



**Financial Capability, Financial Socialisation and Professional Skills of  
Accounting students studying in KwaZulu-Natal Universities**

**Bomi Cyril Nomlala  
(Student No.: 203515450)**

This thesis is submitted in fulfilment of the requirements for the  
degree of Doctor of Philosophy (Accounting)

School of Accounting, Economics and Finance

College of Law and Management Studies

Westville Campus

Supervisor: Professor Mabutho Sibanda

May 2019

## DECLARATION

I, **Bomi Cyril Nomlala** declare that:

- (i) The research reported in this thesis, except where otherwise indicated, is my original research.
- (ii) This thesis has not been submitted for any degree or examination at any other University.
- (iii) This thesis does not contain other persons' data, pictures, graphs or other information unless acknowledged explicitly as being sourced from other persons.
  - a. This thesis does not contain other persons' writing unless acknowledged explicitly as being sourced from other researchers. Where other written sources have been quoted, then their words have been re-written, but the general information attributed to them has been referenced;
  - b. where their exact words have been used, their writing has been placed inside quotation marks and referenced.
- (iv) Where I have reproduced a publication of which I am an author, co-author or editor, I have indicated in detail which part of the publication was actually written by myself alone and have fully referenced such publications.
- (v) This thesis does not contain text, graphics or tables copied and pasted from the Internet, unless specifically acknowledged, and the source being detailed in the thesis and in the References section.

Signed: .....

Date: .....



## SUPERVISOR'S DECLARATION

College of Law and Management Studies

### Supervisors Permission to Submit Thesis for Examination

<b>Name:</b> Bomi Cyril Nomlala		<b>Student No:</b> 203515450	
<b>Title:</b> Financial Capability, Financial Socialisation and Professional Skills of Accounting students studying in KwaZulu-Natal Universities			
<b>Qualification:</b> Doctor of Philosophy (Accounting)		<b>School:</b> Accounting, Economics and Finance.	
	Yes	No	
To the best of my knowledge, the thesis/dissertation is primarily the student's own work and the student has acknowledged all reference sources			
The English language is of a suitable standard for examination without going for professional editing.			
Turnitin Report %*		4 %	
Comment if % is over 10%:			
I agree to the submission of this thesis/dissertation for examination			
Supervisors Name: Professor Mabutho Sibanda			
Supervisors Signature:			
Date: 31 <sup>st</sup> May 2019			
Co-Supervisors Name: N/A			
Date:			

\* The submission of a Turnitin or equivalent Report is compulsory.

## **DEDICATION**

This work is dedicated to the Almighty God, my late father, Rev. Nceba Nelson Nomlala, and my mother, Cecilia Nomda Nomlala.

## ACKNOWLEDGEMENTS

I would like to thank:

- My wife, Ntlekazi, and children, Isibabale, Onelihle and Mikhulu, for their patience and support during my research. You were a pillar of strength for me and a source of inspiration. I appreciate your encouragement and motivation, especially when I doubted my ability to finish the thesis.
- Professor Mabutho Sibanda, my supervisor for creating the hunger in me to obtain a PhD and then sharing your knowledge and offering guidance and encouragement to enable me to complete the study.
- Benjamin, for assistance with the analysis and interpretation of the data.
- Damilola Aboluwodi, who helped immensely with data collection, coding, capturing and research related tasks
- My friends, Kiran Baldavoo, Sinoyolo Ndoni, Khwezi Nonkonyana and Laduma Nomlala, for your support and encouragement.
- My dear sister and her husband, Bomikazi Chinhamo and Edmore Chinhamo, your support through this journey has been tremendous.
- My colleagues in the School of Accounting, Economics and Finance, especially Charmaine, Josue, Paul, Kerry-Ann, Hlengiwe, Mkhize, Sanjeev, Trish, Meena, Smangele, Xolile, Seshni, Nondumiso, Zandile and Mbalenhle, for your support and encouragement.
- Deanne Collins for providing me with much-needed linguistic assistance and technical thesis editing.
- The University of KwaZulu-Natal for awarding me a UCDP Grant.

## **ABSTRACT**

The global discourse on financial capability and financial socialisation has gained momentum in recent times. Professional skills gradually become an issue that prospective employers say most graduates are missing. This has aroused policymakers and academics' interest in the importance of financial capability, financial socialization and professional skills in maintaining economic and financial stability. The global financial crisis of 2007/2008 was a consequence of the lack of such capability. At local and international level, much attention has been paid to financial capability and little has been done on financial socialisation and professional skills, especially when it comes to financial decision making and related skills. Both young and old have been affected by poor financial decision making which has negatively affected the economy. What further complicates the poor financial decision making is the fact that there is also bad influence coming from external sources and lack of requisite skills for sustainability.

However, it remains unclear whether university students enrolled in financially related courses, particularly accounting students in the KwaZulu-Natal Province of South Africa, have higher financial capability levels as measured by financial knowledge, financial attitudes, numeracy skills and financial behaviour. It also remains an unknown factor whether what role external factors play in financial decision measure by parental influence, peer influence and social media play a critical role in the financial decision making.

It is also not known whether students studying for accounting degrees in professionally accredited institutions are more financially capable than their counterparts in non-accredited institutions. Finally, there is a lack of clarity on whether financial knowledge, numerical skills, financial attitudes and financial behaviour as components of financial capability can be influenced by financial socialisation.

This study was motivated by the existence of these grey areas in the current literature. It aimed to provide empirical evidence on these issues that will inform curriculum development and policy formulation on financial literacy matters in South Africa.

Self-administered questionnaires were utilised to collect primary data from undergraduate accounting students studying at the University of KwaZulu-Natal (UKZN), Mangosuthu University of Technology (MUT) and Durban University of Technology (DUT). The Statistical Package for the Social Sciences (SPSS 25) was used to analyse the data. Descriptive statistics, Bivariate regression analysis and One-way Analysis of Variance (ANOVA) were employed to investigate the financial capability of accounting students and confirmatory and exploratory factor analysis was used to identify the factors that influence such capability. Cross Tabulation and Regression analysis were used to ascertain the relationship between level of study and financial capability and factor analysis was employed to determine the factors that influence the accounting students' financial capability, financial socialisation and professional skills. Regression analysis was also used to evaluate the difference in professional skills and financial capability between UKZN (SAICA accredited) and DUT and MUT (non-SAICA accredited). Finally, Chi-square was employed to establish the relationship among the financial capability, financial socialisation and professional skills of accounting students.

The results revealed that more of the respondents were female than male. The overall analysis of the financial capability of the accounting students indicated that most of the respondents (n=1416; 89.5%) have high financial capability. However, only (n=229; 14.5%) were found to have high levels of financial knowledge. With (n=1513; 95.6%), (n=1286; 81.3%), and (n=1394; 88.1%), it was found that most of the respondents have positive financial attitudes, good financial behaviour, and high numeracy skills, respectively. The computations in relation to financial socialisation and professional skills showed that most of the respondents are not influenced by social media, while most have excellent professional skills, with (n=1149; 72.6%) and (n=1506; 95.2%), respectively.

The financial capability of the accounting students is high compared to the results of previous studies conducted among the general population. However, the results for financial knowledge (a component of financial capability) are low, which is consistent with the findings of other studies. The finding that financial attitudes, financial behaviour and numeracy skills significantly influence financial capability is a unique feature of this study,

as it has not been reported in the literature reviewed. As expected, the numeracy skills of the accounting students were high compared to previous research. Nonetheless, much remains to be done to improve the financial knowledge of students in general and accounting students in particular.

**Keywords:** Financial attitudes; Financial behavior; Financial capability; Financial socialisation; Professional skills; Numeracy skills; Financial literacy.

## TABLE OF CONTENTS

DECLARATION.....	ii
SUPERVISOR'S DECLARATION .....	iii
DEDICATION .....	iv
ACKNOWLEDGEMENTS .....	v
ABSTRACT .....	vi
LIST OF TABLES.....	xv
TABLE OF FIGURES .....	xviii
INTRODUCTION AND OVERVIEW .....	19
1.1 Introduction.....	19
1.2 Background to the Study.....	20
1.3 Problem Statement.....	25
1.4 Research Aim/Purpose of the study .....	26
1.5 Research Objectives.....	27
1.6 Research Questions.....	28
1.7 Scope of the study.....	28
1.8 Contribution to the body of knowledge .....	29
1.9 Importance of Financial capability .....	31
1.9.1 Money management.....	31
1.9.2 Planning Ahead .....	31
1.9.3 Making choices/choosing products.....	32
1.9.4 Getting help/staying Informed.....	33
1.10 Importance of financial socialization .....	33
1.10.1 Family influence .....	34
1.10.2 Friends influence .....	35
1.10.3 Social Media influence .....	36
1.10.4 Formal education influence .....	37
1.11 Importance of Professional Skills.....	38
1.12 Limitations .....	38
1.13 Structure of the Thesis .....	38
1.14 Chapter Summary .....	40
CHAPTER TWO.....	41
RESEARCH METHODOLOGY .....	41

2.1 Introduction.....	41
2.2 Research Design.....	41
2.2.1 The Research Approach/Design .....	41
2.2.2 Quantitative research design.....	43
2.3 Model Specification .....	45
2.3.1 Input .....	46
2.3.2 Throughputs .....	46
2.3.3 Output .....	46
2.3.4 Adapted model for the study .....	46
2.4 Data type and sources .....	47
2.5 Survey .....	54
2.6 Research Population.....	54
2.7 The Research sample and Sampling technique.....	55
2.7.1 Sampling method .....	55
2.7.2 Sampling frame .....	55
2.7.3 Sample size.....	56
2.8 Data Analysis .....	57
2.8.1 Data Analysis using the study's objectives .....	59
2.9 Data preparation.....	65
2.9.1 Financial Knowledge and Numeracy Skills.....	65
2.9.2 Financial Attitudes .....	65
2.9.3 Financial Behaviour .....	66
2.9.4 Financial Socialisation and Professional Skills .....	66
2.10 Reliability of the Study Instrument.....	66
2.10.1 Pilot study reliability test .....	68
2.11 Data Interpretation .....	69
2.12 Ethical Considerations .....	70
2.13 Privacy and Confidentiality .....	71
2.14 Chapter Summary .....	71
<b>CHAPTER THREE .....</b>	<b>72</b>
<b>FINANCIAL CAPABILITY .....</b>	<b>72</b>
3.1 Introduction.....	72
3.2 Theoretical framework.....	75
3.2.1 The Capability Approach .....	75

3.2.2 The Financial Capability Approach.....	76
3.3 Definitions, Evolution and Origins of the Capability approach .....	78
3.4 Financial capability among individuals – General Context.....	80
3.5 Financial capability among Youth and Millennials .....	83
3.6 Financial capability and students’ Socio-demographic characteristics .....	84
3.6.1 Gender .....	84
3.6.2 Age.....	86
3.6.3 Education .....	87
3.6.4 Income .....	88
3.6.5 Race.....	88
3.6.6 Parents’ income.....	88
3.6.7 Parents’ education.....	89
3.7 Financial knowledge – Empirical Literature.....	90
3.7.1 Savings and Investment.....	90
3.7.2 Spending and Credit.....	91
3.7.3 Income and Money Management.....	91
3.8 Financial Capability and Financial knowledge - Empirical Literature.....	92
3.9 Financial capability and financial attitude – Empirical Literature.....	95
3.10 Financial capability and financial behaviour - Empirical Literature .....	98
3.11 Financial capability and numeracy skills - Literature.....	100
3.12 Financial capability and Parental influence - Literature .....	102
3.13 Financial capability of South African students - Literature.....	103
3.14 Importance of Financial capability .....	106
3.14.1 Money management.....	106
3.14.2 Planning Ahead .....	106
3.14.3 Making choices/choosing products.....	107
3.15 Data Analysis and Interpretation of Findings .....	108
3.15.1 Financial Capability of Accounting Students .....	108
3.15.2 Confirmatory Factor Analysis (CFA).....	120
3.15.3 Factors influencing the financial capability of accounting students.....	138
3.15.4 The impact of the level of study and other socio-demographic variables on financial capability .....	142
3.16 Discussion and implications of the findings. ....	146
3.16.1 Hypothesis One.....	147
3.16.2 Hypothesis Two.....	152

3.16.3 Hypothesis Three .....	155
3.17 Chapter Summary .....	160
CHAPTER FOUR.....	161
FINANCIAL SOCIALISATION .....	161
4.1 Introduction.....	161
4.2 Theoretical framework.....	162
4.2.1 Social learning theory.....	162
4.2.2 Observation vs Direct experience.....	163
4.2.4 The Social Learning process via Observation .....	163
4.2.5 Social Cognitive Theory .....	163
4.3 Human capability.....	165
4.4 Financial Socialisation.....	166
4.5 Assessment of financial socialisation .....	168
4.5.1 General assessment of financial socialisation.....	168
4.5.2 Categorical assessment of financial socialisation.....	169
4.5.3 Family influence .....	169
4.5.4 Friends' influence .....	171
4.5.5 Media Influence .....	172
4.6 Financial socialisation and Socio-economic factors.....	173
4.6.1 Gender .....	173
4.6.2 Age.....	173
4.6.3 Education .....	173
4.6.4 Income .....	174
4.6.5 Parental factors .....	175
4.6.6 Place of residence.....	175
4.7 Factors influencing the financial socialisation of University students .....	176
4.8 Relationship among socialisation, capabilities and professional skills .....	177
4.8.1 Financial socialisation versus financial capabilities .....	177
4.9 Importance of Financial socialisation.....	178
4.10 Data Analysis and interpretation.....	181
4.10.1 Financial Socialisation versus Demographic data .....	181
4.11 Assessment of financial socialisation .....	182
4.12 Factors influencing the financial socialisation of Accounting students.....	183
4.12.1 Socio-economic factors versus financial socialisation .....	187

4.13	The impact of financial socialisation on financial capabilities .....	189
4.14	The impact of financial socialisation on professional skills .....	189
4.15	Discussion and Implications of the Research Findings .....	189
4.16	Assessment of financial socialisation .....	190
4.16.1	Empirical assessment of financial socialisation .....	190
4.16.2	Categorical assessment of financial socialisation.....	193
4.17	Factors influencing the financial socialisation of accounting students.....	195
4.18	Relationship among socialisation, capabilities and professional skills .....	198
4.19	Chapter Summary .....	200
<b>CHAPTER FIVE .....</b>		<b>201</b>
<b>Professional Skills of Accounting Students .....</b>		<b>201</b>
5.1	Introduction to professional skills.....	201
5.2	Experimental Learning Theory .....	202
5.3	EMPIRICAL LITERATURE ON PROFESSIONAL SKILLS .....	204
5.3.1	Professionalisation of the Accounting profession in South Africa.....	204
5.4	The Mediating role of the University in Skills Development.....	206
5.5	Accreditation of universities and professional skills .....	206
5.6	Importance of Accreditation (Happe, 2015) .....	207
5.7	Accreditation of the Accounting profession around the world.....	207
5.8	South African Accreditation .....	209
5.8.1	Department of Higher Education and Training (DHET) .....	209
5.8.2	Higher Education Quality Council (HEQC) .....	210
5.8.3	South African Institute of Chartered Accountants (SAICA).....	211
5.8.4	SAICA accredited higher education institutions – 2019.....	213
5.9	Professional skills of university students .....	213
5.10	Accreditation and professional skills.....	218
5.11	Technical skills expectations .....	219
5.12	Professional skills expectations .....	220
5.13	Skills gap of accounting graduates .....	220
5.14	Components of Professional Skills.....	221
5.14.1	Critical thinking skills .....	221
5.14.2	Problem-solving skills .....	223
5.14.3	Effective communication skills .....	224
5.14.4	Oral communication skills .....	224

