high student enrolment context.

The teaching philosophy held by the team members as stated in their portfolio of work (see Appendix E) is that, *"all students have the potential to achieve the learning outcomes within the minimum time of one semester of learning, but (that) a significant number may need to overcome mental hindrances to success."*

There was, therefore, the assumption that all students had the capability to succeed. Since life sciences at Grade 12 level is not an entry requirement at the institution for any Bachelor of Science in the biological sciences, it was a given that some students would not have that prior subject knowledge. It was also assumed that some students would be under-prepared for university (as established in the literature that they reviewed) and that efforts needed to be made to bridge the knowledge gap and address the skills deficit to achieve success.

The lecturing team proceeded to engage students with inquiry-based education. They devised a comprehensive strategy that incorporated several practices which are presented in *Appendix F* with permission from *Victor*.

The team of lecturers displayed academic agency in the following ways. They had the capability to revise and improve their strategies following reflexive practice. The agency of these participants involved the operationalisation of the full Basic Agentic Capability Model as will be outlined below:

- Knowledge: The lecturers had knowledge of their subject; the South African educational landscape; probable under-preparedness of students as informed by the literature and test results; suitable resources; teaching and learning, intervention and support strategies that could improve student performance in the module and philosophies of teaching and learning.
- Skill: They possess various skills, for example in teaching methodology; computer literacy / technology; academic literacy; management and leadership

skills. They applied their minds to the barriers to teaching and learning that have been presented and considered whether those constraints presented as conversion factors; in other words, whether those constraints could be transcended or reduced. They considered available resources; considered viable options; came forth with creative ideas. An analysis of the situation provided "practical reason" to operationalise capability into functionings.

- Experience: They have a range of experience between them in teaching at tertiary level; teaching on this module or in the biological sciences; teaching first-year students; teaching large groups of students. They were alert to the challenges presented in the current higher educational context and systemic challenges presented through widening access to a first-year cohort of students with disparate levels of knowledge and skills, and the consequent psycho-social and academic challenges which the students could encounter. They were responsive to the needs of students and the demands of the institution in terms of retention and throughput. Their combined and interdependent knowledge, experience and alertness served as impetus to take a reactive stance to a low pass rate, but also to be proactive by pre-empting similar challenges and refining the learning model for the next cohort. They have the capability to design, implement and improve their own practice in accordance with the objectives of the module.
- Control over one's environment: The lecturers have a measure of autonomy over their immediate environment. They could provide support and implement teaching and learning strategies that they deemed fit for purpose. With regard to curriculum delivery and the teaching methodologies employed, they did not have to subscribe to the dictates of faculty management. There was trust in their ability, and they accepted responsibility and accountability.

Feedback from students who were influenced by the academic agency of these lecturers provided a qualitative assessment of the experience (see *Appendix G* for comments that illustrate the success of the intervention strategy).

Student agency resulted from these interventions. The students were engaged and involved, making them active participants in their own learning. There was a reciprocal relationship, an "interpersonal impact" (Nussbaum, 2011). They

operationalised their own capabilities into functionings by utilising the available physical, human and technological resources at their disposal.

Based on the findings, it is evident that many of the themes found in the literature review emerged during analysis of the data. As in the literature review, there are efforts made by lecturers at this research site to improve student academic performance. For instance, they attempt to fill knowledge gaps by bridging the “articulation gap” between high school and university (Mayet, 2016); improve student participation levels and student engagement through peer collaboration and innovative teaching and learning practices such as flipped classrooms or self-paced learning opportunities (Garraway *et al*, 2016; O'Flaherty’ & Phillips, 2015); and employ strategies to enable students’ self-direction and self-management or independent learning (Bailey, 2013).

5.4 CONCLUSION

This chapter has presented the findings of this study. Analysis of the findings indicates that the participants do not permit structural constraints to limit agency. They do not compromise on quality input irrespective of whether the desired result will be achieved. They are cognisant of the limitations placed on their own efforts through possible student inaction and non-cooperation and structural barriers yet persist with good practice. They realise the value of collegial support and collaborative effort in achieving objectives. They are change agents, perhaps without full realisation or intentional pursuit of that title. The motive is purely to provide the best for the student under challenging circumstances.

CHAPTER 6
RECOMMENDATIONS AND CONCLUSION

6.1 INTRODUCTION

This chapter will present evaluation of the findings in terms of the research questions to determine whether these have been answered. The research questions for this study will be discussed individually.

6.2 RESEARCH QUESTIONS

Research sub-questions a, b and c will be reviewed before providing a discussion of the answer to the main question.

a) When and how do university lecturers operationalise their capabilities into functionings to enable student academic success?

