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The Effect of Biographical Variables on Self-Efficacy of Management Accounting Students

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Abstract: The purpose of this paper is to investigate whether biographical variables such as Gender, Race, Home District, School (urban/rural) and Language proficiency play any role in the Self-efficacy of Cost and Management Accounting (CMA) students and to assess whether Self-efficacy. A descriptive, longitudinal, and mixed-methods approach was used in this paper. In the current study, the quasi-experimental design used for the pre-test and post-test control groups was non-equivalent. The population targeted was CMA students. A census survey was performed. The comparative analysis between the variables revealed no significant difference. However, females, Africans, Urban Home District, Urban School, and English Second Language learners scored more in the post-test. The paper recommends that the implementation of General Education modules into the curriculum be instituted. Additionally, current learners appear to have very poor General Education skills, and respondents themselves believed that self-efficacy can have a positive impact on academic performance.

Keywords: *Financial Accounting, Gender, Home District, Management Accounting, Race, Self-efficacy.*

1. Introduction

While lecturing at the university for many years, it has been observed that some students are eager to learn and can face new challenges, while others appear unmotivated to learn. Among learners, many demonstrate high levels of confidence in their skills, while others seem unsure of their abilities. It is necessary to analyze the factors affecting communication skills as many DUT students come from different cultural, ethnic, and geographic backgrounds and to understand the problem before measuring the communication proficiency of students. The study will attempt to ascertain the contribution of communication skills as a subject in enhancing the performance of CMA students in higher education. Naidoo and Garbharran (2013) conducted a study into communication skills as a subject in the program Cost and Management Accounting at a South African University. The study revealed that respondents, with a majority of 48% and 53% respectively for both English First Language (EFL) and English Second Language (ESL), acknowledged that the English language affected them in obtaining better ranks in Cost and Management Accounting (CMA). The study also indicated that 23 percent of both EFL and ESL were unsure if it affected them. Furthermore, the researchers reported that both EFL and ESL respondents, with a majority of 65% each, showed that CMA lecturers were unaware of the weak comprehension of English by the learners. Educators and administrators should be concerned about the performance of students at tertiary institutions, as well as employers in the labor market.

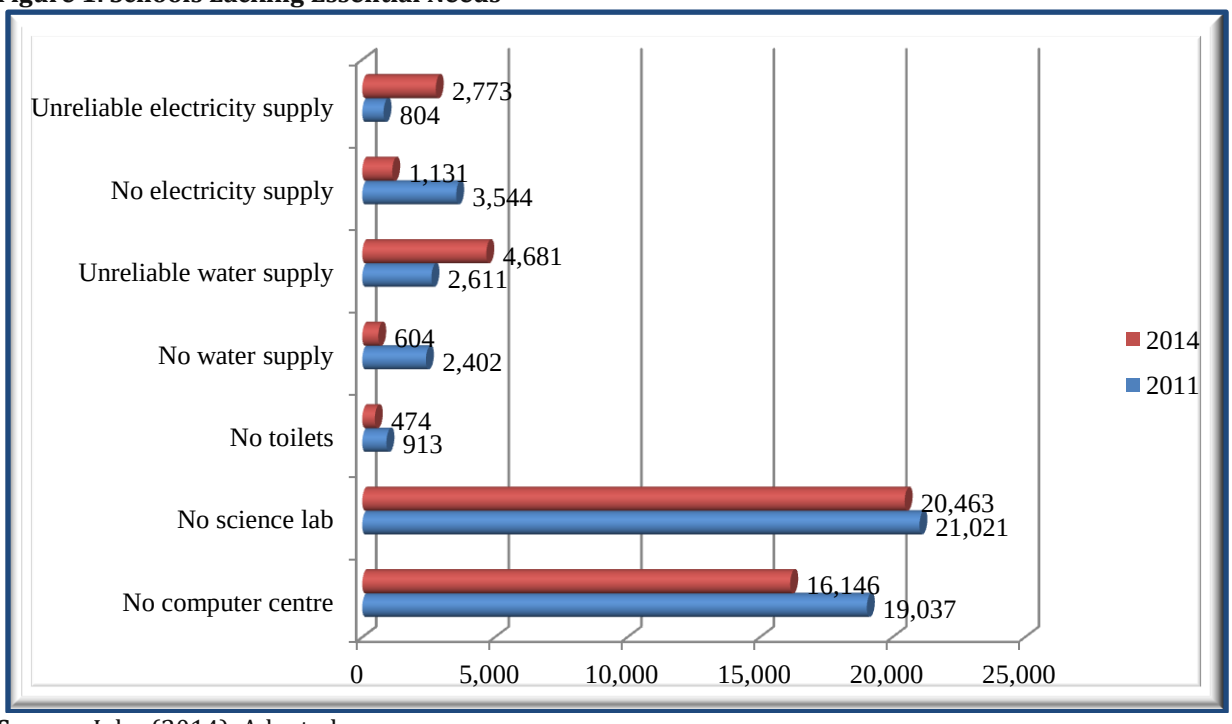
Academic performance is a factor that employers consider when recruiting workers, especially fresh graduates. The other factor is work experience and students have to place the greatest effort in their studies to obtain good results to fulfill the employer's demands. According to the University of Central Arkansas (2018), General Education has six skill areas. There are five areas of emphasis: i) Written Communication; ii) Critical Thinking; iii) Oral Communication; iv) Information Technology, and v) Quantitative Analysis and Researching. According to Greer (2012), General Education helps learners learn oral and written communication skills, physical and natural sciences, humanities, arts, and social sciences, fitness, and wellness skills, comprehension, and knowledge. The goal is to provide the necessary skills and information to function in society through a collection of learning experiences organized according to subject disciplines. According to Washington State University (2020), general education is important to succeed in the workforce and to incorporate the learner's planned careers in broader, more inclusive, and multiple contexts. A college education offers valuable training for the kind of work that graduates do by being exposed to different beliefs, viewpoints, and cultural practices. An experience that will greatly enrich their understanding of the context and significance of careers. South Africa’s performance in terms of producing professional Accounting and Auditing trainees to meet the labor market demand has confirmed the seriousness of the problem and the urgency of finding solutions.

The Vice-Chancellor of Durban University of Technology (DUT) has taken steps to address these shortages of skills through General Education Modules. According to the Vice-Chancellor, the new curriculum will be DUT's signature and will ensure that DUT graduates receive a more holistic education curriculum, ensuring that they are not simply trained for the job market but receive a more holistic education. Self-efficacy is an important motivational concept, according to Gist and Mitchell (1992). Individual decisions, goals, emotional responses, commitment, coping, and resilience are all affected. The authors claim that self-efficacy evolves as a result of learning, experience, and feedback. In the literature on organizational behavior, self-efficacy has received increasing empirical attention. According to Gist and Mitchell (1992), believing that one will succeed on a mission is easier than thinking one will fail. Self-efficacy increases with bona fide improvements in skills.

Infrastructure and Socio-Economic Status: There are a large number of schools in rural areas that are dysfunctional, and some of these schools have dilapidated classrooms that cater to multiple grade levels (Perumal 2009: 38). The same teacher will be teaching different grade pupils simultaneously that share the same classroom. Rural schools are also easily targeted and damaged due to the violent protests that originate from poor service delivery. Teachers in rural schools promote mindless rote learning that confused rather than intellectually stimulated the students because they, themselves, were subjected to such learning. In rural areas, where poverty is common and HIV/AIDS is rife, dysfunctional schools are characterized by a lack of meaningful teaching and learning (Mitchell et al. 2010).