5.14.5	Information technology skills.....	226
5.16	Data Analysis and Interpretation of Findings.....	231
5.16	Educational level and Communication Skills.....	241
5.17	Year of study and Communication Skills.....	242
5.18	Educational level and ICT Skills.....	243
5.19	Educational level and Critical thinking skills.....	245
5.20	DISCUSSION AND IMPLICATIONS OF THE RESEARCH FINDINGS.....	250
5.21	Chapter Summary.....	259
	CHAPTER SIX.....	260
	SUMMARY, CONCLUSION AND RECOMMENDATIONS.....	260
6.1	Introduction.....	260
6.2	Summary of the findings.....	260
6.3	Summary of each chapter.....	261
6.4	Limitations of the study.....	263
6.5	Conclusion.....	264
6.6	Key findings, Implications, contribution to the literature and recommendations.....	266
6.6.1	First objective.....	267
6.6.2	Second Objective.....	267
6.6.3	Third Objective.....	269
6.6.4	Fourth Objective.....	270
6.6.5	Fifth Objective.....	271
6.6.6	Sixth Objective.....	272
6.6.7	Seventh Objective.....	272
6.6.8	Eighth Objective.....	273
6.6.9	Ninth Objective.....	278
6.7	Contribution of the study.....	279
6.8	Suggestions for future research.....	280
	REFERENCES.....	282
	ANNEXURE 1 –QUESTIONNAIRE MATRIX.....	302
	ANNEXURE 2 – QUESTIONNAIRE.....	304
	ANNEXURE 3 – INFORMED CONSENT.....	310
	ANNEXURE 4 – ETHICAL CLEARANCE.....	312
	ANNEXURE 5 – EDITORIAL LETTER.....	313
	ANNEXURE 6 – TURNITIN REPORT.....	314

## LIST OF TABLES

Table 1. 1 Population distribution per University .....	29
Table 2. 1 Content of the research questionnaire .....	53
Table 2. 2 Overall enrollment at KwaZulu-Natal universities.....	54
Table 2. 3 Population distribution and sample size .....	57
Table 2. 4 Reliability test of the pilot study.....	69
Table 2. 5 Capability/Knowledgeable Levels and score ranges .....	70
Table 3. 1 : Respondents' financial knowledge .....	109
Table 3. 2 Respondents' financial behaviour.....	112
Table 3. 3 Respondents' Financial Knowledge vs Financial Behavior .....	114
Table 3. 4 Respondents' Numerical skills .....	115
Table 3. 5 Respondents' financial attitude .....	116
Table 3. 6 : Respondents' financial capability .....	118
Table 3. 7 Respondents' financial capability (FC) versus institutions.....	119
Table 3. 8 CMIN.....	122
Table 3. 9 RMR, GFI.....	122
Table 3. 10 Baseline Comparisons .....	123
Table 3. 11 RMSEA.....	123
Table 3. 12 Parsimony-Adjusted Measures.....	124
Table 3. 13 Computation of degrees of freedom (Default model) .....	126
Table 3. 14 P- value analysis .....	126

<b>Table 3.15 Standardised Regression Weights: (Group number 1)</b> .....	<b>127</b>
<b>Table 3.16 Co-variances: (Group number 1 - Default model)</b> .....	<b>128</b>
<b>Table 3. 17 CMIN</b> .....	<b>131</b>
<b>Table 3. 18 RMR, GFI</b> .....	<b>131</b>
<b>Table 3. 19 Baseline Comparisons</b> .....	<b>131</b>
<b>Table 3. 20 RMSEA</b> .....	<b>132</b>
<b>Table 3. 21 Parsimony-Adjusted Measures</b> .....	<b>132</b>
<b>Table 3. 22 Hoelter</b> .....	<b>132</b>
<b>Table 3. 23 Regression Weights: (Group number 1)</b> .....	<b>134</b>
<b>Table 3. 24 Standardized Regression Weights ( Group 1)</b> .....	<b>135</b>
<b>Table 3. 25 Covariances ( Group 1)</b> .....	<b>136</b>
<b>Table 3. 26 Correlations (Group1)</b> .....	<b>136</b>
<b>Table 3. 27 Variances(Group 1)</b> .....	<b>136</b>
<b>Table 3. 28 Factors influencing financial capability using EFA</b> .....	<b>140</b>
<b>Table 3. 29 Rotated Component Matrix of the factors</b> .....	<b>141</b>
<b>Table 3. 30 Reliability and correlation analysis of factors</b> .....	<b>142</b>
<b>Table 3. 31 Regression model of financial capability</b> .....	<b>143</b>
<b>Table 3. 32 Financial capability versus level of study</b> .....	<b>144</b>
<b>Table 3. 33 Bivariate regression model of financial capability</b> .....	<b>146</b>
<b>Table 4. 1 Financial Socialisation vs Respondents' Campus</b> .....	<b>181</b>
<b>Table 4. 2 Financial Socialisation vs Respondents' Place of Residence</b> .....	<b>181</b>
<b>Table 4. 3 Financial Socialisation vs Respondents' Parents' Educational Level</b>	<b>181</b>
<b>Table 4. 4 Respondents' financial Socialisation</b> .....	<b>182</b>
<b>Table 4. 5 Factors influencing financial capability</b> .....	<b>185</b>

<b>Table 4. 6 Rotated Component Matrix of financial socialisation by using EFA..</b>	<b>186</b>
<b>Table 4. 7 Reliability and correlation analysis of the factors .....</b>	<b>186</b>
<b>Table 4. 8 Regression model of financial socialisation .....</b>	<b>188</b>
<b>Table 5. 1 Professional Skills Cronbach Alpha .....</b>	<b>231</b>
<b>Table 5. 2 Breakdown of Professional Skills questions.....</b>	<b>232</b>
<b>Table 5. 3 Respondents' professional skills .....</b>	<b>233</b>
<b>Table 5. 4 Respondents' professional skills versus institutions .....</b>	<b>233</b>
<b>Table 5. 5 Professional Skills vs University of the respondents.....</b>	<b>234</b>
<b>Table 5. 6 Professional Skills vs Respondents' Level of Study .....</b>	<b>234</b>
<b>Table 5. 7 Professional Skills vs Respondents' Year of Study.....</b>	<b>235</b>
<b>Table 5. 8 Lifelong learning (Skills –Q1).....</b>	<b>237</b>
<b>Table 5. 9 LIFELONG LEARNING (ANOVA).....</b>	<b>238</b>
<b>Table 5.10 Pearson Chi-Square test – Communication Skills .....</b>	<b>240</b>
<b>Table 5. 11 ANOVA – Communication Skills.....</b>	<b>241</b>
<b>Table 5. 12 ICT - Pearson Chi-Square test .....</b>	<b>242</b>
<b>Table 5. 13 Information Communications Technology (ICT) – ANOVA .....</b>	<b>243</b>
<b>Table 5. 14 Critical Thinking Skills – Pearson Chi-Square test.....</b>	<b>244</b>
<b>Table 5. 15 Critical Thinking Skills – ANOVA.....</b>	<b>244</b>
<b>Table 5. 16 Multinomial Logistic Regression - DUT and MUT .....</b>	<b>247</b>
<b>Table 5. 17 Regression model for professional skills .....</b>	<b>250</b>

## TABLE OF FIGURES

Figure 1. 1 Modified family resource management model.....	22
Figure 2. 1 Deacon and Firebaugh's Family Resource Management Model .....	45
Figure 2. 2 Modified family resource management model.....	47
Figure 3. 1 Modified Family Resource Management Model.....	74
Figure 3. 2 Respondents' savings and investment knowledge.....	110
Figure 3. 3 Respondents' spending and credit knowledge .....	110
Figure 3. 4 Respondents' income management .....	111
Figure 3. 5 Respondents' money management .....	111
Figure 3. 6 Respondents' Financial Knowledge .....	112
Figure 3. 7 Respondents' Financial Behaviour.....	113
Figure 3. 8 Respondents' financial attitude .....	117
Figure 3. 9 Financial Capability of Accounting Students .....	118
Figure 3. 10 Respondents' financial capability according to institution .....	119
Figure 3. 11 CFA path diagram (Financial knowledge) .....	125
Figure 3. 12 CFA path diagram (Financial Capability).....	133
Figure 3. 13 Scree plot of components based on the Eigenvalue of >1 .....	139
Figure 4. 1 Scree plot of components based on the Eigenvalue of >1 .....	184

# CHAPTER ONE

## INTRODUCTION AND OVERVIEW

### 1.1 Introduction

The global discourse on financial capability has gained momentum in recent times. This has aroused policymakers and academics' interest in the importance of financial capability in maintaining economic and financial stability. The global financial crisis of 2007/2008 was a consequence of the lack of such capability. It highlighted the need to prevent individuals from making uninformed financial decisions (Klapper et al., 2012) and awareness campaigns and programmes were launched to promote financial literacy across all age groups (Lusardi et al., 2009; Mandell and Klein, 2009). More recently, the scope of such campaigns has been extended to embrace other aspects of financial capability. However, while many developing and developed countries have expanded their efforts in this regard (Xu and Zia, 2012; Demirguc-Kunt et al., 2015), these have not yielded the expected outcomes (Xu and Zia, 2012).

Unlike financial literacy, which has been well researched and conceptualised by academics, there is a paucity of literature on financial capability, which has yet to be clearly defined. Studies (Atkinson and Messy, 2012; Huston, 2010; Hastings et al., 2013) have shown that levels of financial literacy vary between developed countries and developing countries and that most citizens of developing countries do not have access to financial products and services such as a bank account (Ansong and Gyensare, 2012; Sohn et al., 2012; Xu and Zia, 2012). Conversely, some studies have found that individuals in developed countries have higher financial literacy levels due to their access to diverse financial services and products (Xu and Zia, 2012). Poor financial literacy levels in developing countries result in poor financial decision making, which could have dire consequences. It is generally expected that tertiary institutions provide students with an edge by equipping them with financial skills for the future (Louw et al., 2013) and that financial education in schools and the workplace improves financial behaviour (Gale and Levine, 2010).

Some studies on financial literacy have focused on the general population (Klapper et al., 2015; Boisclair et al., 2017), while others have focused on age (Finke et al., 2016); children (Behrman et al., 2010), the youth (Jorgensen and Savla, 2010; Sohn et al., 2012), college students (Louw et al., 2013; Shaari et al., 2013; Sarigül, 2014) and those with tertiary education (Kojo Oseifuah, 2010; Van Rooij et al., 2011). Jorgensen and Savla (2010) asserted that adolescents and college students represent the future workforce and that their levels of financial literacy are thus fundamental to their future financial decisions and the stability of the economy

## **1.2 Background to the Study**

### ***Financial Capability, Financial Socialisation and Professional Skills***

There is no generally accepted definition of the term “financial capability”. Taylor (2011) defines such capability as evidence of sound ability when confronted with financial decision-making. Financial capability has been defined in relation to financial inclusion, financial literacy and financial consumer protection. Xiao et al. (2014b) argue that financial literacy and financial behaviour are closely related.

The pillars of financial capability are financial knowledge, numeracy skills, financial attitudes and financial behaviour (Bank, 2013). While several studies have been conducted on these aspects of financial capability among university students, most do not comprehensively address all the pillars. Cole et al. (2010) and Honohan and King (2009) studies in South Africa and Tanzania, respectively, concurred that financial education yields positive outcomes, but Fernandes et al. (2014) maintained that it only has short-term benefits. Oseifuah and Gyekye (2014) research at Venda University concluded that finance-related courses improve students’ financial literacy. Williams and Oumlil (2015) study on the financial capability of college students focused on financial exclusion rather than their financial knowledge and how they had been financially socialised.

Finally, Kadoya and Khan (2018) and Arellano et al. (2014) argued that financial knowledge is influenced by psychological factors such as financial satisfaction, trust and anxiety about life and the future.

Brooks and Pui (2010) define numeracy skills as the ability to reason and to apply simple numeracy concepts, while Tett et al. (2007) maintained that “confidence and competence” are key factors as this enables people to use numbers and data in their everyday activities to make sound financial decisions. Drever et al. (2015) concurred but added that socialisation also plays a key role. Ghazal et al. (2014) also noted that confidence is an essential component of numeracy skills

Lusardi (2011) study on financial capability in the United States (US) found that numeracy skills among the age group 23 to 28 were relatively high compared to those of older people, while Skagerlund et al. (2018) tested numeracy skills via four questions and found low levels of numeracy among certain age groups.

Robb and Woodyard (2011) study on the relationship between financial knowledge and financial behaviour, found that people with more financial knowledge displayed more positive financial behaviour. However, Jorgensen and Savla (2010) found that no relationship existed between financial attitudes and the financial behaviour of young adults. Xiao et al. (2014b) demonstrated that financially knowledgeable consumers were prone to more positive financial behaviour. Shih and Ke (2014) investigation of the determinants of financial behaviour among university students in Taiwan, concluded that socio-demographic factors have less influence on financial behaviour than personality traits. Akben-Selcuk (2015) examined the factors that influence the financial behaviour of university students in Eastern Europe and found a major difference between the budgeting behaviour of male and female students, with the latter exhibiting superior financial behaviour.

A growing body of evidence suggests that, in general, students rely on their families, especially their parents, to impart financial knowledge (Jorgensen and Savla, 2010). However, some studies have found that many parents lack the requisite skills to fulfil this role (Varcoe et al., 2010). Another school of thought suggests that students learn financial skills via trial and error and that financial knowledge does not make them financially smart (Lachance and Choquette-Bernier, 2004).

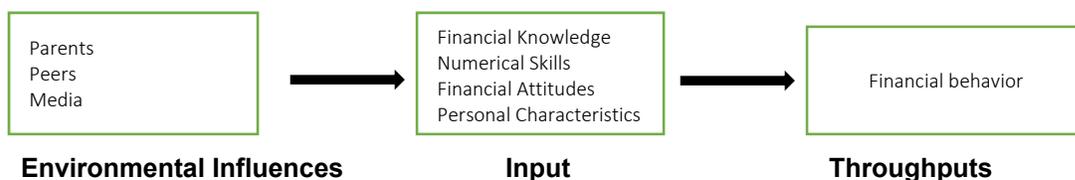
John (1999) argues that most college students rely on their parents and peers for financial knowledge. Jorgensen et al. (2017) noted that parents play an important role in this regard, particularly when their children are young, and that parental practices such as modelling and teaching play a vital role in influencing a young child through the teenage years (Solheim et al., 2011).

To the best of the researcher’s knowledge, no South African studies have examined financial socialisation, financial attitudes, numeracy skills and financial behaviours among accounting students. De Clercq and Venter (2009) surveyed prospective chartered accountants (third-year students studying at the University of South Africa), their main focus was the students’ investment habits, assuming that they have the disposable income to invest. Furthermore, the study’s results are not generalisable to other tertiary institutions as it was restricted to one university.

Financial literacy studies have also drawn on the family resource management model and social learning theory to describe how an individual reaches a financial decision (Goldsmith, 2005). The family resource management model provides the theoretical foundation for this research study.

Perceived parental and peer influence is an important stage in the social learning theory developed by Bandura (1986). John (1999) notes that the theory posits that the environment in which young people are raised shapes their knowledge and attitudes. Parents, peers and the media play a vital role in determining whether or not young adults are able to make positive financial decisions.

**MODIFIED FAMILY RESOURCE MANAGEMENT MODEL - DEACON AND FIREBAUGH**



**Source: Deacon and Firebaugh (1988)**

**Figure 1. 1 Modified family resource management model**

As Fulghum (1993: 1) rightly puts it, *“do not worry that your children never listen to you; worry that they are always watching you.”*

In South Africa, the South African Institute of Chartered Accountants (SAICA) has been at the forefront of the accounting education offered at tertiary institutions (de Villiers and Venter, 2010). It evaluates the accounting degrees offered at such institutions and offers accreditation. In order to obtain accreditation, higher education institutions must have appropriate resources and meet the stipulations set out in SAICA's competency framework.

SAICA performs continuous assessment and monitors universities using self-evaluation and inspection every five years (SAICA 2018). The University of KwaZulu-Natal (UKZN) is accredited by SAICA. Serrao (2008) argued that institutions that offer accounting programmes that are not accredited will struggle to attract students. However, Anisette and Kirkham (2007) contended that accreditation is a “myth” as students that graduate from non-accredited institutions in the United Kingdom (UK) are recognized as chartered accountants by the Institute of Chartered Accountants in England and Wales (ICAEW). Nonetheless, Jones (2010) notes that graduates from an accredited institution are assumed to have the sound technical knowledge and the necessary professional attributes (in line with the competency framework) with regard to financial matters. Barac and Du Plessis (2014) maintain that SAICA's competency framework has improved the competence of accounting students. However, it is unclear whether or not this will shape their financial capability in their future financial choices.

Post-1994, the democratic South African adopted policies and initiatives aimed at promoting financial inclusion and improving financial literacy (Xu and Zia, 2012; Struwig et al., 2013). Financial institutions in the country have also launched education campaigns in an effort to attract more customers (Engelbrecht, 2008). The adoption of the South African Financial Sector Charter in 2004 (Roberts et al., 2012) was another positive step in this regard. However, national surveys show that levels of financial literacy remain low among the adult population (Roberts et al., 2012); Van Nieuwenhuyzen (2009).

Struwig et al. (2013) in-depth analysis of the results of a recent baseline study conducted across all nine provinces showed that financial literacy levels amongst women aged 16 to 29, and amongst coloured and black African people are still very low. However, no studies have been conducted on South Africans' financial capability.