Analysis of the findings indicates that lecturers act in the interest of the student when they have determined a need. Support is immediately provided if the lecturer is alerted to it. It is evident that intervention and support are provided when lecturers encounter a lack of skills, subject knowledge, psycho-social and economic factors that impact the student's academic progress.

Lecturers reflect on their own practice, their experience with first-year cohorts of previous years' and the problems that were presented and analyse the current situation and context of the presently enrolled cohort to determine whether similarities exist and if practice should be revised to address existing challenges. Alerts are built into teaching practice or the assessment system. Formative assessment practices forewarn of learning deficits that require immediate attention. Poor student performance in a semester or tutorial test, for instance, serve as 'red flags' and precipitate intervention. 'Red flags' are presented in attendance registers and thereafter persistent absenteeism is followed up. Support and intervention are provided in various ways and through different means, for instance:

i. Assistance from tutors, student advisors, student assistants, assistant lecturers, administrative staff and other members of the department or Faculty;
ii. Various forms of intervention or support is provided directly by the lecturer;
iii. Intervention or support is provided in collaboration with colleagues within or across disciplines;

iv. Support is provided by members of the alumni;
v. Support services are utilised, for example the disability unit and health services;
vi. Compulsory literacy programmes are implemented, namely information and academic literacy;
vii. Support is embedded in the curriculum through scaffolding and application of instructional strategies characteristic of Bloom's Taxonomy. A search on the university's website reflected that the revised renamed and reordered taxonomy by Anderson and Krathwohl (2001) is proposed for use;
viii. Opportunities for peer instruction exist;
ix. Online learning platforms are utilised.

It is, therefore, evident that this research question has been answered.

The second sub-question that was explored is:

b) Which academic support strategies prove to be successful and why?

It is evident from the findings that a number of support strategies are utilised *inter alia* the following:

i. The employment of knowledgeable tutors and having more tutors available in a large-group tutorial session;
ii. An App for a biological sciences module that was designed to provide 24-hour on- and off-site support;
iii. YouTube videos focused on problem or core knowledge areas;
iv. Various strategies employed in a science module, such as discussion classes and virtual classroom sessions;
v. Addressing last-minute questions before a tutorial test;
vi. Designing a four-pronged support initiative for a large student group in a mathematics module and consistently monitoring and evaluating progress;
vii. Implementing an alternating system of face-to-face and online learning, with a 30:1 student-tutor ratio for better individual support, for a large student group in a chemistry module.
viii. Embedded support in the curriculum. As found in the literature, subject-embedded support strategies that are implemented progressively (scaffolded) are more appropriate and effective (Bailey, 2013).

The fact that “success” is not necessarily quantifiable or statistically proven by the participants does not detract from the fact that the participants deem these support strategies to be successful. Success is more than just good test results and pass rates, but these could be indicative of the success of these practices provided that direct correlation can be established.

The qualitative experience of the end-user can, however, indicate whether certain objectives have been achieved. In the case of the lecturers’ support initiatives, success has been illustrated through student feedback. A few lecturers mentioned that the success of an academic support strategy can be noticeable in the work produced by students, illustrating that they have made the knowledge links, and applied the theory as taught in class. The lecturer’s voice is “heard” and the lecturer’s stamp is “seen” in assignments and tests when students prove through application that they have processed what they have learnt.

A statistics lecturer *(Kate)* indicated that a student told her, *“You opened my eyes. I changed my mind about what I want to do with the rest of my life.”* For the lecturer, that was indicative of success. Opening the student’s eyes to the value of the university experience and changing their mind-set through positive interaction with the lecturer can be life-changing. These support strategies are successful because they try to meet a positive outcome by promoting the following good practices, amongst others:

i. Improved student engagement and participation;
ii. Enabling student preparedness to deal with the subject content and university life;
iii. Intensive support by various staff members and through diverse means to ensure that knowledge gaps are filled;
iv. Appealing to different learning styles by employing the use of technology for an improved learning experience;
v. Ongoing monitoring and evaluation to inform practice.

The findings, therefore, serve to answer this research question.

The third research sub-question is:

c) What are the enabling or constraining structural factors that influence lecturer agency?

The findings have provided evidence of both enabling and constraining structural factors that influence lecturer agency.

