BENCHMARKING OF FINANCIAL LITERACY DEVELOPMENT: A CASE STUDY OF SAICA'S COMPETENCY FRAMEWORK

by

Boniswa Tingaza Madikizela

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A SUMMARY OR ABSTRACT OF THE STUDY

The research report examines the impact that the SAICA Competency Framework, through the Bachelor of Accounting degree, has on the development of personal financial literacy of undergraduate students studying to become Chartered Accountants by measuring their personal financial literacy in order to determine if the score increases as the students' education progresses.

The research conducts a survey of 652 undergraduate students to measure their personal financial literacy using an internationally developed instrument, the 2008 Jump$tart survey. The score obtained is compared to the 60 per cent passing grade, used as a benchmark in the 2008 Jump$tart survey, to be considered financially literate or not, noting whether the score increases as students' education progresses.

The research findings indicate that the Bachelor of Accounting degree students of 2015 at the University of Johannesburg possess reasonable levels of personal financial literacy when measured against the international benchmark, as respondents answered an average of 61 per cent of the questions correctly. Scores of personal financial literacy improve with each academic year, supporting the results per the 2008 Jump$tart survey of an increasing trend in financial literacy scores of college students. The statistical findings however indicate that the SAICA Competency Framework, through the Bachelor of Accounting degree, does not seem to have had a statistically significant impact on the personal financial literacy of students as their education progresses.

Key words: *SAICA competency framework, Bachelor of Accounting, financial literacy, personal financial literacy development*

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LIST OF ABBREVIATIONS AND ACRONYMS

ACCA	Association of Chartered Certified Accountants
ANOVA	Analysis of variance
APC	Assessment of Professional Competence
CA	Chartered Accountant
CA(SA)	Chartered Accountant of South Africa
CAGE	Chartered Accountants Group of Eight
CGAP	Consultative Group to Assist the Poorest
CTA	Certificate in the Theory of Accounting
DFID	Department for International Development
FEFS	Faculty of Economic and Financial Sciences
GAA	Global Accounting Alliance
IFAC	International Federation of Accountants
INFE	International Network on Financial Education
IRBA	Independent Regulatory Board for Auditors
ITC	Initial Test of Competence
OECD	Organisation for Economic Co-operation and Development
QE1	Qualifying Exam 1
ROA	Return on Assets
SAICA	South African Institute of Chartered Accountants
SAIGA	South African Institute of Government Auditors
SARS	South African Revenue Services
SPSS	Statistical Package for the Social Sciences
TVM	Time Value of Money
UJ	University of Johannesburg
USA	United States of America
VAT	Value Added Tax
WEF	World Economic Forum

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CHAPTER ONE: INTRODUCTION

1.1. BACKGROUND

"It is not too farfetched to suggest that the aptitude for financial management begins with the ability to manage personal finances in a disciplined manner" (Sangweni, 2007: 2). The discipline associated with the management of money, from saving to knowing in detail how much and for what reason each cent is spent on, is a practice that one could assume is embraced whole-heartedly by most individuals. In particular, those individuals whose choice of career should have been influenced by this relationship with finances, for example, individuals such as accountants.

The process of qualifying as a Chartered Accountant (CA) involving four years of an academic programme, three years of a CA training programme and two professional examinations could reasonably create the expectation that one has become a master of managing finances. In addition, the view held by society that Chartered Accountants are "pretty good with numbers…as they explain where money has come from and gone to" (South African Institute of Chartered Accountants (SAICA, 2016) supports this expectation. It is no surprise, therefore, that young Chartered Accountants expect to be ready to tackle the world of financial responsibility with ease once they enter practice.

Chartered Accountants are viewed to have a "relatively higher social status" (Hung, 2014) and an associated high earning potential. In line with most professional qualifications in accounting, actuarial science, engineering, health sciences or law (Standard Bank of South Africa (SBSA), 2016) the high earning potential provides easy access to credit from the major banks in South Africa (SBSA, 2016; Investec, 2016; Nedbank, 2016). The Chartered Accountant is afforded an expensive lifestyle of "aspirational purchases" through Private Banking or Professional Banking solutions (Philip, 2013) and is promised banking that will "keep pace with their career, support their lifestyle and help with their financial wellbeing" (Investec, 2016).

Entering the market as a "high-flyer eager for status and success" (SAICA, 2016) it could happen that a young Chartered Accountant is not prepared for the reality that could unfold a few months later. The "inadequate comprehension of personal finance, such as budgeting and tracking expenses, led to increased conspicuous consumption behaviours of lavish spending on goods and services" (Sabri, 2011) by the young. The discipline needed in relation to money management could seem to become impossible as the demands of maintaining an expensive lifestyle increase. As a result, the savings account that started dwindling soon ceases to exist.

Regardless of receiving a discerning educational background (as perceived by Chartered Accountants Australia and New Zealand (2016)) and having membership with a highly esteemed professional accounting body, the South African Institute of Chartered Accountants (SAICA), a Chartered Accountant could conceivably still find themselves in debt.

SAICA is responsible for the awarding of the qualification and designation of Chartered Accountant (South Africa) (CA(SA)). Upon registration with SAICA, members can add the CA(SA) designation after their name. The CA(SA) designation is highly regarded locally and internationally, which is reflected by its recognition by various important bodies. In South Africa, the South African Revenue Services (SARS) lists SAICA as a Recognised Controlling Body allowing its members to register with SARS as tax practitioners (SARS, 2015). The Independent Regulatory Board for Auditors (IRBA) also recognises SAICA members as eligible for registration as Registered Auditors upon completion of the appropriate auditing training (IRBA, 2015). The affiliation of SAICA with international accountancy bodies such as the Global Accounting Alliance (GAA), the Chartered Accountants Group of Eight (CAGE) and the International Federation of Accountants (IFAC) confirms the global pre-eminence of this professional qualification (Strauss-Keevy, 2012). The excellent reputation of the CA(SA) designation was internationally recognised by the World Economic Forum (WEF) in its Global Competitiveness Index for 2015-2016 (WEF, 2015). The 2015-2016 report again rated South Africa as the number one country in the world in terms of the strength of its auditing and reporting standards. Prior to the 2015-2016 report, South Africa was rated as the number one country in the world in terms of the strength of its auditing and reporting standards "a position held previously for five consecutive years" (IRBA, 2014).

SAICA's education and training model is competency based and focuses on the development of a range of competencies considered necessary for a Chartered Accountant to demonstrate upon entry into the profession (SAICA, 2014a). As a result, for a particular period of time during the qualification process a set of fundamental knowledge, skills and attributes are continuously being developed through the academic programme, training programme, professional programme and professional assessments (SAICA, 2014a).

The SAICA Competency Framework Detailed Guidance for the Academic Programme (hereafter referred to as the Competency Framework) states that the formal competency-based academic education is acquired through accredited academic education programmes delivered by universities (SAICA, 2014a). The accredited undergraduate academic education programme at the University of Johannesburg (UJ) is the Bachelor of Accounting degree (hereafter referred to as the BAcc degree). Different universities give different names to the undergraduate academic education programme, however what is similar across the universities is that in order to offer the programme the university must be accredited by SAICA. The accreditation process at university level involves two phases. Firstly, only those universities that incorporate all aspects of the SAICA syllabus into their learning programme are accredited and secondly, the quality of the programmes is monitored through regular quality control visits and other forms of evaluations by SAICA to ensure continued compliance with the SAICA syllabus (South African Institute of Government Auditors (SAIGA), 2015).

The year book of the UJ Faculty of Economic and Financial Sciences (FEFS) states that the objective of the BAcc degree is "to provide a well-rounded, technically focused education that equips graduates with the technical knowledge base, proficiency and pervasive skills that will enable them to demonstrate initiative and responsibility, and that will enable the development of leadership qualities" (UJ, 2016a: 77). More specifically, the purpose of the degree is to provide students with a comprehensive knowledge base for identifying, analysing, evaluating and solving problems in the main modules of accounting, auditing, taxation and financial management (UJ, 2016a) (collectively known as the core accounting disciplines).

Accounting is described by Quacquarelli Symonds Ltd, a leading provider of specialist higher education and careers information and solution, as "the universal language of business, commerce and finance" (Quacquarelli Symonds Ltd, 2015) and studying a bachelor's degree in accounting can be seen as a starting point to becoming literate in the accounting language. As the BAcc degree is designed in consultation with SAICA and recognised as an initial requirement to practice as a Chartered Accountant, one could come to the conclusion that the BAcc's objective is in line with SAICA's intentions of developing key competencies throughout the qualification period. SAICA concurs, adding that it is the intention of the Competency Framework to equip the candidate with competencies which ensure the growth and acquisition of entrepreneurial ability and a foundation for responsible leadership, business acumen and entrepreneurial ability after entry to the profession (SAICA, 2014b).

SAICA recognises that the nature of accounting knowledge is essentially context bound, with every aspect of the discipline of accounting grounded in the real world of current business practice (SAICA, 2014a). However, the author questions if the real world grounding of accounting is limited only to business financial practices without impacting personal financial practices.

The successful application of personal financial practices should suggest that an individual is financially literate. Schagen and Lines supports this view when inferring that financially literate people have a range of abilities and attributes consisting of: “an understanding of the key concepts central to money management; a working knowledge of financial institutions, systems and services; a range of skills, both general and specific; attitudes which would allow effective and responsible management of financial affairs” (1996: 91). In the author’s view, these abilities and attributes coincide with the training that Chartered Accountants receive in the theory and practice of Accounting.

Whilst the above discussion suggests that the process of qualifying as a Chartered Accountant is rigorous in attaining financial literacy in the business context, the author questions if qualifying as a Chartered Accountant necessarily implies that the individual possesses the abilities and attributes of being personally financially literate as identified by Schagen and Lines. The financial literacy of university students has been the focus of much research, but in South Africa, no study to date has attempted to assess the financial understanding of students studying to become Chartered Accountants. This research report attempts to fill that gap.

1.2. PURPOSE STATEMENT

The purpose of this research report is to benchmark the development of personal financial literacy of undergraduate students, under the SAICA Competency Framework, to a personal financial literacy score used in a US study that applied an internationally approved instrument, in order to determine if the score increases as students’ education progresses.

1.3. OBJECTIVES OF THE RESEARCH

The objectives of the research are:

- To evaluate how the SAICA Competency Framework, in its provisions, addresses the development of financial literacy of students studying to become Chartered Accountants. (Chapter 2)
- To measure the personal financial literacy of the Bachelor of Accounting degree students at the University of Johannesburg in 2015 utilising an internationally developed instrument. (Chapter 4)
- To compare the overall mean personal financial literacy score for all the students to an international passing grade used in a study as a benchmark to determine whether the students are more or less financially literate. (Chapter 4)
- To examine whether the students’ mean personal financial literacy score per academic year group increases as the students’ education progresses. (Chapter 4)

1.4. LIMITATIONS AND DELIMITATIONS

The research report only focuses on the three consecutive year groups of students who were registered at the University of Johannesburg for a Bachelors of Accounting degree in a particular year. Conducting the test of financial literacy on a control group at another university, or even at all the universities in South Africa would have been ideal, however due to the nature of the requirements for a Masters in Accountancy, which only requires a limited scope dissertation and constraints on time, the test had to be limited to the three undergraduate year groups registered in 2015. The method of conducting a survey introduces a possible bias in that the students are from the Department of Accountancy where the researcher is employed. Further, conducting the survey during a revision class introduces a high probability that the students attending the class are the weaker students who need revision and, in turn, may not correctly represent the population of each year. The questionnaire used in this research excluded some questions from the 2008 Jump$tart survey that were not applicable to the South African context. Some questions related to uniquely American scenarios and could not be used.

1.5. BENEFITS OF THE STUDY

In the US, the hallmark of financial literacy measurement is the Jump$tart Personal Financial Literacy survey instrument. The instrument was developed by a not-for-profit partner of the US Federal Reserve Board, the Jump$tart Coalition (Symanowitz, 2006). The Jump$tart Coalition (hereafter named Coalition) has been measuring the financial literacy of high school seniors using this instrument since 1997/8. In 2008, 10 years after its first base line study, the Coalition conducted its first national survey designed to measure the financial literacy of college students. The 2008 Jump$tart financial literacy survey is regarded as one of the most relied upon national benchmark surveys of personal financial literacy (Remund, 2010). The information that this instrument supplies provides a valuable assessment tool for educators, policymakers and could serve as a springboard for future financial literacy research and curriculum development for educators and accounting education interest groups in South Africa. It could also provide guidance to accounting educators and professional accounting organisations on the implementation of curriculum improvement in future.

1.6. CHAPTER OVERVIEW

CHAPTER 1: INTRODUCTION

Chapter 1 has introduced the purpose statement, "to benchmark the development of personal financial literacy of undergraduate students, under the SAICA Competency Framework, to a personal financial literacy score used in a US study that applied an internationally approved instrument, in order to determine if the score increases as students' education progresses". The chapter will provide an insight into the background, purpose and objectives of the research topic.

CHAPTER 2: LITERATURE REVIEW

The literature review firstly introduces financial literacy as an item on the global agenda, covering a brief history and discussing the reasons that led to its prominence. Secondly, the term financial literacy is defined, taking into consideration definitions established by other researchers in previous studies. Thirdly, a discussion on previous financial literacy studies conducted to evaluate financial literacy education programmes and to measure the impact of financial education on financial literacy levels of college/university students is provided. Lastly, a detailed discussion evaluating how the SAICA Competency Framework, in its provisions, addresses the development of financial literacy of students studying to become Chartered Accountants is provided.

CHAPTER 3: METHODOLOGY

The chapter includes an explanation of and the reasoning behind the research philosophy used. Aspects such as the research design, research instrument, sampling strategy, methods of data collection and analysis are discussed. Ethical considerations and significance for the research are also provided.

CHAPTER 4: MEASURING PERSONAL FINANCIAL LITERACY

The chapter examines the results of the data collected through the personal financial literacy questionnaire and reports on the findings in line with the applicable research objectives. In particular, the findings on: the measurement of personal financial literacy; the comparison of the overall mean personal financial literacy to the international passing grade; and the examination of whether the personal financial literacy score increases as the students' education progresses, is reported on.

CHAPTER 5: CONCLUSION AND RECOMMENDATION

The focus of this chapter is to put into context the results of the survey based on the background of the literature reviewed. The chapter concludes on the research purpose and provides a summary of how the objectives were met. Opportunities for further research are identified.

CHAPTER TWO: LITERATURE REVIEW

2.1. INTRODUCTION

The previous chapter provided an insight into the background, purpose and objectives of the research topic.

This chapter discusses financial literacy on the global agenda, defines the term taking into consideration definitions in previous studies and discusses previous financial literacy studies conducted on the levels of financial literacy of university students.

The SAICA Competency Framework is then discussed, evaluating in detail how this model in its provisions addresses the development of personal financial literacy.

2.2. FINANCIAL LITERACY

2.2.1. Financial literacy on the global agenda

The concept of financial literacy is not new but dates as far back as August 1787. In a letter to Thomas Jefferson, John Adams, the 2nd president of the United State of America, recognised the need for financial literacy in an economy stating that "the confusion and distress that America was facing was not as a result of defects in the constitution, but as a result of total ignorance of the nature of the coin, credit and circulation" (FinancialCorps, 2014). The words of John Adams suggest that the lack of knowledge and understanding (or illiteracy) of how money works results in confusion and distress in an economy.

It may be assumed that a lack of financial literacy could have contributed to the sub-prime debt crisis that lead to the global financial and economic crisis in 2008 and is a typical example of over indebtedness that had an impact on the economy as well as individuals (Anglo American, 2015). Additional economic implications associated with financial illiteracy include:

- The inability to spend financial resources efficiently (Mandell, 2008) resulting in individuals and families not being able to save for long-term goals such as buying a home or seeking higher education (Braunstein & Welch, 2002);
- Financial hardships resulting in an insecure old age (Lusardi & Mitchell, 2011); and
- Rising household debt and low levels of retirement savings (Association of Chartered Certified Accountants (ACCA), 2014).

As a result, financial education issues and financial literacy gained international recognition from the Organisation for Economic Co-operation and Development (OECD), the World Bank group, the UK based Department for International Development (DFID) and the US based Consultative Group to Assist the Poorest (CGAP) as a “critical life skill for individuals” (Pinto, January 2013). Various international interest groups responded by commissioning extensive research on financial literacy e.g. The Case for Financial Literacy in Developing Countries (Miller, Godfrey, Levesque & Stark, 2009); The Status of Financial Education in Africa (Messy & Monticone, 2012) and The Global Findex Database 2014: Measuring Financial Inclusion around the World (Demirguc-Kunt, Klapper, Singer & Oudheusden, 2015).

The complex and technologically advanced financial services industry increased the pressure and responsibility on the consumer to better understand financial products and their financial implications (Mason & Wilson, 2000). Messy and Monticone (2012) recommended that financial education could empower consumers to better manage their personal and household resources, both on a day-to-day basis and over a long-term horizon. Ben Bernanke (2008), the Chairman of the US Federal Reserve System Board of Governors, in support of the importance of financial education, stated that the problems that resulted from the subprime mortgage market were a reminder of how critically important it is for individuals to become financially literate at an early age, so that they are better prepared to make decisions and navigate an increasingly complex financial marketplace (Pinto, January 2013).

The financial literacy concern increased worldwide. Financial education initiatives, as a response, were considered urgent, necessary and a requirement to empower individuals into taking action in improving their financial well-being. Initiatives included, among others, financial literacy tools, programs and public policies (Miller, et al., 2009) which if effective could result in behaviour that could make consumers less vulnerable to severe financial crises (Braunstein & Welch, 2002).

Atkinson and Messy (2012) noted that before financial literacy education could be provided, the needs and gaps in financial education provision needed to be identified. A study commissioned by the OECD International Network on Financial Education (INFE) was conducted in 14 countries across four continents focusing on levels of financial knowledge, the range of financial behaviours exhibited and attitudes towards long term financial plans of populations groups (Atkinson & Messy, 2012). A number of other studies grounded in the fields of economics and consumer studies (Tisdell, Taylor & Sprow Forte, 2013) have focused on the financial literacy levels and education needs of specific population groups such as young adults (Beal & Delpachitra 2003; Cude, Lawrence, Lyons, Metzger, LeJeune, Marks & Machtmes 2006; Mandell 2008; Clereq & Venter 2009; Louw, Fouché & Oberholzer 2013) or female college students (Eitel & Martin, 2009).

On the basis of the literature reviewed, one could infer that financial literacy is not only a theoretical concept but could also be viewed as an active/operational/functional/practical process. Mason and Wilson (2000) identified financial literacy as a meaning-making process which is necessary to enable informed decisions to be made in order to achieve a desired outcome.

2.2.2. Defining financial literacy

The term financial literacy is a concept combining two words, "financial" and "literacy". According to the Collins Dictionary and Thesaurus (2009), 'financial' means "of or relating to finance, finances, or people who manage money" and also relates to the words 'economic', 'business', 'commercial', 'monetary' and 'fiscal', each having their own meaning. 'Financial' could further be assumed to refer to information of a financial nature. According to the same dictionary, 'literacy' means the ability to read or write and is synonymous with 'education', 'learning' and 'knowledge'. These terms individually appear basic. However, when "combined to form the concept, 'financial literacy', a whole new dimension emerges, which encompasses more than the individual terms" (Gouws & Shuttleworth, 2009: 145) and more than a general meaning of 'the ability to read or write information relating to finance'.

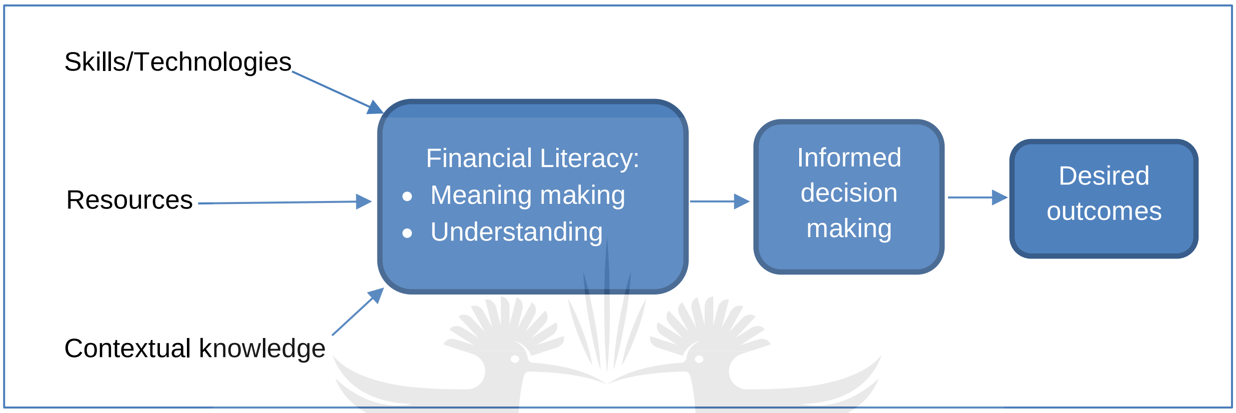
From previous research, to be "financially literate" can be defined as:

- "The ability to use knowledge and skills to manage one's financial resources effectively for lifetime financial security" (Jump$tart Coalition, 1997 - 2016).
- "An individual's ability to obtain, understand and evaluate the relevant information necessary to make decisions with an awareness of the likely financial consequences" (Mason & Wilson, 2000: 31).
- "The ability to read, analyse, manage, and communicate about the personal financial conditions that affect material well-being. It includes the ability to discern financial choices, discuss money and financial issues without (or despite) discomfort, plan for the future, and respond competently to life events that affect everyday financial decisions, including events in the general economy." (Vitt definition, 2000, cited in Clereq & Venter, 2009)
- "The ability of consumers to make financial decisions in their own best interests in both the short and long-term". (Mandell & Klein, 2009: 284)
- "…the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions." (Remund, 2010: 284)

In all of the above definitions, it is evident that 'ability' is important and "speaks to knowledge, skills and life changes" (Remund, 2010: 285). However, the definitions fall short on points that detail the ability, knowledge and skills that one needs to be considered financially literate.

In an attempt to provide the detail, Mason and Wilson (2000) in their study refer to financial literacy as a meaning-making process enabling individuals to achieve a desired outcome. The process is depicted in figure 2.1.

Figure 2.1: Financial Literacy viewed as a meaning-making process



Source: (Mason & Wilson, 2000)

Figure 2.1 proposes that individuals use a combination of skills and technologies, resources and contextual knowledge to make sense of information in order to be sufficiently informed to make decisions with an awareness of the financial consequences. In this model, similar to the definitions listed, Mason and Wilson (2000) did not identify exactly which skills and knowlegde are required in order to become financially literate.

