2017 Southern African Accounting Association
Biennial International Conference Proceedings
Champagne Sports Resort
Drakensberg
SOUTH AFRICA
(ISBN 978-0-620-74762-2)
http://www.saaa.org.za/

EDU008 **ACCOUNTING STUDENT'S MOTIVATION IN LIGHT OF THE SELF-DETERMINATION THEORY: A CASE STUDY OF A TOWNSHIP CAMPUS**

AUTHOR(S): Fezile Ncongwane, University of Pretoria, fezile.ncongwane@gmail.com
Theresa vanOordt, Pretoria, Theresa.vanoordt@up.ac.za

ABSTRACT:
The main objective of this study is to evaluate the self-motivation of accounting students at a township campus in light of the Self-Determination Theory (SDT). The shortage of black accountants in South Africa remains an alarming controversy. To close this racial gap, township universities are required to take a close look at what is required to improve the success rate of black accounting students. Among accounting students, motivation has also been found to be significant in influencing their performance. The SDT offers a method to motivate people to excel and thrive. Motivation in the classroom can only be explored and encouraged once we have understood and evaluated students' motivational levels, in particular those of accounting students at township universities. The research was mainly quantitative in its approach, with a positivist underpinning. In addition to the review of the literature on the development of the SDT model, primary data was collected from students registered in an accounting course at a township campus by means of a questionnaire. The findings of this study may make a contribution to the teaching of accounting, as they highlight the significance of the educator understanding motivational processes and their consequences in the classroom. The results off the study show that students may have been mainly extrinsically motivated, as they indicated more introjected motivation and integrated motivation according to the SDT continuum.

Key words: Accounting students, black accountants shortage, self-motivation, self-determination theory, township campus

Introduction

The accounting profession, accountants and academic scholars will probably encounter turmoil is the next 25 years (Guthrie and Parker, 2016). The intensely networked and interdisciplinary world of accounting will be disrupting the traditional and highly valued role of accounting (Guthrie and Parker, 2016). Globalisation, developing technologies, novel problems and a rapidly changing knowledge base are already confronting accounting graduates at the workplace (Becker, 2013). The dynamic nature and intricacies of the business world have made it more and more imperative for universities to equip graduate students with a set of learning skills as well as content knowledge (Becker, 2013). The content knowledge attained by students in universities will probably become outdated quickly, and it is imperative that universities and accounting programmes specifically respond to these environmental changes (Becker, 2013).

South Africa is not immune to these global environmental changes. An additional challenge for the local accounting profession is that it also still has to transform its demographic profile. There is still an alarming shortage of black accountants in South Africa (Sadler and Erasmus, 2014). The processes of closure on the basis of race in the South African accounting profession are still prevalent (Barac, 2015). Post-apartheid South Africa must address a legacy of low economic growth, a high poverty rate and high unemployment. Adding to the complexities of the labour market are factors where race is a determinant of employment inequality (Barac, 2015).

A large concern at higher education institutions in South Africa and worldwide is the high failure rate of first-year accounting students (Barnes, Dzansi, Wilkinson and Viljoen, 2006). Universities, especially those in the townships, need to take a hard look at why black students fail accounting courses and what should be done to improve their success rate (Sadler and Erasmus, 2014). Self-regulated learning, self-discipline and effort are substantial factors that determine the academic success of students at university (Sadler and Erasmus, 2014). Motivation has been found to be positively associated with academic performance (Barnes *et* al., 2006). Fostering self-regulated learning in black students and as well as intensive academic support would assist black students to enter the restricted profession (Barac, 2015).

Smith (2001) observed that because of the profession's rapid changes, it is impossible for educators to entirely prepare graduates to be accountants; educators should prepare graduates to become accounting professionals by equipping them with lifelong learning skills. This is reiterated by Becker (2013), who states that one such step would be to develop lifelong learners who can "maintain competency", in their respective professions. "How-to-learn" skills are essential for lifelong learning, which is the focus of self-regulated learning (Becker, 2013). In today's workplaces, self-regulated learning is a vital competency.

Self-regulated learning is becoming increasingly important due to socio-political and technological changes sustaining new means of knowledge creation in business (Littlejohn, Milligan and Margaryan, 2011). Self-regulated learning can be defined as "self-regulated thoughts, feelings and actions that are planned and cyclically adapted to the attainment of personal goals" (Zimmerman, 2005 in Littlejohn *et* al., 2011:227). Smith (2000) defined the goal of self-regulated learning as "updating skills, acquiring new knowledge, and solving new problems throughout life" (Becker, 2013:437). Rather than receiving knowledge passively

from external sources, students are seen as active participants in their own learning (Becker, 2013).

Mooi (2006) states that the student's self-motivation to learn is an essential element of self-regulated learning and that self-motivation is a core concept of self-regulated learning. Motivation determines how students work towards their goals (Ahmad, Anananthraman and Hishamuddin, 2011). Motivation is defined as the objective to attain knowledge or a certain goal (Ahmad *et* al., 2011). The enjoyment of an activity is increased by motivation, which consequently increases positive behaviour towards the activity (Ahmad *et* al., 2011). A student's positive attitude towards a subject was found to have a direct influence on their achievement (Ahmad *et* al., 2011). Among accounting students, motivation has also been found to be significant in influencing their performance (Ahmad *et* al., 2011). In the teaching and learning process, the motivation of students is considered a stimulating energy infusing all levels of education, both in the time taken by students to study as well as their academic performance and achievements, and contributes significantly to the achievement of immediate satisfaction in their lives (Miranda, Leal & Carmo, 2013). Miranda *et* al. (2013:163) stated that motivation is "a psychological process in which personality traits (e.g. motives, reasons, skills interests, expectations, and future perspectives) interact with perceived environmental characteristics", showing that student motivation can affect changes within the students themselves.

The Self-Determination Theory (SDT) principles state that the motivation of individuals vary and are established and steered by contexts supporting psychological needs that reveal themselves in different ways, making students' motivation to learn "a complex, multi-determined phenomenon, which can only be inferred by observing behaviour, either in real performance situations or by self-reporting" (Miranda *et* al., 2013:163). Deci and Ryan (2002), Kember *et* al., (1997) and Tigwell and Prosser (1991) show that motivation for learning is an important predictor of students' learning outcomes and competencies (Arquero, Fernàndez-Polvillo, Hassals and Joyce, 2013). Mooi (2006) mentions the need to investigate the impact of student characteristics on self-motivation and how it correlates with performance.

Beneficial notions and practical methods for effective teaching have been documented in numerous research studies (Dahl and Smimou, 2011). These authors believed that the interaction between students' intrinsic and extrinsic motivational alignments as well as alleged teaching quality had not been completely studied. Present literature neglects the discussion of how, or whether, these alignments can be nurtured and heightened in the ongoing effort to promulgate effective teaching (Dahl and Smimou, 2011). Since earlier research on student motivational orientations has been documented, capturing and recognising present thoughts on the topic and examining student perceptions would be very beneficial (Dahl and Smimou, 2011). Miranda *et* al., 2013, found that insufficient research has been conducted on academic motivation in higher education. Students showed a gap in knowing and understanding styles of behaviour regulation. Eccentricities that should be considered in teaching and learning, especially in accounting, have been indicated in particular by this gap (Miranda *et* al., 2013).