Structural factors that enable agency are:

i. Support services available on site, namely health services (including psychologists' support); technical and maintenance support services; administrative services; library services; and the disability unit.
ii. Physical resources, such as well-maintained and well-equipped lecture venues and laboratories; large lecture halls to cater for large student groups; classrooms to cater for lectures, tutorials and practical sessions.
iii. Provision of technology and adequate work stations and computer laboratories.
iv. Available financial resources, such as the budget for the module and/or department.
v. Support and encouragement from faculty management and department leadership structures.
vi. Lecturer autonomy over the coordination and implementation of their module.
vii. Collegial leadership: colleagues collaborate and have the demonstrated capability and initiative in instituting successful practices to effect change (McGrath *et al*, 2016).

Constraining structural factors, or negative conversion factors, that inhibit agency are:

i. Budget constraints;
ii. Staff capacity constraints;
iii. Human resource provisioning constraints;
iv. Time constraints due to increased teaching and administrative workloads;
v. Constrained capacity of practical laboratory venues;
vi. Late enrolment of students;
vii. Demands for research output that impact lecturers' performance evaluation negatively if those demands are not met.

The findings have proven that the lecturers who participated in this study find ways to manage the structural constraints that they encounter, even if it entails adding to their own workload. Examples of this are:

i. Having nine repetitions of a practical session due to large student groups enrolled on a module;
ii. Using virtual laboratories to cater for large student groups due to constrained capacity in wet laboratories;
iii. Using the clicker for 'individual' interaction in a large group setting;
iv. Finding a whole-group solution to common problems through the use of technology and computer software;
v. Collaborating with colleagues to find suitable ways of providing intervention and support.

The link with the literature is apparent. The findings have proven that lecturer agency is a response to a structural constraint or enablement. Lecturer agency and structure are, therefore, interdependent. As indicated in the study by Flores (2014), transformation initiatives were driven by leadership and implemented by lecturers.

It is evident that this research sub-question has been answered. Bearing in mind these findings and supporting evidence that was produced by the participants, the main research question for this study will be discussed to ascertain whether the research aim has been achieved.

The main research question for this study is:

How does lecturer agency enable student academic success?

It has been established through the findings that lecturer agency is exhibited in two interdependent ways, namely human and academic agency. Through the operationalisation of capabilities into functionings, lecturers have enabled student success by providing the necessary support to address a range of constraints. It has been found that lecturers utilise available physical, technological, financial, textbook and human resource provisioning at a specific moment over a limited period of time to cater for the attendant needs of students.

The provision of support not only meets an immediate objective but also equips students with the necessary life and academic skills for long-term impact. Successful

strategies, those that *“get students to do something themselves” (Tanya)*, are used so that students take ownership of their own learning and start thinking of themselves as active participants and not passive recipients in the teaching and learning process. As one participant *(Nadine)* encapsulated her efforts: Students need to be trained to think “like professionals” and to think of themselves as “professionals-in-training” who will occupy a ‘professional space’ in the workplace one day. This focused mind-set is displayed in that of a leader, in the lecturers who participated in this study. They think like leaders and thus become change agents.

Based on the findings, it is clear that the lecturers in this study possess the leadership skills to be change agents. The attributes of a change agent coagulate with a particular leadership style, namely transformational leadership. The transformational leader and the change agent are both proactive and have the capability to evaluate their particular circumstances and decide on a course of action that can prove to be beneficial. Transformational leaders are fair, have integrity, set clear goals, have high expectations and encourage others to meet those expectations (Allen, Grigsby & Peters, 2015; Shatzer, Caldarella, Hallam & Brown, 2014). Maintaining high expectations of their students diminishes the risk of compromising on quality input or output.

By implementing suitable support and intervention strategies they are equipping students with the knowledge and skills to navigate the barriers to success and enabling them to realise potential and meet high expectations.

All the participants are regarded as leaders and managers. They are respected researchers; knowledge contributors and knowledge producers; module coordinators; lead lecturers on the module; some are senior lecturers and professors; a few serve on the ethics committee in their faculties; a few are members of management. They are recognised for their sterling work and are held in high regard by colleagues. The participants mentioned that they reviewed practice frequently and are open to implementing new and innovative ideas. They show integrity and conscientious application of their duty. There is clear identification and acceptance of their role within the institutional context.

Although this study is not focused on leadership qualities or different types of leadership styles within the context of an organisation such as a higher education

institution, the comparison between these lecturer change agents and transformational leaders should be drawn. As previously mentioned, an agent of change is regarded as a transformational leader who has the ability to manage his/her particular circumstances, introducing ways to contribute productively and effectively to an operations plan that is designed to meet target outputs. In this endeavour, all stakeholders need to have buy-in and need to be on board with the mission. These transformational leaders enable active engagement of the students. They enable “interpersonal impact” (Nussbaum, 2011) to ensure that capabilities are developed or enhanced for the conditions of student agency to be created.