The South African Savings Institute maintains that many South African graduates enter the workplace with little or no knowledge of personal finance. While a number of studies have been conducted on financial literacy among adolescents and college students, financial literacy among commerce students remains under-researched. It is crucial that this segment of students possess the requisite financial capability and financial skills required for their future professions. It is thus important to examine whether or not the commerce curriculum, particularly the accounting curriculum, equips students with adequate financial management skills.

Different scholars (Allmark and Machaczek, 2015; Xiao et al., 2014b) have defined financial capability differently, but the generally accepted definition includes four major capability components - financial attitudes, numeracy skills, financial knowledge and financial behaviour, which considers budgeting and "one's ability to manage money" (Sherraden, 2010). Similarly, Lusardi (2012) defines financial capability as a combination of financial literacy and numeracy skills.

In a multitude of ways, financial capability can be measured (Taylor et al., 2011b). (Xiao et al., 2014b) argues that financial capability can only be defined as financial literacy, financial behaviour, and perceived financial capability perceived (Xiao et al., 2014b).

Financial capability is the capacity of customers to make better-informed choices about handling their finances using the gained financial literacy.

According to the definition of the World Bank (WorldBank, 2013; Group, 2013), given socioeconomic and environmental circumstances, it is the inner ability to behave in one's best economic interest.

Financial capability includes consumer knowledge (literacy), attitudes, skills and behaviours in comprehension, choosing and using financial services and the capacity to access financial services that meet their requirements (WorldBank, 2013).

We have adopted the World Bank definition as the working definition of the thesis.

### 1.3 Problem Statement

Studies in many countries have reported poor financial literacy levels among college students (Sohn et al., 2012; Shahrabani, 2013; Sarigül, 2014). These findings are consistent with those on financial literacy in the South African context (De Clercq and Venter, 2009; Roberts et al., 2012).

Other studies pointed to low financial capability levels across all age groups (Demirguc-Kunt et al., 2015). However, the financial capability of university students, particularly those in accounting-related courses remains unexplored. Hence, it remains unclear:

- *Whether it is a generalisable fact that university students enrolled in financial courses, particularly accounting students in the KwaZulu-Natal Province of South Africa, will exhibit higher financial capability levels as measured by financial knowledge, financial attitudes, numeracy skills and financial behaviour.*
- *What factors influence the financial capability of university students enrolled in financial courses, particularly accounting students in the KwaZulu-Natal Province of South Africa.*
- *To what extent students enrolled in financial courses are financially socialised, particularly accounting students in the KwaZulu-Natal Province of South Africa.*
- *What the drivers are of financial socialisation among students enrolled in financial courses, particularly accounting students in the KwaZulu-Natal Province of South Africa.*
- *To what extent students enrolled in financial courses are professionally skilled, particularly accounting students in the KwaZulu-Natal Province of South Africa.*
- *What the drivers are of professional skills among students enrolled in financial courses, particularly accounting students in the KwaZulu-Natal Province of South Africa.*
- *Whether the socio-demographic characteristic of students studying for accounting degrees influence their financial capability, financial socialisation and professional skills.*
- *What kind of relationship exists among financial capability, financial socialisation and professional skills.*

#### **1.4 Research Aim/Purpose of the study**

The overall aim of this study was to investigate the financial capability, financial socialization and professional skills of accounting students studying in KwaZulu-Natal universities in order to understand their financial well-being, role of family and peer in financial decisions their ability to show their professional skills and more importantly offer evidential insights to inform curriculum development and policy direction as well as contribute to the existing body of knowledge in this field of research.

Therefore, understanding the gaps in understanding and similarities between accounting students studying at KwaZulu-Natal University (UKZN), Mangosuthu University of Technology (MUT) and Durban University of Technology (DUT) has also become crucial. It was critical in this research to explore further elements of economic capacity that were studied using subthemes of financial capability as follows: financial knowledge, numeracy abilities, financial attitudes, and financial behaviour. In its detailed elements, the research also explored the function and effect of financial socialization using the following subheading: parental influence, peer influence, and accounting students ' social media influence. Finally, through this research, an inquiry of accounting students ' professional abilities was also carried out using the following critical topics: critical thinking, problem-solving, effective communication and IT. The results from the research's critical elements sought to give suggestions for policy and curriculum enhancement. The thesis is designed to highlight the three primary fields that contribute to the thematic development of scholarship on financial capability, financial socialisation and professional skills and geographical concerning South Africa's KwaZulu-Natal province.

The overall aim of this study is to examine:

- Whether university students enrolled in financially associated courses such as accounting in the KwaZulu-Natal Province of South Africa have significantly higher rates of financial capability,

- Whether learners enrolled in accounting degrees in professionally accredited organizations are more financially capable than their counterparts in non-accredited organizations, and
- Whether financial socialization affects the students' financial capability.

## **1.5 Research Objectives**

Based on the aim of this study, the research objectives are:

### **Research Objective one**

To establish the levels of financial capability (financial knowledge, financial attitudes, financial behaviour and numeracy skills) among accounting students at universities in KwaZulu-Natal.

### **Research Objective Two**

To determine the factors that influence financial capability among accounting students at universities in KwaZulu-Natal.

### **Research Objective Three**

To establish the level of financial socialisation among accounting students at universities in KwaZulu-Natal.

### **Research Objective Four**

To determine the factors that influence financial socialisation among accounting students at universities in KwaZulu-Natal.

### **Research Objective Five**

To establish the level of professional skills among accounting students at universities in KwaZulu-Natal.

### **Research Objective Six**

To determine the factors that influence professional skills among accounting students at universities in KwaZulu-Natal.

### **Research Objective Seven**

To evaluate the differences in professional skills between SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT).

### **Research Objective Eight**

To evaluate the impact of socio-economic factors on financial capability, financial socialisation and professional skills.

### **Research Objective Nine**

To examine the relationships among financial capability, financial socialisation and professional skills.

### **1.6 Research Questions**

In line with the research objectives and the problem statement, the research questions are:

1. What are the levels of financial capability (financial knowledge, financial attitudes, financial behaviour and numeracy skills) among accounting students at universities in KwaZulu-Natal?
2. What are the intra-component drivers of financial capability among accounting students at universities in KwaZulu-Natal?
3. What is the level of financial socialisation among accounting students at KwaZulu-Natal universities?
4. What factors affect financial socialisation among accounting students at KwaZulu-Natal universities?
5. What is the level of professional skills among accounting students at universities in KwaZulu-Natal?
6. What factors influence the professional skills of accounting students at universities in KwaZulu-Natal?
7. Are there any differences in professional skills between SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT)?
8. What impact do socio-economic factors have on financial capability, financial socialisation and professional skills?
9. Is there a relationship among financial capability, financial socialisation and professional skills?

### **1.7 Scope of the study**

The study investigated the financial capability levels of accounting students studying at universities (UKZN, MUT and DUT) within KwaZulu-Natal Province. Students' financial

capability was considered in terms of their financial knowledge, financial attitudes, financial behaviour and numeracy skills. The study also examined the effect of financial socialisation and professional accreditation of the universities on students' financial capability.

The accounting students considered for this study were first-, second- and third-year accounting students in universities within KwaZulu-Natal Province in 2018. The universities included DUT, MUT and UKZN.

Table 1.1 below shows the total number of students registered for accounting at these institutions and the estimated individual sample at 95% confidence level.

**Table 1. 1 Population distribution per University**

<b>Course</b>	<b>UKZN enrolments</b>	<b>DUT enrolments</b>	<b>MUT enrolments</b>	<b>Total population</b>	<b>Sample to be selected</b>
1 <sup>st</sup> year Accounting (main-stream)	842	700.00	850.00	2 392.00	741.27
1 <sup>st</sup> year Accounting (non-main-stream)	471	0.00	0.00	471.00	145.96
2 <sup>nd</sup> year Accounting	910	400.00	600.00	1 910.00	591.90
3 <sup>rd</sup> year Accounting	433	320.00	405.00	1 158.00	358.86
<b>Total</b>	<b>2 656</b>	<b>1 420.00</b>	<b>1 855.00</b>	<b>5 931.00</b>	<b>1 838.00</b>

Source: Constructed by the researcher based on 2017/2018 enrolment numbers

## **1.8 Contribution to the body of knowledge**

Several studies have been conducted on financial literacy levels in South Africa, with some focusing on university students. However, to the best of the researcher's knowledge, no studies have examined South Africans' financial capability or the financial capability of accounting students studying at universities within KwaZulu-Natal Province.

This study seeks to fill this gap by providing novel evidence on the levels of financial capability among accounting students within this province as well as the effects of other variables such as students' financial socialisation and professional accreditation of the accounting programmes.

It thus provides scientific insights for curriculum development and policy formulation on issues of financial capability in South Africa. This is important as universities could play a pivotal role in breaking the existing cycle of financial incapability in society through education.

The study is also interesting in that the respondents hail from diverse racial backgrounds. The findings of this research study contribute novel empirical knowledge to the existing body of knowledge on financial capability, financial socialisation and the professional skills of university students and young adults in South Africa.

Given that the study focused on university students and young adults, its findings are crucial in better understanding this group of people in terms of their financial decision-making capacities as well as influences. This is necessary for policymaking by all stakeholders who are responsible for ensuring financial stability in South Africa.

As a research study that was conducted among university students, the findings are also relevant for future curriculum development, as it provides scientific evidence on areas where financial capability, financial socialisation and the professional skills of accounting students can be further improved. The other distinctive characteristic of this research is that the professional skills of accounting students have never been assessed. The quantitative evidence presented in this thesis is unique as the majority of the literature reviewed focused on learners and teachers' understanding and application of skills at educational institutions, but did not examine students' capacity to demonstrate the required abilities.

The study also examined the professional skills of students studying at SAICA accredited and non-SAICA accredited institutions. Its results disprove studies that suggest that accreditation plays no significant role in students' ability. Finally, the study contributes to knowledge that is pertinent to a developing country. Most existing financial literacy and

capability studies were conducted in developed countries such as the United Kingdom, the US and The Netherlands (see, for example, Atkinson, McKay, Collard, & Kempson, 2007; Lusardi, 2008; Alessie, van Rooij, & Lusardi, 2011).

## **1.9 Importance of Financial capability**

### **1.9.1 Money management**

Financial capability improves individuals' money management proficiencies. Fessler et al. (2007) describe money management as making ends meet, as well as keeping track of one's finances. Based on the UK's Financial Services Authority (FSA) survey, financially capable individuals are better prepared to meet upcoming expenses and actively participate in household financial decisions. Financial capability in this context involves (Bagwell et al., 2014):

- *Keeping a record of income and spending.*
- *Managing payments of bills.*
- *Establishing and following a viable budget plan.*
- *Maximising income via claiming purchase benefits/coupons and shopping for discounts.*

### **1.9.2 Planning Ahead**

Financial capability helps individuals to plan ahead for their anticipated future needs. The FSA survey revealed the need for this kind of financial capability by observing the frequent unexpected financial setbacks and expenses that people experienced, and how well these setbacks had been prepared for (Fessler et al., 2007).

Furthermore, several studies (Taylor et al., 2011a; Von Stumm et al., 2013) have stressed the importance of financial planning in respect to long-term considerations such as retirement planning and wealth accumulation. Financially capable individuals are conscious of making sound long-term financial decisions.

Financial capability in this context involves (Bagwell et al., 2014):

- *Saving to cover small- and medium-term unexpected expenses such as renovations, fixing broken appliances, etc.*
- *Working towards long-term time-bound financial stability goals such as owning a home.*
- *Savings against unforeseen life occurrences such as job loss.*
- *Having a nest egg for retirement.*
- *Anticipating and making provision for future expenses such as children's college tuition.*

### **1.9.3 Making choices/choosing products**

Financial capability helps individuals to make choices in choosing the right financial product over time. Fessler et al. (2007) assert that being financially capable helps individuals to take appropriate steps to choose the financial products and services that satisfy their financial need at a particular point in time. Financial products and services in this context include savings products, credit cards, mortgages, life insurance and other insurance products, etc. Financially capable individuals pay attention to financial product and service features, risks and long-term implications before making a purchase. Adequate consideration is also made of the costs of switching products or service providers, as well as product flexibility. Financial capability in this context involves (Bagwell et al., 2014):

- *Choosing the right insurance product/service.*
- *Seeking debt counselling before making debt decisions.*
- *Choosing the right debt/income product/service.*
- *Comparing the details of several financial products/services before making financial decisions.*

#### **1.9.4 Getting help/staying Informed**

The financial capability provides individuals with financial knowledge and access to financial information in order to make sound financial decisions. Financial capability seeks to evaluate people's knowledge of financial matters via surveys, campaigns and other financial awareness programmes. It requires that people want to address their financial deficiencies and keep abreast of financial developments (Fessler et al., 2007). Financial capability also provides individuals with information relating to financial products and services, as well as how to access such. Financial capability in this context involves (Bagwell et al., 2014):

- *Proactively seeking professional advice and guidance.*
- *Having a life-time financial planner.*
- *Taking steps to reduce debt exposure.*

#### **1.10 Importance of financial socialization**

Financial socialization is a process by which individuals acquire from the environment those skills, knowledge, and attitudes that are necessary to maximize their consumer role in the financial marketplace (Agnew, 2018). Socialization is often seen as a social mechanism that transmits various client characteristics from specific sources, commonly recognized as agents of socialization. A critical assessment of the influence of socialization agents and their effect on economic capacity was carried out in this research. Under three primary subthemes, family impact, friends' impact and impact on social media, financial socialization was examined. Although in latest times the impact of formal education seems to be gaining popularity, none of that impact has been further explored for this research. Agnew (2018)'s definition was regarded as the working definition of the study.

### **1.10.1 Family influence**

Most financial socialisation occurs within the family circle (Danes and Yang, 2014). The family financial model enables the development of positive financial behaviours during the formative years. Furthermore, more often than not, the necessary motivation for future changes in financial behaviours emanates from relationships and interactions within family circles, from early childhood socialisation to making diverse financial decisions over a lifetime. Lee and Mortimer (2009) found that financial independence among adolescents and young adults in the transition towards adulthood is influenced by direct communication and a positive self-concept. Serido et al. (2010) note that factors such as the parent-child relationship as well as parental expectations of children psychologically influence financial coping behaviours among students and young adults. Gudmunson and Danes (2011) stress the importance of family financial socialisation as a plausible alternative to improving financial illiteracy. The authors conducted a critical meta-analysis of 100 interdisciplinary articles that consider the effects of such socialisation.

Whilst many students agree that their financial socialisation was significantly influenced by observing how family responsibilities were shared among family members (Solheim et al., 2011; Serido and Deenanath, 2016), Solheim et al. (2011) found that inculcating financial responsibility in children for their own desires via mandatory and target-savings approaches, influence their financial decision making in later years. This was affirmed by Drever et al. (2015) who posited that being financially responsible at an early age builds the necessary foundation for financial well-being later in life.

Mimura et al. (2015) are of the view that parents, as well as taking personal finance courses at university play a significant role in the financial socialisation of students and young adults regardless of their socio-demographic characteristics. This was revealed in a survey of 1 249 first-generation students at a large provincial university in America. The study group consisted off a diverse cohort of native Americans, as well as immigrants or children of immigrants studying towards undergraduate degrees.

Agnew and Harrison (2015) asserted that gender bias exists within family financial socialisation. Their study found that male children are more likely to be financially socialised by their parents at an early age than female children. The authors observed that this could be a plausible explanation for the existing narrative of male individuals being more financially literate and capable than females.

Serido and Deenanath (2016) investigation of parents' role in influencing their children's progress towards being financially independent and capable adults, recommends financial parenting practices that encourage the development of financial knowledge and skills amongst children at an early age. Sundarassen et al. (2016) found that parental norms and other financial socialisation agents such as financial educators, friends, and the media are key influencers of money management habits and wealth optimisation among students and young adults. Likewise, Curran et al. (2018) survey of 504 university students in the southwest region of the US found that young adults' financial capability and well-being is determined by financial socialisation by their romantic partners, their self-behaviours and parental socialisation.

In contrast, Ergün (2018) study on financial literacy amongst university students in eight European universities found that in recent years, technological and environmental influences have been more influential in university students' financial socialisation than parental influence.

### **1.10.2 Friends influence**

Kretschmer and Pike (2010) surveyed 102 adolescent siblings in order to understand the impact of peer socialisation on aspirations, affiliations and financial success. The study concluded that friendship experiences have more influence on young adults than their relationships with siblings. The study also found that being socialised by the same parent does not result in siblings having shared aspirations, affiliations and financial success and that these outcomes are largely influenced by friendships and peer groups.