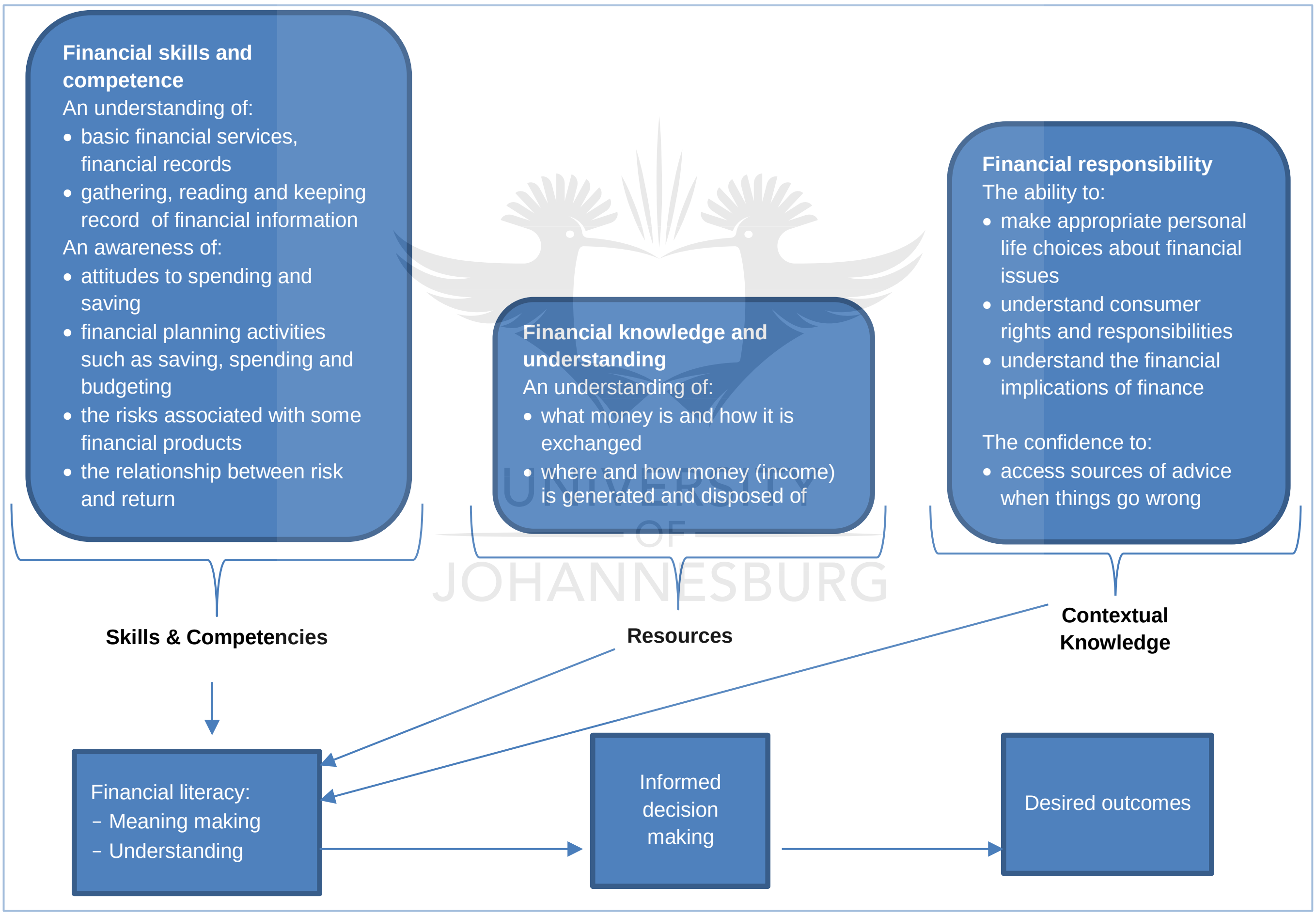
Clereq and Venter (2009) identified three categories of skills: financial knowledge and understanding; financial skills and competence; and financial responsibility. Taylor and Wagland (2013), in addition to the three categories identified by Clereq and Venter (2009), identified the following skills and knowledge as a consideration for being financially literate:

- Mathematical literacy and standard literacy - the ability to read for knowledge and write coherently and think critically about the written word;
- financial understanding - an understanding of what money is and how it is exchanged, where it comes from and goes;
- financial competence - understanding of basic financial services, financial records (and importance of reading and keeping them), attitudes to spending and saving, and an awareness of the risks associated with some financial products and the relationship between risk and return;

- financial responsibility - the ability to make appropriate personal life choices about financial issues, understanding consumer rights and responsibilities; and
- the ability and confidence to access assistance when things go wrong.

Using the skills and knowledge identified as constituting financial literacy, the current researcher has attempted to augment Mason and Wilson's model (Figure 2.1) to view financial literacy as a theoretical and practical/active process. The augmentation is based on the financial literacy definitions falling short in detailing the ability, knowledge and skill for one to be considered financially literate. The augmented model is depicted in Figure 2.2.

Figure 2.2: Financial Literacy viewed as a theoretical and practical/active process



Source: Author

Figure 2.2, aims to propose that an individual, having obtained the financial knowledge and understanding through various resources/initiatives/programs/technologies (e.g. the BAcc degree), would apply the financial skills and competence developed during the process to make sense of information. The sense-making process would then result in attaining contextual knowledge to make decisions most advantageous to one's economic well-being (desired outcome).

On the basis of the updated model and for the purposes of this research report, financial literacy is defined as:

An active process that empowers an individual to obtain financial information and an understanding thereof through various resources and using the financial skills and competence developed to evaluate information to make decisions most advantageous to personal economic well-being. (Author)

2.2.3. Financial literacy studies

This paragraph provides an overview of previous financial literacy studies conducted by various researchers with the aim to evaluate financial literacy education programmes and to measure the impact of financial education on financial literact levels of college/university students.

Beal and Delpachitra (2003) concluded that literature on financial literacy could be classified into two classes: evaluation of financial literacy education programmes and testing of levels of financial literacy among different population groups. Literature reviewed by the author in the financial literacy context includes international and local studies conducted to evaluate financial literacy education programmes and to measure the impact of financial education on financial literacy levels of college/university students.

- *US findings*

Mandell and Klein (2009) conducted a study that examined the impact that a personal financial management course completed in high school, one to four years earlier, had on subsequent financial behaviour of college students compared to those that did not take the course. The findings indicated that those who took the course were no more financially literate than those who had not. According to Mandell and Klein, these findings were in line with the biennial surveys of high school seniors carried out by the Jump$tart Coalition between 1997 and 2008, which consistently found that students who had taken a high school class in personal finance or money management were no more financially literate than those who had not (Mandell, 2008).

Cude et al. (2006), in a study conducted to learn more about college students' financial management practices and their attitudes, investigated how college students acquired financial knowledge and behaviours. The findings confirmed that some college students are "not managing their finances well because they have not adopted a set of recommended practices" (Cude, et al., 2006: 6).

- *Australian findings*

Beal and Delpachitra (2003) conducted a study to determine the financial literacy of Australian university students as well as to identify areas of financial literacy that were least developed. The results indicated that financial literacy was not high and was due to the lack of financial skills education in high schools. However, the study found that students undertaking business studies scored better, indicating that these students had a higher inherent interest in financial matters, a greater level of directed reading and displayed more attentive listening to financial reports on the media.

A study by Kindle (2013) came to a different finding to the ones mentioned above. The study assessed the financial knowledge possessed by social work students. Kindle found that the majority of social work student respondents scored more than 70 per cent correct on a measure of financial literacy. The high scores were due to financial education programmes offered to social work students conducted through the Center for Financial Social Work at the University of Maryland and the University of Missouri. To better equip their students in handling cases related to household levels of financial stress and strain, the social work profession introduced the financial education programe. The introduction was done in order to supplement the experience students were getting in household economics on contact with the different cases. This allowed for providing better counselling services by the social workers. What the results further indicated was that financial education and financial literacy was relevant to the practice community.

- *UK findings*

Schagen and Lines (1996) undertook an investigation of financial literacy in UK adults. They discovered that groups susceptible to difficulties with debt are: young people aged 16-21 years in work or training; students in higher education and not living at home; single parents on benefits and families living in subsidised housing. The student group was the least confident in dealing with financial affairs. The low confidence levels could potentially explain the low levels of financial literacy of college students.

- *South African findings*

Louw et al. (2013) conducted a survey that investigated the financial literacy of third-year students at a South African university within the context of their socio-economic environment and exposure to the world of finance. It was found that 90 per cent of the students were financially supported by their parents and had limited or no responsibility for their personal financial issues and as a result did not have much exposure to financial practices. On the question about the sufficiency of financial knowledge for their future, the finding was that that financial literacy was not sufficient.

Clereq and Venter (2009) analysed factors that have an impact on the level of financial literacy of undergraduate students studying to become chartered accountants. The findings indicated that the younger students were the least financially literate. Because they had just completed school, they had limited experience of personal finance.

Botha (2014) perfomed a study to determine whether students studying towards a finance related diploma have higher financial literacy levels than those students studying towards a non-finance related diploma. The findings revealed that the financial literacy levels of final year diploma students from both sample groups were low.

The above findings suggest that university students have low levels of financial literacy and this problem is not only experienced internationally, but in South Africa as well. As one of the research objectives is to measure the financial literacy of university students studying towards a BAcc degree, it is considered whether, with their finance related education, the students' results would be consistent with these low levels of financial literacy as identified above.

2.2.4. Measuring financing literacy

The terms financial literacy, financial knowledge and financial education are often used interchangeably in literature and few scholars have attempted to define or differentiate these terms (Huston, 2010). Indicators of financial literacy and/or financial knowledge, expressed through attitude and behaviour, have been used to standardise the need for financial education, and to attempt to explain the differences in financial outcomes such as savings, investing and debt behaviour (Huston, 2010). Without a standardised measure of financial literacy, measuring it becomes a challenge and could be contestable.

In paragraph 2.2.2, the financial literacy concept is described as an active process based on key principles of financial knowledge and understanding, financial skills and competence and financial responsibility. This active process empowers an individual to obtain financial information and an understanding thereof through various resources and by using the financial skills and competence developed to evaluate information to make decisions most advantageous to personal economic well-being. Thus, when measuring financial literacy, it is important that the measure/tool considers all of these key principles.

Huston (2010) conducted a study in which a broad range of financial literacy measures used in previous research was considered. Particular attention was placed on determining whether a specific definition of the concept measured was included. Huston's (2010) findings revealed that the definition used by the Jump$tart Coalition (2007) for financial literacy included both knowledge and ability and stated an intended outcome (i.e., lifetime financial security/well-being) within its definition of financial literacy.

Based on the definition of financial literacy provided by the author and the findings by Huston (2010) regarding the Jump$tart Coalition's financial literacy definition, there appears to be a connection - an alignment of principles - where the concepts have the following meanings:

– "Knowledge" = "financial knowledge and understanding";
– "ability" = "financial skills and competence"; and
– "intended outcome" = "financial responsibility".

In the US, the hallmark of financial literacy measurement is the Jump$tart Personal Financial Literacy survey (hereafter referred to as Jump$tart) instrument. The instrument was developed by a not-for-profit partner of the US Federal Reserve Board, the Jump$tart Coalition (Symanowitz, 2006). The Jump$tart Coalition has been measuring the financial literacy of high school seniors since 1997/8. In 2008, 10 years after its first base line study, the Coalition conducted its first national survey designed to measure the financial literacy of college students. The survey used the same 31 question examination as the survey for high school seniors to measure financial literacy.

The questions in the Jump$tart instrument were divided into four categories namely: Income; Money Management; Savings and Investment; and Spending and Credit (Mandell, 2008). This categorisation supports what Huston (2010) identified as the four categories of personal finance that financial literacy measures should measure i.e. basic concepts (time value of money (TVM), planning and the economy); borrowing concepts (credit cards, loans and mortgages); saving/investing concepts (stock, bond, mutual fund and retirement savings); and protection concepts (insurance, estate and tax planning and identity safety).

According to Botha (2014), the majority of research uses the Jump$tart instrument to test financial literacy and it provides a strong example of how existing measurement methods may be applied consistently in future research. As indicated above, the questions in the Jump$tart instrument that was used in this research report to measure financial literacy encompass the stated four categories of personal finance.

Professor Sangweni, the chairperson of the Public Service Commission, in a report on the Indebtedness of Public Servants, sighted that good financial management skills and ability, coupled with financial discipline and planning, are crucial competencies that ensure accountability for public resources and contribute to an ethical Public Service (Sangweni, 2007). These competencies that Sangweni refer to are similar to some of the fundamental competencies that SAICA identifies as being possessed by Chartered Accountants. Competence in financial management, also simply referred to as being financially literate, may be what the general public could assume to be the strength of a Chartered Accountant without any particular evidence to support this assumption. The author believes that an analysis of the education and training of Chartered Accountants is, therefore, necessitated in order to substantiate this assumption.

2.3. SAICA COMPETENCY FRAMEWORK: EDUCATION AND TRAINING OF A CHARTERED ACCOUNTANT

The CA qualification in SA depends upon the guidance and direction of SAICA and therefore the majority of the literature on the Competency Framework is drawn from documents that SAICA has published. The author assumes that the Competency Framework develops financial literacy, an assumption supported by an article published on *Moneyweb.* The article found that where a Chartered Accountant is appointed to any senior or executive position in the business industry, financially illiterate South Africans affirm and support the appointment (Hogg, 2009), suggesting that Chartered Accountants are South Africans considered to be financially literate. On the basis of this assumption, one of the objectives of the research is to test the financial literacy of the students in trying to establish if the Competency Framework does assist the students in developing financial literacy.

2.3.1. Background to the qualification model

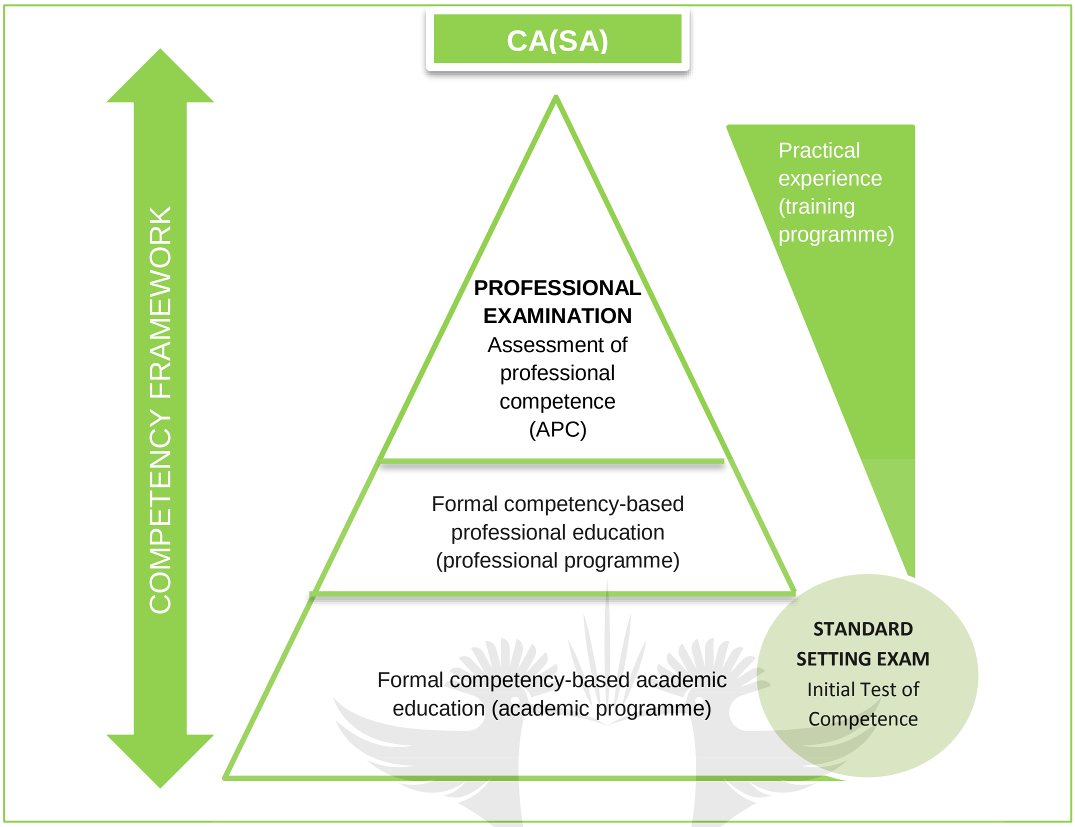
In the introductory chapter it was indicated that SAICA is the professional accounting body responsible for the awarding of the qualification and designation of Chartered Accountant in South Africa. Prior to the revision of the qualification model in 2007, qualifying as a Chartered Accountant entailed the following process (Streng, 2011):

- Formal technical competency based tertiary education comprising of a three-year undergraduate programme, followed by a one-year postgraduate programme at a recognized SAICA accredited university, commonly referred to as a Certificate in the Theory of Accounting (CTA);
- A standard setting examination (Qualifying examination (QE1)) which aims to ensure that all candidates have the requisite level of core technical competence;
- A professional examination (Part II) which assesses professional competence (as opposed to technical competence) prior to entry into the profession; and
- Practical experience, which is acquired through a minimum 3 year training contract.
- In 2007 when SAICA revisited the qualification model the following changes were recommended and adopted (Olivier, 2015):
- The adoption of a Competency Framework (*Figure 2.3*);
- Development of fundamental principles used in revising the different components of the qualification process (listed above as per Streng (2011));
- Revisions to the training programme;
- Revisions to Part I of the Qualifying Exam (now known as the Initial Test of Competence – ITC), and revisions to Part II of the Qualifying Exam (now known as the Assessment of Professional Competence – APC).

What the revision imply is that the previous knowledge-based syllabus was enhanced by adopting a more holistic view in that a candidate would be required to be competent as opposed to merely possessing detailed technical knowledge (Olivier, 2015).

2.3.2. The new CA(SA) qualification model (the Competency Framework)

Figure 2.3: SAICA Qualification model



Source: http://www.accountancysa.org.za/influence-positioning-the-new-apc

In 2008, SAICA developed and approved the above Competency Framework (Malan, 2012) (*Figure 2.3)* with the specific intention of focusing the education and training of a Chartered Accountant on the development of competencies. With the development of these competencies, SAICA (2014a) believes that the Chartered Accountant on qualification should have the necessary level of underlying knowledge and the practical skills and experience to apply the knowledge effectively in the chosen field of work.

The Collins English dictionary defines a competence or competency as the ability to do something well or effectively (Collins, 2009). SAICA agrees with this definition and elaborates by describing ability as the execution of a task in “the real world” (SAICA, 2009). SAICA’s definition suggests that in addition to having knowledge of a particular subject matter, knowledge is demonstrated effectively through execution in the real world.

2.3.3. Competencies developed

Malan (2012) describes the purpose of the Competency Framework as providing students with a broad range of knowledge, skills and attributes during the qualification process and further indicating what the skills set or competencies are that a Chartered Accountant should possess, as instituted through the Competency Framework.

I. Pervasive skills
(sub-divided into three categories)

II. Strategy, risk management and governance

III. Accounting and external reporting

IV. Auditing and assurance

V. Financial management

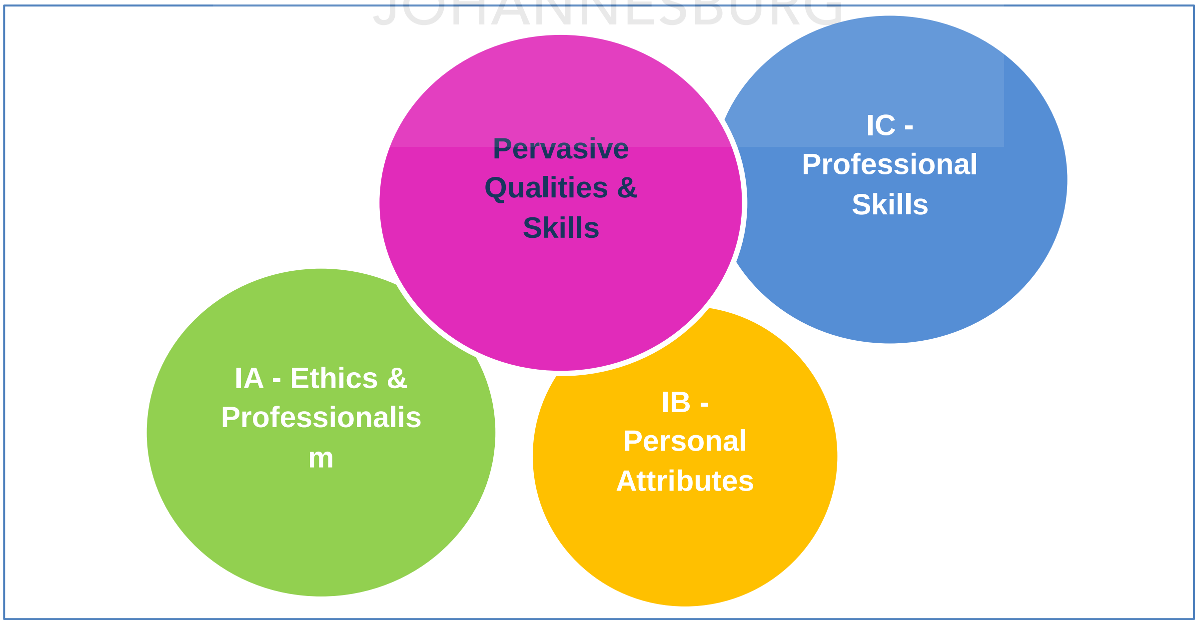
VI. Management decision making and control

VII. Taxation

The competencies listed above culminates in, as discussed in 2.3.1, the eventual effective execution and application of knowledge, practical skills and abilities in the real world.

Three categories of Pervasive qualities and skills are depicted in *Figure 2.4*.

Figure 2.4: Pervasive qualities and skills of a CA(SA) (category I of VII competencies)



Source: SAICA, Competency Framework Detailed Guidance for the Academic Programme (2014a: 24)

According to SAICA (2016), possessing pervasive qualities and skills as a CA(SA) means the following for each category:

IA - Ethical behaviour and professionalism

- Upholding ethical principles and conducting oneself in a professional manner. The reputation for trustworthiness is earned through commitment to integrity in everything.

IB - Personal attributes

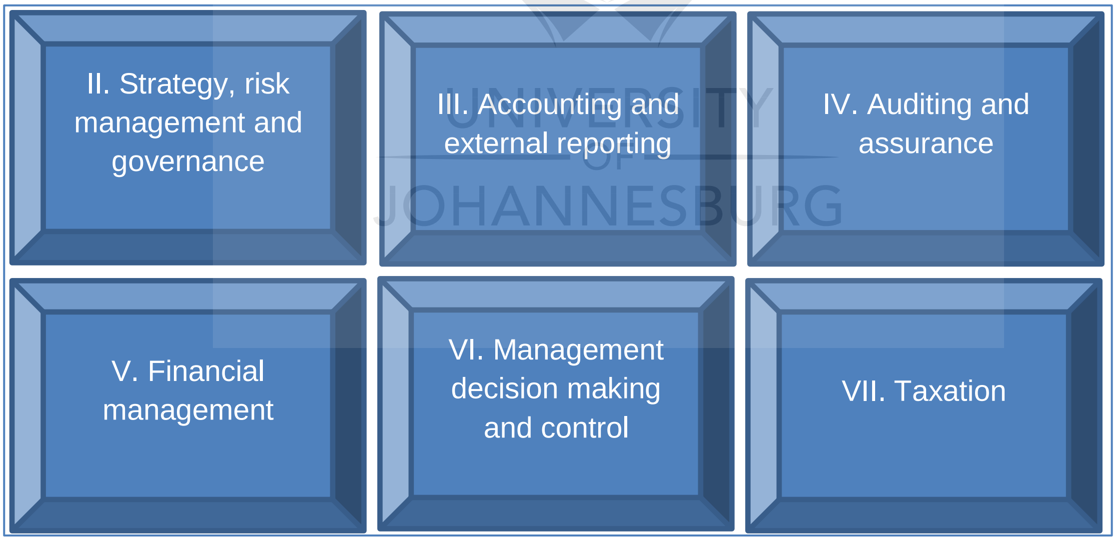
- A leader with improved decision-making abilities. Demonstration of leadership, initiative and constantly striving to add value is indicative of good professional judgement.

IC - Professional skills

- Possessing the following skills: creation, analysis, evaluation and synthesis of information and ideas; problem-solving and decision-making skills; communication and management skills; and proficiency in the use of technology.

The ethical behaviour and professionalism, personal attributes and professional skills (first category of competencies) that CAs are expected to develop "are fully integrated with the specific competencies" (SAICA, 2014a: 9) which are broadly categorised into measuring, reporting and assuring and grouped into six main categories as depicted in *Figure 2.5*.

Figure 2.5: Specific competencies of a CA(SA) (category II to VII of VII competencies)



Source: SAICA, Competency Framework Detailed Guidance for the Academic Programme (2014a: 25)

SAICA recognises that for the seven fundamental competencies to be effectively developed, the primary development should occur during the pre-qualification period.

The pre-qualification period is considered to be the academic education, professional education and practical experience that prospective CAs would undergo to qualify. The components of the qualification process are reproduced in *Table 2.1* detailing what each component involves.

Table 2.1 Components of the qualification model

Formal competency based academic education (= academic programme)	Acquired through accredited academic education programmes delivered by universities: • an undergraduate degree and • a postgraduate programme (Certificate in the Theory of Accountancy (CTA))
A standard setting examination (Initial Test of Competence)	To ensure that all candidates have the requisite level of core competence before embarking on the professional programme.
Formal competency-based professional education (= professional programme)	Acquired through accredited professional programmes delivered by universities and other providers
A professional examination (Assessment of Professional Competence)	To assess professional competence before entry into the profession
Practical experience (= training programme)	Acquired through a training contract of at least three years with a registered training office

Source: SAICA, Competency Framework Detailed Guidance for the Academic Programme (2014a: 8)

The research report examines the provisions of the SAICA Competency Framework to assess how the development of financial literacy of students studying to become Chartered Accountants is addressed in the undergraduate BAcc programme, which is based on the Competency Framework. To align with this objective, the competencies listed in *Figure 2.4* and *Figure 2.5* does not identify financial literacy as a competency. The possible reason could be that SAICA has indicated that "financial literacy which enables an understanding of transactions is pervasive" (SAICA, 2014a: 8), thus suggesting that financial literacy is included in the collective pervasive qualities and skills in *Figure 2.4*.