The transformational leader has a vision and mission, inspires and motivates followers, provides a setting for intellectual stimulation, considers the needs of a diverse group of people and engenders trust and respect. The lecturer-student relationship, therefore, is interdependent and co-agentic.

6.3 RECOMMENDATIONS

The participants offered several recommendations that could enable or improve good practice or create the conditions for success while bearing in mind structural barriers that might be encountered.

It was clear that a student-centred approach to learning is a condition for student success (Albertyn *et al,* 2016). The subject content has to be understood and related to the world of work or real-life situations. The use of technology is encouraged.

A supportive environment is important for lecturer agency to be realised. It is important that not only planning, but also implementation of ideas, is carefully considered. Collegial leadership should not only imply collaborative planning and teaching effort, but also guidance and advice from experienced researchers-lecturers for emerging researchers-lecturers.

Change agents-cum-transformational leaders should not only expect students to acquire academic skills, but also soft skills and should see students as people, not merely student numbers. Behavioural change requires expectation of responsible behaviour and demonstrating how to behave responsibly. It is about working to a high standard or level of expectation and teaching the skills to achieve and maintain

that standard. Transformation is about a gradual release of the student, providing the foundation for them to ultimately work independently.

As indicated before, a positive mind-set can lead to agency. This conditional factor should exist for the agentic lecturer and the agentic student. The “interpersonal impact” of agency seemingly relies on human agency, on the ability to be “approachable” to students. The challenge of accessing the individual student in a large student group is an ongoing one. A whole-group strategy apparently addresses some individual concerns. There should be the choice of the correct learning model and teaching and learning philosophy to underpin methodology. There must be raised expectation, boundaries, guidelines, and due dates. In other words, there should be a framework for success.

Some participants considered whether a four-year degree programme would be more beneficial as recognised in the NDP 2030 (2012:40): “Increasing participation and graduation rates, with the option of a four-year university degree, combined with bridging courses and more support for universities to help black students from disadvantaged backgrounds, is likely to yield higher returns.” A few believed that, even if this could contribute to higher graduate output, there would be structural constraints such as insufficient funds, under-staffing and limited physical resources.

There are constraints to success and there is a plan of action by government, the university, lecturer and student to address those constraints. However, creating conditions for success should be institutional, not just departmental. Shay (2017) has indicated that extensive “educational investment” into “improving the effectiveness of teaching and learning” should occur. This study links with the idea recommended by Shay (2017) that foundational support should be provided to students who need it. This is not necessarily a call for four-year degree programmes across the board, but inclusion of modules in the mainstream curriculum to accommodate the bridging of knowledge gaps, e.g. in mathematics and science. This would, of course, imply some form of curriculum review. The curriculum for the respective modules is densely packed, therefore collaborative curriculum review across modules in a degree programme should be considered for a focused and streamlined implementation.

This study recommends that good practice should be shared and implemented, revised and refined. Practical and workable solutions should be found to alleviate the heavy loads that lecturers carry. This study proposes that collegial networks be encouraged as a means of addressing the attendant academic needs of students. We should work at retaining our change agents by creating positive and supportive environments.

With regard to conflicting lecturer identity, the reality is that some lecturers manage both teaching and research successfully, some do not want to do intensive research and favour teaching, and some researchers do not want to teach and favour research. For the lecturer, the two are not mutually exclusive so this presents a challenge. It is recommended that universities re-think the role of a teacher-lecturer in the massification model. It is also recommended that lecturers re-evaluate their teaching and learning philosophy to inform their methodologies.

6.4 CONCLUSION

The findings have proven that the study has met its objectives, namely to determine whether the lecturer operationalises his/her capability into functionings to identify, design and/or implement an academic support, intervention and/or teaching and learning strategy that enables student academic success. It was further determined that lecturer agency exists due to the successful navigation of constraints to academic support provision. It was determined that successful strategies can be sustainable and transferable for greater opportunity in achieving academic success since none of the strategies in these findings require excessive resources nor are they impractical.

It has been found that the change agent is a transformational leader who contributes to a positive organisational climate by striving to meet target outputs. The transformational leader also attends to the personal and academic well-being of others. It has been established that the lecturers accept students as they are, with or without learning deficits, and endeavour to provide equal access to learning and learning opportunity. As change agents and transformational leaders, they see the value of equipping students with the tools to be self-directed, self-regulated, self-reliant members of the institution. The agentic student will hopefully become an

agentic professional and realise a sense of well-being through gainful employment that will enable advantageous socio-economic circumstances. The significance of this study is, therefore, that lecturer agency points to practical solutions for common problems experienced in higher education today.