Montandon (2014) explored the role played by siblings and friends in influencing Generation Y's risk behaviours. The study concluded that peer pressure plays a significant role in the critical choices made by this age group. Although it was found that a parental protective style has the greatest impact on children, (Mitchell et al., 2015) assert that peers and friends are more influential in young adults' choices when there are disagreements between parents and their adolescent children. This is due to the direct and indirect interactions between young adults and their peers as well as social media's influence on young adult behaviours (Mitchell et al., 2015; Isomidinova and Singh, 2017). Alwi et al. (2015) found that self-determination was the weakest influence on the savings behaviours of Malaysian millennials enrolled in a business school. The study concluded that parental and peer socialisation agents contribute to the millennials' financial decision-making capacity. This finding was affirmed by Jamal et al. (2015b) who found that friends influenced the savings habits and money management practices of students in higher education institutions in the Kota Kinabalu region of Malaysia.

Jamal et al. (2015b) found that peer influence, the individual's own financial literacy and family socialisation are statistically significant in determining savings behaviours among students. Wagner (2015) applied the social learning theory within the context of students' financial literacy and financial behaviours and concluded that students who had better opportunities to observe and hold discussions with their parents, peers and friends were more likely to save and budget than those that did not. Similarly, a study conducted among 110 university students in Uzbekistan found that financial socialisation agents such as family, financial educators, friends, peer groups and the media were crucial in improving financial decisions and money management practices among students (Isomidinova and Singh, 2017).

### **1.10.3 Social Media influence**

In general, studies have found that social media is a powerful tool in shaping consumer buying decisions (Berger Paul et al., 2012; Forbes, 2013; Hira et al., 2013; Xiang et al., 2016). A few studies (Albeerdy and Gharleghi, 2015a; Mimura et al., 2015; Ergün, 2018) have also found that it plays a vital role in the financial socialisation of students.

Berger Paul et al. (2012) assert that social media plays a fundamental role in individual purchase decisions as well as consumer values. Forbes (2013) found that the majority of consumers under the age of 22 used social media such as Twitter for purchase recommendations and buying decisions. This could be related to the modern trend of wanting instant results. However, it could also explain impulsive buying decisions via social media platforms (Xiang et al., 2016).

Hira et al. (2013) stress that the media plays a crucial role in financial socialisation by affecting purchase decisions. Furthermore, in choosing financial investment products, many consumers are influenced by the amount of information available and accessible on media outlets such as the internet. Albeerdy and Gharleghi (2015a) highlighted that peer groups, family, schools and the media are students' main financial socialisation agents. Furthermore, at some point in time, all these agents socialise individuals. They added that students and young adults' financial literacy can be significantly impacted by social media.

Mimura et al. (2015) found that social media was statistically insignificant as a determinant of financial knowledge and practices among 1 249 American college students. In contrast, Sundarassen et al. (2016) SEM analysis revealed that individuals that access information via the media and their parents are likely to exhibit better financial practices. They add that the media is an alternative essential socialisation mechanism for youngsters and teenagers. Likewise, Ergün (2018) asserts that in recent years, technological and environmental influences are more influential in university students' financial socialisation than parental influence.

#### **1.10.4 Formal education influence**

It is also thought that formal education, as a socialization agent, plays a significant role in shaping understanding about personal finance subjects.

### **1.11 Importance of Professional Skills**

The significance of professional skills for the accounting profession as well as the level of exposure expected to be received is understood, but what remains unclear is whether the professional skills requirements of the accounting learners can be quantified for their knowledge. Potential employers end up getting graduates without prerequisite expertise due to unknown levels of real professional accounting student abilities. Although the previous study stated that at the start of the training contract/end of their three / four degree, students/graduates did not fulfil the expectations of the accounting profession with respect to professional abilities. In South Africa as well as around the globe, this knowledge gap has not been examined. In this study, we measure students' professional capabilities.

### **1.12 Limitations**

Given that the study focused on the financial capability of accounting students in universities within KwaZulu-Natal Province, the results are not generalisable across the whole country. Its exclusion of accounting students registered at the University of Zululand in this province could represent a further limitation. This was due to accessibility constraints. Finally, the study is restricted to students in the first, second and third year.

### **1.13 Structure of the Thesis**

The thesis consists of six chapters as follows:

#### ***Chapter One: Introduction and overview of the study***

Chapter one introduces the topic by providing the background to the study as well as an overview. It explains the concept of financial capability and its individual components, and further distinguishes it from financial literacy. The chapter also sets out the research problem, the aim of the study, the research hypotheses and the study's objectives and research questions. It briefly discusses the methodology employed, as well as the study's significance and limitations.

## **Chapter Two: Research Methodology**

This chapter presents an in-depth discussion of the methodology employed to conduct this study, including the population and sample, the data collection method and instrument, data analysis, and validity and reliability. It also justifies the selection of each technique and method.

## ***Chapter Three: Financial capability***

Chapter three focuses on the concept of financial capability and its related components. It reviews the local and international literature on financial attitude, financial knowledge, financial behaviour and numeracy skills among different socio-demographic categories in order to emphasise the need for financial capability among university students. The data gathered on the financial capability of accounting students at universities in KwaZulu-Natal is presented and analysed and the hypotheses formulated in relation to the financial capability of these accounting students are tested. Finally, the findings are discussed in line with the relevant literature.

## ***Chapter Four: Financial socialisation***

This chapter considers the financial socialisation of university students and the factors that influence the financial capability, financial socialisation and professional skills of accounting students.

The local and international literature on financial socialisation is reviewed, especially within the context of university students. The data collected for this study is presented, analysed and discussed vis-à-vis the relevant literature. The chapter also explores the relationship between financial capability, financial socialisation and professional skills (SAICA) using Chi-square analysis.

## ***Chapter Five: Professional Skills (SAICA)***

Chapter five critically assesses the impact of professional skills on the financial capability of university students. It evaluates the differences in professional skills between SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT). The chapter also considers the differences in financial capability between SAICA

accredited institutions (UKZN) and non-SAICA accredited institutions (DUT & MUT) using regression analysis. The findings from these analyses are discussed in line with the relevant literature.

### ***Chapter Six: Summary, Conclusion and Recommendations***

Chapter six presents a summary of the study, a conclusion and recommendations. This chapter critically reviews the findings in relation to the relevant literature as well as against the study's objectives and research questions. Finally, it presents an overall conclusion as well as recommendations in relation to curriculum development and policy formulation, and suggestions for future research.

#### **1.14 Chapter Summary**

This chapter presented an introduction and overview of the study. It briefly discussed the concepts of financial literacy, financial capability, financial socialisation and professional skills from an international and South African perspective and identified the gaps in the literature. The problem statement, objectives, research questions and hypotheses were set out and the scope of the study and the methodology employed were highlighted.

Chapter one finishes with the laying of a base for the KwaZulu-Natal province and its varied current culture that makes socio-demographic data more important than any other province in South Africa. This is triggered primarily by the race groups in the province, such as Indian, coloured, black and white. The chapter concluded with a discussion on the study's limitations and the structure of the thesis.

The following chapter discusses the research methodology employed to conduct this study.

## CHAPTER TWO

### RESEARCH METHODOLOGY

#### 2.1 Introduction

Research is a systematic and scientific way of searching for information relevant to a particular topic (Walliman, 2017). The Oxford English Dictionary (2017) defines research as ‘the systematic investigation informed by the study of materials and sources in order to establish facts and reach new conclusions.’

Silverman (2016) describes research methodology as the broad research strategy that structures the pattern of the research and proposes the methods to be used. This comprises of the research design, data collection and data analysis (Creswell and Creswell, 2017).

The research methodology lies at the centre of research, and the method must be clearly defined. Ability to access the target population significantly influences the research methodology. The critical aspects of the research methodology are the problem statement, research gap, population and sample, data collection methods and instruments, and validity and reliability. This chapter presents an overview of how the current study was conducted.

#### 2.2 Research Design

##### 2.2.1 The Research Approach/Design

###### *Qualitative Design*

Qualitative research seeks to understand the phenomenon under study by exploring the different meanings of individuals or groups attribute to various social and human problems (Creswell and Creswell, 2017).

The research process involves emerging questions and procedures, with data typically collected in the participants' setting, inductively building data analysis from particulars to general themes, and the researcher interpreting the meaning of the data. The final written report has a flexible structure (Kumar, 2014). Qualitative research employs an inductive style and focuses on the individual meaning-making of complex situations.

Creswell and Creswell (2017) note that the characteristics of qualitative research include:

- Emerging research procedures and questions.
- Data collected in the participants' environment.
- Worldviews on general themes are considered when data is analysed.
- The researcher interprets the data using the worldviews.

Although most research is scientific in approach (quantitative), it is not possible to condense certain types of information into numbers for analysis. In such cases, language offers a more sensitive approach to arrive at findings (Bless et al., 2015). The qualitative research design is, therefore, a flexible style of inductive reasoning (Creswell and Creswell, 2017).

### *Quantitative Design*

On the other hand, quantitative research is used to test theories and models using scientific methods to examine the causal relationship between variables (Creswell and Creswell, 2017). This research design is based on numerical data analysis, with data collected and measured using structured tools and scaling techniques (Bless, 2015). The final results are methodically structured into the following components (Creswell and Creswell, 2017):

- Introduction
- Theory and literature
- Research Methods
- Results of the study
- Discussion of the results

Systematic deviations in scores are interpreted or ascribed with meaning based on the real world they represent. This is one of the advantages of a quantitative design as numbers are considered accurate (Bless, 2015).

### *Mixed methods design*

Given that both quantitative and qualitative designs have strengths and weaknesses, the researcher is responsible for choosing the most suitable design for a research study (Bless, 2015). There is no hard and fast rule, as these designs are seen as ends of a continuum (Halcomb and Hickman, 2015; Creswell, 2014).

A mixed methods research design seeks to "mix" and minimise the weaknesses of qualitative and quantitative designs. This approach aims to achieve each research objective while at the same time achieving the main goal. Mixing is not a simple process and may occur at various points of a study (Bless, 2015). Creswell and Creswell (2017) and Aboluwodi (2018) note that a mixed methods investigation involves:

- Qualitative and quantitative data collection.
- Integrating the two data forms.
- Using a distinct design that may involve theoretical frameworks and philosophical worldviews.

The current research study employed a quantitative research design as it was considered most appropriate for achieving the study's goals.

### **2.2.2 Quantitative research design**

In order to promote accuracy, quantitative study designs are well-structured, specific and predetermined. These characteristics also enhance the validity and reliability of the results (Kumar, 2019).

A quantitative research design enables both accuracy and explicit definition. Based on the research objectives, this design was used to quantify the similarities and variations between the study groups within the target population. In addition, a quantitative approach

provides more clarity than qualitative research designs, as there are distinct categories of quantitative design. Kumar (2019) identifies the following three categories:

- The number of study population contacts.
- The study's reference period.
- The nature of the inquiry.

In the context of this study, the researcher evaluated the financial capability, financial socialisation and professional skills of accounting students registered in the 2018 academic year at UKZN, DUT and MUT.

The research design is influenced by the choice of the strategy selected to address the research problem within the given constraints (Creswell and Creswell, 2017). Research data can be obtained from either primary or secondary sources. Primary data was used in this study and a quantitative research method was used to test the devised hypotheses for acceptance or rejection based on scientific and empirical evidence.

Many previous studies on financial capability and financial literacy utilised a quantitative research methodology, with a few adopting a mixed-methods approach. Numerous studies that examined financial literacy as a component of financial capability, including Fatoki (2014b); Sarigül (2014); Agnew and Harrison (2015); Klapper et al. (2015); Ndou (2016); Jayakumar et al. (2017) and Ergün (2018) employed self-administered surveys (Huston, 2010). Primary data is obtained directly from the respondents (Sekaran and Bougie, 2010) using questionnaires, interviews, observation and focus groups. Sekaran and Bougie (2010) note that a questionnaire fits well with a quantitative research approach. In the current study, the data was obtained directly from accounting students studying in KwaZulu-Natal universities.

The quantitative method enables the researcher to use numbers in statistical tests to ensure that the results have a statistical relationship, and to explain their findings.

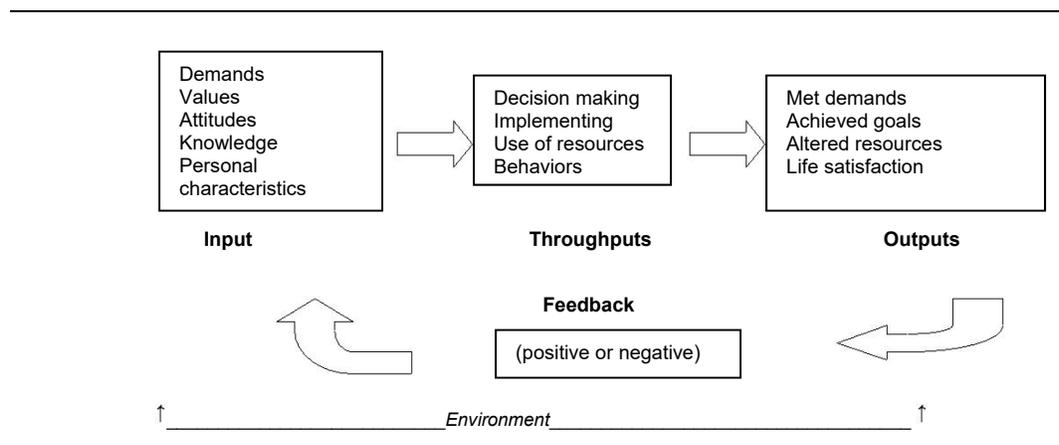
### 2.3 Model Specification

Studies that have investigated financial literacy as a component of financial capability have employed the family resource management model and social learning theory to describe how a financial decision is reached (Goldsmith, 2005). The family resource management model provided the theoretical foundation for this research study.

Deacon and Firebaugh (1988) developed the family resource management model. However, the model did not take into account external influences that play a role in a child's decision-making (Deacon and Firebaugh, 1988). Goldsmith (2005) (Goldsmith, 2005) thus extended this model to include the social learning theory to consider external influences like parental influence. The combined theories seek to explain the role of external influences on an individual's financial knowledge, financial attitudes and financial behaviour.

Deacon and Firebaugh (1988) systems theory is a sub-theory of the family resource management model. It supports the conceptual framework of life satisfaction, which was previously used by Campbell, Converse and Rogers in 1976 (Campbell, 1976). Four stages in the subsystem are used to explain an individual's financial decision making: Inputs, throughput, output and feedback loop.

**Figure 2. 1 Deacon and Firebaugh's Family Resource Management Model**



Source: Deacon and Firebaugh (1988)

### **2.3.1 Input**

An individual's available resources and demands are classified as input under the family resource management model (Goldsmith, 2005; Hayhoe et al., 2005). Students develop their resources by interacting with the environment and trying to satisfy their demands. This research study examined financial knowledge, financial attitudes and related personal characteristics.

### **2.3.2 Throughputs**

At this stage, a decision is made based on an individual's demand and available resources. Individual behaviour will influence the use of individual resources to meet demand Rice et al. (1986). When students make decisions, making use of the resources found in the input section would represent financial behaviour.

### **2.3.3 Output**

This stage assesses whether the demand is achieved and the desired goals were achieved. (Rice et al., 1986) state that inputs will enter the system and will result in improved financial knowledge, good numeracy skills, excellent professional skills, good attitudes or achieved goals. This research study did not examine the output stage of the model because the output is cross-sectional rather than longitudinal.

### **2.3.4 Adapted model for the study**

The original model has five stages of which two, namely, output and feedback, were omitted for the following reasons:

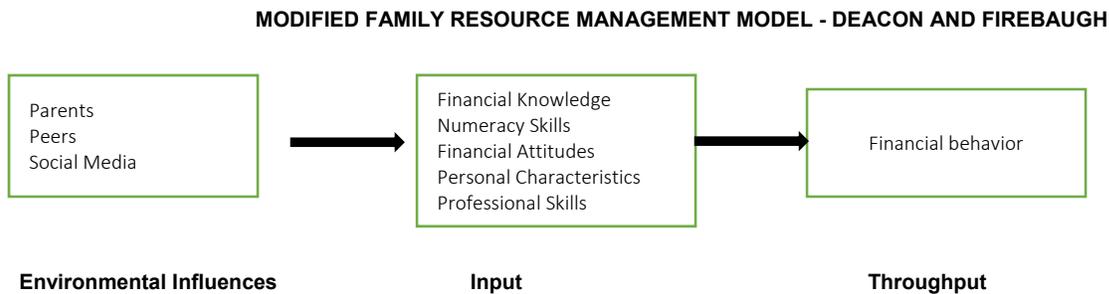
- The researcher was not in a position to ascertain if the demands and goals of individual students were going to be achieved - the questionnaire only dealt with financial knowledge, financial attitudes, numeracy skills, financial behaviour, financial socialisation and professional skills.
- Because there was no output measure for this study, it would have been

difficult to analyse whether or not demands were met as well as the impact of achievement or non-achievement of goals.