In South Africa, very little recent research has been conducted on academic motivation in higher education. Motivation can only be explored and encouraged in the classroom once

we have understood and evaluated students' motivational levels, especially those of accounting students at South African township universities. Universities need not be reminded of the significance of the accounting profession in the South African economy or how important it is to address the types of inequalities that may exist (Barnes *et* al., 2006). Local universities need to go beyond the traditional supply notion of producing market-ready and competent graduates. Efforts must be made to reduce employment inequality and maximise black students' success (Barac, 2015).

To achieve a more balanced intellectual development of accounting graduates, we need to promote self-regulated learning in the accounting curriculum by arousing and sustaining the self-motivation of our students. And, to enhance universities' reputation, they need to develop students with high self-motivation so as to produce high-quality graduates (Subramaniam and Freudenburg, 2007).

The main objective of this study is to evaluate the self-motivation of accounting students at a township campus to be tested by means of the Self-Determination Theory. The study aims to achieve the following research objective:

to determine the types and levels of academic motivation affecting accounting students at a township campus, in light of the SDT.

The importance of the proposed research lies in its empirical contribution to recognising the factors that might encourage or jeopardise the motivation of accounting students at a township campus. The shortage of black accountants in South Africa is still an alarming controversy (Sadler and Erasmus, 2014). To bridge this racial gap, township universities are required to take a hard look at what is required to improve the success rate of black accounting students (Sadler and Erasmus, 2014).

This study could make a contribution to the teaching of accounting. The findings will highlight the significance of the educator understanding motivational processes and their consequences in the classroom. The issue of black students' academic preparation in accounting is critical, not only for the students' immediate success in completing their course, but also later in their chosen fields of expertise and achievement in business specialisation (Sadler and Erasmus, 2014). Understanding the students' motivation means that educators and institutions can act to arouse the students and sustain motivation levels all throughout an accounting programme (Miranda *et* al., 2013).

The research was mainly quantitative in its approach. It had a positivist underpinning, as it was based on the broad premise that an ideal norm or standard exists against which the self-motivation of students can be gauged. The first step in the research was a detailed literature review carried out to establish the concepts of the theoretical constructs that were used in the research. The outcome of the literature review serves as a theoretical underpinning for the development of the proposed SDT model. In addition to the literature review, primary data for the development of the SDT model was collected by means of a questionnaire. Data was collected from students registered for an accounting course at the Tshwane University of Technology (TUT), Ga-Rankuwa campus. This questionnaire was a self-regulation questionnaire which was downloaded from the SDT website.

Training of black accounting students in South African Townships

A major contribution to the racially unequal representation in the South African accounting profession is the education systems' imbalances. The transformation of universities has been ongoing since 1994, but it has since been realised that it will take many more years to correct (Barac, 2015). With the merger of higher education institutions post 1994, small institutions were incorporated and merged into larger institutions and renamed. Historically black institutions were ill-equipped to become viable and efficient higher education institutions (Mouton, Louw, and Strydom, 2013).

South Africa's first 10 years of democracy produced The Tshwane University of Technology (TUT). This university was established by the merger of the former Technikon North Gauteng, Technikon North-West and Technikon Pretoria on 1 January 2004. The South African institutional designation of "technikon" was abandoned in preference of the globally accepted "university of technology" when the merger occurred (Tshwane University of Technology, 2016). These institutions were merged because of they were a similar type of institution but the fact that historically black and historically white institutions were brought together brought in political dynamics (Tyobeka and van Staden). The TUT merger saw three fundamentally different institutions brought together, which made the merger unequal (Mouton *et* al., 2013). The infrastructure and service delivery at the township teaching and learning sites was poor. Staff and students expected immediate parity across all campuses given that the merger was meant to bring about equity but with more than a decade that's passed since the merger, there are still discrepancies in resource allocation and infrastructure development at the township campuses (Mouton *et* al., 2013).

In South Africa, the term township refers to the underdeveloped urban living areas that, from the late 19th century until the end of apartheid, were reserved for non-white residents, namely Indians, Blacks and Coloureds. Townships were built on the periphery of towns and cities. The townships that were established in Pretoria for black people during apartheid are Soshanguve, Mabopane, Attridgeville, Saulsville, Ga-Rankuwa, Mamelodi and Hammanskraal (Wikipedia, 2016).Technikon North-West was situated in Ga-Rankuwa township, North-West of Pretoria. This campus was a historically black institution established under apartheid as a separate institution for black students. TUT Ga-Rankuwa campus currently seats and manages one faculty; The Faculty of Economics and Finance; and five departments at this campus (Tshwane University of Technology 2016).

Research done by South African Institute of Chartered Accountants (SAICA) estimates that South Africa's accounting sector requires over 22 000 qualified accountants at various levels in order to bridge the existing skills shortage in the profession (SAICA). The research revealed that over 16 000 vacancies exist for National Qualifications Framework (NQF) level 3 to NQF level 6 accountants in business and government specifically, in both the financial and non-financial services sectors. These levels denote accounting professionals from entry level to below chartered accountant level (SAICA).

According to the South African Qualifications Authority (SAQA), a national higher certificate is at a NQF level 5 and a diploma at NQF level 6. The National Qualifications Framework Act 67 of 2008 provides for the NQF. The NQF is a comprehensive system, approved by the Minister of Higher Education and Training, for the classification, registration and publication of articulated and quality-assured national qualifications and part-qualifications. The South

African NQF is a single integrated system comprising three co-ordinated qualifications Sub-Frameworks for General and further Education and Training, Higher Education and Trades and Occupations (SAQA).

One of the departments seating at TUT Ga-Rankuwa campus is the Department of Accounting. There are two qualification programmes offered to undergraduate students in this department; National Higher Certificate (NHC): Accountancy and a National Diploma (ND) Accounting. The vacancies in the accounting sector may be bridged by the supply of accounting graduates from TUT Ga-Rankuwa campus. This would also resolve the issue of the shortage of black accountants as a large majority of the students at this campus are black.

Self-regulated learning

It is impossible for educators to entirely prepare graduates to be accountants, because of the profession's rapid changes (Smith, 2001). Smith (2001) states that graduates should be groomed by their educators to become accounting professionals by furnishing them with lifelong learning skills. This is reiterated by Becker (2013), stating that one such step to take would be to develop lifelong learners so graduates can "maintain competency" in their respective professions. The accounting profession's call for lifelong learning skills development would produce an accounting professional who would use these independent learning skills of making decisions, solving problems and managing oneself to establish what requires to be learnt and how to learn it (Smith, 2001).

Self-regulated learning is an important capability for the contemporary workplace. Skills on how to learn are necessary for lifelong learning, and that is the focus of self-regulated learning (Becker, 2013). A fundamental to lifelong learning skills is self-regulated learning. This is a process where the student will exercise control over their thoughts, effect, and behaviour as knowledge and skills are obtained (Smith 2001). The goal of self-regulated learning is "updating skills, acquiring new knowledge, and solving new problems throughout life" (Becker, 2013:437). Students, rather than receiving knowledge passively from external sources, are seen as active participants in their own learning (Becker, 2013). Self-regulated learning is not an "all-or-nothing" concept but rather it is a matter of degree, and the goal is to move students toward a higher degree of self-regulation (Becker, 2013). Learning strategies associated with self-regulation learning are not innate for most students. It is therefore that these skills must be developed in an academic setting and they are best developed in authentic classroom settings rather than in separate learning skills courses (Becker, 2013). Self-regulated learning simultaneously offers the potential for increased academic performance by students who develop such skills (Becker, 2013). Zimmerman and Martinez-Pons (1986) conducted a pivotal study on self-regulated learning in the accounting classroom and a later study conducted by Schleifer and Dull (2009), determined that higher academic performance could be associated to higher levels of self-regulated learning (Becker, 2013).