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APPENDIX A: INTERVIEW QUESTIONS

1. Which support structures are available to students who are identified as being at risk of not meeting learning outcomes? (Is support provided at meso-level, i.e. department/ subject-discipline level, or delivered ad hoc, e.g. provided by a writing centre or general academic support programme?)
2. Do you identify students in need of academic assistance? If so, how and when does this occur?
3. If identified, do you refer the student to a support structure or do you provide assistance? On which basis does either occur?
4. Which strategies do you employ to assist 'at-risk' students? Is support embedded in the curriculum? Is the support process sequential, monitored and evaluated throughout?
5. Are the intervention/ support strategies of your own design or do you follow a prescribed process/ strategy? Please elaborate.
6. How is the success of a teaching or intervention/ support strategy measured? Would you rate your teaching or intervention/ support strategies as successful? Please elaborate.
7. How does the success of an intervention/ support strategy feed into your teaching strategy?
8. What form of support do you receive/barriers or constraints do you experience in an effort to provide academic support? (These could be structural enablement/constraints, e.g. financial resources, peer collaboration, etc.) How does this affect your attempts at providing support to the student?
9. Is there any teaching or intervention/ support strategy that has proven to be consistently successful? To what could this success be attributed?
10. Are those strategies (in no.9) sustainable? Why/ How?
11. In retrospect, do you think you could or should handle intervention/ support for students differently? Please explain.
12. What are the personal/ professional benefits of being able to facilitate student academic success?
13. What do you think your students gain from the experience?
14. Mention an incident (where you provided support to a student) which serves as an academic highlight.

15. Which recommendations would you make regarding T&L or intervention/ support strategies that have proven to enable student academic success?

***APPENDIX B*: LETTER TO DEAN REQUESTING PERMISSION TO CONDUCT INTERVIEWS**

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

…2018

The Dean
Faculty of …
University of …
Address

Dear Professor **…**

Request to conduct research

I hereby request permission to conduct interviews with the lecturers of first-year students in the Faculty of … for the data collection component of my research study.

Attached, please find the research proposal for this study. The reason for choosing your Faculty is explained in the proposal (p.6; pp 9 – 20). The proposal also contains the interview schedule that will be used as a guide during interviews

The study essentially focuses on the nature of academic support/intervention strategies provided by lecturers and how these enable the student to pass the module and proceed to the next phase of learning or graduate from the programme.

I have received conditional approval for the study from the Ethics Committee of the Faculty of Education pending approval of the Dean of the faculty in which the interviews will be conducted.

I hereby declare that no conflict of interest exists on my side. I am currently in the employ of the SAQA but my employer has no financial, intellectual property or other interest in my study. I was employed by the CHE until 31 October 2017. My previous employer holds no financial, intellectual property or other interest in my study.

My son is enrolled as a first-year student in the EBIT Faculty at UP. I will not engage any of his lecturers in this study to avoid conflict of interest.

I will not infringe or impinge on the work of any lecturer who is currently engaged in research of a similar nature. The purpose of this study is neither to complement, dispute, negate, enhance or replace any similar research, nor work in collaboration with any party engaged in that research study. I am cognisant of UP's plagiarism policy and hereby declare that this is my own work. I will adhere to all policy prescripts relevant to research and ethical consideration at UP. The concern of this study is academic and will enable me to produce a mini-dissertation as partial fulfilment for the degree Master of Education in Educational Leadership. I finance my own studies and am not beholden to anyone in this regard. The study remains the intellectual property of UP.

I hereby provide the assurance that the personal details of all participants will be kept confidential and that data will be safeguarded at the university's databank. The anonymity of the participants will be protected throughout the process. Their participation will be entirely voluntary. Participants may exit the study at any point without any obligation or fear of reprisal. If anyone decides to withdraw from the study, his/her contribution will not be included in the study.

The findings of this study will be disseminated as follows:

i. Included in the mini-dissertation for the partial fulfilment of my MEd degree;
ii. Published in a peer-reviewed journal if recommended by my supervisors;
iii. For presentation at a conference if recommended by my supervisors.

The mini-thesis will be available on UP's authorised research repository at https://repository.up.ac.za/ and/or via http://www.library.up.ac.za/ when the degree has been awarded. The study will be published with the research design so that the reader can determine for him-/herself the trustworthiness of the study.