Financial socialisation was introduced as one of the important stages before the input stage, supporting the social learning theory developed by (Bandura and Walters, 1977).

John (2001) and Bandura and Walters (1977); (John, 2001) argue that young adults will be influenced by their environment throughout their life and that this will shape their knowledge and attitudes. In general, socialisation plays a vital role when children are growing up, and their ability to handle finance positively or negatively will depend on their financial socialisation.

**Figure 2. 2 Modified family resource management model**



As Fulghum (1993: 1) rightly puts it, *“do not worry that your children never listen to you; worry that they are always watching you.”*

The social learning theory thus considers environmental influences (parents, peers and social media) in an individual’s decision making.

## **2.4 Data type and sources**

The research instruments are the tools used to gather specific data from the target population. This could take the form of a structured questionnaire, or any other scale designed to obtain the necessary information to achieve the overall research goals (Sekaran and Bougie, 2016; Kumar, 2019).

Based on the nature of this study, primary data was gathered using a carefully structured questionnaire to obtain the required information, as none was previously available to achieve the research goals.

Questionnaires that require respondents to answer the same questions in predetermined order are widely used to gather primary data (Gray, 2013). They enable the researcher to collect first-hand, fresh, tailor-made information on a topic from a specific population.

Gray (2013) notes the following benefits of using a questionnaire:

- Cost and time-efficient: questionnaires are a relatively inexpensive means of data collection and often require minimal time for respondents to complete.
- Questionnaires are best suited to collecting a large volume of data from many people.
- The required data can be collected from the respondents on the spot (at a specific location and time) and clarification of questions can be provided if necessary.
- Questionnaires promote confidentiality as it is easy to protect the identity of the respondents.
- Questionnaires eliminate potential interviewer bias that can influence respondents' objectivity.

However, the following disadvantages are associated with questionnaires:

- Long questionnaires may have a low/poor response rate (Gray, 2013).
- They may take time to administer and be expensive (Kumar, 2019).
- If the questionnaire is too long, respondents might not be motivated to participate (Neuman, 2013).
- Questionnaires often require clarification and some degree of literacy (Kumar, 2019).
- Respondents may provide inaccurate / misleading / flippant responses (Gray, 2013).

These possible demerits were dealt with by adopting the following safeguards:

- The questionnaire was as concise as possible while covering all the necessary areas.

- The researcher personally administered all the questionnaires in order to ensure that clarification was provided when required.
- During interactions with respondents, the researcher was very polite and friendly, thus creating positive engagement and a pleasant atmosphere.

#### **2.4.1 The research questionnaire – Construction and measurement**

The purpose of the questionnaire was to measure the level of the accounting students' financial capability, financial socialisation and professional skills.

##### *Construction of the research questionnaire*

According to Gray (2013), questionnaires should only be used if they fit the goals the researcher seeks to achieve. The construction of the questionnaire is of great importance in achieving the set goals. The questionnaire used for this study was reviewed by experts and revised before it was considered fit for the study. While this study utilised closed-ended questions to measure the accounting students' financial capability, socialisation and professional skills, Bell et al. (2018) note that questionnaires can use either open-ended questions, or closed-ended questions, or both. The authors add that open-ended questions allow respondents to freely express their views in response to the questions posed.

*Closed-ended questions:* This type of question provides a list of potential answers to the questions asked of the respondents. Wagner et al. (2012) note that it is statistically easier to analyse closed-ended questions. Such questions also offer the following advantages:

- It is easier and faster to answer this type of question.
- It is easy to compare responses.
- It is easy to replicate responses.

However, (Wagner et al., 2012: 109) note that closed-ended questions involve either tick boxes or rating scales. While tick boxes require respondents to tick or make a cross as an indication of their response, rating scales measure attitudes in linear or tabulated rating dimensions.

### Measurement of the research questionnaire

Measurement is a crucial part of any inquiry. While qualitative research designs often use descriptive statements to answer questions, quantitative studies are more likely to employ measures involving answers obtained from the interview questions, using a scale (Kumar, 2019). This study used a summated rating scale (Likert scale) to measure the students' behavioural attitudes.

Kumar (2019) describes attitude scales as measures to evaluate respondents' attitudes through open- or closed-ended questions. He categorises these into summated rating scales, a scale of Thurstone, or a scale of Guttman:

*Summated rating scale:* A measurement scale sometimes referred to as a Likert scale that is based on each item on the scale having equal weight, equal importance or attitudinal value that reflects the respondents' attitude to the statement (Kumar, 2019).

Kumar (2019) is of the view that the Likert scale is the easiest type of scale to build and is, therefore, the most widely adopted by researchers and academics.

*Thurstone scale:* Widely known as the 'equal-appearing interval', this scale calculates each item or statement's 'weights' or attitudinal values. This type of scale facilitates the assessment of the importance of each item/statement by a group of judges on the basis of the respondents' absolute rather than relative attitudes. This is a kind of scale of intervals.

*Guttman scale:* The Guttman scale is the hardest scale to build, and is therefore rarely used in research. This is a kind of scale ratio.

Kumar (2014) also divides measurement scales into four categories:

*Nominal scale:* This measurement scale uses shared attributes to classify objects within the data set. Also known as the classification scale, it employs a discrete classification of the distinctive categories based on the data, whereby items are neither measured nor ordered. An example would be gender.

*Ordinal scale:* This scale has all the characteristics of a nominal scale, but it also classifies items within the dataset based on the order of magnitude. It is widely referred to as a ranking scale because it ranks items within subgroups based on a logical ascending or descending order reflecting the magnitude of variation between subgroups (Kumar, 2019).

*Interval scale:* The interval scale is a measurement scale with ordinal scale attributes, but it also classifies subgroup rankings within equally defined spaced units or intervals. The interval scale is, therefore, a relatively designed scale with the attributes of an ordinal scale with an arbitrarily determined starting and endpoint of measurement (Kumar, 2019).

*Ratio scale:* A ratio scale has all the characteristics of nominal, ordinal, and interval scales, but is distinct from an interval scale, as it has a zero starting point. The scale is therefore an absolute scale that assists in the questionnaire's refinement and finalisation. This was necessary in order to adjust the questionnaire structure and the question coding for SPSS analysis (Kumar, 2019).

More than 70% of previous studies on financial capability used self-administered surveys (Taylor, 2011). After carefully considering the study's objectives and the measurement tools, a questionnaire was selected to gather primary data.

The questionnaire was developed following (Welman et al., 2005) guidelines, viz.:

- “What the person knows: factual information and general information;
- What the person likes or dislikes: tastes, preferences;
- What the person thinks: attitudes, beliefs;
- What the person has experienced or what happens currently; and
- Persons typical behaviour”.

Individual questions were formulated using the questionnaire frame as discussed above. See **Annexure 1** for the Questionnaire matrix, that deals with where the question was sourced and the objective of each question. The questionnaire was made up of 65 questions including demographic characteristics. It was divided into seven broad categories, namely: **Part A** – Socio-demographic characteristics; **Part B** – Financial Knowledge; **Part C** – Numeracy Skills; **Part D** – Financial Attitudes; **Part E** – Financial Behaviour, **Part F** – Financial Socialisation and **Part G** – Professional Skills. A copy of the completed questionnaire is attached to this thesis as **Annexure 2**, and the detailed questionnaire matrix is attached as **Annexure 1**.

The questionnaire was arranged under the following **main** themes:

**Table 2. 1 Content of the research questionnaire**

Section	Area	Number of questions	Question no
A	Demographic information	11	1 -11
B	Financial Knowledge a) Savings and Investment b) Spending and Credit c) Income d) Money management	16 a) 4 b) 4 c) 5 d) 3	12-27 a) 13,14,17 and 19 b) 15,18,26 and 27 c) 12, 16, 21, 24 and 25 d) 20,22 and 23
C	Numeracy Skills	6	28 – 33
D	Financial Attitudes	11	34(a) - (m)
E	Financial Behaviour	10	35(a) –(j)
F	Financial Socialisation	7	36(a) –(g)
G	Professional Skills (a) Lifelong learning (b) Communication Skills (c) Problem-solving skills (d) Critical Skills (e) ICT skills	5	37(a) – (e)

Source: Constructed by the researcher

## 2.5 Survey

The survey was conducted during July-August 2018.

## 2.6 Research Population

The population is defined as “a generally large collection of individuals or objects that is the main focus of a scientific query”(Sekaran and Bougie, 2016). The population for this study included all accounting students in KwaZulu-Natal universities enrolled in three-year undergraduate programmes on a full-time basis. There are four universities in KwaZulu-Natal.

**Table 2. 2 Overall enrollment at KwaZulu-Natal universities**

<b>University</b>	<b>Student enrolment</b>
University of KwaZulu-Natal (UKZN)	46 539
Durban University of Technology (DUT)	30 400
Mangosuthu University of Technology (MUT)	11 586
University of Zululand (UNIZULU)	6 825

Source: Constructed by the researcher

The **three** universities with the highest student enrolment were selected. Furthermore, it was difficult to access students at UNIZUL, resulting in the exclusion of this institution. The population included first-, second-, and third-year students registered for the 2017/2018 academic year. Students pursuing the following qualifications were surveyed: Bachelor of Commerce Accounting and Bachelor of Commerce General at UKZN and National Diploma in Accounting at DUT and MUT.

## **2.7 The Research sample and Sampling technique**

### **2.7.1 Sampling method**

A sampling strategy can be described as a systematic approach to recruiting a representative sample of the target population. The strategy selected depends on the research design and methods.

There are two types of sampling, namely probability, and non-probability. Black and Eldredge (2001) define random sampling in a population the ability of as each unit of the population having an equally likely chance to be included in the sample. They further define non-random sampling in a population as non-ability of as each unit of the population having an equal chance to be selected in population.

In probability sampling or random sampling Wagner et al. (2012), each respondent has an equal chance of being selected (Bongini et al., 2012).

This study used random sampling coupled with convenience sampling in order to eliminate any bias that might have occurred in either of the sampling methods. In addition to the validity and reliability of the final draft of the questionnaire, the sampling strategy selected must be effective in gathering the data required for the study.

While simple random sampling involves selecting representatives of the target population randomly or via the rule of thumb, convenience sampling is a non-probability sampling technique that considers the accessibility and proximity of members of the target population to them researcher (Wagner et al., 2012; Gray, 2013).

### **2.7.2 Sampling frame**

Although there are several sampling types, the main objective is always to achieve maximum representational accuracy and avoid bias in the selection process. Using convenience sampling, the study was conducted among first- to third-year accounting students in universities within KwaZulu-Natal registered for the 2018 academic year.

### 2.7.3 Sample size

The accounting students targeted for this study follow a carefully structured programme designed by the South African Institute of Chartered Accountants (SAICA)/South African Institute for Professional Accountants (SAIPA). However, at first-year level, both accounting and non-accounting students do an accounting module. It is unclear whether or not studying accounting at university improves financial capability. The focus on university students was motivated by the notion that students represent the future of society and are willing to empower themselves academically.

The following formula was to be used to calculate the sample size (Nargundkar, 2003)<sup>1</sup>

$$N = \frac{z^2 \times p(1-p)}{e^2} \left( 1 + \frac{z^2 \times p(1-p)}{e^2 N} \right)$$

Where,

*N* = Sample Size *Z* = *Z* value from the standard normal distribution for the confidence level desired by the researcher. For this study, the researcher assumed a 99% confidence level. From the standard distribution tables, the *Z* value is 2.576.

*p* = Frequency of occurrence of something expressed as a proportion (0.50).

*E* = Tolerance error. For this study, the researcher assumed a tolerance error of 0.025.

---

<sup>1</sup> Nargundkar, R. (2003). Marketing Research: Text and Cases (2nd ed.). New Delhi: TATA McGraw Hill Publication, pp. 94-95.

**Table 2. 3 Population distribution and sample size**

<b>Course</b>	<b>UKZN enrolments</b>	<b>DUT enrolments</b>	<b>MUT enrolments</b>	<b>Total population</b>	<b>Sample to be selected</b>
1 <sup>st</sup> year Accounting (main-stream)	842	700.00	850.00	2 392.00	741.27
1 <sup>st</sup> year Accounting (non-main-stream)	471	0.00	0.00	471.00	145.96
2 <sup>nd</sup> year Accounting	910	400.00	600.00	1 910.00	591.90
3 <sup>rd</sup> year Accounting	433	320.00	405.00	1 158.00	358.86
<b>Total</b>	<b>2 656</b>	<b>1 420.00</b>	<b>1 855.00</b>	<b>5 931.00</b>	<b>1 838.00</b>

Source: Constructed by the researcher based on 2017/2018 enrolment numbers

Random and convenience sampling were employed to obtain the study sample size of 1 838 respondents from the targeted population of 5 931 accounting students in KwaZulu-Natal universities. This was achieved using a confidence interval (CI) of 99% and an error rate of 2.5%. Inclusion and exclusion criteria were also used to select the sample. The former was that students had to be registered at UKZN, DUT and MUT, while the latter was that they were studying at UNIZUL or the University of South Africa's Durban campus. Of the sample of 1 838, only 1 582 questionnaires were returned and were valid, resulting in a response rate of 86.07%.

## **2.8 Data Analysis**

In order to obtain meaningful results, the raw data was coded and transferred to the format designated for this purpose. Once the data is properly transferred, data analysis can begin.

Data analysis is the process of converting data into useful information. Various data analysis techniques can be used to obtain meaningful results. The statistical techniques employed are selected using different criteria, including (a) the scale and other characteristics of the data, (b) the objectives of the study, (c) the characteristics of the research design, etc.

The questionnaire was the primary means of data collection. The Statistical Package for the Social Sciences (SPSS) Version 25.0 was utilised to capture, clean, organise, and analyse the raw quantitative data. Descriptive statistics that describe one variable at a time were employed to measure the central tendencies and dispersion amongst the variables – especially the mean (M) and standard deviation (SD), such that frequencies of two or more variables were cross-tabulated. Inferential analysis was used to demonstrate the relationships between variables by means of the chi-square test, confirmatory factor analysis, exploratory factor analysis, multinomial logistic regression, and bivariate regression analysis to evaluate the degree of association, probability, and the nature of the relationship amongst the variables in the dataset. The clean data was then used to estimate the statistical values of a variable against its associated variables.

The overall objective of this study was to establish the financial capability, financial socialisation and professional skills of accounting students studying in KwaZulu-Natal universities. The sub-objectives were as follows:

1. To establish the levels of financial capability (financial knowledge, financial attitudes, financial behaviour and numeracy skills) among accounting students at universities in KwaZulu-Natal.
2. To determine the factors that influence financial capability among accounting students at universities in KwaZulu-Natal.
3. To establish the level of financial socialisation among accounting students at universities in KwaZulu-Natal.
4. To determine the factors that influence financial socialisation among accounting students at universities in KwaZulu-Natal.
5. To establish the level of professional skills among accounting students at universities in KwaZulu-Natal.
6. To determine the factors that influence professional skills among accounting students at universities in KwaZulu-Natal.
7. To evaluate the differences in professional skills between SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT).

8. To evaluate the impact of socio-economic factors on financial capability, financial socialisation and professional skills.
9. To examine the relationships among financial capability, financial socialisation and professional skills.

The traditional  $<0.05$  criterion of statistical significance was employed for all tests computed in this study.

## 2.8.1 Data Analysis using the study's objectives

The data analysis methods were:

### 2.8.1.1 Objective One

To establish the levels of financial capability (financial knowledge, financial attitudes, financial behaviour and numeracy skills) among accounting students at universities in KwaZulu-Natal.