2.3.4. Pervasive qualities and skills

Based on financial literacy not being explicitly identified as one of the seven fundamental competencies in the previous paragraph, the researcher deemed it necessary to unpack the pervasive qualities and skills in detail in order to identify how financial literacy is addressed in the Competency Framework. For this purpose the main categories, namely, IA - Ethical behaviour and professionalism, IB - Personal attributes and IC - Professional skills depicted in *Figure 2.4* are further detailed into their sub-categories in *Table 2.2.*

Table 2.2 Detailed Pervasive qualities and skills

IA - Ethical behaviour and professionalism	
1.	Uses an ethical reasoning process
2.	Protects the public interest
3.	Acts competently with honesty and integrity
4.	Performs work competently and with due care
5.	Maintains objectivity and independence
6.	Avoids conflict of interest
7.	Protects the confidentiality of information
8.	Maintains and enhances the profession's reputation
9.	Adheres to laws, professional standards and policies and the rules of professional conduct when exercising professional judgement
IB - Personal attributes	
1.	Self-manages
2.	Demonstrates responsible leadership
3.	Maintains and demonstrates competence and recognises limits
4.	Strives to add value in an innovative manner
5.	Manages change
6.	Treats others in a professional manner
7.	Is a life-long learner
8.	Plans and effectively manages teams and projects
9.	Works effectively as a team member
10.	Manages time effectively
11.	Demonstrates good corporate citizenship attributes
IC - Professional Skills	
1.	IC-1 Obtains information
•	IC-1.1 Gathers or develops accurate and relevant information and ideas
•	IC-1.2 Develops an understanding of the entity's environment
2.	IC-2 Examines and interprets information and ideas critically (critical thinking)
•	IC-2.1 Analyses information or ideas
•	IC-2.2 Performs computations
•	IC-2.3 Verifies and validates information
•	IC-2.4 Evaluates information and ideas
•	IC-2.5 Integrates ideas and information from various sources (integrated thinking)
•	IC-2.6 Draws conclusions / forms opinions
3.	IC-3 Solves problems and makes decisions
•	IC-3.1 Identifies and diagnoses problems and/or issues

•	IC-3.2 Develops solutions
•	IC-3.3 Makes decisions and recommendations and provides advice
4.	IC-4 Communicates effectively and efficiently
•	IC-4.1 Seeks and shares information, facts and opinions through written and oral discussion
•	IC-4.2 Prepares documents in written and graphic form
•	IC-4.3 Presents information effectively to enhance understandability and usefulness
5.	IC-5 Manages and supervises
•	IC-5.1 Plans and manages projects
•	IC-5.2 Identifies need for internal and external expertise
•	IC-5.3 Facilitates decision making
•	IC-5.4 Leads effective meetings
•	IC-5.5 Supervises
6.	IC-6 Understands how IT impacts a CA's daily functions and routines
•	IC-6.1 Understands computerised business systems
•	IC-6.2 Uses appropriate IT software tools
7.	IC-7 Considers and applies legal concepts
8.	IC-8 Understands how the national and international environment impacts a CA's role

Source: SAICA, Competency Framework (2015)

Table 2.2 details the pervasive qualities and skills that SAICA recommends to be at the heart of what a Chartered Accountant should do. However, as previously mentioned, in both *Figure 2.4 and Figure 2.5* financial literacy has not been identified at all. It is therefore clear that financial literacy, which SAICA has suggested as being pervasive, is not afforded a separate classification. An alternative consideration of where and how it could be developed is thus justified.

In the introductory chapter it was mentioned that the BAcc degree is developed in consultation with SAICA and is an accredited academic education programme. It may, therefore, be assumed that an assessment of the academic education programme should provide further guidance to the assumed possible development of financial literacy.

2.3.5. Academic education programme

Prior to providing a detailed analysis of the academic education programme, it is necessary to point out that SAICA has indicated that universities, being the "providers of the academic programme, are expected to address all those qualities and skills which, in their opinion, are suitable for inclusion in the academic programme" (SAICA, 2014a: 17). Where the universities choose to exclude any of the qualities and skills from the academic programme, an explanation and motivation as to why would be required by SAICA during the monitoring and accreditation process. In addition, with the introduction of the new SAICA qualification model, SAICA no longer prescribes the syllabus for supportive modules. Instead, the universities are expected to offer a curriculum that is made up of modules, which when viewed in totality addresses the competencies identified by the Competency Framework and at the stipulated proficiency levels.

At the University of Johannesburg, the three year undergraduate programme accredited by SAICA is the Bachelor of Accounting degree. "It allows for admission to the Postgraduate Diploma in Accounting Science programme, the equivalent of the Certificate in the Theory of Accounting (CTA) which is also required for students who intend writing the Initial Test of Competence (ITC) of SAICA" (UJ, 2016a: 78).

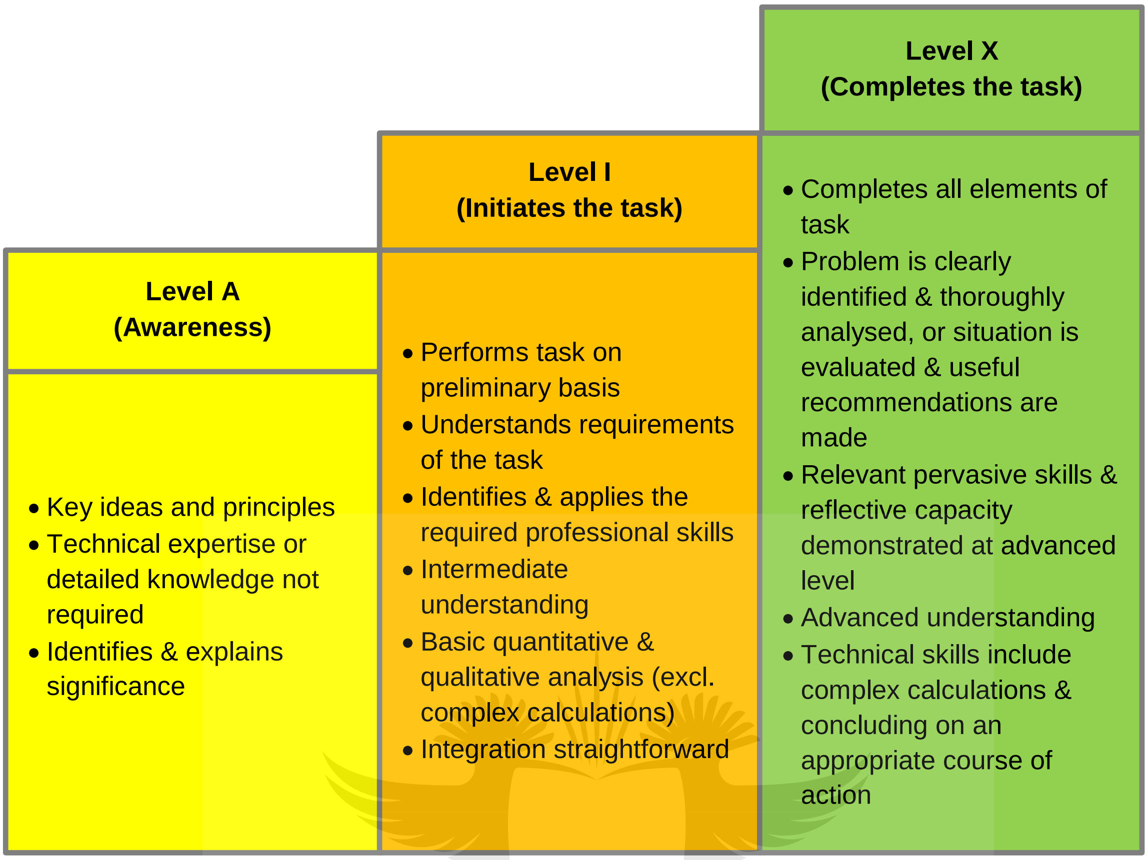
The literature on the Competency Framework, suggests that the pervasive qualities and skills (*Figure 2.4* and *Table 2.2*) cannot be developed without bringing into context the specific competencies (*Figure 2.5*). Furthermore, SAICA has indicated that some competencies that are of a pervasive nature also contain elements of underlying knowledge related to their development and therefore end up having the characteristics of a specific competency (SAICA, 2014a). As a result, it is possible that financial literacy is such a "pervasive competency" as referred to by SAICA.

Since SAICA by ways of the Competency Framework indicated that financial literacy is pervasive (SAICA, 2014a: 8), it is necessary to explore how these pervasive qualities and skills are developed during the academic programme.
As a standard guide for universities, the accountancy profession identified three levels of proficiency for the competencies which are reproduced in *Figure 2.6*. Three distinct levels of proficiency are recognised as necessary for each of the seven competencies (*Figure 2.4* and *Figure 2.5*):

- Level A - Awareness;
- Level I - Initiates the task; and
- Level X - Completes the task.

The designation of proficiency levels to the competencies puts into context what tasks students that have completed the academic programme, but who have not yet embarked on the training and professional programmes, could reasonably be expected to have accomplished.

Figure 2.6: Level of proficiency in a competency



Source: Source: SAICA, Competency Framework (2014a: 19)

SAICA indicates that for a student to acquire and develop a competency, they must:

- Acquire the specific technical knowledge and pervasive skills;
- develop an understanding of where and why the knowledge is to be applied; and
- have experience of executing tasks (practical application). (SAICA, 2014a)

The detailed discussion on competencies developed suggests that students' financial literacy should be developed through the teaching and learning of the specific technical knowledge and pervasive skills during the years of the academic programme. Further, during this period it can be evidenced through learning material, assignments and assessments that the students have developed an understanding of where and why the knowledge is to be applied and have experience of executing tasks.

During 2010, following the development and approval of the Competency Framework (Figure 2.3) by SAICA, the Department of Accounting at UJ embarked on a BAcc programme review. Each of the modules (the core accounting disciplines) were reviewed as to how they developed the competencies (Figure 2.4 and Figure 2.5) as provided by the Competency Framework. The project was done in order to ensure that the BAcc degree remains a SAICA accredited programme that fully complies with the SAICA syllabus from undergraduate on an intermediate level to an advanced level at postgraduate (Department of Accountancy, 2011). The programme review entailed the provision of specific details for each pervasive quality and skill (Table 2.2). Such details included:

- At what academic year the pervasive quality and skill is addressed;
- at what level of proficiency (Figure 2.6) could the tasks, in relation to the specific pervasive quality and skill, be expected to have been accomplished during the academic programme;
- how, in terms of module content, is the pervasive quality and skill addressed; and
- how is the pervasive quality and skill assessed during the academic programme (Department of Accountancy, 2011).

The programme review assessed all the BAcc modules (accounting, auditing, taxation and financial management). The integration of all the modules in the teaching of the BAcc programme could be seen to contribute to the development of financial literacy throughout the students' holistic academic career after careful scrutiny of the BAcc curriculum, as found in the various mapping documents that underlie the review process. The learning objectives, as well as the specific topics outcomes of all the BAcc modules were reviewed for their specific contribution to the development of financial literacy. When viewed together all the modules contribute to the holistic development of financial literacy. However, due to the learning objectives of financial management being entrenched in the principles of financial literacy and due to the topics complementing the essence of the questions in the questionnaire to measure personal financial literacy (Appendix A), the author is of the view that financial literacy principles are mainly developed in the Managerial Accounting and Finance module (Financial Management) from the second academic year to the third academic year. As a result, without ignoring the contribution of the other modules (accounting, auditing and taxation), only the topics that form part of the financial management syllabus that bear relevance to financial literacy are presented below in the order that they are taught: (Department of Accountancy, 2010)

a) Introduction to Financial Management

Students are provided with a proper context and "bigger picture" to ensure the topics covered are within understandable context. A statement of financial position (SoFP) and statement of profit/loss (SoP/L) are used throughout the module to serve as a "bigger picture" to establish on understanding of context.

b) Time Value of Money (TVM)

The TVM principles are introduced to students at second year level and the application is tested through realistic practical scenarios. True application will become clearer to students as they progress through the module, however at a foundational level emphasis is placed on obtaining an understanding of the term structure of interest rates, dealing with annuities and perpetuities and how this relates to different financial instruments, capital budgeting as well as business valuations.

c) Risk and Return and Diversification

The knowledge of 'risk and return' and the relationship between the two elements are taught ensuring that the student understands that risk can be reduced through diversification. Further, a proper link is made with TVM to draw an understanding of how 'risk and return' is dealt with in calculations. Students should in essence be able to perform a valuation of a simple instrument by understanding how 'risk and return' is taken into consideration. Business risks, operational leverage and financial leverage are also discussed in order to provide students with a basic understanding of these elements of risk management.

d) Capital Structure Theory

Students are taught to comprehend the need for financing in a business and that there are two main sources of finance (debt and equity). Furthermore, students should understand that equity and debt will equal assets, in order to realise that financing is obtained in order to invest in assets which will give a return. The concept of Return on Assets (ROA) is introduced and explained within the context that the cost of financing must be lower than the ROA in order to maximise shareholders wealth. Only once this principle has been established are the two main sources (debt and equity) explained in terms of 'risk and return', and the Miller and Modigliani's theory of capital structure explored which teaches that the market value of a company is determined by its earning power and by the risk of its underlying assets and that its value is independent of the way it chooses to finance its investments or distribute dividends (Investopedia, n.d.). At this stage the students are equipped with the proper understanding that organisations should have the intention of minimising the cost of financing.

e) Sources of Finance

Once the students understand the need for financing and the two main sources of finance, various sources of debt financing, as well as different options of equity financing are explored.

f) Cost of Capital

The concept of obtaining finance in order to invest in assets which are used to render a return (make money) – ROA is referred back to. The concept is crucial to fully understanding the pooling of funds and that finance and investment decisions are made separately. Cost of capital calculations are explored by testing ‘risk and return’ as well as TVM. The focus shifts to valuations of instruments as well as the selection of rates of return to measure risk.

g) Working Capital

Working capital provides the opportunity to refer to the “investment” and “financing” side of short term assets and liabilities and is discussed in terms of Risk and Return and how it affects financing requirements. Context is brought to this topic by reference to the SoFP.

h) Analysis and Interpretation of Financial Statements

The focus is on contextualising and gaining knowledge within in a “bigger picture”. Students are provided with practical case studies, and required to calculate standard ratios and interpret them. In most cases, students are required to assess a company’s financial performance by performing a comparative analysis to the previous financial year or by relating financial performance to industry benchmarks.

The documentation for the BAcc degree programme review has mapped in detail how the syllabus enhances the development of the pervasive qualities and skills. However, as indicated in the discussion in paragraph 2.3.4, the programme review documentation does not separately identify, list nor add financial literacy as a pervasive quality and skill. What is evident is the business context within which the pervasive qualities and skills are addressed and assessed in each module through the topics.

SAICA recognises that the nature of accounting knowledge is context bound with every aspect of the accounting discipline being grounded in the real world of current business practice (SAICA, 2014a). Based on this principle and the analysis of the BAcc degree programme review, it is clear that the specific technical knowledge and pervasive qualities and skills (competencies) are developed from a business and company perspective. One could further assume that the students gain financial knowledge about “the basic requirements needed to facilitate sound financial decision-making in organisations” (Gouws & Shuttleworth, 2009). Gouws and Shuttleworth (2009) refer to the process of obtaining financial knowledge, within an organisational context, in order to understand and use financial information for organisational decision-making related to planning, control and profit maximisation as organisational financial literacy.

The question that this research attempts to answer is whether the knowledge gained from studying the CA degree, which is business and company context bound, has any impact on students' financial literacy as far as their personal financial affairs are concerned.

2.4. CONCLUSION

This chapter demonstrates that ever since financial literacy has been on the global agenda, various research efforts have been conducted to define, measure, understand the implications of and improve the levels of financial literacy of individuals. A review of three South African studies shows that research has been conducted on university students studying towards both a finance related and non-finance related qualification. Two of the studies focused on the measurement of financial literacy and another analysed the factors that had an impact on the level of financial literacy. Of the three studies identified, only Clereq and Venter (2009) focused on students studying to become Chartered Accountants. However, no study has been conducted evaluating how the SAICA Competency Framework in its provisions addresses the development of personal financial literacy of students studying to become Chartered Accountants. This research aims to add value to the existing body of knowledge in terms of providing a springboard for future personal financial literacy research, curriculum development and curriculum improvement for educators, accounting education interest groups and professional accounting organisations in South Africa. The chapter that follows will focus on the research philosophy employed in the report by providing the rationale for the choice of research design and research instrument as well as provide details on how the research was conducted.

CHAPTER THREE: METHODOLOGY

3.1. INTRODUCTION

The previous chapter provided a detailed discussion on financial literacy, its definition and previous studies conducted on college/university students. This chapter considers the research philosophy employed in this study. It provides a rationale for the choice of research design and research instrument and provides details on how the research was conducted. It also indicates the data collection method and method of analysis as well as providing the ethical considerations and significance of the research.

3.2. RESEARCH PHILOSOPHY

Research philosophy/paradigm, according to Collis and Hussey (2003), refers to the progress of scientific practice based on the philosophies and assumptions about the world and the nature of knowledge. There are two main research philosophies, “positivist and interpretivist” (Saunders, Lewis & Thornhill, 2012: 129), which are underpinned by different research assumptions. Assumptions of what is “out there” (ontology) and the ways of knowing (epistomology) what is “out there” (Badenhorst, 2008: 96).

A positivistic research philosophy is adopted in this research, because emphasis is placed on observations of an independent and pre-existing reality (objectivism) that can be quantified (Collis & Hussey, 2003). Furthermore, the “distance between the researcher and the research is essential to achieving a truth” or explanations of what is “out there” (Badenhorst, 2008: 93). In adopting this quantitative orientation the researcher remains an objective observer who neither participates in nor influences what is being studied.

Collis and Hussey state that one follows a form of deductive research approach when a “conceptual and theoretical structure is developed and then tested by empirical observation” (2003: 15). This research, therefore, adopts a deductive research approach by following a quantitative approach to analysing primary data gathered using a research instrument.

The purpose of this research report is to benchmark the development of personal financial literacy of undergraduate students, under the SAICA Competency Framework, to a personal financial literacy score used in a US study that applied an internationally approved instrument, in order to determine if the score increases as students’ education progresses.

The research objectives are achieved through:

- A literature review that provides a detailed background to the SAICA Competency Framework, upon which the Bachelor of Accounting degree is based;
- a detailed evaluation of the response rate per question in the questionnaire in order to identify the categories of personal financial literacy in which the students performed better or worse in;
- an examination of the personal financial literacy score differences between the three consecutive academic year groups at one point in time rather than a longitudinal analysis of the personal financial literacy score changes of the same cohort of students over time; and
- a statistical analysis of the average personal financial literacy score obtained per academic year group in order to determine if the score generally increases as students' education progresses.

3.3. RESEARCH METHOD

"The research method describes the methods used to collect data, analyse it and go about the research in order to answer the research question" (Zikmund, 2003, cited in Botha, 2014: 37). This research uses a cross-sectional method to collecting data from students studying to become Chartered Accountants at one point in time. The 2008 Jump$tart survey is a standardised test in the form of a structured questionnaire which was designed to "find out how financial literacy develops as young Americans get older and add to their education" (Mandell, 2008: 11) by measuring the financial literacy score of college students. The structured questionnaire was adapted for the South African environment prior to being used.

Descriptive statistics are used to describe the personal financial literacy scores of the overall Bachelor of Accounting degree student complement as well as of each of the three academic year groups. Comparative analysis are performed on the three academic year groups to identify certain commonalities and differences in terms of personal financial literacy scores. The statistical measure used in the comparative analysis is the One-way analysis of variance (ANOVA).

Research sample

The total South African CA registered student body is the population. The 2015 UJ BAcc registered students form a sample within the CA registered student body. In meeting the research objectives, stratified random sampling is used. Stratified random sampling is a probability sampling method where data is divided into various sub-groups (strata) sharing common characteristics like age, sex, race, income, education and ethnicity (Acharya, Prakash, Saxena & Nigam, 2013: 331). Stratified random sampling was chosen for this research in that the total number of students registered for the Bachelor of Accounting, in 2015, was divided into the three academic year sub-groups. These sub-groups had in common the fact that they were all registered students studying to become Chartered Accountants at the University of Johannesburg in 2015. The purpose of stratified random sampling is to select a representative sample and to allow the findings of the research to be extended to the wider target population (Acharya et al., 2013).

According to the UJ Higher Education Data Architecture (HEDA) Dashboard (UJ, 2016b), the total number of students registered for the Bachelor of Accounting degree (i.e. 1st year to 3rd year) for 2015 at the University of Johannesburg was 1420. This number was made up of 519 first-year students, 495 second-year students and 406 third-year students. The three academic year sub-groups were treated as different strata.

Using the definition of population weights, the following population weights were computed:

$$W1 = \frac{N1}{N} = \frac{519}{1420} = 0.365 \times 100 = 37\%$$

$$W2 = \frac{N2}{N} = \frac{495}{1420} = 0.349 \times 100 = 35\%$$

$$W3 = \frac{N3}{N} = \frac{406}{1420} = 0.286 \times 100 = 27\%$$

where:

W1 = population weight for the 1st academic year sub-group

W2 = population weight for the 2nd academic year sub-group

W3 = population weight for the 3rd academic year sub-group

A census of the entire group of students registered for the Bachelor of Accounting degree at the University of Johannesburg was attempted and a return rate reported. From the census, the return rate was only 48.2 per cent (684 participants out of 1420 registered students). The less than half return rate was due to low class attendance. The survey was conducted during study week, a period when revision classes are held before last assessment opportunities start and attendance is not compulsory. Generally, fewer students attend class during this period as they tend to use this time for self-study.

Participants who answered less than 70 per cent of the questions (32 students) were eliminated, as their specific results were deemed not useful for the purpose of the research.

The response rate based on valid, usable responses was 45.9 per cent (652 participants out of 1420 registered students) spread across the three academic year sub-groups.
With proportional allocation, the total sample of 652 was allocated to the different strata (academic year sub-group) in proportion to the above computed strata weights. Thus, for each $i,\ i = 1, 2, 3, ni$ was computed as follows:

$$ni = nWi$$

resulting in the following sample sizes:

$$n1 = 238;\ n2 = 228;\ n3 = 186$$

The actual sample achieved (652) consisted of 297 first-year students, 243 second-year students and 94 third-year students. Eighteen (18) respondents preferred not to disclose their academic year level thus resulting in a total of 634 respondents who could be allocated to their relevant sample/year group.

In order to demonstrate that the sample achieved a good representation of the population, the matching of the actual sample percentages to the actual population percentages was attempted.

The following actual sample percentages were calculated:

$$first - year\ group = \frac{297}{634} \times 100 = 47\%$$

$$second - year\ group = \frac{243}{634} \times 100 = 38\%$$

$$third - year\ group = \frac{94}{634} \times 100 = 15\%$$

The actual sample percentages (47: 38: 15) appear to resemble the population percentages (37: 35: 27) except for the third-year group. The first-year group and second-year group are a good match and therefore representative of the first and second year population. Although the third year group is underrepresented, when viewed against the Bachelor of Accounting degree group in totality, good representation of the total population is achieved. The actual response rate achieved is 45 per cent (634/1420) of the Bachelor of Accounting degree group.

3.4. DATA COLLECTION

A structured questionnaire adapted for the South African context from the 2008 Jump$tart Coalition Survey for Personal Financial Literacy (2008 Jump$tart survey), was administered manually to the sample. The 2008 Jump$tart survey assesses high school and college students' personal financial literacy. The questions contained in the 2008 Jump$tart survey are divided into four categories: income; money management; savings and investment; and spending and credit (Mandell, 2008) which allows for the provision of further important information about a students' personal financial literacy status and areas that might need attention.

The questionnaire consists of 43 questions divided into Part A and Part B. All questions use a multiple choice format. Part A (Question 1 - 23), which comprises the test of financial literacy investigates the respondents' opinions on financial matters. Part B (Question 24 – 43), asks a set of background and socio-demographic questions including age, gender and income as well as measures of financial behaviour such as credit/store card use, incurrence of debt, bank account balancing habits and incidences of insufficient balance. The background information in Part B has not been used in the research when relating to the questions in the questionnaire. The author has included it to establish relationships between the data in further studies.

The 2008 Jump$tart survey consists of 31 financial literacy questions (Part A) and 25 background questions (Part B). Questions that are relevant to the South African context were adapted to suit the South African context and questions that were not applicable were excluded (see Appendix B for matching of questions and adaptation to the SA context). Questions 1, 4, 7, 8, 13, 19, 21 and 30 of Part A and Question 51, 52 and 54 of Part B were considered not applicable and excluded. The basis used for exclusion was if the questions strictly required the knowledge, understanding and practical application of the USA federal tax system with regards to the applicable law, income tax, social security, state taxes and government insurance. The final questionnaire was presented to a number of experts to ensure that no important questions were excluded purely because they did not relate to South Africa. To test the questionnaire in terms of readability and understanding it was given to a few students and colleagues for comment and suggestions for improvement before giving it to the students.

The lecturers of each academic year group were contacted via e-mail, telephone and/or a face to face meeting to discuss the research and to seek their permission to conduct the questionnaire during lecture time. Each academic year group's timetable was consulted and a specific lecture day and time for each academic year group was selected based on guidance received from the lecturer.