Infrastructure: Equal Education (2018) also states that there are currently over 400 mud schools in the Eastern Cape, many of which are made of mud and shacks. Gardiner (2008) adds that over one-fifth of Eastern Cape, KwaZulu-Natal, and Limpopo schools have over 45 learners per classroom. In addition to the poor infrastructure of schools, many of the schools are grossly under-resourced in terms of reading materials. According to the National education evaluation and development unit (2013), much of the responsibility for improving the poor infrastructure of schools must lie with the provinces, where the budgets for Learning and Teaching Support Materials (LTSM) do not provide for supplying schools at the required levels. These are not conducive conditions for delivering quality education to young learners. As illustrated in Figure 1, there are indications of some improvements in the government's battle to provide schools with science and computer laboratories.

Figure 1: Schools Lacking Essential Needs



Source: John (2014). Adapted.

A majority of rural schools in South Africa have poor infrastructure and lack the necessary resources to conduct quality and constructive education for young learners. There were huge disparities between the Department of Education and NEIMS reports regarding the state of schools in the Eastern Cape. John (2014) assumes that if the reliability of the data is in doubt, then the consistency of the implementation plans for infrastructure in the provinces will also be in question. A majority of these rural schools are lacking basic, facilities like clean running water, electricity, libraries, laboratories, and computers. These are essential for the proper functioning of schools and a lack of these basics will negatively contribute to the quality of education that rural learners receive. On 29 November 2013, the Ministry of Basic Education issued legally binding requirements and specifications for school facilities and it will now be a law that every school must have the basics to act as a learning environment.

Resources: Perumal (2009) reports that rural schools are dysfunctional and lack the resources to function properly as learning centers in South Africa. Furthermore, the researcher found that teachers taught multiple grade levels and mindless rote learning that confused rather than intellectually stimulated students. As a result of large class sizes and inadequate training, teachers have become frustrated, which exacerbates the problem (Brown, 2010). Wallace & Adams (1989) confirm that rural teachers face large classes and different abilities than the students most of them teach.

Rote Learning: According to Gardiner (2008), the total number of teacher training institutions in South Africa from 1994 to 1998 was 120, but reduced to 50 with a significant percentage of these institutions in rural parts of the country. The researcher states that a large number of such teacher-training institutions were of inadequate quality and qualified teachers used static, memorization-learning approaches in the classroom. The scholastic ideology-facilitating teacher training is known as 'Fundamental Pedagogics'. Gardiner (2008) argues that this educational philosophy, established during colonialism, promoted an authoritarian approach to learners and prevented students from questioning or objective reasoning by pupils. A study on MBChB learners at the University of Pretoria found that rote learning is a superficial approach that lacks understanding or insight, whilst a deep approach that requires understanding is needed (Pickworth 2001).

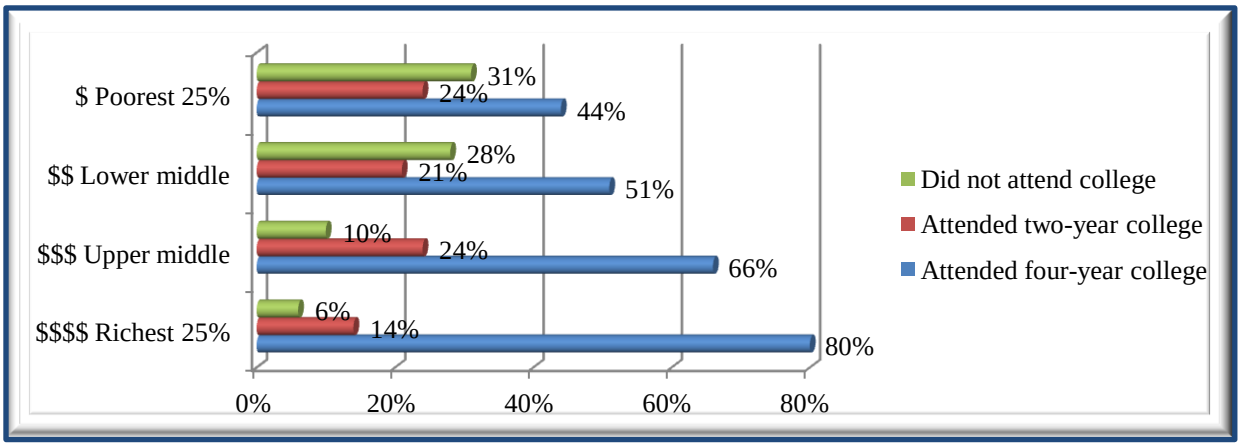
Socio-Economic Status and Education Relationship: According to Corrigan (2009) of the South African Institute for International Affairs, socioeconomic development issues have been identified in six African countries that have received African Peer Review System (APRM) Country Evaluation Reports, namely Ghana, Rwanda, Kenya, Algeria, Benin, and South Africa. All of these countries have recently experienced difficult times. According to the APRM Country Evaluation Report, inequality, land access, inadequate education systems, gender discrimination, and poor healthcare systems are frequent challenges across these countries, (Corrigan, 2009). According to an independent researcher, nearly 75 percent of all South African children are trapped in poverty, and their lack of financial and social capital causes them to attend low-performing schools, according to an article published by the University of South Africa (UNISA) (2012) titled 'How does socio-economic status impact on educational outcomes in South Africa?' The standard and quality of education received by an individual is a factor in the number of opportunities open to that individual. Higher levels of labor development will be aided by an increase in educated individuals.

Through a society's awareness, talents, and innovative capacity, education is a crucial aspect of a country's socio-economic advancement and plays an important role in increasing human capacities and accelerating economic growth (Kiani, 2015). Kiani (2015) further believes that education has favorable consequences on poverty and inequality reduction, improved health, and excellent governance in the execution of socioeconomic policies. Because of a lack of substantial education as well as urban representation in committee membership and office holding, advanced-level participation in growth projects is reduced (Imoh, Nwachukwu and U-James 2009: 73). According to Wall, Pettibone, and Kelsey (2005), a person's socioeconomic status has a significant impact on their level of community engagement, as well as their educational levels and income. According to Angba, Adesope, and Aboh (2009), as a person's educational level rises, his or her attitude toward community development is likely to improve positively. Oladipo and Adekunle (2010) feel that people with high educational achievement are also quick to absorb new ideas and that there is a positive relationship between educational achievement and people's cultural-economic status

in society. Higher education has demonstrated its long-term survival as well as its ability to adapt and bring about societal change and development.

Because of the volume and speed of change, society has become increasingly knowledge-based, and higher education and science are now critical components of individuals', societies', and nations' political, socioeconomic, and environmentally sustainable growth (UNESCO 1998). According to a report from the United States Department of Schools, students who score in the top 25% on standardized tests do not have equitable access to secondary education (Landy, 2012). According to the author, students from affluent socioeconomic origins are more than 80 percent more likely to enroll in a four-year college program than students from low socioeconomic backgrounds. Figure 2 on socioeconomic status shows that students from low socioeconomic backgrounds are five times more likely to not attend college at all. Landy (2012) argues that socioeconomic variables, rather than the wealthiest students, determine who is admitted to top universities.