- a) **Descriptive analysis**, to examine the statistics of the data and describe the data in a sample without making any inferences to the data.
  - i. **Justification:** the information received from descriptive statistics seeks to clarify the mean, median, mode and standard deviation of financial capability. Other studies have also considered the descriptive statistics as basic statistical information (Xiao and O'Neill, 2016).
- b) **Bivariate regression analysis**, a type of statistical analysis that involves analysing two variables – in this case, socio-economic factors and financial capability.
  - i. **Justification:** Bivariate regression analysis was used to assess the connection of socio-demographic factors and financial capability with other research on financial literacy (Finke et al., 2016).
- c) **Cross-tabulations** were used to analyse the relationship between financial capability and demographic variables, specifically the level of study. The cross-

tabulations also enabled the results for one or more variables to be analysed and compared.

- i. **Justification:** In order to answer the research objectives, it was necessary to examine the levels of study with demographical information. (Rasoaisi and Kalebe, 2015) in study on financial literacy used cross-tabulation to explain socio-demographic information with financial literacy.
- d) **One-way Analysis of Variance (ANOVA)** was used to analyse group mean differences between socio-demographic variables and financial capability.
- i. **Justification:** The analysis of variance (ANOVA) was needed to determine whether a statistical connection exists between socio-demographic data and scores of financial capability. (Zakaria et al., 2017) in their study on financial literacy examined the statistical relationship between savings and investment and socio-demographic variables

### 2.8.1.2 Objective Two

To determine the factors that influence financial capability among accounting students at universities in KwaZulu-Natal.

- a) **Exploratory factor analysis (EFA)** from the multivariate statistics family to detect the underlying structure of a relatively large number of variables of financial capability.
  - i. **Justification:** It was used to identify the associate relationship between financial knowledge, financial behaviour, financial attitudes and numerical skills. None of the existing studies examined to this extent especially using EFA. This was essential as the definition used in this research(WorldBank, 2013) already meant that elements of financial capability were financial knowledge(literacy), financial behaviour, financial attitudes, and numerical skills. None of the financial capability research examined used EFA, but other non-related studies used EFA such as (Ahmad et al., 2017).
- b) **Confirmatory Factor Analysis (CFA)** – to test whether measures of a construct are consistent with the researcher's understanding of the financial

capability factors (financial knowledge, numeracy skills, financial attitudes and financial behaviour).

- i. **Justification:** Although exploratory factor analysis was done, it was necessary to confirm whether the capability constructs are closely related to each other. Likewise, none of the financial capability research examined used CFA, but other non-related studies used CFA such as (Huang, 2017).

### 2.8.1.3 Objective Three

To establish the level of financial socialisation among accounting students at universities in KwaZulu-Natal.

- a) **Multinomial Logistic regression**, a method that generalises logistic regression to multiclass problems.
  - i. **Justification:** Multinomial logistic regression was necessary to identify a set of categories which financial socialization falls under which could have been two categories such as financial capability and professional skills in relation to socio-demographic. (Agarwalla et al., 2015) in a study on financial literacy used multinomial logistic regression to explain socio-demographic information with financial literacy.

### 2.8.1.4 Objective Four

To determine the factors that influence financial socialisation among accounting students at universities in KwaZulu-Natal.

- a) **Exploratory factor analysis (EFA)** from the multivariate statistics family to detect the underlying structure of a relatively large number of variables of financial socialisation.
  - i. **Justification:** It was used to identify the associate relationship between family influence, social media influence and peer influence. None of the existing studies examined to this extent especially using EFA. None of the financial socialisation research examined used EFA, but other non-related studies used EFA such as (Ahmad et al., 2017).

### 1.8.1.5 Objective Five

To establish the level of professional skills among accounting students at universities in KwaZulu-Natal.

- a) **Multinomial Logistic regression**, a method that generalises logistic regression to multiclass problems.
  - i. **Justification:** Multinomial logistic regression was necessary to identify a set of categories which professional skills fall under which could have been two categories such as financial capability and financial socialisation in relation to socio-demographic. Agarwalla et al. (2015) in a study on financial literacy used multinomial logistic regression to explain socio-demographic information with financial literacy.

### 2.8.1.6 Objective Six

To determine the factors that influence professional skills among accounting students at universities in KwaZulu-Natal.

- a) **Exploratory factor analysis (EFA)** from the multivariate statistics family to detect the underlying structure of a relatively large number of variables of professional skills.
  - i. **Justification:** It was used to identify the associate relationship between critical skills, problem-solving skills, ICT skills and communication skills. None of the existing studies examined to this extent especially using EFA. None of the professional skills research examined used EFA, but other non-related studies used EFA such as (Ahmad et al., 2017).

### 2.8.1.7 Objective Seven

To evaluate the differences in professional skills between SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT).

- a) **Cross tabulations** (often referred to as cross-tabs) to analyse the relationship between two or more variable – SAICA and non-SAICA institutions.
  - i. **Justification:** In order to answer the research objective, it was necessary to examine the SAICA accredited and non- SAICA accredited if there is any difference. (Rasoaisi and Kalebe, 2015) in study on financial literacy used cross-tabulation to explain socio-demographic information with financial literacy.

### 2.8.1.8 Objective Eight

To evaluate the impact of socio-economic factors on financial capability, financial socialisation and professional skills.

- a) **Chi-square Independent T-test** analysis, to examine if the two categorical variables are related.
  - i. **Justification:** The chi-square test was applied with the objective of determining whether financial capability, financial socialization and Professional skills vary with socio-demographic variables. The chi-square test analysis is used to examine the relationship between two discrete variables(each)(Bahovec et al., 2015).
  
- b) **Bivariate regression analysis**, a type of statistical analysis that involves analysing two variables – in this case, socio-economic factors and financial capability, financial socialisation and professional skills.
  - i. **Justification:** Only the unweighted sample was used for the statistical analysis of bivariates and multivariates. It is suitable to use an unweighted sample for sophisticated statistical analysis when the research question focuses on examining connections between interesting factors(Nielsen and Seay, 2014).

- c) **One-way Analysis of Variance (ANOVA)** was used to analyse the group mean differences between socio-demographic variables and financial capability, financial socialisation and professional skills.
- i. **Justification:** The analysis of variance (ANOVA) was needed to determine whether a statistical connection exists between socio-demographic data and scores of financial capability, professional skills and financial socialisation. (Zakaria et al., 2017) in their study on financial literacy examined the statistical relationship between savings and investment and socio-demographic variables

#### 2.8.1.9 Objective Nine

To examine the relationships among financial capability, financial socialisation and professional skills.

- a) **Correlation analysis** was used to statistically evaluate the strength of the relationships among financial capability, financial socialisation and professional skills.
  - i. **Justification:** The correlation was used to examine the connection of ' net intensity ' between two continuous variables. The coefficient of correlation between product and moment Pearson is the correlation coefficient used to view the correlation between variables from 0 to 1(Albeerdy and Gharleghi, 2015a).
- b) **Pearson Chi-square** was used to statistically test categorical data sets to assess how likely it was that any observed difference between the sets arose by chance.

**Justification:** The chi-square test was applied with the objective of determining whether financial capability, financial socialization and Professional skills vary with socio-demographic . The chi-square test analysis is used to examine the relationship between two discrete variables(each)(Bahovec et al., 2015).

## **2.9 Data preparation**

Data preparation included designing a codebook as a data entry and data processing guide. A specific code was assigned to the data collected. Four data capturers were used to capture the data. In order to ensure the quality of the data, the researcher performed frequent random checks during data entry and after all data were entered. The researcher then conducted a data cleaning process to clarify any unclear data.

Once the data was entered in Excel, it was cleaned to ensure that no errors were made during the data entry process. Data cleaning involved providing descriptive statistics for each variable, including average, standard deviation, and the maximum value and minimum value. Data tabulation was then performed to classify the data and understand the frequency of individual questions or variables.

In order to ensure internal consistency, the alpha coefficient of Cronbach was applied to questions of scale type, i.e., financial capability, financial socialisation and professional skills. Since some of the questionnaires contained some "negative" items, they had to be "reversed" before verifying reliability.

### **2.9.1 Financial Knowledge and Numeracy Skills**

The summary score for financial knowledge and numeracy competencies was then calculated using SPSS. Only two answer codes were used, with correct answers counted as "1," and incorrect answers counted as "0". Each respondent's score was then calculated by adding all the points earned for all questions. The maximum score was 22 (which meant that the respondents responded correctly to all 22 questions).

### **2.9.2 Financial Attitudes**

Financial attitudes were measured in the questionnaire using a 4-point Likert scale ranging from not important to very important. Respondents were asked to rate the statements on the basis of their importance. As in the case of financial knowledge, financial attitudes were measured by a score. Some questions were re-coded (transformed) using SPSS when analysing the data before performing the reliability

analysis and calculating the total score to ensure that all items were scored so that high scores indicated high levels of importance (positive direction).

### **2.9.3 Financial Behaviour**

Financial behaviour was measured in the questionnaire using a 4-point Likert scale ranging from never to always. Respondents were asked to rate the statements submitted on the basis of their frequency. As in the case of financial knowledge, financial behaviour was measured by a score. Some questions were re-coded (transformed) using SPSS when analysing the data before performing the reliability analysis and calculating the total score to ensure that all items were scored so that high scores indicated high levels of their frequency (positive direction).

### **2.9.4 Financial Socialisation and Professional Skills**

Financial socialisation and professional skills were measured in the questionnaire using a 4-point Likert scale ranging from strongly disagree to strongly agree. Respondents were asked to rate the statements submitted on the basis of their level of agreement.

As in the case of financial knowledge, financial socialisation and professional skills were measured by a score. Some questions were re-coded (transformed) using SPSS when analysing the data before performing the reliability analysis and calculating the total score to ensure that all items were scored so that high scores indicated high levels of agreement (positive direction).

## **2.10 Reliability of the Study Instrument**

The reliability of the questionnaire was computed using the Cronbach Alpha Coefficient test, a method that evaluates the internal consistency of an instrument.

### **The validity of the questionnaire**

Validity refers to the research instrument's ability to effectively measure what it was designed to measure (Kumar, 2019).

While there are questions that could have been relevant to the study topic, it was important that the questions in the research instrument were linked to the pre-set research objectives and questions.

Kumar (2019) identifies three types of validity:

- Face and content validity.
- Predictive and concurrent validity.
- The validity of the construct.

*Face and content validity:* This measures whether the instrument measured what it set out to measure (Gray, 2013). Face validity means that the questions in the questionnaire represent the issue(s) it proposes to measure.

*Predictive and concurrent validity:* Predictive validity refers to the research instrument's ability to predict an outcome, while concurrent validity is concerned with how a questionnaire compares with a concurrent second assessment.

*The validity of the construct:* Such validity is established using statistical procedures that evaluate the quality of the research tool in measuring what it is supposed to measure (Kumar, 2019). Construct validity is determined by each construct's contribution to a phenomenon's total variance.

### Reliability of the questionnaire

Reliability in a research tool explains how consistent and stable the research tool is, thereby improving its predictability and accuracy (Kumar, 2019).

Reliability is measured using internal consistency and is statistically tested using the Cronbach Alpha. Factors such as the wording of questions, the mood of the respondent at the time of their engagement with the researcher and the physical environment in which the field study was conducted can affect internal consistency (Kumar, 2019).

The Cronbach Alpha for each section of the questionnaire is summarised below:

### **2.10.1 Pilot study reliability test**

To effectively ensure that the instrument that would be used for the main study was suitable and reliable, the researcher conducted a pilot study. This assists the researcher to determine the quality of the instrument that will be used. The primary purpose was to improve and make changes to the questionnaire where necessary based on the reliability test results.

The section on financial knowledge initially had 28 items. The reliability test was conducted on all 28 items and the test results were grounded on 0.114. However, after deleting 12 items, the financial knowledge items were grounded on 0.711.

Four items were initially designed to measure the respondents' numeracy skills. The reliability test results for these four items were grounded on 0.337. However, two more items were added for the main study.

In the section on financial attitudes, the reliability test result for the pilot study was grounded on 0.849. Therefore, the researcher decided to retain all 13 items for the main study since the test results indicated that the internal consistency of the instrument used for the pilot study was reliable and valid.

Eleven items were initially designed to measure the respondents' financial behaviour. The reliability test results of the 11 items were grounded on 0.683. The researcher decided to delete one item, which boosted the reliability test result to 0.701.

In the section on financial socialisation, the reliability test results on the seven items revealed that they were grounded on 0.743. The researcher decided to retain all seven items for the main study since the test results indicated that the internal consistency of the instrument used for the pilot study was reliable and valid.

There were initially six items in the professional skills section. The results on the six items showed that the reliability test was grounded on 0.635. The researcher decided to delete one item, and the reliability results were boosted to 0.644. Reliability theory suggests that for an item to be reliable, Cronbach Alpha should be at least 0.6.

Therefore, with a mean value of (M=152.10) and a standard deviation of (SD=155.424), the reliability statistics of all 55 items in the pilot study were grounded on 0.727. The overall Cronbach Alpha for the pilot study is 0.727 indicates that the instrument is reliable

**Table 2. 4 Reliability test of the pilot study**

<b>FINANCIAL CAPABILITY: RELIABILITY STATISTICS</b>			
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items
.711	.713		16
<b>Scale Statistics</b>			
Mean	Variance	Standard Deviation	N of Items
40.94	52.596	7.252	16
<b>NUMERACY SKILLS: RELIABILITY STATISTICS</b>			
.337	.346		4
8.97	4.566	2.137	4
<b>FINANCIAL ATTITUDE: RELIABILITY STATISTICS</b>			
.849	.855		13
38.84	35.540	5.962	13
<b>FINANCIAL BEHAVIOUR: RELIABILITY STATISTICS</b>			
.701	.694		10
28.65	18.570	4.309	10
<b>FINANCIAL SOCIALISATION: RELIABILITY STATISTICS</b>			
.743	.733		7
19.26	17.465	4.179	7
<b>PROFESSIONAL SKILLS: RELIABILITY STATISTICS</b>			
.644	.647		5
15.45	5.589	2.364	5
<b>RELIABILITY STATISTICS OF ALL ITEMS</b>			
.727	.774		55
152.10	155.424	12.467	55

Source: SPSS

## 2.11 Data Interpretation

The study's results were grouped using ranges and analysed in line with previous studies on financial literacy (Volpe et al., 1996; Mandell, 1998; Huston, 2010), a component of financial capability. The research that coined evaluation of the outcomes of financial literacy was conducted in a developed world and subsequent surveys in developed countries were also conducted.

In specific, the few surveys undertaken in Africa and South Africa suggested that the levels of literacy in Africa and other European nations are completely distinct, suggesting that the ranges used in an African context need to be adjusted to reflect such variations. To represent this distinction properly, it was necessary to adjust the ranges used in this research to represent the much-reduced rates of literacy in the African context. Given that these studies were conducted in developed countries and that South Africa is a developing country, the score ranges were **adjusted** as shown in Table 2.5 below.

**Table 2. 5 Capability/Knowledgeable Levels and score ranges**

<b>Score Ranges</b>	<b>Adjusted score ranges</b>	<b>Capability/Knowledgeable Levels</b>
80% and more	65% and more	Highly capable/ <b>Knowledgeable</b>
60% to 79%	50% – 64%	Moderately capable/ <b>Knowledgeable</b>
59% and below	Below 50%	Low in capability/ <b>Knowledge</b>

Source: Adjusted by the researcher to suit developing country conditions

## **2.12 Ethical Considerations**

All research should comply with certain ethical standards to minimise the risk of harm to the participants (Silverman, 2016). According to (Bryman and Cramer, 2012), the main ethical considerations should be "harm to the participant," "informed consent," "invasion of privacy" and "deception." Researchers should ensure that study participant is aware of what their involvement in the study entails and that confidentiality and privacy are protected (Silverman, 2016).

This study received full ethical approval from UKZN's Ethics Committee and letters were also received from the gatekeepers at DUT, MUT and UKZN. Since the quantitative phase of research underwent some methodological changes, an amended application for an ethical review was approved in December 2018 (see Annexure 4).

### **2.13 Privacy and Confidentiality**

It is the researcher's responsibility to ensure the privacy and confidentiality of all subjects and data. All data were used and reported only for research purposes. All personal data pertaining to the participants was kept private in the documentation of the results and is not included in the thesis. In the case of data entry, coding was used, particularly in the case of quantitative data, and anonymity was respected when data from respondents were reported.

### **2.14 Chapter Summary**

This chapter presented a detailed discussion on the research methodology employed to conduct this study, including the population and sample, the data collection method and instrument, data analysis, and validity and reliability. It also highlighted the ethical considerations taken into account.

The following chapter presents a literature review on the concept of financial capability and its related components and presents and analyses the data gathered on the financial capability of accounting students at universities in KwaZulu-Natal.