Each lecturer, based on what they deemed to be the most suitable time to complete the questionnaire, set aside 30 minutes of their class time, either at the start or the end of the lecture. The number of students per academic group was confirmed in order to provide the lecturer with the correct number of questionnaires. Each questionnaire contained a cover page introducing the survey to the student. The activities that the questionnaire entailed were explained. It was specifically mentioned to the students that the questionnaire and responses were completely anonymous, that the students did not have to participate and that no monetary compensation was offered for participation.

The questionnaires were handed out during the appointed lecture time and students were allowed to complete it then. At the end of the given time, the students handed the questionnaires back to their lecturer. To improve the probability that the students would participate in the survey, the author thought best to conduct a paper-based questionnaire as opposed to an online questionnaire, which students would have to complete during their own free time. Furthermore, to increase reliability of the questionnaire, the test was conducted in a controlled environment in order to reduce the chances of the students discussing the answers. The fieldwork commenced on 12 October 2015 and ended on 19 October 2015.

3.5. DATA ANALYSIS

In order for the research report to meet the first research objective, namely, to evaluate how the SAICA Competency Framework in its provisions addresses the development of financial literacy, a literature review of the SAICA Competency Framework is provided in Chapter 2. The review was compiled through examining in detail the competencies that Chartered Accountants are required to possess upon entry into the profession. In particular, the specific competencies and the pervasive qualities and skills were examined for specific mention of financial literacy as a competency. The possible development of financial literacy by the SAICA Competency Framework was subsequently traced to the academic education programme by reviewing the programme review documents prepared by the different heads of subjects in the UJ Department of Accounting. The documents provided the detail on how the Bachelor of Accounting degree, through each module, developed the competencies as required by SAICA per the competency framework (refer to 2.3.5).

The primary data obtained manually via questionnaires was captured and the Statistical Package for the Social Sciences (SPSS) was used to store and analyse the data. The software was also utilised to perform the statistical and comparative analysis of the data.
Information obtained from the research instrument (the questionnaire) through descriptive statistics was then analysed to obtain a profile of the personal financial literacy of the students studying to become Chartered Accountants. The mean personal financial literacy score obtained by the overall Bachelor of Accounting degree student complement and by each of the three academic year sub-groups was compared to the 60 per cent score (benchmark) used as the passing grade to be considered financially literate in the 2008 Jump$tart personal financial literacy survey on college students. The responses per question in the questionnaire were then analysed and compared between different year groups in order to determine the commonalities and differences in personal financial literacy of the three academic year sub-groups. Specific attention was given to detect any improving abilities over the subsequent year groups.

3.5.1. Descriptive statistics

According to van Zyl (2014) a set of descriptive statistics (Appendix C) describes the general characteristics of a set of scores allowing the researcher (or the reader of the research report) to get an accurate first impression of what the data looks like. Different measures used to compare different sets (distribution) of scores include (van Zyl, 2014):

- Measures of central tendency (the mean, the median and the mode); and
- measures of variability (the range and the standard deviation).

Field (2009), in addition to the set of measures listed above, discusses measures of shape (kurtosis and skewness) to form part of decriptive statistics that checks for normality in a distribution of scores. When the distribution is normal, the values of skewness and kurtosis should be zero. However, when the distributions are not nearly as symmetrical (i.e. the values of skweness and kurtosis are not zero) then they are considered to be skewed. This might cause a problem where the use of parametric tests is warranted. Field (2009: 139) states that for very large samples, “200 or more, it is more important to look at the shape of the distribution visually and to look at the value of the skewness and kurtosis statistics rather than calculate their significance”. This is because the significance tests of skewness and kurtosis are likely to be significant even when skewness and kurtosis are not too different from normal.

To test that the sample came from a normally distributed population, the Shapiro-Wilk test was utilised (Appendix C.2) (Field, 2009). The null-hypothesis for the Shapiro-Wilk test is that the population is normally distributed for alpha levels greater than 0.05 (Field, 2009). The Shapiro-

Wilk test on the research sample gave a result of a p-value of 0.00, meaning that the test's null-hypothesis that the population is normally distributed is rejected. However, the Shapiro-Wilk test is biased by sample size and thus a Q-Q plot (Appendix C.3) was generated for verification in addition to the Shapiro-Wilk test (Field, 2009). Looking at the Q-Q plot in Appendix C.3, the linearity of the points suggested that the data is normally distributed, confirming the bias of the Shapiro-Wilk test.

For comparative analysis, the parametric test One-way analysis of variance (ANOVA) was generated. The ANOVA measure is used when comparing the mean scores of more than two groups. The ANOVA test indicates whether there are significant differences in the mean scores of more than two groups. In this research there are three academic year sub-groups. Where there were significant differences, the test indicated that at least two of the groups differed, however it was unclear which groups. To correct for this multiple comparison, post-hoc tests by Scheffe and Tamhane were performed to identify which of the three groups differ (refer to Appendix C.4).

The ANOVA measure is appropriate as one of the objectives of this research was to compare the mean personal financial literacy scores of the three academic year sub-groups in order to determine if the score increases as students' education progresses. Therefore, the assumptions adopted for this test, which are in line with parametric test assumptions, were:

- The mean personal financial literacy scores are normally distributed;
- the mean variances between the three academic year sub-groups are equal; and
- the three academic year groups are independent.

3.6. HYPOTHESIS TESTING

3.6.1. Relationship between personal financial literacy and academic year

H0: $\mu1 = \mu2 = \mu3$

The mean personal financial literacy score is statistically equal across the three academic year sub-groups.

H1: At least one mean personal financial literacy score is not statistically equal across the three academic year sub-groups.

The one-way ANOVA test and the Levene test for homogeneity (equality) of variances were used to test this hypothesis.

3.7. RESEARCH ETHICS

"…the most important thing to remember is that human beings are serving as participants in the research…must be treated so that their dignity is maintained in spite of the research or the outcomes" (van Zyl, 2014: 85). It was important that the Bachelor of Accounting degree students, who served as participants in this research were treated in a manner that maintained their dignity. Therefore, specific paragraphs in the questionnaire of informed consent introduced the participants to the research and protected them based on confidentiality, anonymity and voluntary participation.

All the above ethical considerations have been taken into account in planning for this research (see Appendix A for the cover letter). Ethical clearance was obtained from the Faculty of Economics and Financial Sciences Ethics Committee on 1 October 2015 (see Appendix A for the ethical clearance certificate).

3.8. CONCLUSION

This chapter considered the positivistic research philosophy employed in the research by providing the rationale behind the research design, research instrument and research methods used. A quantitative approach to analysing primary data has been adopted and data collected employed a questionnaire as the survey research instrument. To achieve comparative analysis on the three academic year sub-groups, hypothesis testing was performed using the ANOVA statistical measure. The next chapter examines the results of the data collected through the questionnaire and reports on the findings.

CHAPTER FOUR: MEASURING PERSONAL FINANCIAL LITERACY

4.1. INTRODUCTION

The previous chapter discussed the rationale and research methods used in this report. This chapter examines the results of the analysis of the data collected through the questionnaire and reports on the findings in line with the following three remaining research objectives, the first being the literature review contained in Chapter 2:

- To measure the personal financial literacy of the Bachelor of Accounting degree students at the University of Johannesburg in 2015 utilising an internationally developed instrument. (Paragraph 4.3)
- To compare the overall mean personal financial literacy score for all the students to an international passing grade used in a study as a benchmark to determine whether the students are more or less financially literate. (Paragraph 4.4)
- To examine whether the students' mean personal financial literacy score per academic year group increases as the students' education progresses. (Paragraph 4.4)

4.2. CRITICAL LINK TO THE RESEARCH

Financial literacy, as discussed in Chapter 2, gained international recognition as a critical life skill for individuals that is necessary to empower individuals into taking action in improving their financial wellbeing. This recognition inferred that financial literacy is the benchmark to curbing economic implications associated with financial illiteracy. In a detailed background to the SAICA Competency Framework provided in Chapter 2, attention was drawn to SAICA's specific indication that financial literacy is pervasive (SAICA, 2014a: 8). Additionally, SAICA indicates that the pervasive qualities and skills are fully integrated with and developed in conjunction with the specific competencies. These suggestions by SAICA entail that financial literacy, which is pervasive, is integrated and developed too. The academic education programme, having been developed in consultation with SAICA, therefore mirrors the SAICA's Competency Framework in the development of the competencies.

4.3. MEASUREMENT OF PERSONAL FINANCIAL LITERACY

4.3.1. Link to financial literacy definition

In paragraph 2.2.2 of this study, financial literacy was defined by the author as "an active process that empowers an individual to obtain financial information and an understanding thereof through various resources and using the financial skills and competence developed to evaluate information to make decisions most advantageous to personal economic well-being".

At the heart of the author's definition of financial literacy are three key elements that empower an individual to obtain financial information and an understanding. Namely: 1) financial knowledge and understanding; 2) financial skills and competence; and 3) financial responsibility (refer to *Figure 2.2*). Where financial knowledge and understanding entail the understanding of: what money is; how it is exchanged; and where and how it is generated and disposed of. Furthermore, where financial skills and competence translate to having an awareness of: attitudes to spending and saving; financial planning activities; the risks associated with some financial products; and the relationship between risk and return. Lastly, where financial responsibility means the ability to: make appropriate personal life choices about financial issues; understand consumer rights and responsibilities; and understand the financial implications of finance. As well as, meaning the confidence to access sources of advice when things go wrong.

This research used the 2008 Jump$tart survey instrument to measure personal financial literacy. The instrument supported a multidimensional approach to evaluate financial literacy, focusing on four categories: (1) Income; (2) Money Management; (3) Savings and Investment; and (4) Spending and Debt (Mandell, 2008). These four categories relate back to the benchmark, i.e. financial literacy, as follows;

- Financial knowledge and understanding representing the understanding of (1) Income and (2) Money Management;
- financial skills and competence representing the understanding of (3) Savings and Investment and (4) Spending and Debt; and
- financial responsibility also representing the understanding of (3) Savings and Investment and (4) Spending and Debt. (*Figure 2.2*)

The use of the 2008 Jump$tart survey in this research is, therefore, appropriate in measuring financial literacy as defined by the author.

4.3.2. Personal financial literacy categories

In order to meet the second research objective stated in 4.1, namely to measure the personal financial literacy of the Bachelor of Accounting degree students, this paragraph will discuss in detail the results of the different questions included in the questionnaire.
The analysis of the data collected and the reporting on the findings is presented per the four categories of personal financial literacy, namely:

- Understanding of Income;
- Understanding of Money Management;
- Understanding of Savings and Investment; and
- Understanding of Spending and Debt.

Paragraph 4.3.2.1 through to paragraph 4.3.2.4 divide the questions contained in the questionnaire into the four categories listed above. In each paragraph, questions testing the applicable category are grouped together and sorted in the order of the most successful response to the least successful response per question. It should be noted that the ordering of the questions in the original questionnaire was not per the categories identified and therefore the reporting on the results will not follow a chronological sequence of the questions.

The groupings are presented in Table 4.1, Table 4.2, Table 4.3 and Table 4.4. Each table, per category, presents the questions asked with the choice of answers available, the response rate for each question per academic year and the mean response rate for each question per all BAcc students. The correct answers per question are indicated in red bold print in all the tables.

4.3.2.1. Understanding of income

In the discussion above, the understanding of income was related to the 'financial knowledge and understanding' element of personal financial literacy and according to *Figure 2.2* entailed the understanding of what money is; how it is exchanged; and where and how it is generated and disposed of. The knowledge related to income is gained by the students during their teaching and learning of the four BAcc modules. To a greater extent, the recognition and measurement of income transactions is introduced in Accounting at first year at a basic level and continued in subsequent Accounting modules in the second and third year at basic and intermediate levels (Accountancy, 2010).

Questions 1, 9, 12, and 16 represent questions that would provide insight into the students' understanding of income. In particular, these questions seek to determine whether the students understand the importance of education and skills and how it relates to income. The understanding of sources of income is also determined. Questions 12 and 16 address decisions that can affect future income, including the decision to seek higher education and the decision to improve on-the-job skills. A tertiary education is an investment in oneself that could make people more valuable in the workplace. Question 9 addresses knowledge about sources of income while Question 1 relates to VAT. Before committing to significant expenditures, it is important to estimate just how much income is likely to be available to pay for them. This means that net income, after all compulsory deductions have been made, is more important to determine than the gross income before deductions. Table 4.1 provides an analysis of Questions 1, 9, 12, and 16.

Table 4.1 Understanding of Income category - % of BAcc students choosing different responses per academic year and per all UJ students

	BAcc students			
	Academic year level			All students
	1st year	2nd year	3rd year	
Question 9: Which of the following best describes the primary sources of income for most people aged 20-35?				
Dividends and interest	2.40%	2.90%	0.00%	2.20%
Salaries, wages, tips	**94.60%**	**94.70%**	**94.70%**	**94.60%**
Profits from business	2.00%	1.60%	2.10%	1.90%
Rent	1.00%	0.80%	3.20%	1.30%
Question 1: Which of the following is true about VAT?				
The national VAT percentage rate is 10%.	0.70%	1.20%	0.00%	0.80%
The government agency, SARS, will deduct it from your salary.	10.50%	7.80%	4.30%	8.50%
You don't have to pay VAT if your income is very low.	1.70%	0.80%	8.50%	2.40%
It makes things more expensive for you to buy.	**87.20%**	**90.10%**	**87.20%**	**88.30%**
Question 12: Don and Bill work together in the finance department of the same company and earn the same salary. Bill spends his free time taking work-related classes to improve his computer skills while Don spends his free time socializing with friends and working out at a fitness centre. After five years, what is likely to be true?				
Don will make more because he is more social	4.40%	5.40%	1.10%	4.30%
Don will make more because Bill is likely to be laid off	7.10%	4.50%	3.20%	5.60%
Bill will make more money because he is more valuable to his company	**83.00%**	**81.80%**	**84.00%**	**82.70%**
Don and Bill will continue to make the same money	5.40%	8.30%	11.70%	7.50%

	BAcc students			
	Academic year level			All students
	1st year	2nd year	3rd year	
Question 16: If you went to university and obtained a three-year degree, how much more money could you expect to earn than if you only had a matric certificate?				
About 10 times as much	25.30%	27.20%	12.90%	24.20%
No more; I would make about the same either way.	7.40%	5.80%	7.50%	6.80%
A little more; about 20% more	12.80%	19.80%	20.40%	16.60%
A lot more; about 70% more	**54.40%**	**47.30%**	**59.10%**	**52.40%**

Source: SPSS output

Question 9: Which of the following best describes the primary sources of income for most people aged 20-35?

In total, nearly all the respondents (94.6%) answered the question correctly. The results indicate that the respondents, across all the groups, are aware of the sources of future income and potentially know that their major source of income is selling their labour (skills) in exchange for salaries, wages and sometimes tips. Students who eventually take full-time jobs may be amazed at how much of their gross income is taken out for income tax and premiums for items such as health, life and disability insurance. In addition, even after net pay is calculated, Value Added Tax (hereafter referred to as VAT) reduces the purchasing power of that amount even further.

Question 1: Which of the following is true about VAT?

The results indicate that 88.3% of the respondents came up with the correct answer to this question. The second-year group did best with 90.1% of students responding correctly. The first-year and third-year group performed equally at an 87.2% response rate. The correct answer is *d) It makes things more expensive for you to buy*. This is correct since one has to pay VAT in addition to the price of many things that are bought. The other alternatives are incorrect as VAT is levied on most goods purchased at 14% (a), SARS does not deduct VAT from one’s salary (b) and no VAT registered business has any way of knowing what a customer’s income is when that customer buys a product, goods or services (c).

Question 12: Don and Bill work together in the finance department of the same company and earn the same salary. Bill spends his free time taking work-related classes to improve his computer skills while Don spends his free time socializing with friends and working out at a fitness centre. After five years, what is likely to be true?

The results indicate that the question was answered correctly by 82.7% of the respondents. The need to acquire human capital in the form of education and skills no longer ends at age 18 when students matriculate or at age 22 when some students graduate from university. Over time, the mix of income sources is likely to change for people. To project future income with any degree of accuracy, young people must be aware of this mix and how it changes with the accumulation of wealth (Mandell, 2008).

Question 16: If you went to university and obtained a three-year degree, how much more money could you expect to earn than if you only had a matric certificate?

The results indicate that the question was answered correctly by 52.4% of the respondents. However 24.2% of the respondents overestimated their potential earnings believing that they would earn 10 times more than matric pupils. The third-year group was the most accurate about their potential earnings, with 59.1% estimating that they would make 70% more than those with just a high school education, which is correct. The third-year group is left with one more year of the academic programme before entering the job market and starting their SAICA accredited training programme. At this stage, the majority of the third-year students should have signed a training contract or are engaged in discussions to obtain one. It is therefore understandable that the third-year group was the most accurate about their potential earnings as they are probably aware of how much they would be earning at the start of their training programme.

Summary

The above discussion demonstrates that the majority of BAcc students have awareness and an understanding of: the sources of income; how a sales tax on purchases makes the goods and services more expensive; and the importance of increasing one's value through education and training in relevant skills. However on quantifying the value-add as a result of university education less students correctly estimated their potential earnings.

Mandell (2008) confirmed that students in general are more knowledgeable about income than the other categories of personal financial literacy, with the money management category indicating less knowledge. Thus, the awareness that the students have demonstrated to possess could be indicative of the skills that are necessary to make "the best personal financial decisions" (Mandell, 2008: 34). According to Botha (2014) making decisions is essential to money management.

4.3.2.2. Understanding of money management

The understanding of money management, was in paragraph 4.3.1 related to the 'financial knowledge and understanding' element of personal financial literacy similar to the understanding of income. The knowledge related to money management as a control and risk management tool is gained, to a greater extent, from the Financial Management module. At third-year level the students are taught how budgeting fits into the overall planning and control framework. The purpose of budgeting and the identification and description of the various stages in the budgeting process are taught. Students are also required to prepare functional budgets.

This paragraph provides an analysis of the students' responses to the questions asked with regards to money management. Questions 11, 14, and 23 are questions that test the students' understanding of risk management through insurance products. Table 4.2 provides an analysis of Questions 11, 14 and 23.

Table 4.2 Understanding of Money Management category - % of BAcc students choosing different responses per academic year and per all UJ students

	BAcc students			
	Academic year level			
	1st year	2nd year	3rd year	All students
Question 11: Many young people receive medical aid benefits through their parents. Which of the following statements is TRUE about medical aid coverage?				
You are covered by your parents' medical aid until you marry, regardless of your age	16.60%	14.50%	7.40%	14.40%
If your parents stop paying contributions, your medical aid coverage may stop, regardless of your age	**78.60%**	**78.00%**	**84.00%**	**79.20%**
Young people don't need medical aid coverage because they are so healthy.	2.00%	1.20%	4.30%	2.10%
You continue to be covered by your parents' medical aid as long as you live at home, regardless of your age	2.70%	6.20%	4.30%	4.30%
Question 23: If each of the following persons had the same amount of take home pay, who would need the greatest amount of life insurance?				
An elderly retired man, with a wife who is also retired.	34.70%	36.50%	43.00%	36.60%
A young married man without children.	9.80%	6.00%	7.00%	7.90%
A young single woman with two young children.	**52.60%**	**52.80%**	**45.30%**	**51.70%**
A young single woman without children.	2.80%	4.70%	4.70%	3.80%

	BAcc students			
	Academic year level			
	1st year	2nd year	3rd year	All students
Question 14: If you have caused an accident, which type of automobile insurance would cover damage to your own car?				
Comprehensive	49.00%	46.30%	46.70%	47.60%
3rd party only	14.30%	12.90%	20.70%	14.70%
3rd party, fire and theft	8.20%	7.50%	5.40%	7.50%
Collision	**28.60%**	**33.30%**	**27.20%**	**30.20%**

Source: SPSS output

Question 11: Many young people receive medical aid benefits through their parents. Which of the following statements is TRUE about medical aid coverage?

The correct answer is *b) If your parents stop paying contributions, your medical aid coverage may stop, regardless of your age*. Most medical aid benefits are provided through joining a medical aid via one's employer. For children, it is provided only if their parents are members of a medical aid. If the parents stop paying contributions due to becoming unemployed, the medical aid benefits cease immediately. *Table 4.2* indicates that the third-year group performed much better on this question than the first- and second- year group, with 84% answering the question correctly. Knowledge on the functioning of a medical aid would be gained from second-year onwards when the students are introduced to general deductions for personal income tax in Taxation. The students learn how to calculate normal tax as a requirement to prepare tax calculations and advising on tax matters in accordance with the legal requirements (Department of Accountancy, 2014). At third-year level the concepts are discussed/studied at an intermediate level and it may be assumed that the older students start to understand the realities of having to join a medical aid once they start working, explaining why the third-year group performed better.

Question 23: If each of the following persons had the same amount of take home pay, who would need the greatest amount of life insurance?

The correct answer is *c) A young single woman with two young children.* The primary purpose of life insurance is to provide income for those who are dependent upon a breadwinner upon his/her demise. The younger the dependent, the greater the total amount of money that would be needed to provide for that dependent until he or she is old enough to provide for him or herself. Therefore, young single parents tend to have the greatest need for life insurance because they are the sole source of money needed by young children for a long time. According to *Table 4.2*, 51.7% of respondents answered this question correctly. However, the third-year group who is assumed to have more years of education and thus assumed to be more knowledgeable were the least likely to know the correct answer compared to the first-year and second-year group.

Question 14: If you have caused an accident, which type of automobile insurance would cover damage to your own car?

The correct answer is *d) Collision*. Third party insurance covers you against damages that you have caused to others while comprehensive insurance cover includes events such as fire and theft of your car. *Table 4.2,* indicates that only 30.2% of the respondents answered this question correctly. The second-year group performed better than the first and third-year groups with the third-year group being the worst performers. The low correct response rate could be due to a lack of knowledge with regards to car insurance. It is possible that the majority of the respondents do not yet own or drive cars and therefore are not paying insurance. If they do drive cars, it is highly possible that their parents pay the insurance on their behalf. The wording of the question does leave the possibility of also selecting comprehensive insurance as an option as one's car would also be covered for collision. With that view point, 47.6% of the respondents could also be considered to have answered the question correctly. However the possibility still remains that the majority of the students are less knowledgeable about car insurance for the reasons already suggested.

Summary

The understanding of money management as assessed in the Jump$tart survey includes the topics of Financial Goals and Plans as well as Insurance. The questions related the Financial Goals and Plans topic were specific to the US 401K plans and thus not adapted to the SA environment nor included in this current questionnaire. Therefore, the understanding of money management has only been tested from the knowledge and understanding of risk management (insurance) products, i.e. medical aid, life cover and car insurance. The above discussion highlighted the respondents' knowledge of insurance products. A high number of the respondents are knowledgeable about the functioning of medical aids, in particular what would happen if one stopped paying the premiums. However, the results also indicate that the students are less knowledgeable about life cover and car insurance, which is in line with Mandell's (2008) findings that students' performance, in the categories other than understanding of income, declined. A study conducted on Malaysian students found that students in private colleges, freshmen, and students who never discussed finances with their parents during their childhood have less financial knowledge (Sabri, 2011). The contributing factor to the low levels of understanding of how to manage money could therefore be the lack of discussions about finances as identified by Sabri (2011).

4.3.2.3. Understanding of savings and investment

The understanding of savings and investments was discussed in paragraph 4.3.1 with regards to how it related to the 'financial skills and competence' and the 'financial responsibility' elements of financial literacy. The concepts related to savings and investment is taught to the students under the capital budgeting topic, as discussed in paragraph 4.3.2.2. Additionally, the concepts of savings and investment are taught at second-year and third-year level when the "Investment" and "Financing" side of short term assets and liabilities as well as the terms of 'Risk and Return' and how they affect financing requirements are covered (Department of Accountancy, 2010).

This paragraph provides an analysis of the students' responses to the questions asked with regard to savings and investment. In particular, Questions 2, 5, 6, 7, 10, 20 and 22 focused on topics such as budgeting to save; short and long term saving and investment strategies; risk, return and liquidity; and the impact of taxes and inflation on savings and investment decisions. Table 4.3 provides an analysis of Questions 2, 5, 6, 7, 10, 20 and 22.