Figure 2: Socio-Economic Status at Colleges



Source: Landy (2012). Adapted.

The most important aspect of the dispute is study quality, and whether or not this is adequate for the many inputs that may make resource interpretation more difficult. People with higher educational accomplishments and higher socioeconomic status, according to Taylor and Yu (2009), are much more likely to become active in the school group, increasing the school staff's sense of responsibility toward the parents and contributing positively to the school standard. Several other studies have found that parents with a strong educational background may harm their children's schooling. Other factors that affect student accomplishment, such as the character of family inputs, may not be fully accounted for by statistical models. When contrasted with certain of the school features, the estimates may incorrectly attribute higher student accomplishment due to superior household elements (Hanushek and Woessman, 2007).

2. Rural Student's Skills

When compared to rural students, urban students begin reading and writing at a younger age, which may have an impact on their academic performance at the postsecondary level (Banda, 2003). Because rural students develop reading skills later in life and later in tertiary education, they may believe that the speaker is speaking too quickly for them to absorb the content; however, it might not be an issue for English First Language or metropolitan students. Jiya (1993) indicates that some lecturers talk extremely fast which is a problem for rural students, as these students may take a longer time to understand what is been expressed. Souter, Archer and Rochford (1992) conducted a study on 52 first-year English second language students at a rural institution in 1987 and 1988, believing that because inference is so important in reading, poor performance in inference by most students is a matter for concern.

Role of Gender: Different cognitive learning styles have different effects on different learners. Because each gender has a distinct cognitive learning style, the compatibility or incompatibility of their preferred thinking and reasoning abilities is more likely to affect understanding and, ultimately, academic performance (Bosire, Mondoh and Barmao, 2008). There could also be psychological and biological influences that could account for the differences in academic performance between the genders. Male students tend to take more risks during examination conditions and female students tend to play it safe. Accounting was previously known as a male-dominated profession, which could explain why males were more academically successful, but females have made significant inroads into the male-dominated profession over the years (Lanier and Tanner, 1999: 76). According to several studies, male students outperform their female counterparts. According to a study conducted by Blaylock and Lacewell (2008) in assessing prerequisites as a measure of success, the inclusion of gender is the model of best fit when determining student performance in accounting. A study by Huh, Jin, Lee and Yoo (2010: 84) into the differential effects of student performance in the accounting discipline found that gender played a significant role in the grade point average and that males were performing better than female students. Du Plessis, Moller and Prinsloo (2005) presented evidence to suggest that males were performing substantially better and were more successful in accounting.

Koh and Koh (1999) learned that gender played a significant role in academic performance and found that male, students were performing better in the accountancy degree program. Doran, Benillon and Smith (1991: 74-83) had similar findings concerning males performing significantly better in examination scores than females in the introductory Accounting course but did not maintain the difference in the next level of the Accounting course. The common belief is that students who have an instructor of their gender may perform better than other students but this did not present itself in their study. Male performance is best explained by school accounting, while female academic ability is stronger than that of specific cognate disciplines such as school mathematics and accounting (Auyeung and Sands, 1994). There is additional evidence to imply and corroborate that female students outperform their male counterparts academically. Cudia (2009) claims that gender has a significant impact in determining the final grades of Managerial Accounting students and that if the student is female, the chances of receiving a higher final grade increase. Kaighobadi and Allen (2008) presented evidence to suggest that female academic performance was superior to male students in Financial Management. Tyson (1989) also found that female students were outperforming male students in all courses, including introductory Accounting courses. Mutchler, Turner, and Williams (1987) found that female students consistently outperformed male students for 18 years.

In 1984 and 1985, the same researchers ran a second trial in an accounting class, which confirmed their prior findings of females outperforming males. Female accounting students' academic performance has increased over time. The ratio of women getting Ph.D. qualifications in accounting in higher education has steadily increased since 1985 (Lanier and Tanner, 1999). Some academics also argue that gender has little or no bearing on a student's academic success. Gender, according to Tumen, Shulruf, and Hattie (2008) of the University of Auckland in New Zealand, plays little effect on student academic performance. In a study of factors impacting students' success in undergraduate Accounting modules, Guney (2009) found no evidence to indicate that there was any association between gender and academic achievement. Lipe (1989) likewise found no evidence of a gender effect on academic achievement or those students who have a female instructor perform much better than those other students. Gender is a topic that has been extensively researched, yet the results are frequently contradictory. Other factors may be at play in the gender research findings on whether female or male accounting students are more effective. Ethnic or cultural differences among students could be a factor in the inequalities in these research findings. Ethnicity and cultural characteristics should be considered in future research on female academic success.

General Education Prerequisites of Professional Accounting Bodies: From the perspective of professional accounting organizations, the current part discusses the aspect of General Education competence requirements for accounting learners.

International Federation of Accountants: IFAC is a global organization dedicated to serving the accounting profession's public interest by strengthening the discipline and contributing to the development of strong international economies. IFAC has more than 179 associates and members in 130 countries and territories,

with almost 2.5 million accountants in public accounting, education, government, business, and commerce, according to Deloitte Global Services (2020).

Purpose and Scope of International Education Standards (IES): International Education Standards 3 recommends a mixture of skills that applicants need to be suitable as qualified Accountants, according to IFAC (2008: 59). Much of the aim of IES 3 is to illustrate how and where to obtain General Education in a variety of ways in different environments, which can potentially contribute to the growth of the mixture of skills. According to IFAC (2008: 59), the goal of IES 3 is to ensure that applicants for affiliation to an IFAC member body have the right balance of intellectual, personal, technical, interpersonal, and organizational skills to perform as proficient Accountants. Accountants with these skills would be able to function as effective professionals in an ever-changing and challenging environment throughout their careers. Professional accountants, according to Fawcett (2015), are required to have the following soft skills and General Education competencies:

- ✓ Intellectual abilities;
- ✓ Competencies in technical and functional areas;
- ✓ Personal capabilities;
- ✓ Interpersonal and communication skills are important; and
- ✓ Organizing and business management abilities.

As per IES 3, the skills listed above are essential for anyone aspiring to be a skilled accountant. According to IFAC (2008: 59), IES 3 seeks to address non-business topics that stimulate the development of both prerequisite skills and may even be included in General Education learning. Specialized Accounting learning, ethical norms, concepts, and behaviors, criteria for practical experience and professional competency evaluation are not included in the IES 3. IFAC and professional bodies agree that a portion of General Education should be included in all professional education programs and that this specific General Education will make a major contribution to the development of professional skills. IES 3 stipulates that General Education will focus on developing non-professional knowledge; intellectual talents; personal talents; interpersonal and communication talents; and management and organizational talents. IFAC and professional Accounting bodies highlight those skills requirements allowing the qualified accountant to use the information gathered through General Education with success.

Models and Theories on Education Skills: Many learners' current superficial approach to learning may not be appropriate for studying the Management Accounting curriculum. Quality learning can help students succeed and obtain good results in Management Accounting. Furthermore, quality learning can help learners develop strong communication skills and a deep approach to learning (Pickworth, 2001). Critical thinking skills, decision-making ability, Rauding Theory, and Bloom's Taxonomy are all components of good learning. The Rauding Theory and Bloom's Taxonomy identify the skills required for high-quality learning for students to succeed in their studies. It is therefore pertinent that the following section addresses these skills.