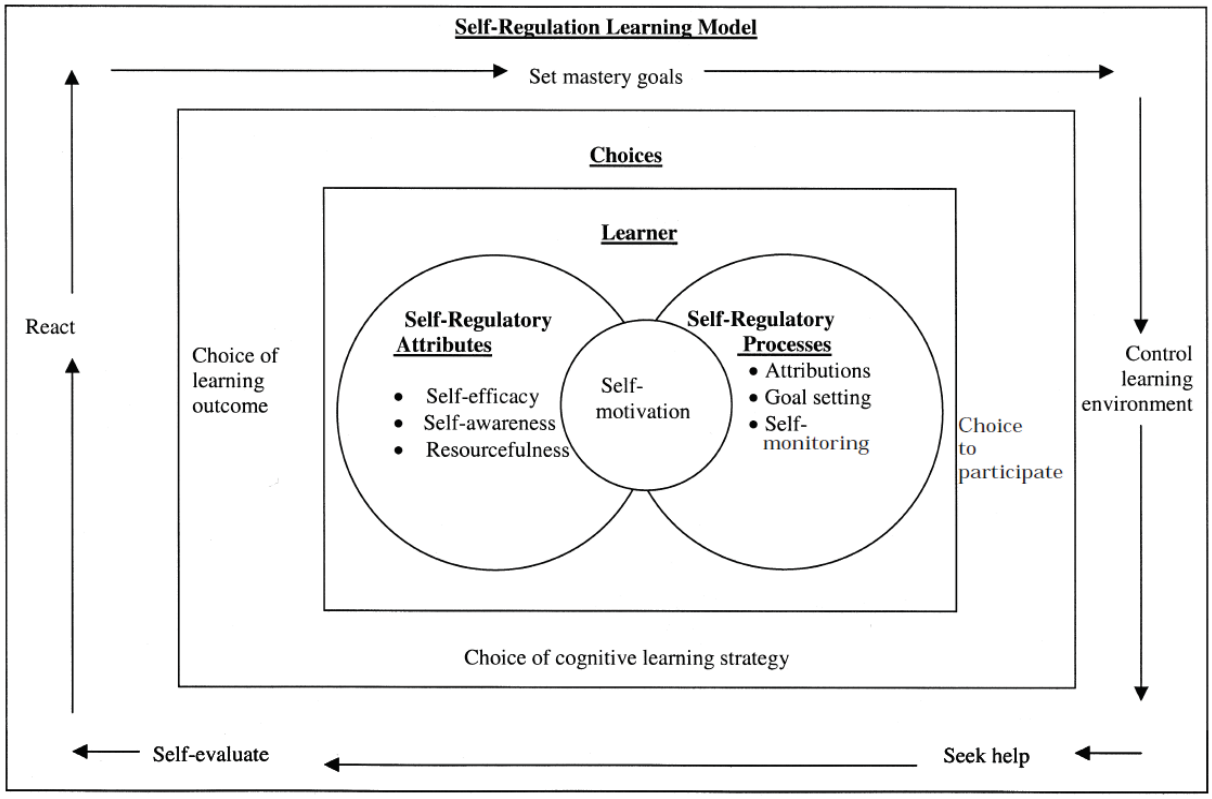
Accounting is considered a more challenging and conceptual course, and therefore provides the most favourable context for the development of self-regulated skills (Becker, 2013). An opportunity exists to develop students' self-regulated skills whilst simultaneously affording the support required to improving on their chances for academic success in an accounting course, as suggested by the nature of the course and the characteristics of the students in

the course (Becker, 2013). The relationship between self-regulated learning and students' academic performance and their future professional success must be communicated by educators to students to encourage metacognitive awareness (Becker, 2013). The students' motivation should be increased by knowing that performance centres on more than intellectual capacity, and realising the relevance of self-regulated learning to their future professions (Becker, 2013).

Students' self-motivation

At the core of self-regulated learning is the student's self-motivation, which is intense determination to learn something specific or to acquire some added level of expertise (Smith, 2001 and Mooi, 2006). With no self-motivation, many of the choices and processes would not be accomplished (Smith, 2001). Unlike students who receive instructions passively determined by an external authority, self-motivated students have an intrinsic goal directed towards a drive of self-improvement (Smith, 2001). Students will be more likely motivated to learn if they believe that their ability to learn can be credited to forces that they can command (Mooi, 2006). Figure 1 below demonstrates the fundamental and dynamic relationship between self-motivation and the student's self-regulatory attributes and processes. Any combination of the attributes and processes' strength and weaknesses affects how strong the focus on self-motivation will be (Smith, 2001). The student who will be most self-motivated will believe in their capabilities (*self-efficacy*), believes the ultimate outcome is attributed to controllable forces (*attributions*), and sees goals as achievable (*goals*) (Smith, 2001).

Figure 1: Self-Regulation Learning Model



Source: Smith (2001).

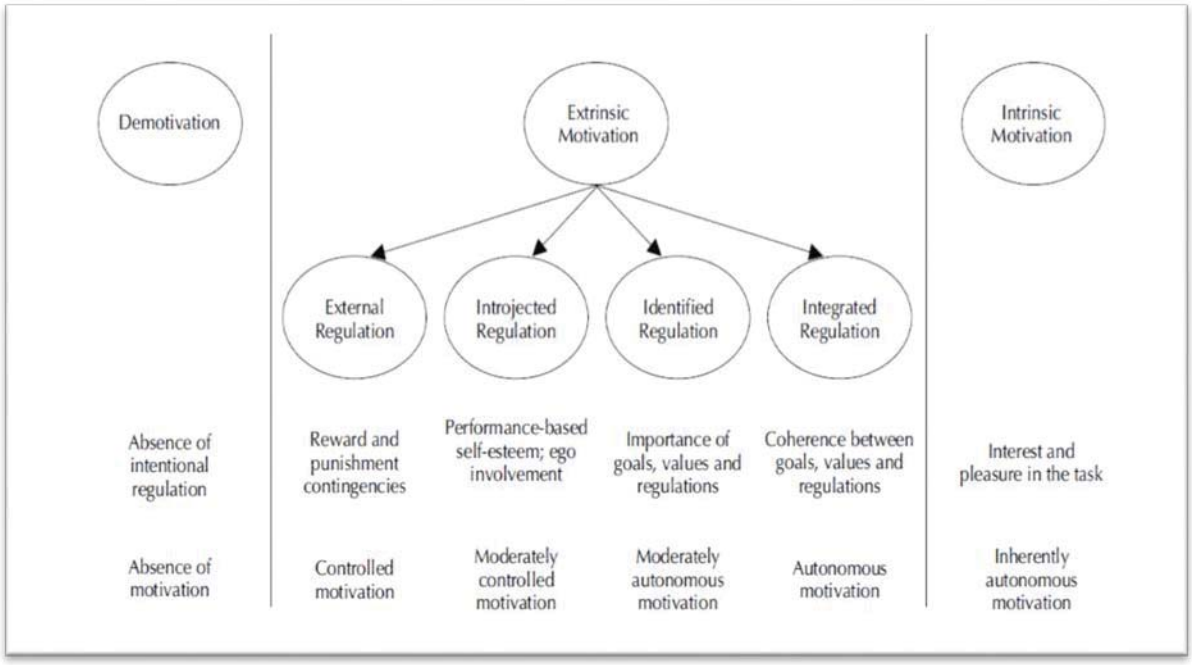
Conditions that relate with initiation and persistence of behaviour have been emphasised by motivation research, the nature and vastness of human needs and the influence of environmental conditions on need stimulation and satisfaction. For instance, initial motivation theory offered explanations of all human actions as a predictable and controllable response to reinforcements (Facer, 2012). More recently, reinforcement theory was rejected as a satisfactory explanation of human motivation. Other researchers proposed that humans decision to act or not to act is based on the utility they perceive the activity to have given their goals (Facer, 2012). It was further proposed that humans decide to act in order to satisfy acquired psychological needs such as the need for achievement, the need for affiliation, and the need for power. Today, the Self-Determination Theory (Deci and Ryan, 2002), is a meta-theory that aims to describe human functioning generally. According to SDT, a person engages and persists in an activity based on the extent to which innate psychological needs for autonomy, relatedness, and competence are satisfied or thwarted (Facer, 2012).