Table 4.3 Savings and Investment category: % of students choosing different responses per academic year and per all UJ students

	BAcc students			
	Academic year level			All students
	1st year	2nd year	3rd year	
Question 2: Rebecca has saved R30 000 for her university expenses by working part-time. Her plan is to start university next year and she needs all of the money she saved. Which of the following is the safest place for her university money?				
Locked in her closet at home	0.70%	0.80%	0.00%	0.60%
Shares.	1.00%	3.70%	1.10%	2.10%
Corporate bonds	2.70%	5.30%	7.40%	4.40%
A bank savings account	**95.60%**	**90.10%**	**91.50%**	**92.90%**
Question 6: David just found a job with a take-home salary of R4 000 per month. He must pay R1 800 for rent and R300 for groceries each month. He also spends R500 per month on transportation. If he budgets R200 each month for clothing, R400 for restaurants and R500 for everything else, how long will it take him to accumulate savings of R1 200.				
3 months	6.10%	6.30%	3.20%	5.70%
4 months	**70.30%**	**72.90%**	**73.40%**	**71.80%**
1 month.	7.20%	10.40%	8.50%	8.60%
2 months	16.40%	10.40%	14.90%	13.90%

	BAcc students			
	Academic year level			All students
	1st year	2nd year	3rd year	
Question 22: The South African government has introduced an initiative to encourage a savings culture, a non-retirement savings that helps to maximize tax relief. Which of the following is that initiative?				
An RSA Savings Bond.	22.70%	17.70%	18.50%	20.20%
A certificate of deposit at the bank.	5.60%	4.20%	3.30%	4.70%
A bond issued by one of the provincial governments.	7.30%	3.40%	9.80%	6.20%
An RSA Treasury Bond.	23.10%	11.00%	7.60%	16.10%
A Tax Free Savings Account	**41.30%**	**63.70%**	**60.90%**	**52.80%**
Question 10: Rob and Mary are the same age. At age 25 Mary began saving R4 000 a year while Rob saved nothing. At age 50, Rob realized that he needed money for retirement and started saving R8 000 per year while Mary kept saving her R4 000. Now they are both 75 years old. Who has the most money in his or her retirement account?				
They would each have the same amount because they put away exactly the same	39.20%	35.30%	28.70%	36.10%
Rob, because he saved more each year	9.10%	4.60%	9.60%	7.40%
Mary, because she has put away more money	5.10%	6.60%	2.10%	5.20%
Mary, because her money has grown for a longer time at compound interest	**46.60%**	**53.50%**	**59.60%**	**51.20%**
Question 5: Many people put aside money to take care of unexpected expenses. If Juan and Elva have money put aside for emergencies, in which of the following forms would it be of LEAST benefit to them if they needed it right away?				
Invested in a down payment on the house	**40.50%**	**45.50%**	**45.20%**	**43.10%**
Cheque account	8.10%	7.90%	7.50%	7.90%
Shares.	30.10%	28.10%	30.10%	29.30%
Savings account	21.30%	18.60%	17.20%	19.70%
Question 20: If you had a savings account at a bank, which of the following would be correct concerning the interest that you would earn on this account?				
Earnings from savings account interest may not be taxed.	67.80%	47.90%	36.00%	55.50%
Income tax may be charged on the interest if your income is high enough	**18.30%**	**39.10%**	**50.60%**	**31.00%**
VAT may be charged on the interest that you earn.	9.30%	9.20%	11.20%	9.60%
You cannot earn interest until you pass your 18th birthday.	4.50%	3.80%	2.20%	3.90%
Question 7: Sara and Joshua just had a baby. They received money as baby gifts and want to put it away for the baby's education. Which of the following tends to have the highest growth over periods of time as long as 18 years?				
A cheque account	2.70%	2.10%	1.10%	2.20%

	BAcc students			
	Academic year level			All students
	1st year	2nd year	3rd year	
Shares	**22.20%**	**34.60%**	**26.60%**	**27.60%**
A SA Govt. savings bond.	45.10%	46.30%	47.90%	46.00%
A savings account	30.00%	17.10%	24.50%	24.20%

Source: SPSS output

Question 2: Rebecca has saved R30 000 for her university expenses by working part-time. Her plan is to start university next year and she needs all of the money she saved. Which of the following is the safest place for her university money?

The correct answer is *d) a bank savings account.* Money locked in a cupboard at home may be stolen. Shares and corporate bonds tend to fluctuate in value and may be worth less than R30 000 at the time Rebecca needs it. *Table 4.3*, indicates that 92.9% of the respondents answered this question correctly. It would appear that the importance of liquidity is covered in a way that makes it important to the lives and current plans of the respondents. It is however surprising that the first-year group has the highest percentage of correct answers when compared to the second-year and the third-year group. The expectation is that the third-year group would have more experience with savings.

Question 6: David just found a job with a take-home salary of R4 000 per month. He must pay R1 800 for rent and R300 for groceries each month. He also spends R500 per month on transportation. If he budgets R200 each month for clothing, R400 for restaurants and R500 for everything else, how long will it take him to accumulate savings of R1 200.

The correct answer is *b) 4 months*. David takes home R4 000 per month. He spends R1 800 (rent) plus R300 (groceries) plus R500 (transportation) plus R200 (clothing) plus R400 (restaurants) plus R500 (everything else) adding up to a total of R3 700; R4 000 in income minus R3 700 in expenses leaves R300 a month for savings. Therefore, it will take him 4 months to save R1 200. This is an easy question requiring only simple arithmetic to arrive at the right answer. *Table 4.3* indicates that the third-year group performed better on this simple question than the first- and second-year group, with 73.4% of them answering this question correctly. Nevertheless, 28.2% of all the respondents managed to get it wrong which is concerning.

Question 22: The South African government has introduced an initiative to encourage a savings culture, a non-retirement savings that helps to maximize tax relief. Which of the following is that initiative?

The correct answer is *e) A Tax Free Savings Account. Table 4.3* indicates that only 52.8% of the respondents answered the question correctly with the second-year group performing best with 63.7% of the respondents. While the third-year group (60.9%) is expected to understand government bonds, they should have been able to rule out RSA Savings Bond, RSA Treasury Bond and a bond issued by one of the provincial governments. This would leave a Tax Free Savings account as the only possible correct answer. Students should know about real world events and that the returns on the instrument are tax free.

Question 10: Rob and Mary are the same age. At age 25 Mary began saving R4 000 a year while Rob saved nothing. At age 50, Rob realized that he needed money for retirement and started saving R8 000 per year while Mary kept saving her R4 000. Now they are both 75 years old. Who has the most money in his or her retirement account?

The correct answer is *d) Mary, because her money has grown for a longer time at compound interest. Table 4.3* indicates that a total of 51.2% of the respondents answered this question correctly. The second- and third-year groups performed better than the first-year group with 59.6% of third-year group answering correctly. Students learn about the time-value of money in their first year and are expected to apply it from that year forward. It may be an area warranting further attention in the teaching and learning of second-year and third-year students.

Question 5: Many people put aside money to take care of unexpected expenses. If Juan and Elva have money put aside for emergencies, in which of the following forms would it be of LEAST benefit to them if they needed it right away?

The correct answer is money *a) Invested in a down payment on the house.* It is important to have "liquid" assets that are available at any time to meet emergencies. Money invested in a down payment on a house is not liquid since it takes time to sell a house in order to get the money. In addition, while they may be able to take out some of the down payment in the form of a home equity loan, this could take some time and would not give them access to all of the funds they had invested in their house. *Table 4.3* indicates that only 43.1% of the respondents got this question correct. However, this did not increase with the respondents' number of years at university and expected education. The concepts of risk and return, liquidity and financial instruments are taught in Financial Management, however, this low response of 43.1% suggest that this knowledge does not filter through to the students' real-world experience and this non-filtering is not addressed in the academic programme.

Question 20: If you had a savings account at a bank, which of the following would be correct concerning the interest that you would earn on this account?

The correct answer is *b) Income tax may be charged on the interest if your income is high enough*. Interest from investments, including money in the bank, is taxable just like wages, salaries, and other types of income. *Table 4.3* indicates that only 31.0% of the respondents answered correctly. The majority, 55.5%, thought that earnings from savings account interest may not be taxed. This was one question in which respondents having had Taxation at second and third year performed better than the average (31%). It was surprising that 36% of the third-year group thought that earnings from savings account interest may not be taxed. Similar to Question 5 it is concerning that concepts on savings and investment learned do not filter to the students' real-world experience.

Question 7: Sara and Joshua just had a baby. They received money as baby gifts and want to put it away for the baby's education. Which of the following tends to have the highest growth over periods of time as long as 18 years?

The correct answer is *b) Shares. Table 4.3* indicates that only 27.6% of the respondents answered the question correctly, with the second-year group obtaining the highest success rate at 34.6%. The third-year group, once again, did not perform better than the other groups. Only 27.6% of the respondents felt that shares would grow faster than a cheque account (2.2%), SA Government savings bonds (46.0%) or savings accounts (24.2%) over an 18 year holding period. This response is a concern and may have severe implications for the retirement of today's young people. The respondents as university students will soon be required to make asset allocations of their defined contribution retirement savings plans once they are employed.

Summary

Based on the questions asked to test the savings and investment knowledge of students, one could assume that for the majority of the students this knowledge would have been developed as a result of exposure to the savings and investment concepts in the module content as opposed to development from exposure at home. The students demonstrated a high level of knowledge when it comes to the arithmetic calculation of 'budgeting to save' and 'risk, return and liquidity'. However, on analysing their understanding of short and long term saving and investment strategies it appears that the time value of money is a concept that warrants further attention. Only a little more than half of the students (51.2%) appeared to possess on understanding of the time value of money concept. The questions on risk, return and liquidity that involved articulation into a real life context of one's knowledge were answered poorly. This result permeated to the questions on the impact of taxes and inflation on savings and investment.

The students are taught the concepts of savings and investment but these findings indicate that students do not understand what the implications are in real life. They can't pull those concepts through to real-world scenarios. This raises concern about the students' abilities to make saving and investment decisions that would better their economic position in the short and long term. These results further indicate that the students' savings and investment futures are probably doubtful and bring to question the students' readiness to some of life's challenges concerning spending and debt.

4.3.2.4. Understanding of spending and debt

The understanding of spending and debt and their relationship to the 'financial skills and competence' and to the 'financial responsibility' elements of financial literacy was discussed in paragraph 4.3.1. The concepts related specifically to spending and debt are taught at second-year and third-year level as part of the "Investment" and "Financing" side of short term assets and liabilities as well as the terms of 'Risk and Return' and how they affect financing requirements are covered (Department of Accountancy, 2010).

This paragraph provides an analysis of the students' responses to the questions asked with regard to spending and debt. Questions 3, 4, 8, 13, 15, 17, 18, 19 and 21 tested personal financial knowledge regarding transaction instruments, the price of credit, credit history and credit overextension. The questions were directed primarily at the utilisation of debt rather than general consumer knowledge. Table 4.4 provides an analysis of Questions 3, 4, 8, 13, 15, 17, 18, 19 and 21.

Table 4.4 Spending and Debt category: % of students choosing different responses per academic year and per all UJ students

	BAcc students			
	Academic year level			
	1st year	2nd year	3rd year	All students
Question 13: Which of the following statements is NOT correct about most ATM (Automated Teller Machine) cards?				
You can generally get cash 24 hours-a-day	4.00%	2.90%	3.20%	3.50%
You can generally obtain information concerning your bank balance at an ATM machine	4.70%	5.00%	2.20%	4.40%
You can get cash anywhere in the world with no fee.	**86.90%**	**85.90%**	**88.20%**	**86.70%**
You must have a bank account to have an ATM Card.	4.40%	6.20%	6.50%	5.40%
Question 17: Which of the following instruments is NOT typically associated with spending?				
Debit card	6.10%	10.70%	6.50%	7.90%
Deposit slip	**85.50%**	**86.00%**	**88.00%**	**86.10%**

	BAcc students			
	Academic year level			All students
	1st year	2nd year	3rd year	
Cash.	3.00%	2.10%	4.30%	2.80%
Credit card.	5.40%	1.20%	1.10%	3.20%
Question 21: If you are behind on your debt payments and go to a responsible debt counselling service organisation such as Debt Counselling South Africa, what help can they give you?				
They can cancel and cut up all of your credit cards without your permission.	5.80%	5.40%	6.50%	5.80%
They can get the government to apply your income taxes to pay off your debts.	10.70%	6.20%	4.30%	8.00%
They can work with those who loaned you money to set up a payment schedule that you can meet.	**80.80%**	**85.90%**	**83.70%**	**83.20%**
They can force those who loaned you money to forgive all your debts.	2.70%	2.50%	5.40%	3.00%
Question 19: Which of the following statements is TRUE?				
Banks and other lenders share the credit history	**67.10%**	**72.90%**	**71.70%**	**70.00%**
People have so many loans it is very unlikely that one bank will know your history with another bank	12.70%	10.80%	9.80%	11.50%
Your bad loan payment record with one bank will not be considered if you apply to another bank for a loan.	9.20%	8.80%	6.50%	8.70%
If you missed a payment more than 2 years ago, it cannot be considered in a loan decision	11.00%	7.50%	12.00%	9.80%
Question 3: Under which of the following circumstances would it be financially beneficial to you to borrow money to buy something now and repay it with future income?				
When you need to buy a car to get a much better paying job	**69.80%**	**68.80%**	**72.50%**	**69.80%**
When you really need a week vacation	1.00%	4.20%	0.00%	2.10%
When some clothes you like go on sale	10.70%	6.80%	7.70%	8.70%
When the interest on the loan is greater than the interest you get on your savings	18.60%	20.30%	19.80%	19.40%
Question 18: Which of the following credit card users is likely to pay the GREATEST rand amount in finance charges per year, if they all spend the same amount per year on their cards?				
Jessica, who pays at least the minimum amount each month and more, when she has the money.	13.70%	12.10%	10.00%	12.60%
Vera, who generally pays off her credit card in full but, occasionally, will pay the minimum when she is short of cash.	15.10%	13.80%	7.80%	13.50%
Megan, who always pays off her credit card statement in full shortly after she receives it.	15.80%	16.70%	20.00%	16.70%
Erin, who only pays the minimum amount each month.	**55.30%**	**57.50%**	**62.20%**	**57.20%**
Question 15: Scott and Eric are young men. Each has a good credit history. They work at the same company and make approximately the same salary. Scott has borrowed R12 000 to take a foreign vacation. Eric has borrowed R12 000 to buy a car. Who is likely to pay the lowest finance charge?				
Eric will pay less because the car is collateral for the loan.	**55.10%**	**54.10%**	**57.80%**	**55.10%**
They will both pay the same because the rate is set by law.	19.90%	23.10%	17.80%	20.80%

	BAcc students			
	Academic year level			All students
	1st year	2nd year	3rd year	
Scott will pay less because people who travel overseas are better risks.	9.60%	7.90%	10.00%	9.00%
They will both pay the same because they have almost identical financial backgrounds.	15.40%	14.90%	14.40%	15.10%
Question 8: Barbara has just applied for a credit card. She is an 18-year-old high school graduate with few valuable possessions and no credit history. If Barbara is granted a credit card, which of the following is the most likely way that the credit card company will reduce its risk?				
It will make Barbara's parents pledge their home to repay Barbara's credit card debt.	17.00%	21.70%	4.30%	16.90%
It will require Barbara to have both parents co-sign for the card.	25.20%	24.20%	24.50%	24.70%
It will charge Barbara twice the finance charge rate it charges older cardholders.	7.10%	5.40%	5.30%	6.20%
It will start Barbara out with a small line of credit to see how she handles the account.	**50.70%**	**48.80%**	**66.00%**	**52.20%**
Question 4: Which of the following statements best describes your right to check your credit history for accuracy?				
Your credit record can be checked once a year for free	**23.50%**	**48.30%**	**27.50%**	**33.70%**
You cannot see your credit record	3.90%	1.70%	2.20%	2.80%
All credit records are the property of the SA Government and access is only available to the SSA	23.50%	14.70%	23.10%	20.00%
You can only check your record for free if you are turned down for credit based on a credit report.	49.10%	35.30%	47.30%	43.50%

Source: SPSS output

Question 13: Which of the following statements is NOT correct about most ATM (Automated Teller Machine) cards?

The right answer is *c)* as it is not correct that *You can get cash anywhere in the world with no fee.* These days many banks charge a fee to withdraw money from an ATM. In fact, it is common to pay a fee both to the bank that owns the ATM machine (if it is not your bank) and to the bank where you have your account. *Table 4.4* indicates that 86.7% of the respondents answered this question correctly. Fees are being charged on most ATM transactions, particularly if the machine used is not part of the user's own bank. This would imply that respondents who had ATM cards (presumably most students) would be more likely to answer the question correctly, thus leading to the high percentage of correct answers.

Question 17: Which of the following instruments is NOT typically associated with spending?

The correct answer is *b) Deposit slip*. When one makes a deposit, assuming to an investment account, this is a type of savings account provided one is depositing the money for a period of time. Legally, if you deposit money in a term deposit account, one would not have the right to get the money until the term expires. Some banks, however, may allow one to withdraw funds early but generally at an early withdrawal penalty fee. Therefore, a deposit slip for an investment account is highly illiquid and is not at all associated with spending. This was a simple question and *Table 4.4* indicates that 86.1% of the respondents answered the question correctly.

Question 21: If you are behind on your debt payments and go to a responsible debt counselling service organisation such as Debt Counselling South Africa, what help can they give you?

The correct answer is *c) They can work with those who loaned you money to set up a new payment schedule that you can meet.* Responsible debt counselling services can work with individuals and those to whom the individuals owe money to on a strictly voluntary basis. Lenders are often willing to work with debt counselling services to set up a payment plan in terms of which the debtor has to pay off his/her debt over a longer period of time, provided that the individual is willing to cooperate.

Table 4.2 indicates that 83.2% of the respondents correctly answered that a responsible counselling service could work with those who loaned money to set up a new payment schedule. This could indicate that the students potentially know what to do when things go wrong.

Question 19: Which of the following statements is TRUE?

The correct answer is *a) banks and other lenders share the credit history of their borrowers with each other through credit reporting services and are likely to know of any loan payments that you have missed. Table 4.4* indicates that overall 70% of the respondents were aware of the fact that banks share credit information. However, the second-year group appeared to be more aware than the other groups.

Question 3: Under which of the following circumstances would it be financially beneficial to you to borrow money to buy something now and repay it with future income?

The correct answer is *a) When you need to buy a car to get a much better paying job.* If you must have a car to get to a high paying job, the purchase of the car is an investment that will yield a high return. As such, it is definitely financially beneficial provided that the job has been secured and one doesn't buy a far more expensive car than needed for basic transportation. Answers b) and c) relate to consumption and would rarely be considered investments on which the payment of interest would be financially beneficial. *Table 4.4* indicates that 69.8% of the respondents answered this question correctly with the third-year group (72.5%) performing better than the other groups. This result is indicative of an earlier discussion that third-year students are a year away from starting their training programme and as a result their awareness of issues that will have a direct impact on them is amplified.

Question 18: Which of the following credit card users is likely to pay the GREATEST rand amount in finance charges per year, if they all spend the same amount per year on their cards?

The correct answer is *d) Erin, who only pays the minimum amount each month.* Finance charges must be paid on the amount of a credit card balance that is not paid off by the due date. Therefore, people who pay off the smallest possible amount of their balance and subsequently allow the greatest amount to accumulate as debt, end up paying the greatest finance charge. *Table 4.4* indicates that 57.2% of the respondents answered the question correctly. This is no surprise as 433 or 66% of the respondents do not use credit cards, including store cards. The third-year group, who probably has more experience with these cards, did better than the other groups. Nevertheless, it is to be expected that students studying BAcc should be able to understand the impact of low payments on an interest bearing obligation.

Question 15: Scott and Eric are young men. Each has a good credit history. They work at the same company and make approximately the same salary. Scott has borrowed R12 000 to take a foreign vacation. Eric has borrowed R12 000 to buy a car. Who is likely to pay the lowest finance charge?

The correct answer is *a) Eric will pay less because the car is collateral for the loan*. Banks tend to charge less for a loan if it is used to buy something that can be taken back if the loan is not repaid. By selling this “collateral” the bank can recover at least some of the money that was loaned. Scott's vacation may have been great, but there is nothing left for the bank to recover if he is unable to make payments on the loan. In Eric’s case there is a car to repossess, making the loan safer and banks could charge less interest for safe loans.

Table 4.4 indicates that slightly more than half (55.1%) of the respondents answered this question correctly with the third-year group comprising 57.8% of the total group. This is an indication once again that the students do not always understand the concepts that they are taught. This question addresses an important concept because it reveals the extent to which students have an intuitive understanding of how credit markets work and which type of loans are likely to cost less (Mandell, 2008). It is however, disturbing that 20.8% indicated that both would pay the same because the rate is set by law. An additional 15.1% indicated that they would pay the same because they have similar financial backgrounds. Finally, 9% said that Scott would pay less because people who travel overseas are better risks.

Question 8: Barbara has just applied for a credit card. She is an 18-year-old high school graduate with few valuable possessions and no credit history. If Barbara is granted a credit card, which of the following is the most likely way that the credit card company will reduce its risk?

The correct answer is *d) It will start Barbara out with a small line of credit to see how she handles the account.* Young people with no credit history and without valuable assets that can be pledged as collateral to secure a loan tend to be unknown credit risks for lenders, yet credit or store card issuers want to obtain the business of these young people. The way this tends to be done is to extend a relatively small amount of credit to see how well the young person manages it. If payments are made on a timely basis, the credit or store card issuer will tend to increase the amount of money that can be borrowed. *Table 4.4* indicates that 52.2% of the respondents answered the question correctly. The third-year group performed exceedingly better than the other groups, with 66.0%. As the students get older, add to their education and have experience with credit or store cards, one would expect that their understanding of the credit system would improve. Further, the 52.2% could relate to the 334 or 51.2% of the respondents who indicated that they have a credit card by answering the question 'when did you get your first credit card or store card?'

Question 4: Which of the following statements best describes your right to check your credit history for accuracy?

The correct answer is *a) Your credit record can be checked once a year for free. Table 4.4* indicates that only 33.7% of the respondents answered the question correctly. However, the proportion answering correctly did not correlate to the year of study. Instead, the second-year group performed much better than the other groups. The students may have performed poorly because they haven't been in a position that required them to check their credit history.

Summary

The questions asked tested mainly the students' financial knowledge and understanding regarding transaction instruments, the price of credit, credit history and credit overextension. The students appear to be well versed with transaction products and demonstrate a high level of awareness in this regard with in excess of 86 per cent of all the students answering the questions correctly. It is encouraging that more than 83 per cent of the students indicated an understanding of the options available to them should they ever find themselves overextended on credit. As well, their knowledge (70%) that banks and other lenders share the consumers' credit history is further encouragement of their awareness of the credit system.

The questions dedicated to the 'price of credit' and 'spending now versus later' did not yield as encouraging a result. No more than 57.20 per cent of the students understood that a credit card user who only pays a minimum amount each month would pay the greatest rand amount in finance charges per year compared to other credit card users who spent the same amount per year on their cards but paid off more of the outstanding amount. Furthermore, only 55.10 per cent of the students understand that money borrowed to buy a car, which serves as collateral, attracts the lowest finance charge compared to money borrowed for a foreign vacation. This brings to question the ability to apply knowledge to a practical situation. Students performed well in problem solving questions that involved a process of calculating the correct financial answer, however when it comes to spending and debt in a personal context, as observed in the discussions above, the behaviour that is evident is a cause for concern.

4.3.3. Summary of categories of personal financial literacy

The 23 questions, contained in the questionnaire as a test of personal financial literacy, were divided into four categories: Income; Money Management; Savings and Investment; and Spending and Debt. Overall, based on the category answered most correctly (See Appendix D), the students performed best in Income (79.1%), followed by Spending and Debt (64.6%), and Saving and Investment (52.1%). At the bottom, with 51.9 per cent correct responses were Money Management. The questions on money management focused only on the risk management understanding of insurance products.

In paragraph 2.3.5 the academic education programme (BAcc degree programme) that the students studying to become Chartered Accountants undertake was discussed. The discussion was then followed by an introduction to the BAcc degree programme review that the UJ Department of Accountancy embarked on during 2010, following the development and approval of the Competency Framework by SAICA. The programme review allowed for the detailed analysis of the main modules (core accounting disciplines) underpinning the Chartered Accountancy qualification at university level. The programme review (mapping exercise) demonstrated at what academic year level the pervasive qualities and skills were addressed; at what level of proficiency could the tasks, in relation to the specific pervasive qualities and skills, be expected to have been accomplished during the academic programme; how, in terms of module content, the pervasive qualities and skills were addressed; and how the pervasive qualities and skills were assessed during the academic programme. To be a

SAICA accredited academic programme, it was important for the BAcc degree programme to demonstrate that the prospective Chartered Accountant will acquire and develop the required competencies. The student would then acquire the specific technical knowledge and pervasive skills, develop an understanding of where and why the knowledge is to be applied and have experience of executing tasks (practical application) (SAICA, 2014a).

Having gained an in-depth knowledge and understanding of the Competency Framework and the BAcc curriculum (paragraph 2.3), the interpretation of the results of the test of personal financial literacy (the questionnaire) provided interesting considerations for the author. One could consider what it is that students learn in their modules and to what extent that influences or impacts the students' development of personal financial literacy.