As indicated, I have applied for ethical clearance from the Ethics Committee of the Faculty of Education. The following UP Policies have been reviewed in guiding this study: guidelines_ethical_researchs408300 S 4083/00 (amended), postgraduate-policy-feb-20101-faculty-of-education.zp39021 S4308/10, codeofethicsforresearch Rt 429/99 and Plagiarism Prevention Policy Document number: S 4726/09.

I hereby declare that I will respect the research site, all participants and conduct myself professionally at all times. I will use politically sensitive and academically correct language at all times.

My supervisors will check my work frequently and ensure that all protocols are in place.

I will appreciate your support in providing the contact details of the first-year lecturers (with their permission) to contact them directly via email. An alternative suggestion following faculty protocol will be appreciated. I hope to start with interviews early in the new year at a time which is convenient for the participants.

Thank you for considering my request. I look forward to your positive response.

Kind regards

…
UP Student number 17273073
Contact details: ...

Supervisor:	Dr T. Calitz Faculty of Education talita.calitz@up.ac.za Ph: 012 420 5624
Head of Department:	Prof E. Weber Faculty of Education everard.weber@up.ac.za Ph: 012 420 5591

APPENDIX C: LETTER OF INVITATION TO PARTICIPANTS

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

… 2018

Prof/Dr/Mr/Ms …
Faculty of …
… Campus
University of …

Dear …

Request: Interview participant's consent

I hereby request your participation in the interview process which forms part of the data collection component of my research study. I have received permission from the Ethics Committee: Education Faculty and the Dean: Education Faculty to conduct these interviews in the faculty.

Herewith, please find information pertaining to my study that you should take into consideration before deciding to participate.

The title of my study:

University lecturers' agency in enabling student academic success

Brief overview:

There is pressure on both students and faculty to ensure student throughput. The academic concern for this study is whether, and how, lecturers act as key agents of change in effecting student academic improvement and/or success. This study will explore teaching and learning, intervention or support strategies that prove to be effective in enabling student academic success.

This study will seek to identify and document successful strategies that have aided student academic success. Research indicates that many strategies are proposed or implemented but there is limited evidence of sustainability, transferability and review of those strategies. This study will explore whether the lecturer operationalises his/her capability to identify, design and/or implement an own/existing/prescribed academic support strategy that enables student success at university. Enabling/constraining structural factors that influence lecturer agency in providing academic support will perhaps also be identified.

The research design for this study will be a case study including a purposive sample of participants. A minimum of 20 participants who teach first-year students will be invited due to

concern about the high drop-out rate in this year of study. Semi-structured individual interviews of 60 – 90 minutes each will be conducted. A follow-up session might be required. With your permission, an audio recording of the interview will be done. No video recording will be done. You will be required to check your transcribed audio interview to verify the data.

The significance of this study will be to add to the body of knowledge on how to identify effective academic support strategies. Identifying and sharing good practice could lead to sustainable and/or improved student success.

Declaration: Conflict of interest

I hereby declare that no conflict of interest exists on my side. My current (or previous) employer holds no financial, intellectual property, or other, interest in my study. My spouse is employed by UP but his work bears no relation to this study. My son is enrolled as a student at UP but not in the faculty where I will conduct interviews.

I will not infringe or impinge on the work of any lecturer who is currently engaged in research of a similar nature. I am cognisant of UP's plagiarism policy and hereby declare that this is my own work. I will adhere to all policy prescripts relevant to research and ethical consideration at UP.

Participant's anonymity, voluntary participation and exit

I hereby provide the assurance that your personal details will be kept confidential and safe at the university's databank. Your anonymity will be protected throughout the process. Your participation will be entirely voluntary. You may exit the study at any point without any obligation or fear of reprisal. If you do decide to withdraw from the study, your contribution will not be included in the study.

Reporting the findings

The findings of this study will be disseminated as follows: included in the mini-dissertation for the partial fulfilment of my MEd degree; published in a peer-reviewed journal if recommended by my supervisors; for presentation at a conference if recommended by my supervisors. The mini-thesis will be available on UP's authorised research repository at https://repository.up.ac.za/ and/or via http://www.library.up.ac.za/ when the degree has been awarded.

Ethical considerations

I have applied for ethical clearance from the Ethics Committee of the Faculty of Education. The following UP Policies have been reviewed in guiding this study: guidelines_ethical_researchs408300 S 4083/00 (amended), postgraduate-policy-feb-20101-faculty-of-education.zp39021 S4308/10, codeofethicsforresearch Rt 429/99 and Plagiarism Prevention Policy Document number: S 4726/09.