A distinctive prescription on how to motivate people to excel and thrive is prescribed by the SDT. Human motivation as described by the SDT is a broad-based theory, which has been developed for more than 30 years. Fundamental bases, processes and conclusions of human thriving, especially the conceptualisation of the nature of “optimal motivation”, with the general conditions supporting or undermining such motivation is meant to be expressed by this theory (Vansteenkiste and Seldon, 2006). This motivation is achieved by supporting the autonomy of the people (Vansteenkiste and Seldon, 2006). The SDT’s useful perspective, was developed by Deci and Ryan (1980, 1985, 2002) conceptualising motivation as being intrinsically and extrinsically oriented, therefore students could present different motivation in a continuum from lack of control to self-determination (demotivation, external motivation (external, introjection, and identification and integrated) through to internal motivation (Arquero *et* al., 2013).

Gagnè and Deci (2005), Porter and Lawler (1968) proposed a work motivation model based on Vroom’s (1964) motivation of theory which operates on two dimensions: intrinsic motivation and extrinsic motivation. This theory maintains that intrinsic motivation involves people performing an activity purely from interest in the activity (doing the activity for its own sake) and feel immediate satisfaction in performing it, simply because the activity is innately pleasant, satisfying or challenging (Vansteenkiste and Seldon, 2006 and Miranda *et* al., 2013). Automatic self-determination is seen as intrinsic motivation because the person’s full abilities are readily engaged in a self-catalysing chain of activity (Deci and Ryan, 2002). Contrasting intrinsic motivation is extrinsic motivation; the outcome of the activity is separable from the activity. Little or no enjoyment is derived by people performing this activity (Vansteenkiste and Seldon, 2006). Extrinsic motivation requires a conduit between the activity and a separate consequence, for example verbal or tangible rewards. The extrinsic consequence produced by the activity produces the satisfaction and not the activity itself (Miranda *et* al., 2013). This means that the SDT “makes an important distinction between two different motivational issues: why versus what for. What is the purpose of your activity and why do you want to accomplish this goal?; what are the reasons that lead the effort to achieve this goal?” (Miranda *et* al., 2013:164). “Motivation can have an effect on learning and performance at the same time that learning can affect motivation” (Miranda *et* al., 2013:164). The evaluation of dissimilar indications of motivation that is involved in the teaching and learning process is the principle on which SDT is built (Miranda *et* al., 2013).

A self-determination continuum (Figure 2) has been presented by Gagnè and Deci (2005), where the six types of motivation are distinguished varying qualitatively per the internalisation of external behavioural regulation (Miranda *et* al., 2013). There are three groups in which an individual's motivation can be analysed according to this approach: demotivation, extrinsic motivation, and intrinsic motivation (Miranda *et* al., 2013).

Figure 2: The Self-Determination continuum



*Source: Adapted from Gagnè and Deci (2005) in (*Miranda *et al*., 2013).

The lack of motivation is as the name implies, demotivation, i.e., there is no intentional behaviour by the person to proactively engage, and "in such a situation, there is a devaluation of activity and a lack of perceived personal control" (Miranda *et* al., 2013:164). Extrinsic motivation is in the second group, divided into four types of behavioural regulation that may differ in the degree of autonomy they represent:

1) External regulation; the least autonomous form of motivation, in this case, the person acts to receive an award or avoid being punished. An example is, "a student studying on a Friday night so that their mother might let them go to a party on Saturday night (extrinsic motivation and external regulation)" (Miranda *et* al., 2013:164). For the youth of today, technology is everything. A student could bargain with their parent that should they do well, they will receive a cell phone or a better cell phone to what they already have. But students could bargain with almost anything they want from their parents to motivate them to study harder.

2) Introjected regulation; the results of internal pressures such as guilt and anxiety are managed by the person's external consequences. For example, "a student can give their best in school because their parents require it and they do not want to disobey them and because otherwise they would feel guilty. Thus, they study to avoid feeling guilty" (Miranda *et* al., 2013:164).
3) Identified regulation; this is a more autonomous form than the previous types as, in this case, even if the reason to do something is externally originated, some internalisation already exists. For example, "A student can do their best in school because they want to go to university and become an accountant. They perceive themselves as a future accountant. This student's motivation is instrumental and hence extrinsic, but identifies itself with the reason to study" (Miranda *et* al., 2013:164).
4) Integrated regulation; the behaviour, goals and values of the person are clear, making this the most autonomous form of extrinsic motivation, although the focus remains "on personal benefits arising from carrying out the activity" (Miranda *et* al., 2013:164).

Lastly, intrinsic motivation, the person is interested and enjoys carrying out the task, and the activity itself is seen as an end (Miranda *et al*., 2013).

Osborne and Jones (2011) proposed a theoretical model which directly links the structure of self-motivation to academic results (Miranda *et* al., 2013). Wechsler (2006), Pfromm (1987), Schunk (1991) and Mitchel Jr. (1992) have had discussions on SDT in the field of motivation in school learning, and these studies show that motivation can affect student's learning and performance, and equally, that learning can affect motivation (Miranda *et* al., 2013). Reeve (2002) highlighted that students who are intrinsically motivated tended to have better success in education and are able to benefit more from autonomous styles of teaching (Arquero *et* al., 2013). The quality of student learning shows that intrinsic motivation is an important aspect. It was found that a significant influence in the performance of accounting students is motivation (Ahmad *et* al., 2011).

In this section, environmental changes of the accounting profession were reviewed. These also affect the South African profession. The racial profile of the South African accounting profession was evaluated by highlighting the need for black accountants and how universities need to ensure that black accounting students are produced to close the gap, ensuring that black accounting students succeed in their studies and as well as in their careers .The evaluation of self-motivation of accounting students was traced through the motivation literature. A review of the self-regulated learning model revealed key components of self-regulated learning, which has self-motivation at the core of the model. The review of self-motivation as explained by the SDT includes related subconstructs which lay the foundation for the survey methodology presented next.

Methodology

The approach of the study was quantitative, with a positivist foundation. It is founded on the broad premise that self-motivation can be tested against an existing ideal norm or standard. A self-regulation questionnaire was downloaded from the SDT website. This questionnaire reveals the reasons why people learn in certain settings such as universities by asking three questions about why people engage in learning-related behaviours. Each question is followed by 4 statements that are answered using a Likert five-point scale (strongly agree to strongly disagree). Each point of the self-determination continuum will be evaluated by a set of items that encompass controlled regulation and autonomous regulation. Responses will indicate either controlled (i.e., external regulation or introjected regulation) or autonomous motivation (identified regulation, integrated regulation or intrinsic motivation) (Miranda *et* al., 2013).