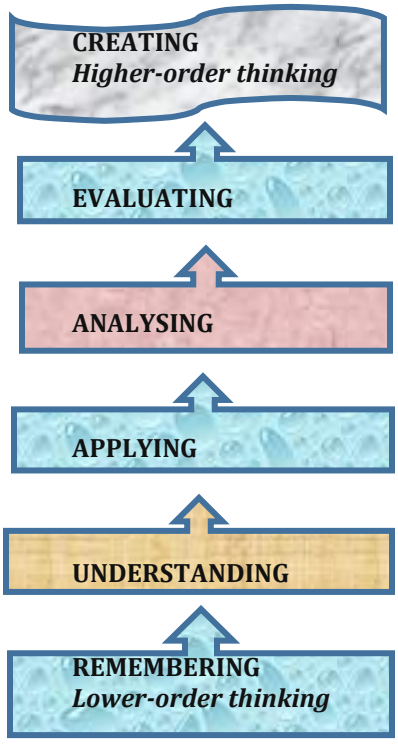
The Rauding Theory: The goal of attempting to read is to comprehend the essence of whatever the instructor or problem requires, as well as to use that knowledge to solve the problem. When studying, students might use a variety of reading tactics. The Rauding Theory is the best example of these reading strategies. According to the Rauding Principle, reading can be divided into four categories: scanning, skimming, rauding, learning, and memorization (Carver, 1978). Knowing or understanding a text, terms, or sentences is required for rauding (Carver Learning Systems 2020). It combines reading and hearing; reading involves looking at written words to determine context and listening to spoken words to determine meaning (Carver Learning Systems 2020). A human being is Rauding when he/she is not scanning, skimming, learning, or memorizing, but looks in sequential order at 100 percent of all the words in a text segment, as well as simultaneously understanding all the thoughts found in that passage. Learners will need to be able to read aggressively to answer important issues, especially in science subjects, which can be accomplished via the Rauding Theory. When studying the subject of Management Accounting, the Rauding Theory is also a good strategy to use. For reading newspaper articles, learners' common rapid and scanning methods may be more useful (Carver, 1978). To grasp what is required from the question, learners in the Management Accounting program must be fluent in reading. Furthermore, they must familiarize themselves with the relevant skills to be proficient. As evidenced by the Rauding Theory, learners should be able to perform the following:

Rauding: Learners should be able to perform an analytical, detailed, and searching type reading style to comprehend essential and crucial information from the text, which is a combination of reading and listening.
Researching: Learners should be able to examine essential statements and be able to look for relevant information from case studies.

Planning: When completing research, the learner must be able to utilize information by preparing, formulating, and presenting the data in an organized way that gives meaning and sense.

Bloom's and Krathwohl's Taxonomies: The updated taxonomy is focused on two goals: first, to encourage information retention, and second, to facilitate knowledge transfer (Mayer, 2002). Mayer & Wittrock (1996, cited in Mayer 2002: 226) define retention as the ability to retain knowledge at a later date, whereas transition is the ability to use what has been learned to solve complicated issues in new circumstances. Figure 3 best illustrates the essential skills required for quality learning.

Figure 3: Bloom's Taxonomy (Revised)



Source: Krathwohl's Taxonomy (2002: 215). Adapted.

Remembering (level one) is linked to knowledge retention from the six stages indicated in the updated taxonomy illustrated in Figure 3, whereas comprehension, implementation, review, assessment, and development are linked to information transfer (Mayer, 2002). Learners must be able to function at all taxonomic levels, according to Black and Ellis (2010, referenced in Thomas 2011: 28).

- **Remember:** Learners should have the ability to recollect information when needed, such as ideas, definitions, formulas, concepts, principles, etc.
- **Understand:** Learners must therefore know the significance of the information and express it in their own words.
- **Apply:** Learners need to use the information and knowledge acquired to solve problems and answer questions.

- **Analyze:** Learners should be able to study, examine, investigate and analyze knowledge or information.

- **Evaluate:** Learners need to be able to assess the significance of the information and procedure for a given purpose.

- **Create:** Finally, learners should be able to build or improve on their knowledge according to the situation and formulate new ideas depending on the circumstance.

Analysis of Models and Theories on Quality of Learning: Even though Bloom's Taxonomy came into being in 1956, it has been included in the current study due to its relevance and importance. Moreover, it is still commonly practiced today. Krathwohl has made some minor but pertinent amendments, as illustrated in Figure 2 in the revised taxonomy. Both Bloom's and Krathwohl's Taxonomies, including the Rauding Theory, indicate vital qualities necessary for learners and young graduates to possess and/or develop to be successful academically and in the field of Management Accounting. IFAC, IEC 3, SAICA, and other professional bodies have also stressed the significance of Bloom's, Krathwohl's taxonomies and General Education skills and soft skills necessary for Accountants and newly qualified graduates to succeed in the field of Accounting. After significant discussion on the subject of quality learning, it now becomes imperative to focus on the initiatives available to provide additional support for the development of teaching and learning for pupils. Initiative programs are essential tools that provide an additional alternative approach to the traditional classroom method of learning, which may strengthen and address any absence of academic skills in accounting learners.

Self-Efficacy: This section explores the concept of self-efficacy as it relates to the academic curriculum for Accounting students, particularly those who are struggling academically. The emphasis will be on learners' self-efficacy. The question is why some students appear to have more self-confidence in their abilities while others appear to have less confidence. The gap between these two extremes could be explained by a student's belief in his or her ability to execute tasks, which is known as Self-efficacy. A growing body of evidence suggests that self-efficacy beliefs and academic achievement are linked positively.

The Role of Self-Efficacy: Almost anybody can set goals, improve areas, and complete tasks. Nonetheless, most people are aware that putting such plans into action is not as simple as they may believe. Bandura and others examined and discovered that a person's self-efficacy is important in how they manage objectives, tasks, and problems. Bandura and others have discovered that a person's self-efficacy has a significant impact on how they manage objectives, activities, and problems.

Self-Efficacy vs Self-Esteem: There is a great deal of misunderstanding regarding Self-efficacy and self-esteem beliefs. It is therefore necessary to clarify the difference between these two concepts. As with Self-efficacy and other forms of expectation, there is no clear definition of the theoretical difference between Self-efficacy and self-esteem to researchers or people. Several researchers have used the terminology synonymously whereas others describe self-esteem as nothing more than a conceptual type of Self-efficacy. Other researchers define educational self-esteem as self-perception talent. Pajares (2002) believes that self-esteem is considered at a wide-ranging point of specificity, which involves the assessment of these abilities and the self-esteem associated with the behaviors in question.

A typical self-esteem item: "*How good are you in English?"* fluctuates significantly from a question on Self-efficacy, which can start from *"How certain are you that you can diagram this sentence*?" (Zimmerman, 2000). Beck (2008) highlights that Self-efficacy varies from self-esteem even though it is a judgment of individual capacities instead of just a general sense of self-worth. In addition, Ferla, Valcke and Cai (2009) conclude that the academic self-esteem of learners strongly influences their academic Self-efficacy values, and that this is a reliable predictor and decision-maker of effective and efficient motivational factors; while academic Self-efficacy is indeed a better indicator and facilitator of scholastic achievement. The vast number of available references shows that Self-efficacy progressed commencing a novel view in the 1960s to a common term now validated by a considerable body of literature.