Students performed best in the income category (79.1%) which determined the students' understanding of the sources of income, the importance of education and skills and the relationship between the two. The Chartered Accountancy profession is well known for the high salaries it commands. It could reasonably be expected that the students studying to become Chartered Accountants are highly motivated to succeed and therefore understand the investment required in education and skills to earn such high income. Mandell and Schmid Klein (2007), in a paper that examined the hypothesis that low financial literacy scores among young adults was related to a lack of motivation, found that the level of aspiration was one of the most important determinants of financial literacy. Furthermore, students committed to a four-year college, a professional job or a higher starting salary consistently outscored students who were less highly motivated (Mandell & Schmid Klein, 2007).

The spending and debt category tested personal financial knowledge regarding transaction products, the price of credit, credit history and credit overextension. Although this category was the second best performing (64.6%) amongst the students, it still raised a concern in that the students' ability to apply technical knowledge to a practical personal situation may be lacking. The modules that would best develop the technical knowledge and understanding of expenses and debt is Accounting and Financial Management. In these modules one may assume that the "big picture" of assets, liabilities, equity, income and expenses, as described in the BAcc programme review, is taught from a business context and therefore developed.

The savings and investments category as well as the money management category had the worst performance respectively. It appears that the application of the concept of TVM as it applies to short-term and long-term savings and investments has not been grasped by the students within a personal context. It is therefore important that further attention is given to the application of TVM in order to attempt to reduce the risks associated with the doubtful savings and investment futures of our students. Money management is lacking and from a review of the curriculum, it has been identified that the concepts of personal insurance (medical aid, life cover and car insurance) as risk management products are not covered. The concepts of risk and return and the relationship between the two elements as taught has allowed the students to make a link with TVM and draw an understanding only as it relates to arithmetic calculations.

4.4. PERSONAL FINANCIAL LITERACY RESULTS

In order to meet the third and fourth research objectives, namely:

- to compare the overall mean personal financial literacy score for all the students to an international passing grade used in a study as a benchmark to determine whether the students are more or less financially literate and
- to examine whether the students' mean personal financial literacy score per academic year group increases as the students' education progresses,

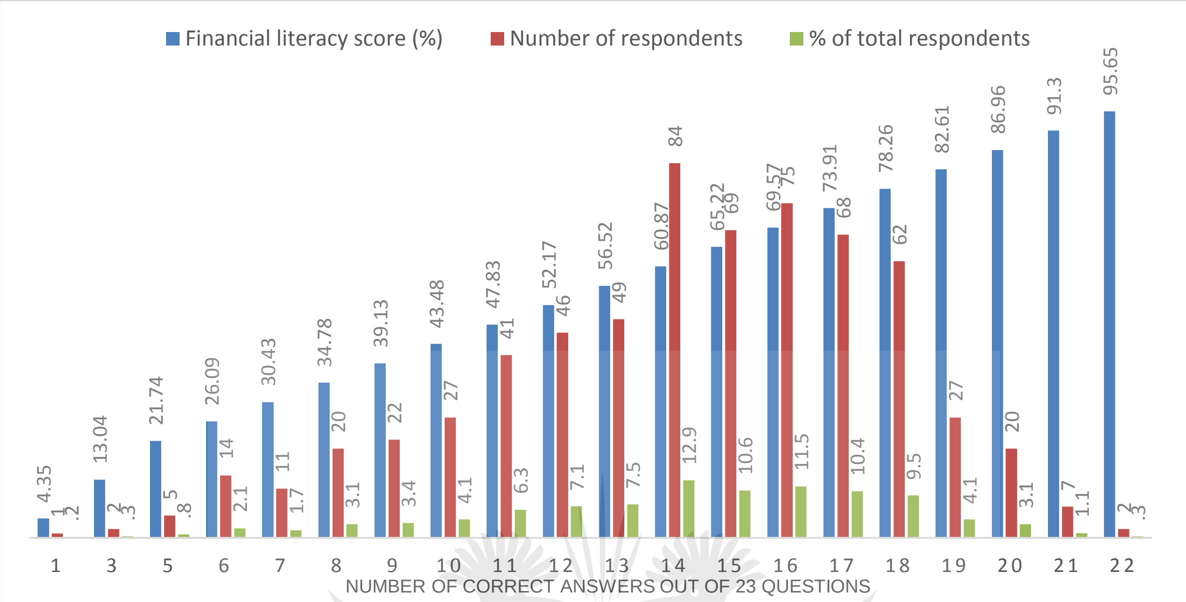
the following paragraphs will present the personal financial literacy results generated from the the primary data obtained via the questionnaires. The statistical and comparative data analysis of the mean personal financial literacy score of the total BAcc degree student complement and that of each academic year sub-group was performed using the SPSS software.

4.4.1. Performance: Overall

The mean personal financial literacy score for each respondent was calculated. The sum of all the respondents' scores for the entire questionnaire was then divided by the total number of respondents (652) to get the mean personal financial literacy score for all BAcc degree students. The test of financial literacy consisted of 23 questions, Part A of the questionnaire. On average, the respondents answered 14 questions correctly and obtained an average score of 61.7 per cent.

The 2008 Jump$tart survey used a 60 per cent score as the passing grade in the financial literacy survey on college students (Mandell, 2008). Since the 2008 Jump$tart survey forms the basis to measure personal financial literacy in the current research report, this score should be used as a benchmark for each respondent analysed. Therefore, the respondents who achieved a score less than this benchmark (60%) could be considered to be less financially literate than the average sample and the respondents who achieved a score greater than the benchmark (60%) could be considered to be more financially literate than the average sample.

Figure 4.1: Personal financial literacy scores achieved by the BAcc degree respondents



Source: SPSS output

Figure 4.1 provides the personal financial literacy score (%) obtained by the respondents, the number of respondents per score and the percentage of total respondents who got the answer right. The horizontal axis represents the number of correct answers achieved out of the 23 questions that the test of financial literacy comprises of.

The bulk of the sample, 84 or 12.9 per cent of the respondents, answered 14 questions correctly with an average score of 60.87 per cent. Only two or 0.3 per cent of the respondents answered 22 questions correctly. It is worth noting that one or 0.2 per cent of the respondents answered only one question correctly. None of the respondents obtained a score of 23 correct answers.

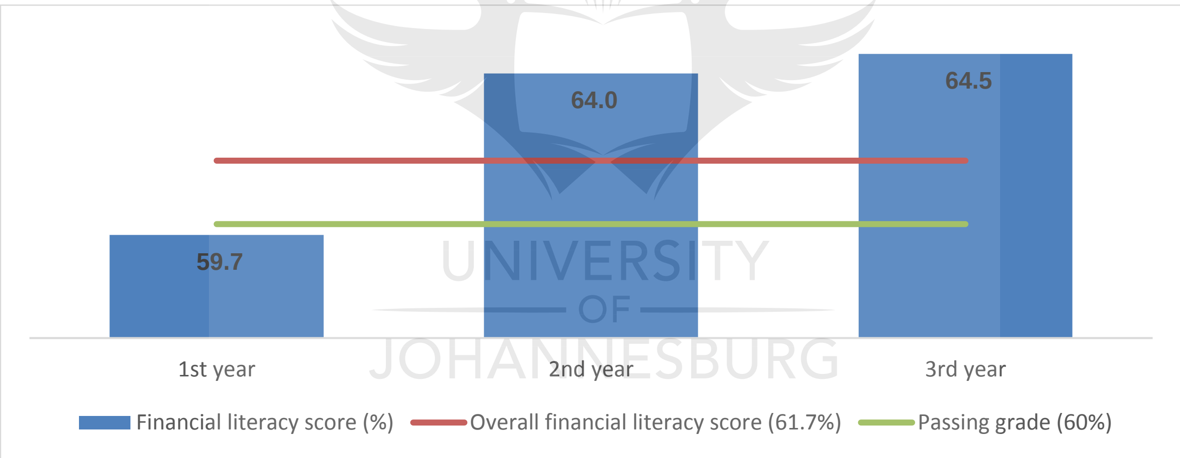
It is encouraging that the average score, 61.7 per cent, is more than the 60 per cent passing grade used by the Jump$tart survey to be considered financially literate and only lower than the average score of “62.2 per cent” (Mandell, 2008) obtained by the college students in the same survey, by 0.5 per cent. A total of 414 or 63.5 per cent of the respondents passed the test of financial literacy with a score of 60.87 per cent and above. Therefore, 414 respondents are considered to be financially literate. It is however a concern that 238 or 36.5 per cent of the respondents are considered to be less financially literate with a score of 56.52 per cent and below.

The following paragraphs provide a descriptive analysis of the personal financial literacy scores of the respondents according to their academic year of study.

4.4.2. Performance: Per academic year

Mandell (2008) found that the 2008 Jump$tart survey rendered encouraging results by showing an increasing trend in financial literacy scores of college students, with the college seniors obtaining a maximum average score of 64.8 per cent. This paragraph will discuss and present the findings per academic year of study of the BAcc degree students to determine whether the score increases as the students' education progresses. The total number of respondents was 652, spread across the different academic year groups. The sample consisted of 297 (47%) first-years, 243 (38%) second-years, 94 (15%) third-years and 18 respondents who preferred not to disclose their academic year.

Figure 4.2: Personal financial literacy results of BAcc degree students per academic year group



Source: SPSS output

Figure 4.2 provides the mean personal financial literacy score obtained by the respondents per academic year of study. The first-year group obtained a 59.7 per cent score which is just below than the 60 per cent passing grade to be considered financially literate. The second-year group obtained a 64 per cent score which is above the overall average (61.7%) and above the passing grade (60%). The second-year group is therefore considered to be financially literate. The third-year group can also be considered to be financially literate with a 64.5 per cent score which is above the passing grade and above the overall average.

In meeting the fourth research objective, namely to examine whether the students' mean personal financial literacy score per academic year group increases as the students' education progresses, the following hypothesis has been stated:

> **H_0:** The mean personal financial literacy score is statistically equal across the three academic year groups.
> **H_1:** At least one mean personal financial literacy score is not statistically equal across the three academic year groups.

To establish whether the mean personal financial literacy score is statistically equal across the three academic year groups, the hypothesis was tested through the ANOVA test and the results are tabled in Table 4.1. A 5 per cent level of significance was used.

The average financial literacy score per group is shown in Table 4.1.

Table 4.5: Group statistics – BAcc degree descriptive statistics per academic year group

Academic year	N	Mean	Std. Deviation	Std. Error
1st year	297	59.713	14.111	0.819
2nd year	243	63.965	16.472	1.057
3rd year	94	64.477	15.910	1.641
Total	634	62.049	15.456	0.614

Source: SPSS output

Table 4.1 indicated that respondents in the second academic year (63.96%) scored more in the test of financial literacy than the respondents in the first academic year (59.71%). In turn, the third-year respondents (64.48%) scored more than the second-year respondents (63.96%).

To test whether the variance in the financial literacy scores is the same for the three academic year sub-groups, the Levene test for homogeneity (equality) of variances was used (Appendix C.5). The Levene test tests the null hyphothesis that the variances in the means of the personal financial literacy scores between the academic year groups is equal. The test gave a significance value (Sig./p-value) of 0.125 (typically, $\alpha = 0.05$). As the value is greater than 0.05, the null hyphothesis cannot be rejected and the variances are equal.

The ANOVA test indicates whether all group means are equal and is provided in Table 4.2.

Table 4.6: ANOVA test

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3066.900	2	1533.450	6.531	0.002
Within Groups	148149.310	631	234.785		
Total	151216.211	633			

Source: SPSS output

Table 4.2, indicates a Sig. value (p-value) of less than 0.05. The rule is that if the probability value is greater than 0.05 then the null hypothesis (**H_0**) is accepted and the alternative hypothesis (**H_1**) rejected. Furthermore, the F- test suggests that the bigger the F value is, the more the probability value is closer to 0.05. The Sig. value of 0.002 indicates that the null hypothesis can be rejected. This indicates that the mean personal financial literacy score between groups is statistically not equal across the three academic year groups. However, it is unclear which groups differ. To correct for this multiple comparison, post-hoc test, Scheffe, was perfomed to identify which group was different from another group.

Table 4.7: Post-hoc test: Multiple Comparison

Multiple Comparisons			**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Scheffe	1st year	2nd year	-4.252*	1.325	0.006
		3rd year	-4.764*	1.813	0.032
	2nd year	1st year	4.252*	1.325	0.006
		3rd year	-0.512	1.861	0.963
	3rd year	1st year	4.764*	1.813	0.032
		2nd year	0.512	1.861	0.963

Source: SPSS output

Table 4.3 indicates where the differences among the groups occurred, by providing the statistical significance between each pair of groups. In the results presented above (asterisks), the first-year group and second-year group are statistically not equal as the p-value is less than 0.05, at 0.006. As well, the first-year group and third-year group are statistically not equal as the p-value is less than 0.05, at 0.032. An inspection of the mean difference indicates that the first-year group recorded the lowest personal financial literacy scores (-4.25186 and -4.76426), with the third-year group recording the highest (4.76426 and .51240) followed by the second-year group (4.25186 and -.51240). The second-year and third-year groups recorded significant differences from the first- year group (p-values<0.05), but no significant difference between the second-year and third-year group. This implies that learning takes place during the second year of study.

In order to determine the effect size (Eta) of the differences among the groups per *Table 4.3*, information from *Table 4.2* ANOVA test and the following formula is used:

$$\text{Eta} = \frac{\text{Sum of squares between groups}}{\text{Total sum of squares}}$$

$$= \frac{3066.90}{151216.211}$$

$$= 0.02$$

The resulting Eta squared value is 0.02 which is considered to represent a small effect size (Field, 2009). Therefore, an Eta of 0.02 is translated to mean that only two per cent (2%) of the variation in the personal financial literacy score is explained by the academic year level. Alternatively, it is translated to mean that the fact that a student is in first, second or third year explains or accounts for only 2 per cent of the differences in the personal financial literacy scores among the sub-groups.

4.4.3. ANOVA results summary

A one-way between-groups ANOVA was conducted to explore the impact that the SAICA Competency Framework, through the BAcc degree has on the levels of personal financial literacy as the students' education progresses. There was a statistically significant difference at the $p < .05$ level in personal financial literacy scores for the three academic year sub-groups: F (2, 631) = 6.5, p = .002. Despite reaching statistical significance, the actual difference in mean personal financial literacy scores between the sub-groups was quite small. The effect size, calculated using Eta squared, was 0.02. Post-hoc comparison using the Scheffe test indicated that the mean score for the first-year group (M = 59.71, SD = 14.11) was significantly different from the second-year group (M = 63.96, SD = 16.47) and from the third-year group (M = 64.48, SD = 15.91). The second-year group did not differ significantly from the third-year group. Two of the personal financial literacy means were significantly different, thus, the null hypothesis (**H_0**) is rejected.

The two pairs of groups: 1) the first-year and second-year group; and the 2) first-year and third-year group having statistical differences in the average scores of personal financial literacy means that the theory that the average personal financial literacy score (as stated by (**H_0**)) is statistically equal across the three academic year groups is rejected. The average personal financial literacy score is not statistically equal across the three academic year groups.

4.5. CONCLUSION

This chapter has examined the results of the data collected through the questionnaire and reported on the findings in line with the applicable research objectives. The findings reveal that Money Management is the personal financial literacy category that the students performed worse in followed by the Savings and Investment (Appendix D.2). This could be an indictor that the Bachelor of Accounting degree programme, as accredited by SAICA and through the development of competencies (*Figure 2.4* and *Figure 2.5*), does not provide adequate exposure to the students. Exposure to the concepts of financial literacy from a personal context, that would allow for the mental processing and articulation that can result in students making decisions that would be most advantageous to their economic well-being, is required.

The BAcc degree student complement achieved an overall average personal financial literacy score of 61.7 per cent. This is higher than the 60 per cent passing grade used as a benchmark to be considered financially literate. Thus, a total of 414 students of the 652 sample is considered to be financially literate. The analysis of the average personal financial literacy score per academic year sub-group indicated that the first-year group could not be considered financially literate as they achieved a score (59.7%) below the benchmark and less than the overall BAcc group score. The second-year and third-year groups are considered financially literate with a score of 64 per cent and 64.5 per cent respectively.

The variance in the financial literacy scores of the academic year sub-groups was tested using the Levene test for equality. It indicated that the variances between the three groups is roughly equal. However, the mean personal financial literacy across the academic year groups is statistically not equal. This provides a further indication that there are differences among the academic year groups, first and second year and first and third year. The effect of the academic year on the personal financial literacy score only explains 2 per cent of the variance in the average personal financial literacy scores of the academic year sub-groups. And the 2 per cent is considered to be a small effect size.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1. INTRODUCTION

In Chapter 4, an examination of the results and a report on the findings was provided with specific focus on descriptive and comparative analysis of the sample in terms of measurement of the personal financial literacy score for the overall BAcc degree group and per academic year sub-group. This chapter focuses, firstly, on providing a summary of the key findings reported in light of the research objectives and the hypotheses stated. Then, a discussion on the significance and the contribution of the research to the body of knowledge is provided. Finally, in addition to drawing the conclusion, the limitations of the research and the recommendations for future research are discussed.

5.2. SUMMARY OF FINDINGS

5.2.1. SAICA Competency Framework

The first research objective evaluated how the SAICA Competency Framework, in educating and training students in becoming Chartered Accountants, develops a student's financial literacy. In line with the literature discussed in Chapter 2, the education and training of prospective Chartered Accountants is governed by SAICA. At university level, the education is acquired through SAICA accredited academic education programmes such as the BAcc degree. The academic education programmes are competency based and focus on the development of a range of competencies considered necessary for a Chartered Accountant upon entry into the profession. Financial literacy, which has been identified as a "critical life skill for individuals" (Pinto, January 2013), has not been separately identified by SAICA as one of the range of competencies that a Chartered Accountant should master. This is a concern, as it could be assumed that in most roles they occupy, Chartered Accountants are tasked with the responsibility and accountability for the management of company financial resources.

The findings indicate that the nature of accounting knowledge is context bound with every aspect of the accounting discipline grounded in the world of business (SAICA, 2014a). Therefore, the context that students are exposed to in terms of module content and assessment is that of business. The author assumes that the academic education programme would be successful, from a business context, in educating and training students to understand and use financial knowledge and information for decision-making related to planning, control and profit maximisation. This therefore indicates that the Competency Framework, through the BAcc degree, does develop the financial literacy of students studying to become Chartered

Accountants. However, this development is from an organisational perspective rather than from a personal perspective.

5.2.2. Personal financial literacy categories

The 2008 Jump$tart survey identified four categories of personal financial literary which were tested in this research using the questionnaire. The detailed analysis of the responses to the questions indicated that the students performed worst in the money management category. Additionally, their knowledge and understanding of the savings and investment concepts in a personal context was found to be lacking. Their second best performance in the spending and debt category indicated that the students' personal financial knowledge regarding transaction instruments, the price of credit, credit history and credit overextension is sound. However, it still raised a concern that the students' ability to apply technical knowledge to a practical personal situation may be lacking. The students' better understanding of the sources of income, the importance of education and skills and the relationship between the two is evident with this category being the best the students performed in.

5.2.3. Overall personal financial literacy results compared to benchmark

The second research objective was to measure the personal financial literacy of the BAcc degree students using the 2008 Jump$tart survey. The third research objective required the comparison of the overall mean personal financial literacy score for all the students to an international passing grade used in a study as a benchmark to determine whether the students are more or less financially literate.

The overall mean score obtained by the total sample was 61.7 per cent. This score indicated that on average, the BAcc degree students of 2015 possessed reasonable levels of personal financial literacy. The score was higher than the 60 per cent benchmark used in the 2008 Jump$tart survey. When assessed against the 60 per cent benchmark and with a sample size of 652 respondents, 63.5 per cent of the BAcc degree students were considered to be financially literate and 36.5 per cent to not be financially literate. Analysis by academic year indicated that the first-year group, with a 59.7 per cent score, was considered to not be financially literate. The second-year group with a 64.0 per cent score and the third-year group with a 64.5 per cent score proved to be financially literate.

5.2.4. Impact of academic year on personal financial literacy

The last research objective examined the relationship between academic year and the level of personal financial literacy in that it examined whether the average personal financial literacy score increased as the students' education progresses. In line with the hypothesis tested in Chapter 4, the findings indicated that the mean score for first-year group was statistically different from the second-year group and from the third-year group. However, the second-year group did not statistically differ from the third-year group.

The findings also indicated that only two per cent of the variance in the personal financial literacy means of the three academic year groups could be explained by academic year. This therefore statistically confirmed that academic year is a factor with a very small impact on the level of personal financial literacy of the students. Thus, there is a correlational relationship between academic year and the level of personal financial literacy in that the two variables performed in a synchronised manner rather than the one being the cause of the other.

5.3. Significance and contributions of the research

The key contribution of this research is to highlight the importance of personal financial literacy as a "critical life skill for individuals" (Pinto, January 2013) demanding urgent and deliberate inclusion in the BAcc curriculum. Current academic education programmes, such as the Bachelors of Accounting degree that prospective Chartered Accountants are registered for, do not place enough emphasis upon the importance of financial literacy. Personal financial literacy levels of students are not high enough to consider them to be empowered individuals able to obtain financial information and gain an understanding thereof and using the financial skills and competence and therefore developed to make decisions that would be most advantageous to their personal economic well-being. In South Africa, given our political and socio-economic background, personal financial literacy education could equip students with a better opportunity to survive the economic implications associated with financial illiteracy. Due to the fact that the financial literacy of BAcc is not much better than the benchmark, which was expected at the onset of the research, consideration could be given to also offer a seperate module on financial literacy to students registered at UJ in the Department of Accountancy.

5.4. LIMITATIONS OF THE RESEARCH

Due to the nature of the requirements for a Masters in Accountancy, which only requires a limited scope dissertation and the relevant constraints on time during study, the findings of this report have to be considered in light of the limitations discussed below. The findings cannot be generalised to another university or even to all the universities in South Africa, as they are specific to the three consecutive academic year groups of students who were registered in 2015 at the University of Johannesburg for a Bachelors of Accounting degree. This research made use of a cross-sectional method to collecting data at one point in time and all generalisations made should be limited to the sample or carefully applied to groups similar to the ones used in this research. The method of conducting a survey introduces a possible bias in that the students are from the Department of Accountancy where the researcher is employed. Further, conducting the survey during a revision class introduces a high probability that the students attending the class are the weaker students who need revision and, in turn, may not correctly represent the population of each year. The questionnaire used in this research excluded some questions from the 2008 Jump$tart survey that were not applicable to the South African context. Some questions related to uniquely American scenarios and could not be used. Care was taken to include all the content areas that tested personal financial literacy. Comparison of this report with other studies that did not use the 2008 Jump$tart survey will be difficult due to the absence of a standardised financial literacy questionnaire.

5.5. RECOMMENDATIONS FOR FUTURE RESEARCH

Future research could expand this research by increasing the sample at the University of Johannesburg to include all other registered students not studying to become Chartered Accountants. The population could also be extended to include all the universities in South Africa. The information that the questionnaire provides could serve as a springboard for future personal financial literacy research and curriculum development for South African educators and universities intending to develop centres of excellence for personal financial literacy or just to enrich current curriculums. Personal financial literacy modules could be offered to all the different faculties ensuring that personal financial literacy of all registered students is improved leading to possible improved financial behaviour.

The background information in Part B to the questionnaire could be used in future research to relate the questions in the test. Biographic information could be related to wrong answers to establish whether it is because of deprived backgrounds that the students don’t understand or is it applicable to all students.

This research established that there was a correlational relationship between the level of personal financial literacy and academic year in that the two variables performed in a synchronised manner and not that one caused the other. An opportunity for future research would be to explore a third variable, not explored by existing research, that would result in an improvement to both the level of personal financial literacy and academic year.

5.6. CONCLUSION

The findings indicate that the Bachelor of Accounting degree students of 2015 at the University of Johannesburg possess reasonable levels of personal financial literacy when assessed based on the passing grade used as a benchmark to be considered financially literate. The levels of personal financial literacy do improve with each academic year, thus supporting the results by the 2008 Jump$tart survey that showed an increasing trend in financial literacy scores of college students.

However, due to progress in the academic year having only a two per cent effect size on the levels of personal financial literacy, the author concludes that the SAICA Competency Framework, through the Bachelor of Accounting degree at UJ, does not have a statistically significant impact on the development of personal financial literacy of its students as their education progresses.