There are previous studies that validated the SDT questionnaire used in this study. These previous studies on constructing and adapting instruments to evaluate motivation for learning were conducted by Deci and Ryan (1985, 1991, 2000 and 2002), Vallerand *et* al. (1992), Amabie Hill, Hennessey and Tighe (1994), Guimàreas, Bzuneck, and Sanches (2002), Reeve and Sickenius (1994), and Guimàreas, Bzuneck, and Boruchovitch (2003). The possibility to evaluate learning motivation in a valid, precise and consistent way was presented by these studies (Miranda *et* al., 2013).

The participants of this study were TUT students at Ga-Rankuwa campus registered for an accounting course in the second semester of 2016. Because this campus is in a black township, a major part of the student population at this faculty consists of black students. TUT Ga-Rankuwa campus students represent a more rural population than those at urban universities, and a large number of students come from disadvantaged backgrounds.

First-year accounting has a high failure rate at higher education institutions, thus becoming a large concern globally and in South Africa (Barnes *et* al., 2006). This is also true of the TUT Ga-Rankuwa campus (see Table 1 below). The faculty management at TUT Ga-Rankuwa campus has classified the accounting course as a high-impact subject in the Department of Accounting. Third-year accounting has also created a bottleneck, as only about half the students registered pass this course (Table 1). There is pressure on higher education institutions to increase their throughput rate and decrease their failure rate. The consequence of poor performance is that the student does not pass, which not only affect the student personally, but also causes student congestion (due to high numbers of repeaters), which in turn prevents new students from enrolling.

Table 1: Summary of the pass rate in Accounting for the past three years at TUT Ga-Rankuwa campus

COURSE	2013	2014	2015
Financial Accounting I	50.99%	39.71%	45.42%
Financial Accounting II	86.81%	72.75%	85.99%
Financial Accounting III	51.55%	54.11%	56.38%

The Faculty of Economics and Finance comprises the Department of Accounting, the Department of Internal Auditing, the Department of Managerial Accounting and Finance, the Department of Economics and the Department of Public Sector Finance. In the Department

of Accounting, the NHC: Accountancy is a generic two-year programme and serves as a prerequisite for the following National Diplomas:

- Accounting
- Internal Auditing
- Cost and Management Accounting.

In 2016 there were 1 861 students registered for Financial Accounting I (first-year level), 790 students registered for Financial Accounting II (second-year level) and 970 students registered for Financial Accounting III (third-year level). There were 10 groups of first-year accounting students, 6 groups of second-year accounting students and 5 groups of third-year accounting students. Permission was requested from the lecturers responsible for the different groups to inform their students about the study and the survey during their class time. At the beginning of each lecture the researcher introduced herself to the class. The study's objective was relayed to the students and the students were requested to participate in the study.

The students were assured of the confidentiality of the information supplied and their choice not to answer the questionnaire if they did not wish to. Weekly reminders of the survey were sent out to the students during their class time by their accounting lecturers.

The questionnaire was administered as an online survey distributed to all students who are registered for an accounting course at TUT, Ga-Rankuwa campus. The method of instruction was English as the medium of instruction at TUT is English. The questionnaire was administered electronically using the learning management system at TUT (myTUTor). Permission was sought from the subject coordinators of the different levels to build the survey into their modules. The survey was placed on the students' myTUTor account in their accounting course and completed when they logged onto to myTUTor. The survey was displayed on the welcome page of the accounting course so as to make it easier for the students to locate the questionnaire. Students answered the questionnaire when they were accessing their accounting study material. This ensured that the students did not feel intimidated and had ample time to complete the questionnaire in their own time and space. This manner also ensured that anonymity of respondents was maintained in the survey. A major limitation of the survey was that students may have answered without giving proper consideration or thought to their responses. Other students might have made light of the questionnaire and given false answers. The questionnaire was made available to students for a short period, and therefore not all students may have had the opportunity to respond to the questionnaire. Some students may not have a myTUTor account or may have forgotten their log-on details, therefore only those students with an active account would be able to participate in the survey. And the myTUTor system could also have been offline, resulting in students being unable to access the questionnaire.

The questionnaire was adapted slightly for the purpose of this study to suit accounting students studying at the TUT Ga-Rankuwa campus. The questionnaire was sent to the research ethics committee at TUT, where permission was granted to use the questionnaire to survey TUT students. The SDT was previously validated externally in South Africa by Muller and Louw (2010), who analysed the relationship between university students' interest and motivation on the one hand with the perceived conditions of teaching and learning at the

University of Cape Town. The theoretical expectations are confirmed by the correlations between interest and the variables of the SDT (Muller and Louw, 2010).

This section provided an overview of the steps taken to develop and validate the self-regulation questionnaire. A review of the literature confirmed that the methodology chosen uses accepted standards for motivation instruments. As such, the process outlined in this section provides a sufficient level of thoroughness upon which to base the assertions that the SDT is a valid, reliable, and practitioner-friendly offering to the motivation literature. The next section will discuss the results of the data collected, and upon which such assertions about reliability and validity were based.

Analysis of data

The study instrument was made available to all 3 621 accounting students at TUT Ga-Rankuwa campus through their online management learning system (myTUTor). Only 187 valid responses were received, giving a response rate of 5.16%. An acceptable response rate for online surveys is 30% (Baruch and Holton, 2008). The response rate level is a crucial factor in measuring the value of the research findings, as a low response rate increases the probability of statistical bias (Baruch and Holton, 2008). Due to the low response rate, the findings of the study cannot be generalised, but the data was nevertheless analysed as it could still offer some insight. To eliminate the non-response bias, the stratification method was utilised. This approach has been advocated and occasionally used (Baruch and Holton, 2008). Stratification is based on the assumed similarity of non-respondents to some sub-groups (Baruch and Holton, 2008). The class lists of the Financial Accounting groups confirmed that this sample is representative of the population.

The profile of the respondents was 103 (55%) female and 83 (44%) male, distributed among the following age groups: 18 years: 6 (3%); 19 years: 22 (12%); 20 years: 40 (21%); 21-25 years: 115 (62%). The racial composition was 98% black, 1% white and 1% coloured. The respondents were 61 (33%) first-year, 35 (19%) second-year and 90 (48%) third-year accounting students.

Almost 100% of TUT students are black. The racial composition of the groups was used to generalise the population. From the class lists we can confirm that 99% of Financial Accounting I students are black, 98% of Financial Accounting II are black and 98% of Financial Accounting III are black. The majority of respondents were between the ages 21-25 years for all the Financial Accounting courses, and most of them are registered for Financial Accounting III. The majority of the students indicated that they were registered in their Financial Accounting course as a first-time students (not repeating). The majority of the Financial Accounting I students (98.5%) predicted that they would pass the course, but the final-year marks from the previous year indicated that only 45% of the students passed. Financial Accounting II students all predicted a mark above 50%, indicating that they would all pass the course. In the previous year, only 86% of the students had passed. This prediction may not apply to the students who participated. Financial Accounting III students all predicted that they would pass the course. This may not be a reasonable expectation, as only 56% of the students passed the course the previous year and the pass rate was approximately 50% for the previous 3 years (Table 1).