Sources of Self-Efficacy: Bandura's early study focused on learners' tendency and ability to understand and alter their actions through vicarious interaction and social modeling rather than experience. Bandura (1994) advocates that Self-efficacy beliefs are formed according to how people perceive the feedback they receive from four sources:

- Performance in the Past (Bandura claims that one of the most powerful ways to build a clear sense of success would be through interactions of mastery);
- Modeled Behaviour;
- Others' Persuasion or Social Persuasion; and
- Physiological Effects.

Dimensions of Self-Efficacy: Self-efficacy evaluations differ along with three distinct yet interconnected factors. Self-efficacy is measured with these interconnected qualities. Magnitude, strength, and generalizability are the three dimensions in question.

- **Magnitude:** To begin, the degree of task complexity that an individual believes is doable may be explained by the strength of one's expectations of effectiveness (Bandura, 1977). Learners with a high level of Self-efficacy believe they are capable of accomplishing tough tasks, whereas learners with a low level of Self-efficacy believe they are only capable of completing simple activities.

- **Strength:** Second, the strength of self-efficacy expectations varies (Bandura, 1977). Low expectations are easily shattered by disconfirming information, whereas high expectations exist in the face of such information (Brief and Aldag, 1981).

- **Generalisability:** Finally, the degree to which self-efficacy expectations can be generalized varies (Bandura, 1977). Many students believe they are qualified to perform certain acts under specified situations, while others believe they can perform specific tasks under any conditions and take a slightly different activity. Within the Accounting environment, Albert Bandura's three dimensions of Self-efficacy theory were introduced.

Self-Efficacy Affecting Learner Performance: Through four primary psychological processes, self-efficacy can influence a learner's performance. The cognitive, motivational, emotional, and selection processes, according to Bandura (1994), are the four major processes.

- **Cognitive Process:** The learner's self-confidence influences the cognitive process by influencing the proactive situations that individuals create and practice (Bandura, 1994). Learners who have high Self-efficacy beliefs, for example, are more likely to predict success, whereas those who have low Self-efficacy beliefs are more likely to dwell on what could go wrong and predict failure. High Self-efficacy, on the other hand, can sometimes lead to learners putting in less effort on a single task. This is because high self-efficacy can lead to overconfidence in a learner's intellectual capacity, resulting in a false sense of potential.

- **Motivation Process:** Self-efficacy now influences motivation by determining the level of goal setting, determination, and failure resistance (Bandura 1994: 73). Students with a high sense of self-efficacy appear to set higher goal rates than those with a low sense of self-efficacy, implying a greater willingness to exert more effort. Learners who have low Self-efficacy frequently mention a lack of expertise, whereas those who have high Self-efficacy frequently mention a lack of dedication. As a result, those with low self-efficacy are more likely to give up when faced with adversity (Bandura 1994: 73).

- **Affective Process:** Affective processes, which govern emotional states and stimulate emotional or physiological reactions, are influenced by self-efficacy on numerous levels. According to Bandura (1994: 75), autonomic reflexes, catecholamine secretion, and endogenous opioid release are triggered by a poor sensation of effectiveness for exercising stressor management. Those who have a higher sense of self-regulatory effectiveness, on the other hand, are more successful in eliminating

health-damaging behaviors and incorporating health-promoting practices into their daily routines (Bandura 1994: 75).

- **Selection Process:** Self-efficacy also influences selection processes, implying that it has an impact on the types of activities and conditions pupils choose.

Assessment Processes: Activity criteria analysis, knowledge attribution analysis, and personal and situational resource evaluation are the three self-efficacy evaluation methods.

Analysis of Task Requirements: The mental strength of a student will determine the level of performance required. When task requirements are analyzed, judgments are made regarding what it will take to accomplish at various levels (Gist and Mitchell, 1992). When a student considers the burden of creating a market prediction, the researchers point out that he or she may recognize the degree to which quantitative abilities, such as statistics, are required to perform well, as well as the time required. As a result, anytime the work is original or newly discovered, the activity analysis should be carefully explained. Individuals who have completed jobs personally and frequently in the past are more likely to depend largely on their understanding of the causes of previous performance levels (Gist and Mitchell, 1992).

Attribution Analysis of Experience: Gist and Mitchell (1992) point out that attributional analysis entails a learner's assessment of why a particular level of achievement occurred. Although individual experiences may provide more robust data for attributional scrutiny, causal information from persuasion or modelling experiences can also be acquired (Gist and Mitchell, 1992). According to the researchers, learners can determine the appropriate skills and personality traits used by lecturers or peers in the performance of a task by calculating the extent to which certain skills are identical to their own and inferring the magnitude of their commitment versus the ability required to produce a comparable result by calculating the extent to which certain skills are identical to their own and inferring the magnitude of their commitment versus the ability required to produce a comparable result by calculating the extent to which certain skills are identical to their own and inferring

Assessment of Personal and Situational Resources: Gist and Mitchell (1992) point out that a person's assessment of personal and situational supplies is linked to their consideration of personal and situational elements. Personal aspects include things like skills level, anxiety, motivation, and energy availability, whereas situational influences include things like competing requests and diversions (Gist and Mitchell, 1992).

Self-Efficacy and Information Processing: Cognitive psychology views a person as an information processor in the same way as a machine that receives information and follows an output program (McLeod 2008). Cognitive psychology compares the human mind with that of a machine, which means that learners are indeed processors of knowledge and that it is necessary and acceptable to research the internal emotional processes, which often reside behind learners' motivations and reactions.

Goal Setting: Schunk (1991) suggests that learners who set goals, as well as through teachers or lecturers assigning a target, are prone to feeling an initial sense of Self-efficacy to achieve it. Often, learners who obtain goals are more likely to commit to pursuing the task and therefore goals need to affect performance. As learners move through the mission, they engage in activities that they think will contribute to achieving the goal. Schunk (1991) believes the activities that learners engage in are attending to instruction; rehearsing material to remember; expending effort; and persistence. Learners will need to interpret the information before rehearsing the information to achieve the goals set by themselves or teachers/lecturers.

Academic Material: Research studies have shown that learners' Self-efficacy about their capabilities can influence motivation and learning to process academic material knowingly through the process of perception, memory, judgment, and reasoning. Schunk (1989) argues that learners who consider that they will have significant difficulty in understanding information may have a lower perception of effectiveness in understanding it, whilst learners who feel they are capable of managing information processing requirements will feel more positive. A greater sense of efficacy encourages learners to carry out those tasks that they are

confident will result in becoming skilled. As a learner works on a task, he/she derives information about how well they understand. Schunk (1991) believes that if the learner has the perception that he/she can interpret the academic material, it enhances their efficacy and incentive. Alternatively, if the impression is that minimal progression is been made, then it will suppress learners' effectiveness and motivation. However, if learners feel they can do well by modifying their commitment to the assignment, it may increase their effectiveness and encouragement.