## **CHAPTER THREE**

### **FINANCIAL CAPABILITY**

#### **3.1 Introduction**

This chapter focuses on the concept of financial capability and its related components. It reviews the local and international literature on financial attitude, financial knowledge, financial behaviour and numeracy skills among different socio-demographic categories in order to emphasise the need for financial capability among university students. The data gathered on the financial capability of accounting students at universities in KwaZulu-Natal is presented and analysed and the hypotheses formulated in relation to the financial capability of these accounting students are tested. Finally, the findings are discussed in line with the relevant literature.

Financial capability plays an important role in financial stability, financial inclusion and the effective functioning of financial markets (Zottel, 2013; Lusardi and Mitchell, 2014). It is also a vital ingredient in promoting financial stability at the household level (Lusardi, 2011; Sherraden, 2013). It is for this reason that it has received increased attention from governments and policymakers in both developing and advanced economies (Lusardi and Mitchell, 2014). Lusardi (2011) suggests that financial capability can be measured from the perspective of how households make financial decisions such as making ends meet, budgeting and choosing and managing financial products as well as having the requisite skills and knowledge of financial matters. Financial capability also improves financial stability by curbing growing economic inequalities among households (Sherraden, 2013).

In terms of financial inclusion, Mitton (2008) notes that financial capability can improve both financial decision making as well as access to appropriate financial products and services, which are the two defining elements of such inclusion. This is necessary as

people need to take responsibility for their financial security during retirement, physical incapacitation and periods of unemployment (Atkinson et al., 2007).

Furthermore, constant changes in financial markets call for increased financial capability at the individual level (Bucher-Koenen et al., 2017).

The World Bank defines financial capability as an individual's capacity to behave in their best financial interests given socio-economic conditions. It encompasses the knowledge (literacy), attitudes, skills and behaviours of consumers in managing their resources, and understanding, selecting and making use of financial services that meet their needs (Zottel, 2013). In their study on the financial capability of low-income millennials, West and Friedline (2016) define this concept as an individual's ability to adopt healthy financial behaviours in an institutional context with opportunities that facilitate such behaviours. The authors further identify financial knowledge and financial inclusion as the two foundational pillars of financial capability.

The British Household Panel Survey (BHPS) survey on the financial capability and well-being of British residents, defines financial capability as:

"...a broad concept, encompassing the people's knowledge and skills to understand their financial circumstances, along with the motivation to take action. Financially capable consumers plan, find and use information, know when to seek advice and can understand and act on this advice, leading to greater participation in the financial services market" (Taylor et al., 2009).

Thus, financial capability reflects a person's knowledge of financial matters. This is demonstrated by how the individual manages and controls his or her finances (Taylor, 2011).

Banerjee et al. (2017) conceptualise financial capability as the ability and opportunity to save, access credit and invest money in the mainstream economy. The Financial Services Board describes it as people's knowledge and skills to understand their own financial circumstances, along with the motivation to take action.

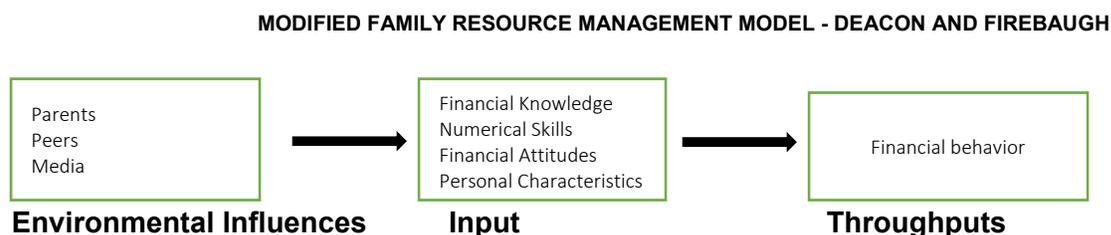
It adds that financially capable individuals plan ahead, find and use information, know when to seek advice and can understand and act on this advice, leading to greater participation in the financial market.

Xiao et al. (2015) observe that financial behaviour and financial literacy are closely related to financial capability. They add that financial literacy is displayed by a certain level of such literacy and positive financial behaviours. Sherraden et al. (2015) are of the view that being financially capable helps individuals to accumulate the financial assets that are necessary for their long-term financial security. They suggest that financial capability should be a lifelong pursuit, beginning from birth via the opening of a Child Development Account (CDA) for each newborn. Zhu (2018b) study on the influence of parental financial socialisation on the financial capability of Chinese adolescents, conceptualised this phenomenon as an enduring cognitive-behavioural ability that comprises of multifaceted aspects relating to the management of finances.

Zhu (2018b) found that parents play a vital role in the development of financial knowledge among children and adolescents. Davies' (2015) survey of 946 adolescent students in Hong Kong also concluded that parental financial norms and conscious financial education of their children were key contributors to the study participants' financial behaviours and capability.

Financial education aims to improve the overall financial literacy levels of individuals, with the primary aim of making them financially capable. While financial capability is influenced by several factors, Deacon and Firebaugh (1988) propose a conceptual model that considers both internal and external influences. This is illustrated in the diagram below:

**Figure 3. 1 Modified Family Resource Management Model**



## **3.2 Theoretical framework**

### **3.2.1 The Capability Approach**

The approach to capability is a relatively latest theoretical framework that offers a way to understand human development and well-being that differs from more traditional rational choices and other neo-classical financial views. This theoretical framework was developed in the 1980s and later revised in 1990s by Amartya Sen, a Noble Prize-winning philosopher and economist from India (Sen, 1990; Sen, 1993).

The approach to capability is based on the concept that liberty is essential to achieving well-being (Sen, 1987). The strategy also indicates that liberty, at least in portion, should be characterized as being capable of achieving well-being. The capability strategy claims that the freedom individuals have to accomplish what they value is what matters most for well-being.

Sen says this is because liberty enables what individuals are "capable of being" and "capable of doing" and determines the kind of life they lead (Sen, 1990; Sen, 1993).

This contrasts sharply with the more common sense of well-being, which is most often measured on the grounds of either revenue or happiness, what economists call usefulness (Clark, 2007). As its unique feature from traditional neo-classical economic theory, the strategy to capacity indicates that non-monetary indicators of well-being are better measurements of the liberty of individuals to accomplish what they value in life (Sen, 1993).

This argument is essential because it indicates that well-being assessment and measurement must take into consideration the function of structural arrangements as well as individual variables. This theoretical proposition can be properly grasped by looking carefully at the conceptual definitions provided by (Sen, 1993) to demonstrate the distinction between capability and what he calls "functions".

It is, therefore, the mixture of individual skills and access to advantageous social structures that enables individuals to accomplish what they want in life. Individual skills can influence the conversion of resources into valued results.

As applied to financial well-being, individuals with an understanding of financial planning and budgeting may do well to convert resources into valued results by handling financial resources efficiently, the meeting ends, or saving for college and pension.

Nussbaum (2001) applies the human development and well-being approach to capacities, indicating that both individual-level variables and external circumstances are essential for well-being. The strategy taken by Nussbaum indicates that individuals need skills such as understanding and skills, as well as access to external possibilities within advantageous social structures to accomplish well-being (Nussbaum and Glover, 1995; Nussbaum, 2001; Nussbaum, 2011).

Nussbaum (2001) applies the human development and well-being approach to capabilities, indicating that both individual-level variables and external circumstances are essential for well-being. The strategy taken by Nussbaum indicates that individuals need skills such as understanding and skills, as well as access to external possibilities within advantageous social structures to accomplish well-being (Nussbaum and Glover, 1995; Nussbaum, 2001; Nussbaum, 2011).

According to Nussbaum, enhancing well-being is therefore not only a matter of enhancing individual skills but also a matter of altering environmental circumstances to boost the range of possibilities accessible to individuals to develop their capability and secure their well-being (Nussbaum, 1998; Nussbaum, 2001; Nussbaum, 2011).

### **3.2.2 The Financial Capability Approach**

The concept of financial capability is an interdisciplinary one that stems from diverse disciplines such as economics, psychology and sociology (Robeyns, 2016), with the shared goal of improving the financial self-efficacy and well-being of individuals (Sherraden, 2013). It considers how human behaviours, psychology, and actions, as well as social structures, affect financial choices and decisions in both the short and long term.

This section of the chapter discusses the conceptualisation of financial capability, the elements of financial capability, and its role in improving financial decision-making.

We further discuss and examine the conceptual financial capability structure as it relates to the practice of social work by examining both the individual and structural elements of the development.

Similar to the capability approach articulations, both individual and structural factors that may influence well-being are captured by the concept of financial capability (Sherraden, 2013). According to this concept, people need both economic knowledge and individual-level skills and access to economic products and services in order to produce financially secure lives. It is thought that in their best economic interests individuals who are financially knowledgeable and skilled can make financial decisions (Butrica et al., 2014). Recent literature has given an overall insight into the connection between financial education and change in behaviour. Researchers have typically found that there is a beneficial shift in conduct in financial education. Most of these research although some were sceptical, concentrated on gathering information from target communities that are easily accessible and ready to engage in formal assessments, such as staff, students and customers with financial advice (Lyons et al., 2006). This scepticism arises in part from academics who studied financial education, suggesting that financial expertise alone will decrease economic vulnerability (Lyons et al., 2006).

Institutional theory details how structural arrangements, including laws, regulations, possibilities, and norms, shape the economic well-being of people. The institutional theory offers methods of thinking about how access and chance to financial products and services help to determine everyone's economic well-being in society, including the financially vulnerable.

The second academic working body that informed our knowledge of economic capacity is Behavioral economics. Behavioural economics focuses on the impacts on individuals' behavioural decisions and choices of psychological, behavioural and emotional variables (Thaler and Sunstein, 2008). Thus, informed by institutional theory and behavioural economics, the notion of financial capability indicates that individuals make financial decisions based on their inner abilities, such as economic expertise and skills, as well as institutional agreements, access and possibilities linked to economic products and services accessible to them (Sherraden, 2013).

### 3.3 Definitions, Evolution and Origins of the Capability approach

The capability approach is a broad normative framework that facilitates the evaluation and assessment of the well-being of individuals in social contexts (Robeyns, 2005; Sherraden et al., 2015). This framework is necessary for the formulation of policies and implementation of social change within society (Robeyns, 2005). As a normative rather than an explanatory theory, the capability approach is not designed to explain inequality, poverty, or individual well-being, but rather to conceptualise the notions therein (Robeyns, 2016). The term capability was developed in the seminal work of distinguished philosophers Amartya Sen and Martha Nussbaum. Winner of the Nobel Prize in Economic Sciences in 1998, Sen (1987) conceptualised capabilities as notions of freedom which are explicated in presenting individuals with real opportunities to lead the type of life they want.

He clarified that the normative crux of the capability approach can be understood in the following ways (Robeyns, 2016):

- *The assessment of individual well-being.*
- *The evaluation and assessment of social arrangements.*
- *The design of policies and proposals about societal social change.*

Nussbaum (2000) examined how capability affects human development and individual welfare within a social context. This combined capability approach is made up of both internal capacity as well as external conditions. While internal capabilities comprise of an individual's skills set, knowledge and ability, external capabilities consist of a plethora of opportunities available to such individual in the form of access to products, institutions and services within society (Sherraden et al., 2015). Nussbaum (2000) added that the combined capability approach provides a platform of opportunities to all individuals within society via policies, laws, regulations and welfare incentives that improve the general well-being of individuals in society.

The general capability approach comprises of two clusters that depict individual capability and commitment to a set of five principles, namely (Nussbaum, 2011):

- *Treating each person as an end*
- *A focus on choice and freedom instead of achievements*
- *Pluralism about values*
- *Being deeply concerned about social justices*
- *Ascribing an urgent task to the government.*

Before the advent of the capability approach, Rawls' theory of justice was the revolutionary ideal in the discourse on welfare maximisation, which replaced the utilitarianism model (Nussbaum and Sen, 1993). Rawls (2009) seminal work on the theory of justice identified two major flaws of utilitarianism. Firstly, utilitarianism regards welfare as an aggregate sum, which does not consider how it is distributed within society. Hence, it does not account for inequalities that emerge in the distribution of wealth and welfare. Secondly, Rawls noted that utilitarianism assumes that welfare is premised on an individual's condition that is deemed fit for normative evaluation (Nussbaum and Sen, 1993).

He thus suggested that aggregation be replaced with equality and welfare via primary goods and that normative evaluation be replaced with measures such as goods instead of welfare quantas (Rawls, 2009).

While Rawls' contributions to the study of welfare were undoubtedly profound, especially the ideation of a new welfare measurement, his propositions were challenged decades later by (Sen, 1993). Sen (1993) was of the view that primary goods are not a suitable corresponding replacement for aggregation. He also noted that Rawls did not perceive the opportunity for equality for welfare as an alternative approach. In a vivid analogy, Sen argues that an individual's level of nutrition cannot be effectively captured/measured via his/her amount of goods or his/her level of welfare. While the former relates to his/her food supply; the latter captures the pleasure he or she derives from consumption of the supply (Robeyns, 2011).

Thus, Sen believed that the central idea of welfare should be to avail people with the opportunity to achieve their desired state. He proposed two changes in perspective: from actual state to opportunity (capability) and from goods measurement to “functionings”. Functionings depict an individual's state of being in relation to the various things he/she has to do or become to lead a life. On the other hand, the capability of a person shows the alternative combinations of functionings that such an individual can achieve; hence, he/she can choose a collection (Robeyns, 2005; Robeyns, 2016).

Sen's assertions represented a major paradigm shift from Rawlsian and other welfarist views in two orthogonal directions which ideate the phenomenon of capability. Sen's ideology was more focused on what an individual can get in the space between the ends of goods and welfare as postulated by Rawls and the welfarists (Robeyns, 2016).

In contextualising the capability approach from the perspective of financial capability, Sherraden et al. (2015) are of the view that financial capability is both an individual and structural idea, as the approach emphasises the environmental factors that influence individual capability.

In a similar vein, (Johnson and Sherraden, 2007; Sherraden et al., 2015) regard financial capability as the fusion of an individual's ability to act, coupled with their opportunity to act in their best interests. Hence, financially capable individuals are not only financially literate but also have access to beneficial financial products and services that contribute to their financial functioning, well-being and life chances (Sherraden et al., 2015).

### **3.4 Financial capability among individuals – General Context**

Lusardi et al. (2017) found that financial knowledge is a critical factor in wealth inequality among Americans as it helps individuals to efficiently allocate their scarce financial resources in a world of uncertainties and competing demands. Their study found that financial knowledge alone is responsible for more than 30% of inequalities in retirement wealth. Xiao and O'Neill (2016) explored the impact of financial education on the financial capability of Americans and found that consumers who are financially knowledgeable

exhibited superior financial capability. The study, which utilised the US 2012 Financial Capability Survey, supports the findings of similar studies (Brown et al., 2014; Drever et al., 2015; Brown et al., 2016; Xiao and Porto, 2017). However, some studies have reported that financial knowledge is not a key factor in consumers' financial decisions (Tang et al., 2015; Friedline and West, 2016).

Xiao and Porto (2017) considered interceding components such as financial literacy, financial behaviour and financial capability and found a positive relationship between Americans' financial education, financial satisfaction and prosperity. This infers that the positive connection between financial education, financial satisfaction and prosperity, and poor budgetary information adds to young Americans' substantial reliance on debt (Brown et al., 2016). Deficiencies in financial knowledge tend to have stronger and more positive effects on long term behaviours than short term behaviours (Wagner and Walstad, 2015). This is because poor financial knowledge is often penalised in short term behaviours whereas it tends to be more devastating in long-term behaviour due to the low chance of correction.

Sherraden and Grinstein-Weiss (2015) link the drivers of financial capability in the next generation to three trends: the increasing complexity of daily financial decision-making, young adults' early exposure to high-stake financial decisions such as student loans, and financial struggles among many families. To tackle these growing concerns, the authors recommend measures such as financial socialisation and education, financial advice and guidance; and safe and reliable financial products, services and policies.

Gibson et al. (2017) emphasised that financial education should be taught at different stages of life. This is necessary as several factors such as timing and the applicability of financial education, mental maturity, and changes in financial products and services have relative impacts in both short- and long-term behaviours. The study found that individuals that did not attend college but were exposed to financial education at high school exhibited positive financial behaviour.

While stressing the importance of financial capability in adulthood, Batty et al. (2015) advocate for the introduction of financial topics at fourth and fifth grade. Their study showed that being taught financial topics at an early age improves financial attitudes and behaviour as well as increases the chances of being financially capable in adulthood. Drever et al. (2015) are also of the view that the necessary foundations of financial well-being in adulthood are cemented during the formative and youthful years when financial knowledge, skills, attitudes, and personality are formed.