To determine the types of academic motivation affecting accounting students in light of SDT, each question from the questionnaire is followed by four statements. The responses to these statements will indicate either controlled motivation (i.e., external regulation or introjected regulation) or autonomous motivation (i.e., identified regulation, integrated regulation or intrinsic motivation) or demotivation.

Table 2: Numbering of PART B questions of the questionnaire

Number	Question
I participate actively in accounting classes:	
A1	because I feel like it's a good way to improve my understanding of the material.
A2	because others might think badly of me if I didn't.
A3	because I would feel proud of myself if I did well in the course.
A4	because a solid understanding of accounting is important to my intellectual growth.
I am likely to follow my lecturer's suggestions (learning tips and points) for studying accounting:	
B5	because I would get a bad grade if I didn't do what he/she suggested.
B6	because I am worried that I am not going to perform well in the subject.
B7	because it's easier to follow his/her suggestions than come up with my own study strategies.
B8	because he/she seems to have insight about how best to learn the material.
The reason that I will make an extra effort in understanding and practise accounting problems is:	
C9	because it's interesting to learn more about the nature of accounting.
C10	because it's a challenge to really understand how to solve accounting problems.
C11	because a good grade in accounting will look positive on my record.
C12	because I want others to see that I am intelligent.

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was 0.707 (Table 4 below), which is above the recommended threshold of 0.5 and Bartlett's Test of Sphericity was significant ($p<0.001$) for the twelve items dealing with self-motivation of accounting students, which indicated that a factor analysis was appropriate. The analysis indicated four factors, and the analysis identified only four factors based on the eigenvalue criterion (eigenvalue greater than 1) and these factors explain 38% of the variance after extraction. The final factor loadings are shown below (Table 3).

Table 3: Pattern Matrix

	Factor			
	1	**2**	**3**	**4**
A2			.789	
A3	.674			
A4	.741			
B5		.354		
B6				
B8		.776		
C11				.398
C12			.393	
A1	.510			
B7		.662		
C9	.435			
C10				.606

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.707
Bartlett's Test of Sphericity	Approx. Chi-Square	363.803
	Df	66
	Sig.	.000

Using Cronbach alpha, the internal consistency (reliability) for each of the four factors was determined as 0.650, 0.587, 0.512 and 0.337. With the exception of the first factor, the factors were below the acknowledged threshold for exploratory research, namely 0.6. It was thus decided to analyse each statement separately in the subsequent analysis.

If a variable that is being analysed does not conform to any known or continuous distribution, non-parametric statistics is suitable. The Kruskal-Wallis test can be used when there is a need for comparison of two or more independent groups based on a single variable. It is useful to apply this test when the sample from the population is small or the data type is ordinal. A statistical difference of less than 10% indicates the similarity found per variable analysed.

The instrument – reasons why students participate in an accounting class – the following results were produced by the Kruskal-Wallis test.

Table 5: Part B: Statistically significant differences indicated at 10% level
The results indicate that there is a statistically significant difference, at the 10% level of significance, between the three Financial Accounting levels relating to the factors below.

Number	
A1	0.095
A3:	0.009
A4:	0.044
B5:	0.047
B8:	0.084
C11:	0.095

Similarities were indicated in the following factors at the three levels of Financial Accounting groups. This is indicated by a statistically significant difference of less than 10%.

(A1: *p*=0.095): The mean ranks indicate that Financial Accounting I and III tend to agree most that participation in an accounting class is a good way to improve their understanding of the material.

(A3: *p*=0.009): The mean ranks indicate that Financial Accounting I and III tend to agree most that they participate in an accounting class because they would feel proud of themselves if they did well in the course.

(A4: *p*=0.044): The mean ranks indicate that Financial Accounting I and III tend to agree most that they participate in an accounting class because a solid understanding of accounting is important to their intellectual growth.

(B5: *p*=0.047): The mean ranks indicate that Financial Accounting I and III tend to agree most that they are more likely to follow their lecturer's suggestions for studying accounting because they would get a bad grade if they didn't do what the lecturer suggested.

(B8: *p*=0.084): The mean ranks indicate that Financial Accounting I and III tend to agree most that they are likely to follow their lecturer's suggestions for studying accounting because the lecturer seems to have more insight into the best way of learning the material.

(C11: *p*=0.096): The mean ranks indicate that Financial Accounting I and III tend to agree most that the reason why they would make an extra effort to understand and practise accounting problems is because a good grade in accounting will look good on their record.

None of the other factors showed statistically significant differences between the three accounting levels (all the p values were above 0.1).

A response rate of 5.16% was achieved and the data was analysed using the exploratory factor analysis. The acknowledged threshold for exploratory research was not achieved, and therefore each statement was separately analysed using non-parametric statistics. The results produced by the Kruskal-Wallis test on the instrument indicated 6 factors that showed

a statistically significant difference of less than 10% between all the groups. These factors indicated a similarity between all the Financial Accounting groups.

The first factor indicated that all three levels of Financial Accounting agreed that they participated in an accounting class because they felt that it was a good way to improve their understanding of the material. This may indicate coherence between goals, values and regulations. These results may indicate a form of integrated regulation and, according to the SDT continuum, may indicate extrinsic motivation.

The next factor indicated that all the groups agreed that they participated in an accounting class because they would feel proud of themselves if they did well in the course. This factor may indicate introjected motivation, which is also a form of extrinsic motivation according to the SDT continuum, indicating a performance-based self-esteem.

All the groups further agreed that their participation in an accounting class was because a solid understanding of accounting is important to their intellectual growth. This factor may indicate coherence between goals, values and regulations. This may indicate integrated motivation, which is a form of extrinsic motivation.

All the groups then indicated that they didn't participate in an accounting class because of what others thought of them. This may indicate that the students were not externally motivated by their ego, which would have indicated introjected regulation, i.e. extrinsic motivation.

All the groups agreed that they were likely to follow their lecturer's suggestions for studying the accounting because he/she seemed to have more insight in the best way to study the material, this may indicate coherence between goals, values and regulations, indicating integrated regulation (extrinsic motivation).

Lastly, all the groups indicated that they agreed that the reason why they would make an extra effort to understand and practise accounting problems was that a good grade in accounting would look good on their record. According to the SDT continuum, this is introjected regulation – extrinsic motivation based on performance-based self-esteem.

As the above factors showed a statistically significant difference of less than 10% between all the Financial Accounting groups, it may be concluded that the students were more extrinsically motivated, as they indicated more introjected motivation and integrated motivation according to the SDT continuum.

It was highlighted that students who are intrinsically motivated tended to have better success in education and are able to benefit more from autonomous styles of teaching (Arquero *et* al., 2013). The quality of student learning shows that intrinsic motivation is an important aspect. With these findings, the educators and the institution could start investigating methods to move the students to be more intrinsically motivated, as it was indicated by different authors that an intrinsically motivated student would benefit the accounting profession (Miranda *et* al., 2013).

Lastly, the conclusions related to the stated objective of this study are presented next. The conclusion commences with a summary of the contribution by this study, a brief discussion of the limitations and an indication of future research that may be relevant to this topic. The paper closes with some concluding remarks.

Conclusion

Motivation, as a significant influence in strengthening the students' involvement in learning activities, inspired the present study, which evaluates the self-motivation of accounting students at a township campus by means of the SDT. The primary objective of the study was supported by secondary research objectives, namely:

- A literature review to clarify the theoretical framework underpinning this study.