Salomon (1984) carried out a study on students' efficacy in studying from television, composing a text, and found that Self-efficacy has links to psychological determination. Participants had been approved permission on whether to watch a televised movie or read a comparative text and thereafter participants were evaluated on the material. It measured the amount of human energy required to know. The findings showed that learners with an increased mental commitment to text had shown higher text-related achievement ratings. Self-efficacy was effectively associated with intellectual effort and accomplishment concerning the learning of text. As with television research, it correlated with intellectual effort in the negative. Students who viewed television felt that learning was more effective, but used minimal energy and accomplished at an even reduced level. Meier, McCarthy and Schunk (1984) highlight that mental processing measurement amongst university students is associated with the effectiveness of writing. Learners were at the beginning and at the end of a semester requested to write essays. Thereafter, their efficacy was assessed after accomplishing the course writing objectives. Efficacy accurately predicted performance in writing.

Analysis of Self-Efficacy and Information Processing: The Management Accounting program demands learners to be proficient in reading and interpreting the requirements of case studies. The rapid and scanning methods that learners usually use may be more suitable for reading newspaper articles. Therefore, learners who believe that they will experience considerable difficulty interpreting academic material are capable of holding a low sense of efficacy for learning Management Accounting. However, those learners who believe they have become capable of managing information-processing requirements should be more efficacious in Management Accounting. A study by Salomon (1984) observed that all those learners with increased mental commitment to writing also showed higher text-based success scores. The Self-efficacy of text learning was positively associated with intellectual effort and a sense of accomplishment. The Self-efficacy for television studying was negatively associated with mental effort. Learners who watched television thought they were more successful in learning and therefore used a smaller amount of energy and achieved at a reduced level.

3. Methodology

Research Design: The current research paper made use of the quantitative methodology.

Longitudinal Research Study: The current research study collected data at two points in time: before the implementation of the General Education Modules and after the implementation of the General Education Modules. The aim was to measure any noticeable change between the non-implementation and implementation phase, if any, in the learners' Self-efficacy over the period. In view that the current research study aims to determine the apparent gains in learners' Self-efficacy over a period, after the implementation of the General Education Modules, therefore the researcher felt it was more appropriate to use the longitudinal study type method.

Quasi-Experimental Design: The nature of the quasi-experimental approach that was used in the current study is the non-equivalent pre-test and post-test control group design. In the current research study, the scholar pursued to conclude whether the intervention, that is, the integration of General Education into the CMA program influences the Self-efficacy of CMA learners.

Sampling Design: The target population considered for the current study were first-year learners registered, for Cost and Management Accounting at Mangosuthu University of Technology (MUT) and DUT. A census survey was considered an appropriate method and relevant to the present study.

Sample Size: The sample size that was deemed appropriate for the study in progress is as follows:

- The control group: The first-year learners registered for Cost and Management Accounting at MUT.

- The experimental group: The first-year learners registered for Cost and Management Accounting at the DUT.

Data Collection Method: For this study, Cost and Management Accounting students were given questionnaires (quantitative approach) to determine their level of self-efficacy. The questionnaires were distributed in two stages. The first stage occurred at the time of the learner's enrolment, followed by a follow-up near the end of the second year of study. The researcher was in charge of disseminating and collecting all of the respondents' questionnaires.

Data Analysis: Cronbach Alpha, Correlation Analysis, Bar charts, Cross-tabulations, T-tests, and ANOVA were among the inferential statistics employed in this study. Under the supervision of a statistician, quantitative data were collected using the computer software package known as Statistical Package for Social Sciences (SPSS). Predictive Analytics Software (PASW) Statistics and Pearson Chi-Square Tests were used to analyze the quantitative data.

Research Ethics: The researcher met all of the conditions set forth by the DUT's Institutional Research Ethics Committee (IREC). The current study had no ethnic or community focus and adhered to all of the university's ethical norms and guiding principles.

4. Results and Discussion

The current section presents the results and interprets the findings obtained from the questionnaires in the current study. The questionnaire was the primary tool utilized to collect data from DUT and MUT learners. The data collected from the responses were analyzed using SPSS version 26.0. The descriptive statistics will be presented in the form of graphs and cross-tabulations. The inferential techniques include the use of correlations and chi-square test values, which are interpreted by using the p-values.

The Sample: In total, 442 questionnaires were distributed and 360 questionnaires were completed and returned, which gave an 81.5% response rate.

Factor Analysis: A summary table represents the results of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity before the matrix tables. The KMO must be larger than 0.50 and Bartlett's Test of Sphericity must be less than 0.05. The prerequisites are met in every case, allowing for the factor analysis technique. Table 1 shows the KMO and Bartlett's Test results for the study's pre-test.

Table 1: KMO and Bartlett's Test (Pre-Test)

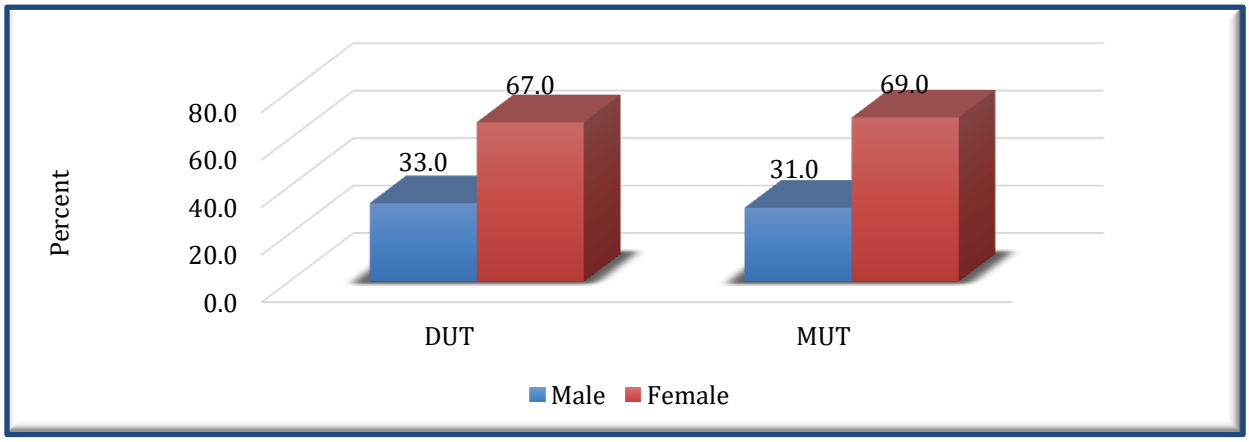
The Measure of Sampling Adequacy.		**0.841**
Bartlett's Test of	Approx. Chi-Square	2575.439
	df	435
	Sig.	0.000

Table 2 reflects the KMO and Bartlett's Test regarding the post-test of the study.