I hereby declare that I will respect the research site, all participants and conduct myself professionally at all times. I will use politically sensitive and academically correct language at all times.

Trustworthiness

I hereby declare that I will protect the integrity of the research process. A research journal will be kept as part of the audit trail. My supervisors will check my work frequently and ensure that all protocols are in place.

Your participation in the study will be greatly appreciated.

Regards

Student: …
Contact details: ...
Supervisor: Dr T. Calitz
Contact details: +27 (12) 420 5624/ talita.calitz@up.ac.za
Co-Supervisor & HOD: Prof E Weber
Contact details: +27 (12) 420 5591/ everard.weber@up.ac.za

APPENDIX D: PARTICIPANT'S AGREEMENT TO VOLUNTARY PARTICIPATION

Please read the statements and TICK next to each if you would like to participate in this study:

- I have read and understood the scope and purpose of the study.
- I have noted the declaration of the student that there is no conflict of interest.
- I have noted the assurance that my participation will be anonymous, voluntary and that I may withdraw from the study at any time.
- I have noted the ethical considerations for this study.
- I have noted that the data will be kept in storage at the university and that the findings will be reported as part of a mini-dissertation that will be disseminated upon recommendation by relevant supervisors and as authorised by relevant UP authorities.
- I have noted the ethical considerations and guarantee of the trustworthiness of the study.
- I have noted the student's declaration that she is aware of UP policies, including those relevant to and the prevention of plagiarism.

I, _____ (full name in block letters), hereby undertake to participate in this study, free of coercion, obligation and entirely voluntary. I declared that I am an adult _____ (M/F) currently employed as a lecturer in the Faculty of _____at the University of Pretoria. I have read and understood all of the above and accept all declarations as such. I reserve the right to withdraw from this study at any time of my own volition without fear of reprisal. I will not be held liable for such a decision and my contribution (if any provided prior to withdrawal) may not be used for the study at any time of the research and reporting process. I hereby assent to my full participation in interview and will liaise with the student to agree on a suitable meeting date and time. I consent to checking the transcribed interview notes and participating in a follow-up interview session if so required. I reserve the right to withdraw from either of the two aforementioned activities if I so wish. I will engage with the student in a professional manner and will not hold any authority/ interest in this study beyond the relevance of my participation.

Signed at _____ on this the ___ day of _____2018.

Signature: _____

APPENDIX E: DOCUMENTS PRODUCED FOR DOCUMENT ANALYSIS

The following documentation was presented for scrutiny and/or analysis:

1. Notes from a first-year mainstream Chemistry module – arranged in PowerPoint slide format illustrating the sequencing and scaffolding of course content.
2. A 2017 course outline booklet for an education module.
3. A timetable indicating the consultation hours of the lecturer and the working hours of the lecturer's assistant (This was shown during the interview session).
4. Homework sheets submitted by students in a mainstream Physics module – illustrating the 'second chance' given by the lecturer to submit homework if not previously done (This was shown during the interview session).
5. A few textbooks used for the compilation of the computer literacy module workbook, e.g. Navigating Information Literacy and CMPTR³ (This was shown during the interview session).
6. A computer literacy workbook (This was shown during the interview session).
7. Two academic literacy workbooks which cater for two separate subjects/fields used on the extended programme (This was shown during the interview session).
8. A CD for a Science module which included the following:

- A portfolio of work by a departmental team composed of four members that was presented for the Teaching Excellence & Innovation Awards in 2014;
- A video clip of a virtual classroom on *Blackboard* Collaborate, a tool on the *Blackboard* online learning platform. The lecturer was in his virtual 'room' at home responding to questions posted by students from their hostel rooms on the evening before a test. The lecture could be viewed as on Skype and used a white board to illustrate while he explained;
- Examples of peer discussion and answering during the virtual classroom session;
- Expressions of appreciation and positive student feedback on the benefits of the virtual classroom session;
- Lecture notes that aligned with the study guide with lesson objectives, Clicker questions, and typical examination questions included in the presentation;
- A video clip of a lecturer in the department who engages with students for quick consultation at the end of a lesson;
- Examples of animations and videos used in lectures;