  The literature review was performed to empirically explore the concept and the definition of self-regulated learning, which hinges on self-motivation and the types of motivation on the self-determination continuum.
- Analysis of the data collected in order to determine the types and levels of academic motivation of accounting students.
- Determination of the correlation between the types of motivation according to the self-determination continuum and the accounting students registered at a township campus.
- Drawing conclusions on the findings of the study and making recommendations for further research related to the topic.

To cope with the rapid changes of the accounting profession, accounting standards are regularly revised, as the applicability of the knowledge of existing accounting standards is expected to be short-lived (Foong and Khoo, 2013). Consequently, accounting graduates should be equipped with the ability to constantly update themselves not only on the latest technical accounting developments, but also on areas that might directly or indirectly be relevant to the successful development of their organisations (Foong and Khoo, 2013).

With these environmental changes also facing the accounting profession in South Africa, the local accounting profession has also made efforts to transform its demographic profile. South Africa's accounting profession is still closed to black accountants, with a disproportionally low number of black accountants in relation to the country's racial demographics (Barac, 2015). Increasing self-regulation of black accounting students at township universities by increasing their motivation should help socio-economically disadvantaged students enter the restricted market (Barac, 2015).

Self-regulated learning plays a fundamental role in academic success and is also a skill that is professionally desirable (Smith, 2001). A learning environment that encourages skills in self-regulated learning has the potential to substantially propel the instructional efforts to shift accounting students toward a higher level of self-regulation (Smith, 2001). Successful self-regulated learning efforts are facilitated by a quality learning environment, as this could considerably intensify the student's attitude towards the search for current knowledge. In this respect, educators play a crucial role in shaping the student's attitude towards self-regulated learning (Foong and Khoo, 2013). In meeting the "broader content coverage" expected by

the accounting profession, accounting educators should change from their compliance-driven attitude to one appreciating the relevance of non-technical course contents when designing the curriculum (Foong and Khoo, 2013).

The SDT can have educational significance in numerous ways. Firstly, intrinsically motivated students are more comfortable in their learning processes; these students acquire knowledge in a more differentiated and coherent form, their learning is retained over a long period, and their own knowledge is applied more regularly than that of others (Muller and Louw, 2010). Furthermore, these students cope better with university demands. Over an extended period, they display a higher academic performance and perceive themselves as more competent (Muller and Louw, 2010). Secondly, the quality of instructional processes and their effects, such as instructional designs that promote motivation, must be improved (Muller and Louw, 2010). The satisfaction of basic psychological needs is an important precondition for self-determined motivation, as studies on SDT have indicated (Muller and Louw, 2010).

The findings of this study could have implications on how academic reforms may be restructured to emphasise active student learning for developing attitudes consistent with the self-regulated learning culture, which are critical for success in the increasingly challenging work environment (Foong and Khoo, 2013). The reforms should be directed at the development of a multi-competent workforce, as companies are seeking adaptable employees who can look beyond the numbers (Foong and Khoo, 2013). The study also highlights the importance of educators in understanding the consequences of motivational processes in the accounting classroom (Miranda *et* al., 2013). If accounting as a course attracts students with high levels of external regulation, then the characteristics of the students and the consequences thereof should be taken into consideration when developing the learning contexts (Arquero *et* al., 2013). If the students' types of motivation are known, institutions and educators can act to stimulating and maintaining motivation levels throughout the programme, in accordance with the results of the present study (Miranda *et* al., 2013). This may be particularly relevant, as there is evidence suggesting that pedagogical skills of educators may affect student motivation (Miranda *et* al., 2013). There is a need for new methods of classroom education that are capable of streamlining the teaching and learning process by involving students in the design of the content to be studied (Miranda *et* al., 2013). The findings of this study are also important for the primary and secondary education of students. This may be where interventions should be made by the provincial and national governments. The importance of this is due to the university environment having more heterogeneous students across different generations who are increasingly connected to new technologies (Miranda *et* al., 2013). Therefore, an important action would be to invest in teacher training on Accounting education (Miranda *et* al., 2013).

The study has limitations. Firstly, the students that participated in this study are enrolled at a single university. A second limitation is that the selection of the student participants was not random. The convenience use of the participants is acknowledged, even though it is believed that the participant selection did not bias the results. The third limitation of the study was the low number of valid responses. A response rate of only 5.16% was achieved, which is considerably lower than the acceptable 30% for online surveys. A final limitation is that a factor analysis could not be performed on the response data, as it was below the acknowledged threshold.

Recommendations of the study are that more current and extensive research is required. The replication of the study in other contexts is suggested, particularly in accounting programmes in urban universities, to ascertain trends on accounting students' motivation. A comparative study contrasting population groups and urban/rural setting would be a valuable extension of this work. This will contribute to the educational debate. And, as suggested by Miranda *et* al., (2013), more studies using qualitative methodologies are required, such as observing student behaviour, as previous studies have predominantly used quantitative methods to better understand the phenomenon of motivation. The impact of primary and secondary education on students' motivation can also add value to the debate. Furthermore, studies need to be done to on how parents could boost their children motivation through real practical terms. Students seem to be extrinsically motivated, so that incentive should be used, however intrinsic motivation is linked to locus of control and as well as developmental factors, so how can these be addressed in a short period of time in the university setting, what additional support could be provided? There is potential for a lot more work in further research here, possibly qualitative.

The study aimed to evaluate the motivation of accounting students at a township campus in light of the SDT. The population did not produce adequate responses. The results of the exploratory factor analysis could also not be relied upon, as the factors determined were below the acknowledged threshold. Non-parametric statistics was subsequently applied. There were 6 out of 12 factors that indicated a statistically significant difference of less than 10%. These 6 factors may have indicated introjected regulation as well as integrated regulation, indicating that the students were extrinsically motivated. Extrinsic motivation requires a conduit between the activity and a separate consequence, for example verbal or tangible rewards. There is potential for a lot more work in further research here, possibly qualitative. Students should be moved to be more intrinsically motivated. Intrinsic motivation is inherent autonomous motivation, where there is interest and pleasure in performing the task. Based on the findings, educators and the university could stimulate the student's motivation throughout an accounting programme, and fostering self-regulated learning in the black students and as well as intense academic support would assist black students enter the restricted profession.

LIST OF REFERENCES

Ahmed, Z., Anantharaman, R.N. & Ismail, H. 2011. Students' Motivation, Perceived Environment and Professional Commitment: An Application of Astin's College Impact Model. *Accounting Education: An international journal,* 21(2):187-208. [Online] Available from: EBSCOHost: http://0-eds.a.ebscohost.com.tkplib01.tut.ac.za/eds/pdfviewer/pdfviewer?vid=4&sid [Downloaded: 2016-04-15].

Arquero, J.L., Fernàndez-Polvillo, C., Hassall, T. & Joyce, J. 2013. Vocational, motivation and approaches to learning: A comparative study. *Education and training journal,* 57(1):13-30. [Online] Available from: Emerald Insight http://www.emeraldinsight.com.uplib.idm.oclc.org/doi/pdfplus/10.1108/ET-02-2013-0014 [Downloaded: 2016-03-15].

Barac, K. 2015. Helping Disadvantaged Students: Findings from the Thuthuka Programme. *Accounting Education: An international journal,* 24(2):75-101. [Online] Available from: ProQuest: http://www-tandfonline-com.uplib.idm.oclc.org/doi/pdf/ [Downloaded: 2016-09-22].