Table 2: KMO and Bartlett's Test (Post-Test)

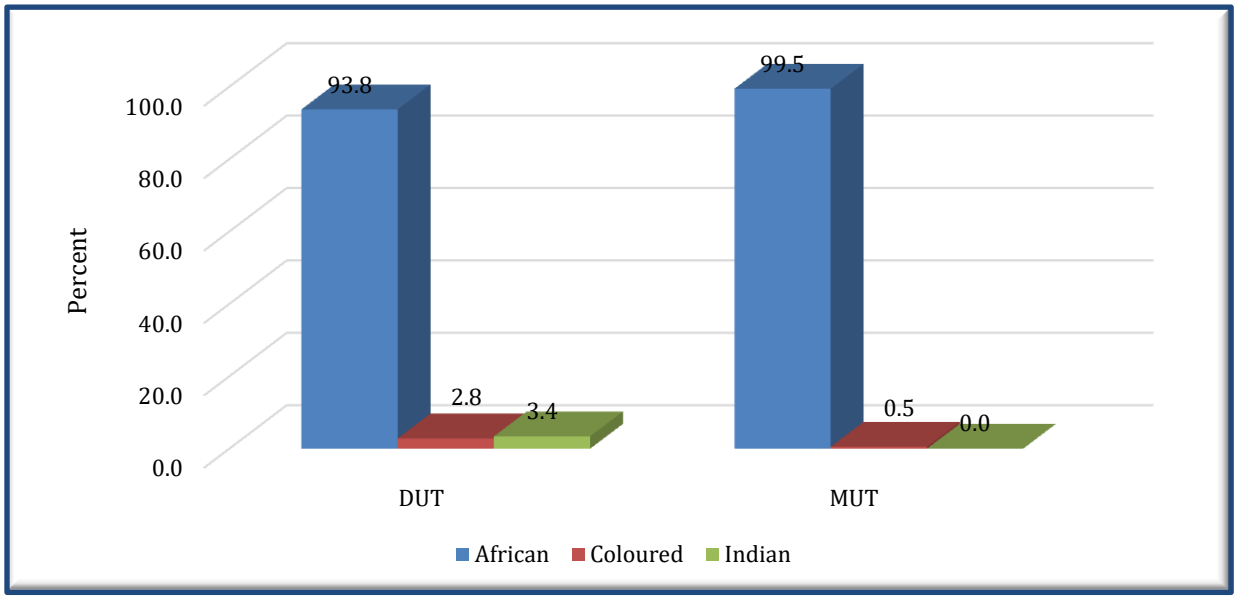
Post-Test of Study Sampling Adequacy.		**0.868**
	Approx. Chi-Square	2249.146
	df	435
	Sig.	0.000

Figure 4: Gender Distribution



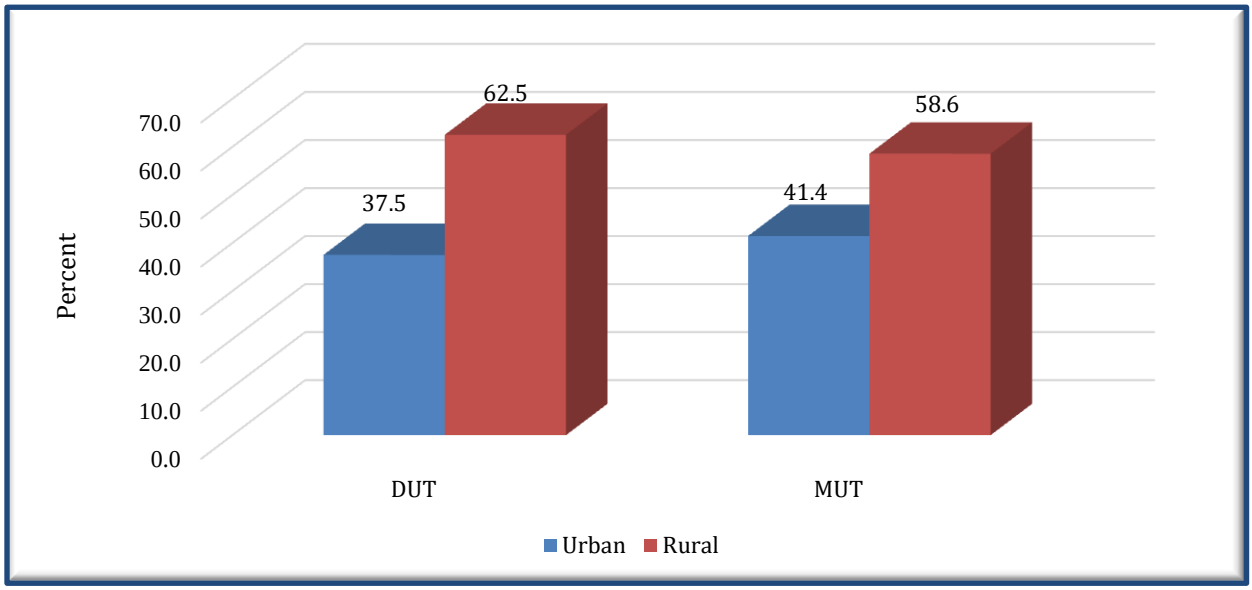
All of the conditions are satisfied for factor analysis, which means that the Kaiser-Meyer-Olkin Measure of Sampling Adequacy value should be greater than 0.500 and Bartlett's Test of Sphericity sig. the value should be less than 0.05. Figure 4 illustrates the gender distribution of the respondents from DUT and MUT. Learners' statistical data for DUT comprises 67% females and 33% males, while the MUT learner population is 69% females and 31% males. The overall ratio of males to female respondents is approximately 1:2 (32.0%: 68.0%). There were significantly more females than males ($p < 0.001$), but the composition of the institution is not different ($p = 0.735$). Figure 5 illustrates the racial composition of the respondents of both DUT and MUT.

Figure 5: Racial Composition of Respondents



The respondents' statistical data for DUT comprises of 93.8% African, 2.8% Coloured and 3.4% Indian; while MUT's learner population is 99.5% African, 0.5% Coloured and 0.0% Indian. There are significantly more African respondents in each institution ($p < 0.001$). The composition of the institution is also significantly different ($p = 0.003$), with there being more African respondents at MUT, whilst DUT had more Coloured and Indian respondents compared to MUT. Figure 6 indicates the nature of the respondents' home district.

Figure 6: Home District of Respondents



The DUT respondents' home district comprised 37.5% urban and 62.5% rural; while MUT respondents' home district is 41.4% urban and 58.6% rural. Within each institution, there were significantly more respondents from rural areas ($p < 0.05$), but the ratio of respondents between the institutions was similar ($p = 0.257$). Figure 8 illustrates the respondents' location in the high/secondary school district of both DUT and MUT. The DUT respondents' high/secondary school district comprised 44.9% urban and 55.1% rural; while MUT respondents' high/secondary school district is 47.3% urban and 52.7% rural. According to each institution, there were similar numbers of respondents who attended urban schools, as there were those who attended rural schools ($p > 0.05$).