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APPENDIX A – ETHICAL CLEARANCE AND QUESTIONNAIRE

UNIVERSITEIT VAN JOHANNESBURG

FACULTY OF ECONOMIC AND FINANCIAL SCIENCES
(ETHICS COMMITTEE)

1 October 2015

To Whom it may concern

ETHICAL APPROVAL FOR THE BT MADIKIZELA STUDY ON THE PROFILE OF THE FINANCIAL LITERACY LEVELS OF BACHELOR OF ACCOUNTANCY STUDENTS AT THE UNIVERSITY OF JOHANNESBURG

STUDY DETAILS

Student name	Boniswa T Madikizela
Student number	920201762
Qualification registered for	M Com (International Accounting)
Title	A PROFILE OF THE FINANCIAL LITERACY LEVELS OF BACHELOR OF ACCOUNTANCY STUDENTS AT THE UNIVERSITY OF JOHANNESBURG
Supervisor(s)	N Stegmann
Co-supervisor(s)	NA

ETHICAL CONSIDERATIONS FOR QUESTIONNAIRES CHECKLIST

RESEARCH COMPLIES WITH:	COMPLIANT	NON-COMPLIANT
The right to privacy, confidentiality and anonymity	Yes	
The right to equality, justice, human dignity/life and protection against harm	Yes	
The right to freedom of choice, expression and access to information	Yes	
Right of the community and science community	Yes	
Informed consent / letters of request	Yes	

Additional narrative comments from the committee

1. The FEFS ethics committee has scrutinised the questionnaire intended to be used to complete the abovementioned study.
2. The committee is satisfied that adequate introduction, purpose of the study and information regarding anonymity and the use of the data gathered has been provided to participants.
3. The questionnaire and covering letter to respondents make the following statements:
   a. Aggregates will be used to discuss overall results
   b. Confidentiality is assured
   c. Under no circumstances will individual results be divulged
4. The questionnaire is professionally worded and structured. It indicates an ethical consciousness in the data gathering process and is generally considered by the committee to be in line with ethical data gathering practices and norms.
5. The questions contained in the questionnaire appear clear and unambiguous.
6. As the population to which the questionnaire will be distributed are UJ students, additional clearance must be obtained from the Dean of FEFS, Prof A Dempsey, as well as Prof N Fourie, UJ Corporate Governance

The Ethics Committee of the Faculty of Economic and Financial Sciences at the University of Johannesburg hereby provides ethical clearance for the abovementioned questionnaire to be distributed for completion by the relevant participants, provided that the statements made regarding anonymity and the use of data as indicated in point 3. above, is adhered to and that additional approval is obtained as noted under point 6. above.

Signed at Johannesburg, this ___1st______day of____October___________, 2015.

____

K Heathcote
FEFS Ethics Committee Chairperson
krystah@uj.ac.za

University of Johannesburg
PO Box 524
Auckland Park
2006
South Africa
Tel: 011 559 2046

Department of Accountancy – University of Johannesburg

October 2015

Dear Sir/Madam

We are researchers from the University of Johannesburg's Department of Accountancy. Research is being conducted on the profile of the financial literacy levels of the Bachelor of Accounting students. The information will be used to inform the department on whether the Bachelor of Accounting academic programme improves the financial literacy levels of the students at each academic year level. The results from the research will also translate into a master's mini-dissertation and could also be published in scientific journals at a later stage. Please be aware that the information you may provide is anonymous, and so no answers you provide can be traced back to you. We hope this encourages you to answer the questions as freely and honestly as possible.

Activities of the project:

- We are going to ask you some questions that will take about 30 minutes of your time.
- The questionnaire consists of 43 questions, included in two different sections (A and B).
- The questions relate to the information on income, money management, saving, spending and credit of the university student.

Please remember that:

- No personal identification information is asked from you (i.e. your name, contact details, or ID number, etc. so the responses are completely anonymous). Therefore, there is no way in which any responses or results from the completed study can be traced back to you as an individual.
- You have the right to ask questions about this study. If any questions arise while explaining this form, please ask them freely and take your time. Any questions you may have about the questionnaire or the questions themselves will be answered and you may take your time until you are comfortable to proceed.
- You do not have to participate in this study. If you feel that you do not want to be part of the study you are free to withdraw at any time and your information will not be included in the results of the study. We will not put you under any pressure if you feel uncomfortable to continue.
- No monetary compensation is offered for your participation. This information is gathered in the interests of science, research and society in general. Your willingness to contribute your time and honesty during this process is highly appreciated.

Thank you for participating in this study. For more information you can contact the researcher, Mrs BT Madikizela in the following manners:

BT Madikizela
Tel no: 011 559 3604
Cell no: 083 960 9275
Email address: bmadikizela@uj.ac.za

PLEASE ANSWER THE FOLLOWING QUESTIONS BY CROSSING (X) THE RELEVANT BLOCK.

EXAMPLE of how to complete this questionnaire:
Your gender? If you are male: ☐ × Male ☐ Female

Section A

This section of the questionnaire tests your levels of financial literacy and explores your measures of financial behaviour.

1.	Which of the following is true about VAT?	☐ The national VAT percentage rate is 10%. ☐ The government agency, SARS, will deduct it from your salary. ☐ You don't have to pay VAT if your income is very low. ☐ It makes things more expensive for you to buy.
2.	Rebecca has saved R30 000 for her university expenses by working part-time. Her plan is to start university next year and she needs all of the money she saved. Which of the following is the safest place for her university money?	☐ Locked in her closet at home. ☐ Shares. ☐ Corporate bonds. ☐ A bank savings account.
3.	Under which of the following circumstances would it be financially beneficial to you to borrow money to	☐ When you need to buy a car to get a much better paying job. ☐ When you really need a week vacation.

	buy something now and repay it with future income?	☐ When some clothes you like go on sale. ☐ When the interest on the loan is greater than the interest you get on your savings.
4.	Which of the following statements best describes your right to check your credit history for accuracy?	☐ Your credit record can be checked once a year for free. ☐ You cannot see your credit record. ☐ All credit records are the property of the SA Government and access is only available to the SSA (State Security Agency) and Lenders. ☐ You can only check your record for free if you are turned down for credit based on a credit report.
5.	Many people put aside money to take care of unexpected expenses. If Juan and Elva have money put aside for emergencies, in which of the following forms would it be of LEAST benefit to them if they needed it right away?	☐ Invested in a down payment on the house. ☐ Cheque account. ☐ Shares. ☐ Savings account.
6.	David just found a job with a take-home salary of R4 000 per month. He must pay R1 800 for rent and R300 for groceries each month. He also spends R500 per month on transportation. If he budgets R200 each month for clothing, R400 for restaurants and R500 for everything else, how long will it take him to accumulate savings of R1 200.	☐ 3 months. ☐ 4 months. ☐ 1 month. ☐ 2 months.

7.	Sara and Joshua just had a baby. They received money as baby gifts and want to put it away for the baby's education. Which of the following tends to have the highest growth over periods of time as long as 18 years?	☐ A cheque account. ☐ Shares. ☐ A SA Govt. savings bond. ☐ A savings account.
8.	Barbara has just applied for a credit card. She is an 18-year-old high school graduate with few valuable possessions and no credit history. If Barbara is granted a credit card, which of the following is the most likely way that the credit card company will reduce its risk?	☐ It will make Barbara's parents pledge their home to repay Barbara's credit card debt. ☐ It will require Barbara to have both parents co-sign for the card. ☐ It will charge Barbara twice the finance charge rate it charges older cardholders. ☐ It will start Barbara out with a small line of credit to see how she handles the account.
9.	Which of the following best describes the primary sources of income for most people age 20-35?	☐ Dividends and interest. ☐ Salaries, wages, tips. ☐ Profits from business. ☐ Rent.
10.	Rob and Mary are the same age. At age 25 Mary began saving R4 000 a year while Rob saved nothing. At age 50, Rob realized that he needed money for retirement and started saving R8 000 per year while Mary kept saving her R4,000. Now they are both 75 years old. Who has the most money in his or her retirement account?	☐ They would each have the same amount because they put away exactly the same. ☐ Rob, because he saved more each year. ☐ Mary, because she has put away more money. ☐ Mary, because her money has grown for a longer time at compound interest.

11.	Many young people receive medical aid benefits through their parents. Which of the following statements is TRUE about medical aid coverage?	☐ You are covered by your parents' medical aid until you marry, regardless of your age. ☐ If your parents stop paying contributions, your medical aid coverage may stop, regardless of your age. ☐ Young people don't need medical aid coverage because they are so healthy. ☐ You continue to be covered by your parents' medical aid as long as you live at home, regardless of your age.
12.	Don and Bill work together in the finance department of the same company and earn the same salary. Bill spends his free time taking work-related classes to improve his computer skills; while Don spends his free time socializing with friends and working out at a fitness centre. After five years, what is likely to be true?	☐ Don will make more because he is more social. ☐ Don will make more because Bill is likely to be laid off. ☐ Bill will make more money because he is more valuable to his company. ☐ Don and Bill will continue to make the same money.
13.	Which of the following statements is NOT correct about most ATM (Automated Teller Machine) cards?	☐ You can generally get cash 24 hours-a-day. ☐ You can generally obtain information concerning your bank balance at an ATM machine. ☐ You can get cash anywhere in the world with no fee. ☐ You must have a bank account to have an ATM Card.

14.	If you have caused an accident, which type of vehicle insurance would cover damage to your own car?	☐ Comprehensive. ☐ 3rd party only. ☐ 3rd party, fire and theft. ☐ Collision.
15.	Scott and Eric are young men. Each has a good credit history. They work at the same company and make approximately the same salary. Scott has borrowed R12 000 to take a foreign vacation. Eric has borrowed R12,000 to buy a car. Who is likely to pay the lowest finance charge?	☐ Eric will pay less because the car is collateral for the loan. ☐ They will both pay the same because the rate is set by law. ☐ Scott will pay less because people who travel overseas are better risks. ☐ They will both pay the same because they have almost identical financial backgrounds.
16.	If you went to university and obtained a three-year degree, how much more money could you expect to earn than if you only had a matric certificate?	☐ About 10 times as much. ☐ No more; I would make about the same either way. ☐ A little more; about 20% more. ☐ A lot more; about 70% more.
17.	Which of the following instruments is NOT typically associated with spending?	☐ Debit card. ☐ Deposit slip. ☐ Cash. ☐ Credit card.
18.	Which of the following credit card users is likely to pay the GREATEST rand amount in finance charges per year, if they all spend the same amount per year on their cards?	☐ Jessica, who pays at least the minimum amount each month and more, when she has the money. ☐ Vera, who generally pays off her credit card in full but, occasionally, will pay the minimum when she is short of cash.

		☐ Megan, who always pays off her credit card statement in full shortly after she receives it. ☐ Erin, who only pays the minimum amount each month.
19.	Which of the following statements is TRUE?	☐ Banks and other lenders share the credit history of their borrowers with each other and are likely to know of any loan payments that you have missed. ☐ People have so many loans it is very unlikely that one bank will know your history with another bank. ☐ Your bad loan payment record with one bank will not be considered if you apply to another bank for a loan. ☐ If you missed a payment more than 2 years ago, it cannot be considered in a loan decision.
20.	If you had a savings account at a bank, which of the following would be correct concerning the interest that you would earn on this account?	☐ Earnings from savings account interest may not be taxed. ☐ Income tax may be charged on the interest if your income is high enough. ☐ VAT may be charged on the interest that you earn. ☐ You cannot earn interest until you pass your 18th birthday.
21.	If you are behind on your debt payments and go to a responsible debt counselling service organisation such as Debt Counselling South Africa, what help can they give you?	☐ They can cancel and cut up all of your credit cards without your permission. ☐ They can get the government to apply your income taxes to pay off your debts.

		☐ They can work with those who loaned you money to set up a payment schedule that you can meet. ☐ They can force those who loaned you money to forgive all your debts.
22.	The South African government has introduced an initiative to encourage a savings culture, a non-retirement savings that helps to maximize tax relief. Which of the following is that initiative?	☐ An RSA Savings Bond. ☐ A certificate of deposit at the bank. ☐ A bond issued by one of the provincial governments. ☐ An RSA Treasury Bond. ☐ A Tax Free Savings Account
23.	If each of the following persons had the same amount of take home pay, who would need the greatest amount of life insurance?	☐ An elderly retired man, with a wife who is also retired. ☐ A young married man without children. ☐ A young single woman with two young children. ☐ A young single woman without children.

Section B – Background information

This section of the questionnaire refers to background or biographical information. Although we are aware of the sensitivity of the questions in this section, the information will allow us to compare groups of respondents. Once again, we assure you that your response will remain anonymous. Your cooperation is appreciated.

24.	What is your gender?	☐ Male ☐ Female ☐ Prefer not to say
25.	What is your current academic year level?	☐ 1st year ☐ 2nd year

		☐	3rd year
26.	What is the highest level of education you expect to achieve?	☐ ☐ ☐ ☐	Bachelor degree (three-year). Honours degree (four-year). Master's degree. Doctoral degree
27.	What is the highest level of schooling your father completed?	☐ ☐ ☐ ☐ ☐ ☐ ☐	Some primary school education. Did not complete high school. Completed high school. Some college. College graduate University graduate. Don't know.
28.	What is the highest level of schooling your mother completed?	☐ ☐ ☐ ☐ ☐ ☐ ☐	Some primary school education Did not complete high school. Completed high school. Some college. College graduate University graduate Don't know.
29.	How do you describe yourself?	☐ ☐ ☐ ☐ ☐	White. Black. Indian. Coloured. Other
30.		☐	Under R200 000.

	When you start to work full-time, after you finish your education, how much do you expect to make per year before deductions for taxes and other items?	☐ R200 000 to R299 999. ☐ R300 000 to R399 999. ☐ R400 000 or more
31.	How many credit cards do you use, including store cards?	☐ None ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 or more
32.	Which of the following statements best describes the way in which you make payments on your credit cards or store cards?	☐ I always pay off the total balance each month. ☐ I occasionally do not pay off the balance for a month or so when I am short on funds. ☐ I generally have an outstanding balance but occasionally am able to pay it off. ☐ I seldom, if ever, pay off all my balances, but try to pay them when I can. ☐ I generally pay only the minimum required payment each month. ☐ I generally pay, less than the minimum required payment each month.
33.	What is the total outstanding balance on all of your credit cards or store cards?	☐ Under R500 ☐ R500 to R1 499 ☐ R1 500 to R2 999 ☐ R3 000 to R5 999 ☐ More than R6 000
34.		☐ Before completing high school.

	When did you get your first credit card or store card?	☐ When I matriculated from high school. ☐ When I started university. ☐ During my first year in university. ☐ After completing my first year of university.
35.	How often do you balance your bank account?	☐ After every purchase, deposit and ATM withdrawal. ☐ About once a week. ☐ About once a month. ☐ Several times per year. ☐ Once or twice per year. ☐ Whenever I receive my monthly bank statement.
36.	How would you rate the savings and investments that you have?	☐ Adequate for my needs right now. ☐ Slightly less than I should have right now. ☐ Much less than I should have right now. ☐ I do not have any savings or investments.
37.	Which of the following courses or classes have you had in university? (Tick ALL that apply)	☐ A semester-length course in personal money management or personal finance. ☐ Coverage of money management or personal finance (including part of first year orientation). ☐ Economics ☐ Finance ☐ Accounting
38.	What is your best estimate of your parents' total income last year? Consider annual income from all sources before taxes.	☐ Less than R200,000. ☐ R200,000 to R399,999. ☐ R400,000 to R799,999. ☐ R800,000 or more. ☐ Don't know.
		☐ Never.

39.	How often are you late paying your credit or store card statements?	☐ Once or twice since I've had credit cards. ☐ Once or twice per year. ☐ More than two times per year.
40.	When you finish your undergraduate education, how much do you expect to owe in student loans?	☐ Nothing ☐ Less than R50,000 ☐ R50,000 to R99,999 ☐ R100,000 to R199,999 ☐ R200,000 to R299,999 ☐ R300,000 to R499,999 ☐ R500,000 or more
41.	Aside from any credit card debt or student loans you might have, what other types of debt do you have? (check ALL that apply)	☐ Car loans. ☐ Home loan. ☐ Store card debt. ☐ Personal debt or other debt.
42.	In what form do you hold your savings and investments? (Check ALL that apply)	☐ Savings account. ☐ Certificates of deposit. ☐ RSA Savings Bonds. ☐ Stocks. ☐ Mutual funds. ☐ Bonds other than RSA Savings Bonds. ☐ Retirement accounts such as retirement annuity fund.
43.	How much do you worry about your debts?	☐ Never. ☐ A little. ☐ Sometimes.

		☐ Often. ☐ Nearly all the time.

Thank you for your help

APPENDIX B – MATCHING AND ADAPTATION TO SOUTH AFRICAN CONTEXT

Questions adapted for the South African environment	2008 Jump$tart College Questionnaire
SECTION A	
Question 1 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	1. Inflation can cause difficulty in many ways. Which group would have the greatest problem during periods of high inflation that last several years? a) Older, working couples saving for retirement. b) Older people living on fixed retirement income. c) Young couples with no children who both work. d) d) Young working couples with children.
1. Which of the following is true about VAT? a) The national VAT percentage rate is 14%. b) The government agency, SARS, will deduct it from your salary. c) You don't have to pay VAT if your income is very low. d) It makes things more expensive for you to buy.	2. Which of the following is true about sales taxes? a) The national sales tax percentage rate is 6%. b) The federal government will deduct it from your pay check. c) You don't have to pay the tax if your income is very low. d) It makes things more expensive for you to buy.
2. Rebecca has saved R30 000 for her university expenses by working part-time. Her plan is to start university next year and she needs all of the money she saved. Which of the following is the safest place for her university money? a) Locked in her closet at home. b) Shares. c) Corporate bonds. d) A bank savings account.	3. Rebecca has saved $12,000 for her college expenses by working part-time. Her plan is to start college next year and she needs all of the money she saved. Which of the following is the safest place for her college money? a) Locked in her closet at home. b) Stocks. c) Corporate bonds. d) A bank savings account.
Question 4 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	4. Which of the following types of investment would best protect the purchasing power of a family's savings in the event of a sudden increase in inflation? a) A 10-year bond issued by a corporation. b) A certificate of deposit at a bank. c) A twenty-five year corporate bond. d) A house financed with a fixed-rate mortgage.

3. Under which of the following circumstances would it be financially beneficial to you to borrow money to buy something now and repay it with future income? a) When you need to buy a car to get a much better paying job. b) When you really need a week vacation. c) When some clothes you like go on sale. d) When the interest on the loan is greater than the interest you get on your savings.	5. Under which of the following circumstances would it be financially beneficial to you to borrow money to buy something now and repay it with future income? a) When you need to buy a car to get a much better paying job. b) When you really need a week vacation. c) When some clothes you like go on sale. d) When the interest on the loan is greater than the interest you get on your savings.
4. Which of the following statements best describes your right to check your credit history for accuracy? a) Your credit record can be checked once a year for free. b) You cannot see your credit record. c) All credit records are the property of the SA Government and access is only available to the SSA (State Security Agency) and Lenders. d) You can only check your record for free if you are turned down for credit based on a credit report.	6. Which of the following statements best describes your right to check your credit history for accuracy? a) Your credit record can be checked once a year for free. b) You cannot see your credit record. c) All credit records are the property of the U.S. Government and access is only available to the FBI and Lenders. d) You can only check your record for free if you are turned down for credit based on a credit report.
Question 7 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	7. Your take home pay from your job is less than the total amount you earn. Which of the following best describes what is taken out of your total pay? a) Social security and Medicare contributions. b) Federal income tax, property tax, and Medicare and social security Contributions. c) Federal income tax, social security and Medicare contributions. d) d) Federal income tax, sales tax, and social security contribution.
Question 8 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	8. Retirement income paid by a company is called: a) 401 (k). b) Pension. c) Rents and profits. d) Social Security.

5. Many people put aside money to take care of unexpected expenses. If Juan and Elva have money put aside for emergencies, in which of the following forms would it be of LEAST benefit to them if they needed it right away? a) Invested in a down payment on the house. b) Cheque account. c) Shares. d) Savings account.	9. Many people put aside money to take care of unexpected expenses. If Juan and Elva have money put aside for emergencies, in which of the following forms would it be of LEAST benefit to them if they needed it right away? a) Invested in a down payment on the house. b) Checking account. c) Stocks. d) d) Savings account.
6. David just found a job with a take-home salary of R4 000 per month. He must pay R1 800 for rent and R300 for groceries each month. He also spends R500 per month on transportation. If he budgets R200 each month for clothing, R400 for restaurants and R500 for everything else, how long will it take him to accumulate savings of R1 200. a) 3 months. b) 4 months. c) 1 month. d) 2 months.	10. David just found a job with a take-home pay of $2,000 per month. He must pay $900 for rent and $150 for groceries each month. He also spends $250 per month on transportation. If he budgets $100 each month for clothing, $200 for restaurants and $250 for everything else, how long will it take him to accumulate savings of $600. a) 3 months. b) 4 months. c) 1 month. d) 2 months.
7. Sara and Joshua just had a baby. They received money as baby gifts and want to put it away for the baby's education. Which of the following tends to have the highest growth over periods of time as long as 18 years? a) A cheque account. b) Shares. c) A SA Govt. savings bond. d) A savings account.	11. Sara and Joshua just had a baby. They received money as baby gifts and want to put it away for the baby's education. Which of the following tends to have the highest growth over periods of time as long as 18 years? a) A checking account. b) Stocks. c) A U.S. Govt. savings bond. d) A savings account.
8. Barbara has just applied for a credit card. She is an 18-year-old high school graduate with few valuable possessions and no credit history. If Barbara is granted a credit card, which of the following is the most likely way that the credit card company will reduce ITS risk? a) It will make Barbara's parents pledge their home to repay Barbara's credit card debt. b) It will require Barbara to have both parents co-sign for the card. c) It will charge Barbara twice the finance charge rate it charges older cardholders. d) It will start Barbara out with a small line of credit to see how she handles the account.	12. Barbara has just applied for a credit card. She is an 18-year-old high school graduate with few valuable possessions and no credit history. If Barbara is granted a credit card, which of the following is the most likely way that the credit card company will reduce ITS risk? a) It will make Barbara's parents pledge their home to repay Karen's credit card debt. b) It will require Barbara to have both parents co-sign for the card. c) It will charge Barbara twice the finance charge rate it charges older cardholders. d) d) It will start Barbara out with a small line of credit to see how she handles the account.

Question 13 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	13. Chelsea worked her way through college earning $15,000 per year. After graduation, her first job pays $30,000. The total dollar amount Chelsea will have to pay in Federal Income taxes in her new job will: a) Double, at least, from when she was in college. b) Go up a little from when she was in college. c) Stay the same as when she was in college. d) d) Be lower than when she was in college.
9. Which of the following best describes the primary sources of income for most people age 20-35? a) Dividends and interest. b) Salaries, wages, tips. c) Profits from business. d) Rents.	14. Which of the following best describes the primary sources of income for most people age 20-35? a) Dividends and interest. b) Salaries, wages, tips. c) Profits from business. d) Rents.
	15. Question 15 is Question 21 in SA adapted questionnaire.
10. Rob and Mary are the same age. At age 25 Mary began saving R4 000 a year while Rob saved nothing. At age 50, Rob realized that he needed money for retirement and started saving R8 000 per year while Mary kept saving her R4,000. Now they are both 75 years old. Who has the most money in his or her retirement account? a) They would each have the same amount because they put away exactly the same. b) Rob, because he saved more each year. c) Mary, because she has put away more money. d) Mary, because her money has grown for a longer time at compound interest.	16. Rob and Mary are the same age. At age 25 Mary began saving $2,000 a year while Rob saved nothing. At age 50, Rob realized that he needed money for retirement and started saving $4,000 per year while Mary kept saving her $2,000. Now they are both 75 years old. Who has the most money in his or her retirement account? a) They would each have the same amount because they put away exactly the same. b) Rob, because he saved more each year. c) Mary, because she has put away more money. d) Mary, because her money has grown for a longer time at compound interest.
11. Many young people receive medical aid benefits through their parents. Which of the following statements is true about medical aid coverage? a) You are covered by your parents' medical aid until you marry, regardless of your age. b) If your parents become unemployed, your medical aid coverage may stop, regardless of your age. c) Young people don't need medical aid coverage because they are so healthy. d) You continue to be covered by your parents' medical aid as long as you live at home, regardless of your age.	17. Many young people receive health insurance benefits through their parents. Which of the following statements is true about health insurance coverage? a) You are covered by your parents' insurance until you marry, regardless of your age. b) If your parents become unemployed, your insurance coverage may stop, regardless of your age. c) Young people don't need health insurance because they are so healthy. d) d) You continue to be covered by your parents' insurance as long as you live at home, regardless of your age.