Barnes, H., Dzansi, D., Wilkinson, A. & Viljoen, M. 2006. Researching the first year accounting problem: Factors influencing success or failure at a South African higher education institution. *Journal for New Generation Sciences,* 7(2):36-58. [Online] Available from: EBSCOHost: http://eds.b.ebscohost.com/eds/detail/detail?vid=1&sid=d7bb92d2-6e77-43c1-9ab5-144ab14005ec%40sessionmgr104&hid [Downloaded: 2016-07-19].

Baruch, Y. & Holton, B.C. 2008. Survey response rate levels and trends in organisational research. *Sage publications, 61(8):1139-1160*. [Online] Available from: Google Scholar: http://s3.amazonaws.com/academia.edu.documents/41770481/Survey_response_rate_levels_and_trends_i20160130-16677-2qcme0.pdf [Downloaded: 2016-11-16].

Becker, L.L. 2013. Self-regulated learning interventions in the introductory accounting courses: An empirical study. *Issues in Accounting Education,* 28(3):435-460. [Online] Available from: ProQuest: http://search.proquest.com.uplib.idm.oclc.org/docview/892728464/fulltextPDF/ [Downloaded: 2016-06-27].

Dahl, D.W. & Smimou, K. 2011. Does motivation matter? On the relationship between perceived quality of teaching and students' motivational orientations. *Managerial Finance,* 37(7):582-609. [Online] Available from: Emerald Insight: http://www.emeraldinsight.com.uplib.idm.oclc.org/doi/pdfplus/ [Downloaded: 2016-03-15].

Facer, Jr. D.C. 2012. *The motivational beliefs inventory: Measuring motivation beliefs using four motivation theories*. PhD Thesis, University of San Diego. [Online] Available from: ProQuest Dissertation and Theses Global: http://search.proquest.com.uplib.idm.oclc.org/docview/1040884454/previewPDF/68704750CC584BEDPQ/1?accountid=14717 [Accessed: 2016-07-01].

Foong, S. & Khoo, C. 2013. Attitude, learning environment and current knowledge enhancement of accounting students in Malaysia. *Journal of Accounting in Emerging Economics,* 5(2):202-221. [Online] Available from: Emerald Insight: http://www.emeraldinsight.com.uplib.idm.oclc.org/doi/pdfplus/10.1108/JAEE-07-2012-0030 [Downloaded: 2016-05-25].

Guthrie, J. & Parker, L.D. 2016. Wither the accounting profession, accountants and accounting researchers? Commentary and projections. *Accounting, Auditing & Accountability Journal,* 29(1):2-10. [Online] Available from: Emerald Insight: http://www.emeraldinsight.com.uplib.idm.oclc.org/doi/pdfplus/10.1108/AAAJ-10-2015-2263 [Downloaded: 2016-06-26].

Littlejohn, A., Milligan, C. & Margaryan, A. 2011. Charting collective knowledge: supporting self-regulated learning in the workplace. *Journal of workplace learning,* 24(3):226-238. [Online] Available from: Emerald Insight: http://www.emeraldinsight.com.uplib.idm.oclc.org/doi/pdfplus/10.1108/AAAJ-10-2015-2263 [Downloaded: 2016-06-22]

Miranda, G.J., Leal, E.A. & Carmo, C.R.S. 2013. Self-Determination Theory: An Analysis of Student Motivation in an Accounting Degree Program. *Revista Contabilidade & Finanças,* 24(62):162-173. [Online] Available from: EBSCOHost: Academic Search Complete: http://eds.a.ebscohost.com.uplib.idm.oclc.org/ehost/resultsadvanced?sid [Downloaded: 2016-03-15].

Mooi, T. 2006. Self-efficacy and Student Performance in an Accounting Course. *Journal of Financial Reporting and Accounting,* 4(1):129-146. [Online] Available from: Emerald Insight: http://www.emeraldinsight.com.uplib.idm.oclc.org/doi/pdfplus/10.1108/19852510680001586 [Downloaded: 2016-03-15].

Mouton, N., Louw, G.P. & Strydom, G.L. 2013. Restructuring and mergers of the South African Post-Apartheid Tertiary System (1994-2011): A critical analysis. *International Business and Economics Research Journal,* 12(2):151-166. [Online] Available from: ProQuest:http://search.proquest.com.uplib.idm.oclc.org/docview/1418720152/fulltextPDF/E7229C920A9A48D1PQ/1?accountid=14717 [Downloaded: 2016-09-22].

Muller, F. & Louw, J. 2010. Learning environment, motivation and interest: Perspective on SDT. *South African Journal of Psychology,* June:1-22. [Online] Available from: Google Scholar:https://www.researchgate.net/profile/Florian_Mueller5/publication/258185128_Learning_Environment_Motivation_and_Interest_Perspectives_on_Self-Determination_Theory/links/5406bd9d0cf2c48563b25cbd.pdf [Downloaded: 2016-07-05].

Ryan, R.M. & Deci, E.L. 2002. Self-Determination Theory [Measurement instrument]. Retrieved from www.selfdeterminationtheory.org.

Sadler, E. & Erasmus, B.J. 2014. The academic success and failures of black chartered accounting graduates in South Africa: A distant education perspective. *Meditari Accountancy*

Research, 13(1):29-50. [Online] Available from: Emerald Insight: http://www.emeraldinsight.com.uplib.idm.oclc.org/doi/pdfplus/10.1108/10222529200500003 [Downloaded: 2016-09-05].

South African Qualifications Authority, 2016. *Updated level descriptors.* [Online] Available from:http://www.saqa.org.za/docs/brochures/2015/updated%20nqf%20levevl%20descriptors.pdf [Accessed: 2016-11-14].

Smith, P.A. 2001. Understanding self-regulated learning and its implications for accounting educators and researchers. *Issues in Accounting Education,* 16(4):663-700. [Online] Available from: ProQuest: http://search.proquest.com.uplib.idm.oclc.org/docview/210878158/fulltextPDF/ [Downloaded: 2016-06-26].

South African Institute of Chartered Accountants. 2016. *Membership statistics.* [Online] Available from: https://www.saica.co.za/Portals/0/Members/About%20members/Race2016.pdf [Accessed: 2016-09-05].

Subramaniam, N. & Freudenberg, B. 2007. Preparing accounting students for success in the professional environment: enhancing self-efficacy through a work integrated learning program. *Asia-Pacific Journal of Cooperative Education,* 8(1)87-102 [Online] Available from: Emerald Insight: http://ssrn.com/abstract=1493467 [Accessed: 2016-06-26]

Tshwane University of Technology. 2016. *About Us.* [Online] Available from: http://www.tut.ac.za/About%20Us/ [Accessed: 2016-08-04].

Tyobeka, E.M. & van Staden, L. Academic restructuring at Tshwane University of Technology. [Online] Available from: http://www.tut.ac.za/Other/HEMC/Documents/Paper%20-%20Restructuring%20at%20TUT%20(final).pdf [Accessed: 2016-11-13].

Vansteenkiste, M. & Sheldon, K.M. 2006. There's nothing more practical than good theory: Integrating motivational interviewing and self-determination theory. *British Journal of Clinical Psychology,* 45:63-82. [Online] Available from: EBSCOHost: http://0-eds.b.ebscohost.com.tkplib01.tut.ac.za/eds/pdfviewer/pdfviewer?vid=4&sid=1e086d40-44ef-41dc-b560-0410185ffe8e@sessionmgr102&hid=122 [Downloaded: 2016-04-18].
Wikipedia, 2016 [Online] Available from: https://en.wikipedia.org/wiki/Township_(South_Africa) [Accessed: 2016-11-14].