- A video clip that shows a lecturer in the department using the Bamboo Pad in class. The video clip shows a PowerPoint presentation that is projected on the large screen and the lecturer explaining subject terminology by writing synonyms on the presentation by using the Bamboo Pad (a Tablet with a touch surface and stylus designed for drawing and writing);
- Examples of multiple-choice questions for Clicker use;
- A video clip of noisy students before the class starts and how the lecturer (an experienced professor who participated in this study) calmly focuses their attention;
- An example of an online test on the *Blackboard* learning system where the student receives two attempts to complete the test;
- An example of a figure or sketch used for discussion in class;
- Examples of “SOS by SMS” questions;
- Positive feedback on “SOS by SMS” questions;
- Positive student feedback on discussion classes and tutorial sessions;
- Positive feedback on the participant’s lectures;
- A Molecular and Cell Biology Study Guide;
- Tutorial questions and memorandum;
- A student survey form, called the Student Feedback Instrument, that is used to gather students’ opinions on the teaching and learning practices of academic staff;
- A video clip of the participant singing in class with lecture notes used as lyrics. It provided a light-hearted moment yet served to reinforce key concepts.

9. The App designed for use by students in a Biological Sciences module (This was shown on the lecturer’s cell phone during the interview session).
10. A video clip of Clicker usage in class, illustrating the students’ engagement (This was shown during the interview session).

APPENDIX F: INTERVENTION STRATEGY OF A BIOLOGICAL SCIENCES LECTURING TEAM

The following strategy formed part of a portfolio of work submitted by the team for the Teaching Excellence and Innovation Award in 2014 which was presented for document analysis.

Our strategy comprised of the following interventions:

- *To nurture confidence among the students in the use of a well-designed study guide to encourage self-regulated learning.*
- *The design of various modes of assessment and learning opportunities including discussion classes with different formats to accommodate different learning styles; tutorials; computer based tests and ...on-line assignments.*
- *Ensure that all tests and examinations complied with the outcomes demonstration stipulated in the study guide following rigorous internal moderation.*
- *Encouraging class attendance by livening it up with several interesting approaches including singing of biochemical pathways, animations and video material.*
- *Piloting virtual classrooms using Blackboard Collaborate for students with questions before tests and exams.*
- *SOS by SMS was implemented so that students working through the course content and getting confused or stuck would have help a message away.*
- *Student feedback to inform future strategies. This included: standard (university) course evaluation; evaluation of the four different discussion class formats; evaluation of the virtual classroom experience, before and after winter school student evaluations.*
- *Integration of subject matter by bridging different components. The outgoing lecturer introduced the new lecturer and linked previous study material to the forthcoming study material to encourage a holistic view of the course content.*
- *Careful analysis of student performance in the supplementary exam and diagnosing the problem of insufficient skills in self-regulated learning.*
- *Introducing a winter school for students who failed, designed primarily at developing self-regulated learning skills.*

- *Focusing the winter school on the principle of discipline for learning: training students to be punctual and considerate of other students, applying continuous assessment by the use of an audience response system, and instilling confidence and skills in using the study guide.*
- *Employment of senior education assistants from the pool of examination invigilators of the university. Senior education assistants were trained in the implementation of the new technology. They were on hand to address individual student issues in real time to avoid distraction and disruption of the learning process. They facilitated student focus on the course material.*

APPENDIX G: STUDENT FEEDBACK ON INTERVENTION IN A BIOLOGICAL SCIENCES MODULE

- *Lecture feedback*

Student A: Prof ...provided us with videos where we could actually visualise what we learnt about. Use of songs, with lyrics that are connected to the concept of study helped a lot.

Student B: The lecturer's singing really helped with remembering the facts and it kept us all entertained and awake in class.

- *SOS by SMS feedback*

Student C: Yes, thank you. Sorry to sms so late, it makes much more sense now.

Student D: I will try sir, thank you for replying, and thank you for not completely giving up on me. Have a good evening.

- *Feedback on virtual classroom session*

Student E: I had a general idea of the work covered in theme 8 before the class. And the class was more of a revision class. But there were questions posed in the class that I had actually planned on asking and it definitely did help me to understand some of the concepts better.

Student F: (I)t is an opportune time to ask any questions as well as hear other students' points of view, questions and concerns. Hearing other students' questions offer a different insight to the work and a final review like this to solve any last-minute problems is ideal.

- *Feedback on discussion classes*

Student G: I feel the discussion classes did help me understand the work better and provided an extra pathway for asking questions. I liked the positive vibe and more informal atmosphere created that puts you slightly more at ease and makes it easier to ask questions, especially in smaller groups. The analogy method used in the first discussion class suits my style of learning perfectly. The use of senior students as tutors is helpful as they have a unique insight into our situation and insecurities.

Student H: I felt that the discussions helped me understand quicker because I was asking questions from peers and the way they answered helped me to understand topics from different angles.