12. Don and Bill work together in the finance department of the same company and earn the same salary. Bill spends his free time taking work-related classes to improve his computer skills; while Don spends his free time socializing with friends and working out at a fitness centre. After five years, what is likely to be true? a) Don will make more because he is more social. b) Don will make more because Bill is likely to be laid off. c) Bill will make more money because he is more valuable to his company. d) Don and Bill will continue to make the same money.	18. Don and Bill work together in the finance department of the same company and earn the same pay. Bill spends his free time taking work-related classes to improve his computer skills; while Don spends his free time socializing with friends and working out at a fitness centre. After five years, what is likely to be true? a) Don will make more because he is more social. b) Don will make more because Bill is likely to be laid off. c) Bill will make more money because he is more valuable to his company. d) d) Don and Bill will continue to make the same money.
Question 19 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	19. If your credit card is stolen and the thief runs up a total debt of $1,000, but you notify the issuer of the card as soon as you discover it is missing, what is the maximum amount that you can be forced to pay according to Federal law? a) $500 b) $1000 c) Nothing. d) $50
13. Which of the following statements is NOT correct about most ATM (Automated Teller Machine) cards? a) You can generally get cash 24 hours-a-day. b) You can generally obtain information concerning your bank balance at an ATM machine. c) You can get cash anywhere in the world with no fee. d) You must have a bank account to have an ATM Card.	20. Which of the following statements is NOT correct about most ATM (Automated Teller Machine) cards? a) You can generally get cash 24 hours-a-day. b) You can generally obtain information concerning your bank balance at an ATM machine. c) You can get cash anywhere in the world with no fee. d) d) You must have a bank account to have an ATM Card.
Question 21 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	21. Matt has a good job on the production line of a factory in his home town. During the past year or two, the state in which Matt lives has been raising taxes on its businesses to the point where they are much higher than in neighbouring states. What effect is this likely to have on Matt's job? a) Higher business taxes will cause more businesses to move into Matt's state, raising wages. b) Higher business taxes can't have any effect on Matt's job. c) Mark's company may consider moving to a lower-tax state, threatening Matt's job.

	d) d) He is likely to get a large raise to offset the effect of higher taxes.
14. If you have caused an accident, which type of automobile insurance would cover damage to your own car? a) Comprehensive. b) 3rd party only. c) 3rd party, fire and theft. d) Collision.	22. If you have caused an accident, which type of automobile insurance would cover damage to your own car? a) Comprehensive. b) Liability. c) Term. d) d) Collision.
15. Scott and Eric are young men. Each has a good credit history. They work at the same company and make approximately the same salary. Scott has borrowed R12 000 to take a foreign vacation. Eric has borrowed R12,000 to buy a car. Who is likely to pay the lowest finance charge? a) Eric will pay less because the car is collateral for the loan. b) They will both pay the same because the rate is set by law. c) Scott will pay less because people who travel overseas are better risks. d) They will both pay the same because they have almost identical financial backgrounds.	23. Scott and Eric are young men. Each has a good credit history. They work at the same company and make approximately the same salary. Scott has borrowed $6,000 to take a foreign vacation. Eric has borrowed $6,000 to buy a car. Who is likely to pay the lowest finance charge? a) Eric will pay less because the car is collateral for the loan. b) They will both pay the same because the rate is set by law. c) Scott will pay less because people who travel overseas are better risks. d) They will both pay the same because they have almost identical financial backgrounds.
16. If you went to college and earned a four-year degree, how much more money could you expect to earn than if you only had a high school diploma? a) About 10 times as much. b) No more; I would make about the same either way. c) A little more; about 20% more. d) A lot more; about 70% more.	24. If you went to college and earned a four-year degree, how much more money could you expect to earn than if you only had a high school diploma? a) About 10 times as much. b) No more; I would make about the same either way. c) A little more; about 20% more. d) A lot more; about 70% more.
	25. Question 25 is Question 22 in SA adapted questionnaire.
	26. Question 26 is Question 23 in SA adapted questionnaire.
17. Which of the following instruments is NOT typically associated with spending? a) Debit card. b) Deposit slip. c) Cash. d) Credit card.	27. Which of the following instruments is NOT typically associated with spending? a) Debit card. b) Certificate of deposit. c) Cash. d) Credit card.

18. Which of the following credit card users is likely to pay the GREATEST rand amount in finance charges per year, if they all charge the same amount per year on their cards? a) Jessica, who pays at least the minimum amount each month and more, when she has the money. b) Vera, who generally pays off her credit card in full but, occasionally, will pay the minimum when she is short of cash. c) Megan, who always pays off her credit card bill in full shortly after she receives it. d) Erin, who only pays the minimum amount each month.	28. Which of the following credit card users is likely to pay the GREATEST dollar amount in finance charges per year, if they all charge the same amount per year on their cards? a) Jessica, who pays at least the minimum amount each month and more, when she has the money. b) Vera, who generally pays off her credit card in full but, occasionally, will pay the minimum when she is short of cash c) Megan, who always pays off her credit card bill in full shortly after she receives it. d) Erin, who only pays the minimum amount each month.
19. Which of the following statements is true? a) Banks and other lenders share the credit history of their borrowers with each other and are likely to know of any loan payments that you have missed. b) People have so many loans it is very unlikely that one bank will know your history with another bank. c) Your bad loan payment record with one bank will not be considered if you apply to another bank for a loan. d) If you missed a payment more than 2 years ago, it cannot be considered in a loan decision.	29. Which of the following statements is true? a) Banks and other lenders share the credit history of their borrowers with each other and are likely to know of any loan payments that you have missed. b) People have so many loans it is very unlikely that one bank will know your history with another bank c) Your bad loan payment record with one bank will not be considered if you apply to another bank for a loan. d) If you missed a payment more than 2 years ago, it cannot be considered in a loan decision.
Question 30 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	30. Dan must borrow $12,000 to complete his college education. Which of the following would NOT be likely to reduce the finance charge rate? a) If he went to a state college rather than a private college. b) If his parents cosigned the loan. c) If his parents took out an additional mortgage on their house for the loan. d) d) If the loan was insured by the Federal Government.
20. If you had a savings account at a bank, which of the following would be correct concerning the interest that you would earn on this account? a) Earnings from savings account interest may not be taxed. b) Income tax may be charged on the interest if your income is high enough.* c) VAT may be charged on the interest that you earn. d) You cannot earn interest until you pass your 18th birthday.	31. If you had a savings account at a bank, which of the following would be correct concerning the interest that you would earn on this account? a) Earnings from savings account interest may not be taxed. b) Income tax may be charged on the interest if your income is high enough. c) Sales tax may be charged on the interest that you earn. d) You cannot earn interest until you pass your 18th birthday.

21. If you are behind on your debt payments and go to a responsible debt counselling service organisation such as Debt Counselling South Africa, what help can they give you? a) They can cancel and cut up all of your credit cards without your permission. b) They can get the government to apply your income taxes to pay off your debts. c) They can work with those who loaned you money to set up a payment schedule that you can meet. d) They can force those who loaned you money to forgive all your debts.	15. If you are behind on your debt payments and go to a responsible credit counselling service such as the Consumer Credit Counselling Services, what help can they give you? a) They can cancel and cut up all of your credit cards without your permission. b) They can get the federal government to apply your income taxes to pay off your debts. c) They can work with those who loaned you money to set up a payment schedule that you can meet. d) d) They can force those who loaned you money to forgive all your debts.
22. The South African government has introduced an initiative to encourage a savings culture, a non-retirement savings that helps to maximize tax relief. Which of the following is that initiative? a) An RSA Savings Bond. b) A certificate of deposit at the bank. c) A bond issued by one of the provincial governments. d) An RSA Treasury Bond. e) A Tax Free Savings Account.	25. Many savings programs are protected by the Federal government against loss. Which of the following is not? a) A U. S. Savings Bond. b) A certificate of deposit at the bank. c) A bond issued by one of the 50 States. d) A U. S. Treasury Bond.
23. If each of the following persons had the same amount of take home pay, who would need the greatest amount of life insurance? a) An elderly retired man, with a wife who is also retired. b) A young married man without children. c) A young single woman with two young children. d) A young single woman without children.	26. If each of the following persons had the same amount of take home pay, who would need the greatest amount of life insurance? a) An elderly retired man, with a wife who is also retired. b) A young married man without children. c) A young single woman with two young children. d) d) A young single woman without children.

Questions adapted for the South African environment	2008 Jump$tart College Questionnaire
SECTION B	
24. What is your gender? a) Male b) Female	32. What is your gender? a) Male b) Female
25. What is your current academic year level? a) 1st year b) 2nd year c) 3rd year	55. What is your class standing? a) Freshman b) Sophomore c) Junior d) Senior
26. What is the highest level of education you expect to achieve? a) Bachelor degree (three-year). b) Honours degree (four-year). c) Master's degree. d) Doctorate, law or professional (six year or more)	33. What is the highest level of education you expect to achieve? a) Associate degree (two-year). b) Bachelor degree (four-year). c) Master's degree. d) Doctorate, law or professional (six year or more)
	34. Question 34 is Question 38 in SA adapted questionnaire.
27. What is the highest level of schooling your father completed? a) Some primary school education. b) Did not complete high school. c) Completed high school. d) Some college. e) College graduate f) University graduate. g) Don't know	35. What is the highest level of schooling your father or mother completed? a) Neither completed high school. b) Completed high school. c) Some college. d) College graduate or more than college. e) Don't know.
28. What is the highest level of schooling your mother completed? a) Some primary school education. b) Did not complete high school. c) Completed high school. d) Some college. e) College graduate f) University graduate. g) Don't know	Question 35 above combined the level of schooling for both parents and the SA adapted questionnaire divided this question to present father (Question 27) and mother (Question 28) separately.
29. How do you describe yourself? a) White. b) Black. c) Indian d) Coloured e) Other	36. How do you describe yourself? a) White or Caucasian. b) Black or African-American. c) Hispanic American. d) Asian-American. e) American Indian, Alaska Native, or Native Hawaiian

	f) Other
30. When you start to work full-time, after you finish your education, how much do you expect to make per year before deductions for taxes and other items? a) Under R20 000. b) R20 000 to R29 999. c) R30 000 to R39 999 d) R40 000 or more	37. When you start to work full-time, after you finish your education, how much do you expect to make per year before deductions for taxes and other items? a) Under $30,000. b) $30,000 to $39,999. c) $40,000 to $49,999 d) $50,000 or more
31. How many credit cards do you use, including store cards? a) None b) 1. c) 2. d) 3. e) 4. f) 5 or more	38. How many credit cards do you use, including store credit cards? a) None b) 1. c) 2. d) 3 e) 4 f) 5 or more
32. Which of the following statements best describes the way in which you make payments on your credit cards or store cards? a) I always pay off the total balance each month. b) I occasionally do not pay off the balance for a month or so when I am short on funds. c) I generally have an outstanding balance but occasionally am able to pay it off. d) I seldom, if ever, pay off all my balances, but try to pay them down when I can. e) I generally pay only the minimum required payment each month.	39. Which of the following statements best describes the way in which you make payments on your credit cards? a) I always pay off the total balance each month. b) I occasionally do not pay off the balance for a month or so when I am short on funds. c) I generally have an outstanding balance but occasionally am able to pay it off. d) I seldom, if ever, pay off all my balances, but try to pay them down when I can. e) I generally pay only the minimum required payment each month.
33. What is the outstanding balance on all of your credit cards or store cards? a) Under R500 b) R500 to R1 499 c) R1 500 to R2 999 d) R3 000 to R5 999 e) More than R6 000	40. What is the outstanding balance on all of your credit cards? a) Under $1,000 b) $1,000 to $2,499 c) $2,500 to $4,999 d) $5,000 to $9,999 e) More than $10,000
34. When did you get your first credit card or store card? a) Before graduating high school. b) When I graduated from high school. c) When I started university. d) During my first year in university. e) After completing my first year of university.	41. When did you get your first credit card? a) Before graduating high school b) When I graduated from high school c) When I started college d) During my first year in college e) After completing my first year of college
	42. Question 42 is Question 39 in SA adapted questionnaire

	43. Question 43 is Question 40 in SA adapted questionnaire
	44. Question 44 is Question 41 in SA adapted questionnaire
Question 45 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	45. Do you have a checking account? a) Yes b) No
Question 45 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	46. How often have you bounced a check (had it returned for insufficient funds)? a) Never b) Once or twice in my lifetime c) Once or twice per year d) More than twice per year
35. How often do you balance your bank account? a) After every purchase, deposit and ATM withdrawal b) About once a week c) About once a month d) Several times per year e) Once or twice per year f) Never	47. How often do you balance your check book? a) After every check, deposit and ATM withdrawal b) About once a week c) About once a month d) Several times per year e) Once or twice per year f) Never
	48. Question 48 is Question 42 in SA adapted questionnaire
36. How would you rate the savings and investments that you have? a) Adequate for my needs right now b) Slightly less than I should have right now c) Much less than I should have right now	49. How would you rate the savings and investments that you have? a) Adequate for my needs right now b) Slightly less than I should have right now c) Much less than I should have right now
	50. Question 50 is Question 43 in SA adapted questionnaire
Question 51 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	51. Who prepares your income taxes? a) I do it myself by hand b) I do it myself using a computer program c) A tax preparer d) My parents
Question 52 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	52. Which of the following classes did you have in high school? (Check ALL that apply) a) An entire course in personal money management or personal finance. b) A portion of a course where at least a week was focused on personal money management or personal finance.

	c) An entire course in economics. d) A portion of a course where at least a week was focused on economics. e) A course in which we played a stock market game.
37. Which of the following courses or classes have you had in university? (Tick ALL that apply) a) A semester-length course in personal money management or personal finance b) Coverage of money management or personal finance (including part of first year orientation) c) Economics; Finance d) Accounting	53. Which of the following classes have you had in college? (Check ALL that apply) a) A semester-length course in personal money management or personal finance b) Coverage of money management or personal finance (including part of freshman orientation) c) Economics; Finance d) Accounting
Question 54 from the Jump$tart questionnaire was excluded in the SA adapted questionnaire.	54. Which of the following best describes your status as a student? a) I am a full time undergraduate student at a Four-year college or university b) I am a full time undergraduate student at a Two-Year college or university
38. What is your best estimate of your parents' total income last year? Consider annual income from all sources before taxes. a) Less than R200,000. b) R200,000 to R399,999. c) R400,000 to R799,999. d) R800,000 or more. e) Don't know.	34. What is your best estimate of your parents' total income last year? Consider annual income from all sources before taxes. a) Less than $20,000. b) $20,000 to $39,999. c) $40,000 to $79,999. d) $80,000 or more. e) Don't know.
39. How often are you late paying your credit or store card statements? a) Never. b) Once or twice since I've had credit cards. c) Once or twice per year. d) More than two times per year.	42. How Often are you late paying your credit card bills? a) Never. b) Once or twice since I've had credit cards. c) Once or twice per year. d) More than two times per year.
40. When you finish your undergraduate education, how much do you expect to owe in student loans? a) Nothing b) Less than R50,000 c) R50,000 to R99,999 d) R100,000 to R199,999 e) R200,000 to R299,999 f) R300,000 to R499,999 g) R500,000 or more	43. When you finish your undergraduate education, how much do you expect to owe in student loans? a) Nothing b) Less than $5,000 c) $5,000 to $9,999 d) $10,000 to $19,999 e) $20,000 to $29,999 f) $30,000 to $49,999 g) $50,000 or more
41. Aside from any credit card debt or student loans you might have, what other types of debt do you have? (check ALL that apply)	44. Aside from any credit card debt or student loans you might have, what other types of debt do you have? (check ALL that apply)

a) Car loans. b) Home loan. c) Store card debt. d) Personal debt or other debt.	a) Auto loans b) Home Mortgage c) Personal debt or other debt
42. In what form do you hold your savings and investments? (Check ALL that apply) a) Savings account. b) Certificates of deposit. c) RSA Savings Bonds. d) Stocks. e) Mutual funds. f) Bonds other than RSA Savings Bonds. g) Retirement accounts such as retirement annuity fund.	48. In what form do you hold for your savings and investments? (Check ALL that apply) a) Savings account. b) Certificates of deposit. c) U. S. Savings Bonds. d) Stocks. e) Mutual funds. f) Bonds other than U. S. Savings Bonds. g) Retirement accounts such as 401k's and IRA's.
43. How much do you worry about your debts? a) Never. b) A little. c) Sometimes. d) Often. e) Nearly all the time.	50. How much do you worry about your debts? a) Never b) A little c) Sometimes d) Often e) Nearly all the time

APPENDIX C – DESCRIPTIVE STATISTICS

C.1 DESCRIPTIVES

Descriptives			Statistic	Std. Error
pscore Per cent correct n/23*100	Mean		61.6698	.61062
	95% Confidence Interval for Mean	Lower Bound	60.4708	
		Upper Bound	62.8688	
	5% Trimmed Mean		62.2270	
	Median		65.2174	
	Variance		243.102	
	Std. Deviation		15.59172	
	Minimum		4.35	
	Maximum		95.65	
	Range		91.30	
	Interquartile Range		21.74	
	Skewness		-.561	.096
	Kurtosis		.044	.191

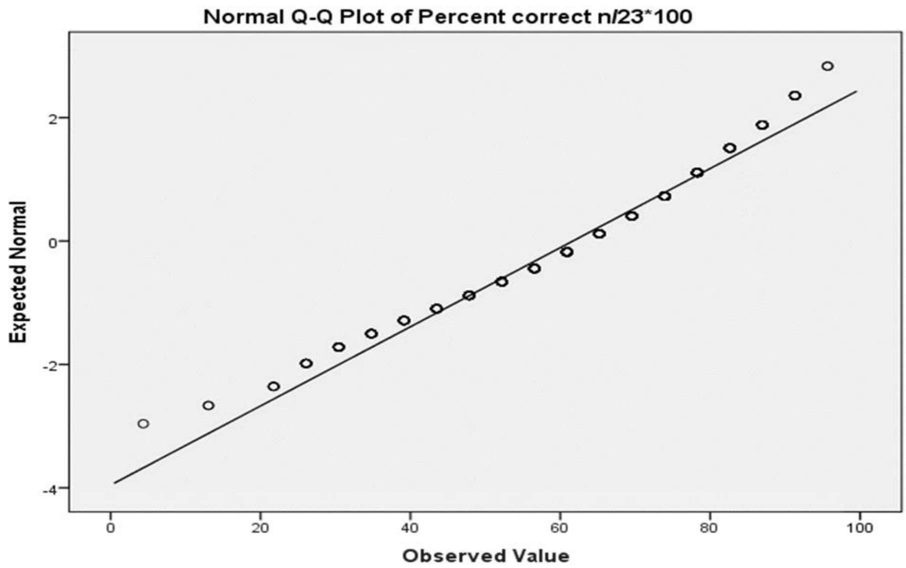
Source: SPSS output

C.2 TESTS OF NORMALITY

Tests of Normality			
	Shapiro-Wilk		
	Statistic	df	Sig.
pscore Per cent correct n/23*100	.970	652	.000

Source: SPSS output

C.3 NORMAL Q-Q PLOT



Source: SPSS output

C.4 POST HOC TESTS

Multiple Comparisons

Dependent Variable: pscore Per cent correct n/23*100

(I) B25 What is your current academic year level?			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Scheffe	1st year	2nd year	-4.25186*	1.32541	.006	-7.5038	-.9999
		3rd year	-4.76426*	1.81335	.032	-9.2134	-.3151
	2nd year	1st year	4.25186*	1.32541	.006	.9999	7.5038
		3rd year	-.51240	1.86116	.963	-5.0789	4.0541
	3rd year	1st year	4.76426*	1.81335	.032	.3151	9.2134
		2nd year	.51240	1.86116	.963	-4.0541	5.0789
Tamhane	1st year	2nd year	-4.25186*	1.33684	.005	-7.4551	-1.0486
		3rd year	-4.76426*	1.83391	.031	-9.1953	-.3332
	2nd year	1st year	4.25186*	1.33684	.005	1.0486	7.4551
		3rd year	-.51240	1.95178	.991	-5.2179	4.1931
	3rd year	1st year	4.76426*	1.83391	.031	.3332	9.1953
		2nd year	.51240	1.95178	.991	-4.1931	5.2179

Source: SPSS output

C.5 LEVENE'S TEST FOR HOMOGENEITY

Levene's test for homogeneity of variances

Levene Statistic	df1	df2	Sig.
2.084	2	631	.125

Source: SPSS output

APPENDIX D – FINANCIAL LITERACY CATEGORIES

D.1 Financial literacy categories in the order of questions most correctly answered

Financial Literacy Category	Question Number	Question	No. of correct answers
Income	A9	Which of the following best describes the primary sources of income for most people age 20-35?	94.6%
Savings & Investment	A2	Rebecca has saved R30 000 for her university expenses by working part-time. Her plan is to start university next year and she needs all of the money she saved. Which of the following is the safest place for her university money?	92.6%
Income	A1	Which of the following is true about VAT?	88.5%
Spending & Debt	A13	Which of the following statements is NOT correct about most ATM (Automated Teller Machine) cards?	85.9%
Spending & Debt	A17	Which of the following instruments is NOT typically associated with spending?	85.6%
Income	A12	Don and Bill work together in the finance department of the same company and earn the same salary. Bill spends his free time taking work-related classes to improve his computer skills; while Don spends his free time socializing with friends and working out at a fitness centre. After five years, what is likely to be true?	81.6%
Spending & Debt	A21	If you are behind on your debt payments and go to a responsible debt counselling service organisation such as Debt Counselling South Africa, what help can they give you?	80.4%
Money Management	A11	Many young people receive medical aid benefits through their parents. Which of the following statements is TRUE about medical aid coverage?	78.5%
Savings & Investment	A6	David just found a job with a take-home salary of R4 000 per month. He must pay R1 800 for rent and R300 for groceries each month. He also spends R500 per month on transportation. If he budgets R200 each month for clothing, R400 for restaurants and R500?	71.5%
Spending & Debt	A3	Under which of the following circumstances would it be financially beneficial to you to borrow money to buy something now and repay it with future income?	68.1%
Spending & Debt	A19	Which of the following statements is TRUE?	68.1%
Spending & Debt	A18	Which of the following credit card users is likely to pay the GREATEST rand amount in finance charges per year, if they all spend the same amount per year on their cards?	54.9%
Spending & Debt	A15	Scott and Eric are young men. Each has a good credit history. They work at the same company and make approximately the same salary. Scott has borrowed R12 000 to take a foreign vacation. Eric has borrowed R12 000 to buy a car. Who is likely to pay the lowest finance charge?	54.4%
Income	A16	If you went to university and obtained a three-year degree, how much more money could you expect to earn than if you only had a matric certificate?	51.7%
Spending & Debt	A8	Barbara has just applied for a credit card. She is an 18-year-old high school graduate with few valuable possessions and no credit history. If Barbara is granted a credit card, which of the following is the most likely way that the credit card company will reduce its risk?	51.5%

Financial Literacy Category	Question Number	Question	No. of correct answers
Savings & Investment	A10	Rob and Mary are the same age. At age 25 Mary began saving R4 000 a year while Rob saved nothing. At age 50, Rob realized that he needed money for retirement and started saving R8 000 per year while Mary kept saving her R4 000. Now they are both 75 years	50.6%
Savings & Investment	A22	The South African government has introduced an initiative to encourage a savings culture, a non-retirement savings that helps to maximize tax relief. Which of the following is that initiative?	50.0%
Money Management	A23	If each of the following persons had the same amount of take home pay, who would need the greatest amount of life insurance?	47.9%
Savings & Investment	A5	Many people put aside money to take care of unexpected expenses. If Juan and Elva have money put aside for emergencies, in which of the following forms would it be of LEAST benefit to them if they needed it right away?	42.8%
Spending & Debt	A4	Which of the following statements best describes your right to check your credit history for accuracy?	32.5%
Savings & Investment	A20	If you had a savings account at a bank, which of the following would be correct concerning the interest that you would earn on this account?	29.6%
Money Management	A14	If you have caused an accident, which type of vehicle insurance would cover damage to your own car?	29.4%
Savings & Investment	A7	Sara and Joshua just had a baby. They received money as baby gifts and want to put it away for the baby's education. Which of the following tends to have the highest growth over periods of time as long as 18 years?	27.6%

***D.2** Financial literacy categories in the order of the weighted average of most correctly answered category (highest to lowest)*

Financial Literacy Category	Question number	Answered most correct	Average per category
Income	A9	94.6%	
Income	A1	88.5%	
Income	A12	81.6%	
Income	A16	51.7%	**79.1%**
Spending & Debt	A13	85.9%	
Spending & Debt	A17	85.6%	
Spending & Debt	A21	80.4%	
Spending & Debt	A3	68.1%	
Spending & Debt	A19	68.1%	
Spending & Debt	A18	54.9%	
Spending & Debt	A15	54.4%	
Spending & Debt	A8	51.5%	
Spending & Debt	A4	32.5%	**64.6%**
Savings & Investment	A2	92.6%	

Financial Literacy Category	Question number	Answered most correct	Average per category
Savings & Investment	A6	71.5%	
Savings & Investment	A10	50.6%	
Savings & Investment	A22	50.0%	
Savings & Investment	A5	42.8%	
Savings & Investment	A20	29.6%	
Savings & Investment	A7	27.6%	**52.1%**
Money Management	A11	78.5%	
Money Management	A23	47.9%	
Money Management	A14	29.4%	**51.9%**