Figure 7: High/Secondary School of Respondents

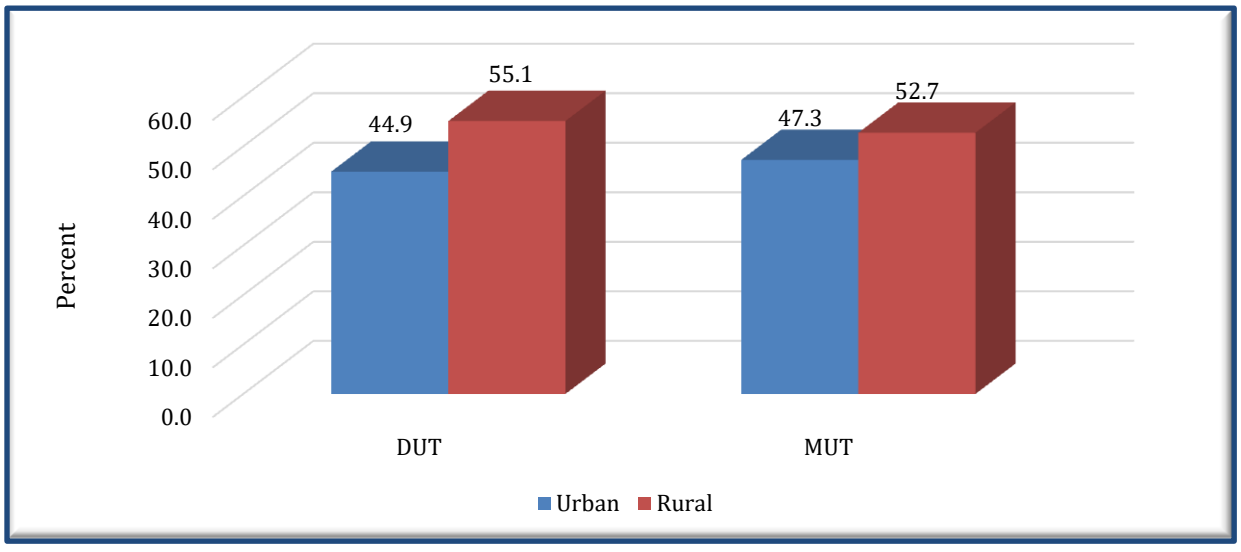
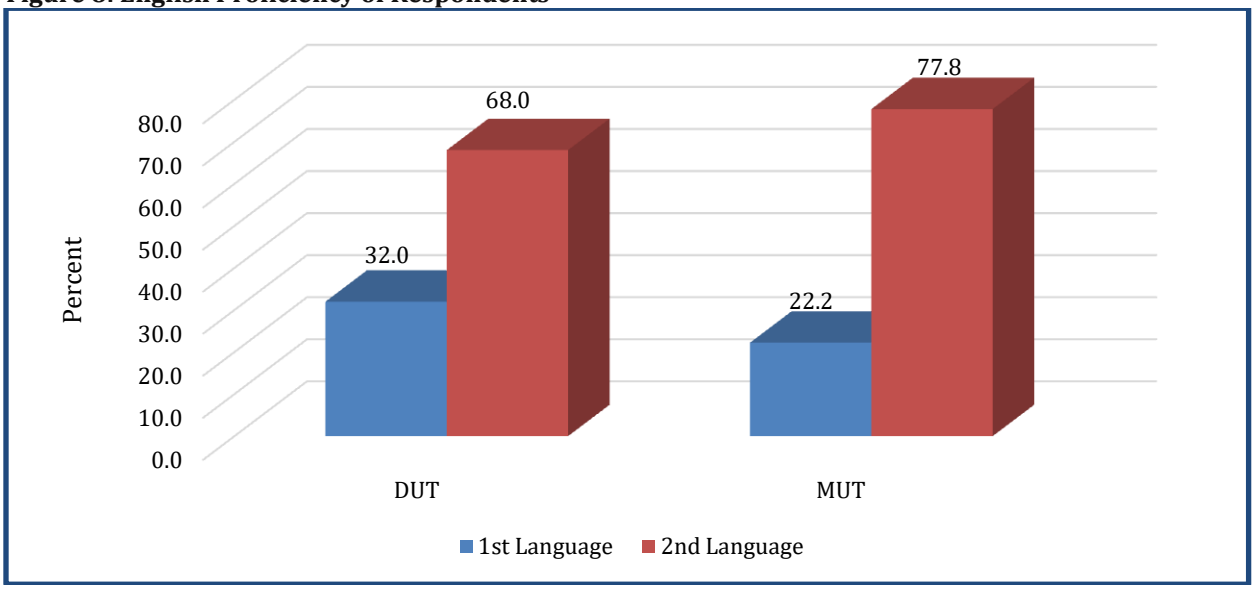


Figure 8 illustrates the English proficiency of the respondents.

Figure 8: English Proficiency of Respondents



The DUT respondents' English proficiency comprised 32.0% 1st Language and 68.0% 2nd Language; while MUT respondents' English proficiency comprised 22.2% 1st Language and 77.8% 2nd Language. The ratio of first to second language respondents was 1:2 at DUT and approximately 1:4 at MUT ($p < 0.05$). The difference was significant between the institutions ($p = 0.042$).

Analysis of Variables (DUT & MUT): The study also analyzed other variables that could affect the Self-efficacy of learners. Sex, race, home district, school (urban/rural), and language proficiency were the variables that were considered.

Comparative Analysis of Variables (DUT): Table 3 illustrates a comparative analysis of variables regarding DUT. The current study probed a comparative analysis of biological data for DUT that could affect learners' Self-efficacy. The variables taken into consideration were Gender, Race, Home District, School (urban/rural), and Language proficiency. The comparative analysis between the same variable revealed no significant difference. However, females, Africans, Urban Home District, Urban School, and English Second Language learners scored more in the post-test.

Table 3: Comparative Analysis of Variables (DUT)

DUT	Pre-test % (Mean Score)	Post-test % (Mean Score)	Difference % (Mean Score)
Gender:			
Male	68.1345	77.0241	8.8896
Female	68.1966	77.3932	9.1966
Race:			
African	67.9339	77.0776	9.1437
Coloured	75.0600	76.6800	1.62
Indian	69.1000	83.1000	14
Home District:			
Rural	69.0218	77.7045	8.6827
Urban	66.7667	76.5500	9.7833
School:			
Rural	69.2010	77.8165	8.6155
Urban	66.9177	76.6025	9.6848

Language:			
1st Language	69.7309	77.6309	7.9
2nd Language	67.5197	76.9581	9.4384

Table 3 reflects the analysis of DUT and MUT. For the effect size testing, the study used ANOVA. An effect size is utilized when the dependent variable is numerical and the independent variable is categorical and is measured using a partial eta squared score. Various scenarios were set up for individual institutions, together with a combined cohort. In all instances, there was a minimal effect by the following variables on the scores observed: Gender, Race, Home District, School (urban/rural), Language proficiency, and the combinations thereof. It was observed that all of the partial eta squared values are less than 0.02, which is an indication of a small effect (refer to Table 4). This means that these variables had little to no effect on the overall patterns observed.

Table 4: Analysis of Variables (DUT & MUT)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2286.663[a]	19	120.351	1.627	0.048	0.086
Intercept	149706.686	1	149706.686	2024.446	0.000	0.860
Q1.3	18.590	1	18.590	0.251	0.616	0.001
Q1.4	340.560	2	170.280	2.303	0.102	0.014
Q1.5	44.561	1	44.561	0.603	0.438	0.002
Q1.6	69.478	1	69.478	0.940	0.333	0.003
Q1.7	13.052	1	13.052	0.177	0.675	0.001

5. Recommendations

To boost accounting students' self-efficacy, the research article suggests incorporating General Education courses into the curriculum. Furthermore, present learners' General Education skills appear to be quite inadequate, and respondents indicated that self-efficacy may have a good impact on their academic achievement.

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