Lusardi and Tufano (2015) considered financial knowledge among Americans from the perspective of debt literacy. Debt literacy is a subset of financial literacy that measures an individual's knowledge of debt and self-assessed financial knowledge. The national survey found that most Americans have poor financial knowledge in the area of debt. However, a relationship was found to exist between debt literacy, financial experience and debt loads. Individuals with low levels of debt literacy tend to make adverse debt decisions due to ignorance.

Rothwell and Wu (2017) national survey on the financial capability of Canadians aimed to determine the impacts of financial education on financial knowledge and self-efficacy. The study found that financial education is a precursor for both financial knowledge and self-efficacy, with men exhibiting better financial knowledge than women across all age categories.

Chen and Garand (2018) suggest that the gender gap in financial knowledge could be explained from a psychological perspective. Studies show that most women are risk-averse and lack confidence in their financial knowledge. This could explain why many women provide incorrect or "don't know" answers to financial knowledge questions.

Some studies have found that the financial knowledge of young adults is influenced by factors such as financial education, financial experience and their parents' financial literacy (Tang and Peter, 2015).

Tang et al. (2015) argue that while financial knowledge is not enough to guarantee positive financial behaviour among young adults, parental influence, as well as self-discipline, are key determinants of positive financial behaviours. Friedline and West (2016) agree and note that millennials require financial capability rather than financial knowledge to exhibit better behaviours in financial decisions. Fatoki's (2014a) study on small and medium enterprises in South Africa confirmed that South Africans are also grappling with financial knowledge.

### **3.5 Financial capability among Youth and Millennials**

Johnson and Sherraden (2007) clarified that the distinction between financial literacy and financial capability is that the latter goes beyond mere development of financial knowledge and skills, to gaining access to financial products and services. They add that the burden of financial incapability is mainly borne by economically disadvantaged youths who lack financial knowledge and access to traditional financial products and services (Johnson and Sherraden, 2007). This has triggered several global inquiries on financial capability (Sherraden, 2010; Sherraden, 2013; Despard and Chowa, 2014).

Loke et al. (2015) suggest that the youth's financial capability can be improved via financial education programmes. Their study surveyed 275 economically disadvantaged youths who participated in the MyPath Savings Initiative, a youth development and employment programme that encourages first income earners to save through traditional financial products. The study found that improvements in financial capability are not related to socio-demographic factors such as race, age, gender, household income, etc. (Loke et al., 2015).

Despard and Chowa (2014) developed a measurement model to test the financial capability of 5 451 Ghanaian youths between the ages of 12 and 18 participating in the Youth Save program. The survey measured the students' financial capability using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). While EFA was used to identify the latent variable structure, CFA was employed to assess the fit of

the model for measuring financial capability among the youth. Upon testing of items, a 12-item model and three latent variables were proven fit for the data. Hence, the study established money management, financial services awareness and financial services actions as valid constructs for measuring youth financial capability in Ghana.

Idris et al. (2017) investigated the relationship between financial literacy and financial distress among 430 young Malaysian adults. The study found that although there is a positive subsisting relationship between the level of financial literacy and corresponding financial distress, this relationship is weak. It highlights moderate levels of financial literacy and distress among the respondents and advocates for organisations to ensure their employees' financial literacy. Studies have shown that financial distress can reduce employee productivity. Kim et al. (2018) used the National Financial Capability Study to investigate the role of financial knowledge in the lives of millennials. The findings suggest that millennials had lower levels of both objective and perceived financial knowledge in comparison to other household categories.

### **3.6 Financial capability and students' Socio-demographic characteristics**

#### **3.6.1 Gender**

Although a few studies such as Shaari et al. (2013) and Fatoki (2014b) have shown that female students are better at financial decisions than male students, others have found the opposite (Oseifuah and Gyekye, 2014; Montford and Goldsmith, 2016; Bucher-Koenen et al., 2017; Chen and Garand, 2018).

De Clercq and Venter (2009) established a positive relationship between gender and the financial literacy of South African university students studying to become Chartered Accountants. Oseifuah and Gyekye (2014) assessment of the financial capability of accounting students at the University of Limpopo also found gender to be statistically significant, as male students were more financially capable than female students. However, Fatoki (2014b) study at two South African universities found that female

students registered for a non-business degree had better financial capability than their male counterparts (Fatoki, 2014a; Oseifuah and Gyekye, 2014).

Thapa (2015) found that there is no significant relationship between gender and financial capability, while Agnew and Harrison (2015) concluded that gender was the only consistent factor in understanding college students' debt behaviours in both New Zealand and England. Montford and Goldsmith (2016) considered the role of gender and financial self-efficacy in the investment risk behaviours of 182 American college students. The study found that women are more likely than men to invest in less risky investment options. The study further suggests that the financial self-efficacy of women could be a plausible explanation for gender disparities in financial risk-taking.

Farrell et al. (2016) survey among Australian women found that women with high financial self-efficacy are likely to prove their capabilities via investing in investment and savings products. In contrast, those with low financial self-efficacy exhibit their deficient financial capabilities via debt accumulation tendencies. Bucher-Koenen et al. (2017) found that women across all age categories exhibit a lower level of financial literacy than men. This is particularly worrying as women tend to live longer than men and could find themselves financially incapable in their widowhood. Hence, it is necessary to improve the financial capability of women via financial literacy towards retirement planning and long term financial security (Bucher-Koenen et al., 2017).

Chen and Garand (2018) assert that a plausible explanation for the gender gap in financial literacy evident in the literature could be that women are low-risk takers. This cognitive behaviour is expressed in their higher choice of "Don't Know" answers to financial literacy questions than men. Potrich et al. (2018) found that both sexes in Brazil have a generally low level of financial literacy. The researchers emphasised that particular attention should be paid to improving women's financial capabilities, especially those that are single, low income and less educated. This is necessary to bridge the widening gender inequalities in the world (Potrich et al., 2018).

### 3.6.2 Age

Except for studies like Özdemir et al. (2015), most studies have found a positive relationship between college students' age and their financial capability (Volpe et al., 1996; Chen and Volpe, 1998; de Bassa Scheresberg, 2013; Xiao et al., 2015).

Volpe et al. (1996) found that the financial decision proficiencies of American college students in the area of investment literacy are consistent with their age progression. This finding was affirmed (Chen and Volpe, 1998) study on the overall financial literacy of university students in America. It concluded that older students tend to make better financial decisions than younger students. A similar study conducted among South African university students studying to become Chartered Accountants by De Clercq and Venter (2009) found a positive relationship between age and students' financial decisions. de Bassa Scheresberg (2013) found that both age and educational qualifications are key factors in personal financial decision making. Students aged less than 35 with a postgraduate qualification displayed superior personal financial capability to that of their peers within the same age group without a postgraduate qualification.

Ansong and Gyensare (2012) found that the age of university students in Ghana is a predictor of their financial outcomes, and Thapa (2015) study on college students in Nepal concluded that age is a determinant of financial capability. Xiao et al. (2015) found a positive relationship between individual age and financial capability. The study measured financial capability using five variables, namely, objective financial literacy, subjective financial literacy, desirable financial behaviour, perceived financial capability and a financial capability index based on data from the US 2012 National Financial Capability Study. The youngest age group (18-24 years) was found to have the lowest score across these measures.

### 3.6.3 Education

Albeerdy and Gharleghi (2015b) found evidence of a strong relationship between the level of education and the financial literacy of college students in Malaysia. It was observed that students' level of education is key factor in their ability to make better financial decisions. Kotzé and Smit (2008) concluded that poor financial knowledge was a plausible explanation for the low level of financial confidence among 286 South African students studying business-related degrees at the University of Free State. This finding is consistent with Fatoki (2014b) study that showed that South African students registered for non-business-related degrees are not financially capable. However, the study found that the students were willing to take courses in financial literacy to improve their financial capability.

Shahrabani (2013) found that students studying economics and business-related degrees in Israel were much more financially inclined than their peers in other disciplines and concluded that a student's field of study can significantly affect his/her financial capability. However, Botha (2013) asserted that there is no relationship between students' field of study and their financial capability. The author found that South African university students enrolled in both finance and non-finance postgraduate diploma programmes had low levels of financial literacy.

Ansong and Gyensare (2012) found that levels of study and educational attainments do not influence the financial capability of university students in Ghana, while Chmelíková (2016) investigation of college students studying for finance-related degrees in the Czech Republic concluded that students' financial capability was more influenced by their experience of financial decision making than their level of education and other socio-demographic factors. However, Rousseau and Venter (2016) survey among 560 consumers in Port Elizabeth, observed that the low level of education among young South African adults in this city could explain their poor financial choices.

### **3.6.4 Income**

De Clercq and Venter (2009) found that there is a positive relationship between income and the financial literacy of South African university students studying to become Chartered Accountants. Ansong and Gyensare (2012) concluded that work experience influences students' personal financial decision making, as postgraduate students who earn an independent income exhibited better financial capability than those that were dependent on their parents. de Bassa Scheresberg (2013) study on the financial capability of more than 4 500 individuals found that financial capability is low among young adults who are less educated and earn a lower income. Thapa (2015) asserts that students' income is a key factor in determining their financial capability.

### **3.6.5 Race**

De Clercq and Venter (2009) found that there is a positive relationship between race and the financial literacy of South African university students studying to become Chartered Accountants. Shahrabani (2013) found evidence that Jewish students have better financial literacy than Arabian students. While the former had an overall mean score of 50%, the latter scored 39%. The author thus concluded that nationality influences financial decision-making capabilities. Agnew and Harrison (2015) found that New Zealand students are more financially literate than native English students. Finally, Serido et al. (2016) study revealed that students with Asian ancestry exhibited more responsible financial behaviours than white students in America. The author thus concluded that race and ethnicity are critical determinants of financial capability.

### **3.6.6 Parents' income**

Botha (2013) found that parental income is a key determinant of the financial capability of South African students, while Soria et al. (2014) concluded that undergraduate students from low-income backgrounds are susceptible to making poor financial decisions. Herawati et al. (2018) suggest that financial literacy, financial self-efficacy and

their parents' economic status affect the financial behaviours of accounting students in Bali, Indonesia. Zhu (2018a) discovered that the financial capability of economically disadvantaged adolescents is largely influenced by their poor economic circumstances as well as parental financial socialisation.

### **3.6.7 Parents' education**

Lusardi et al. (2009) assert that young adults from wealthy and financially sophisticated families are more financially capable than those whose families are not knowledgeable and experienced in financial markets. Ansong and Gyensare (2012) found that mothers' level of education could impact the financial capability of university students in Ghana. Angulo-Ruiz and Pergelova (2015) concluded that interactional elements such as external locus of control, parental financial teachings and experience have a more profound effect on the financial capability of young adults than intrapersonal elements. Albeerdly and Gharlegghi (2015b) concluded that there is no significant relationship between parental financial socialisation and the financial capability of Malaysian college students. Németh et al. (2015) found that their parents' poor financial knowledge contributed to poor loan decisions among young Hungarians aged 18-25.

Tang and Peter (2015) suggest that young Americans' financial capability is enhanced by interaction among individual financial knowledge, financial experience and parental education.

Hence, there is a positive relationship between parents' financial education and individual financial capability. Van Campenhout (2015) found that parents' financial teachings go a long way in developing financial capability, and advocated for a re-evaluation of parents' role in financial socialisation. A survey among college students revealed that they were of the view that it is crucial for parents to teach their children about money matters as well as provide specific lessons to boost their financial capability (LeBaron et al., 2018).

## **3.7 Financial knowledge – Empirical Literature**

### **3.7.1 Savings and Investment**

Kharchenko (2011) national survey in Ukraine concluded that financial literacy does not have a direct impact on the savings behaviours of individuals when wealth is controlled for. However, the evidence pointed to a possible indirect effect of financial literacy on savings behaviour based on its influence on wealth accumulation over time. Several studies have observed low levels of savings and investment knowledge and behaviour among Americans of all ages across socio-demographic groups (Chen and Volpe, 1998; Lusardi et al., 2009; Lusardi et al., 2010; Helman et al., 2015; Montford and Goldsmith, 2016). However, Lusardi et al. (2010) found a strong relationship between family financial sophistication and the savings behaviour of college students. Male college students whose parents had financial investments in stocks and retirement savings exhibited significantly better savings behaviours.

Jamal et al. (2015a) examined the determinants of savings behaviours among 1 124 college students in Malaysia and found low levels of such behaviour. The study also investigated the mediating role of financial literacy on the students' savings behaviour. The findings suggest that the most significant determinant of savings behaviour among students is social influence, especially family influence.

Thapa (2015) study among 436 college students in Nepal found that they had high levels of numeracy skills, but average knowledge of savings and investments (60%). While their savings and investment capabilities were measured via questions on financial markets, their numeracy skills were tested by means of questions relating to basic financial calculations such as compound interest rate, time value of money, etc. Amari and Jarboui (2015) tested Tunisian college students' knowledge of financial and economic concepts relating to savings and investment. The survey found that only 65.33% of the students could correctly calculate the simple interest rate; 37.33% understood inflation, and only 12% understood compound interest as it relates to interest rates and bond prices.

### **3.7.2 Spending and Credit**

While several studies (Xiao et al., 2011; Robb and Sharpe, 2009) have found a positive/significant relationship between financial literacy and credit card behaviours among students, Govindarajan (2016) concluded that there is no linkage between college students' numeracy skills and their credit card behaviours. (Anderson and Card, 2015) investigated the spending behaviours of 502 American first-year students. They exhibited poor spending and credit behaviours in the form of compulsive buying, with female students more prone to such behaviour. The study also showed that financial education could be used as an intervention to address this issue Thapa's (2015) survey used a logistic regression methodology and found that college students in Nepal exhibited a poor financial understanding of credit. Braun Santos et al. (2016) concluded that credit card use among female college students could impact their financial well-being. The comparative study among Brazilian and American women utilised a structural equation model and found that American women exhibit higher levels of negative credit card behaviour than Brazilian women and that this negatively affected their financial well-being.

Chmelíková (2016) confirmed that students' experience of loans was a key determinant of their debt behaviours. Americans across all age groups have low levels of debt literacy (Lusardi and Tufano, 2015; Brown et al., 2016). This is worrying as sparse knowledge of how debt works tend to result in bad decisions (Lusardi and Tufano, 2015).

Brown et al. (2016) assert that poor debt behaviour among young American students is a result of their poor financial capability. Financial knowledge can prevent poor debt choices as well as being vulnerable to financial scams (Andreou and Philip, 2018).

### **3.7.3 Income and Money Management**

Rasoaisi and Kalebe (2015) found that male students at the National University of Lesotho were more financially knowledgeable than their female counterparts. While age was not found to determine financial knowledge, gender was statistically significant, as more male than female students were responsible for money management.

Harrison et al. (2015) qualitative study on debt attitudes among young university students in England, found that only a third of the students believed that managing their day-to-day expenses is pivotal to controlling and minimising their debt. Manju (2016) survey among 240 Indian students between the ages of 16 and 22 found that most of the students displayed poor money management skills as they spent most of their income on pleasure and fast food rather than on savings and books. It was further found that only half of the students utilised personal budgets and that female student had better money management skills than male students. Harrington et al. (2017) suggest that budgeting behaviours can be encouraged among business students by teaching them how to use low-effort personal budgets to avoid overspending.

Mihály et al. (2017) found that students who earn an income and are self-supporting are more likely to save than those who do not. The study among 305 Hungarian university students concluded that students' attitude to money as well as their money management skills are affected by certain socio-demographic factors. Bamforth et al. (2018) examined money management behaviours among 47 students in three Australian universities via a qualitative exploratory study using six focus groups. The study found that progression in level of study, parental money management advice, and technology influence money management habits among students.

### **3.8 Financial Capability and Financial knowledge - Empirical Literature**

Improved financial well-being and financial inclusion are dependent on financial literacy (Ambarkhane et al., 2015). The negative impact of financial incapability is often intensified during the university years when students are expected to optimise the use of their limited financial resources (Eichelberger et al., 2017).

Potrich et al. (2016) measured the financial knowledge, attitudes and behaviour of 534 students attending public and private universities in Brazil. The study utilised a Structural Equation Model (SEM) and found that both financial knowledge and attitudes influence

the financial behaviour of university students. These findings were similar to more recent studies that concluded that financial behaviour is directly influenced by financial knowledge and attitudes (Vieira et al., 2019).

Thapa (2015) assessed the influence of demographic, educational and personality traits on the financial literacy of 436 university students in Nepal. The study found that financial knowledge is impacted by age, income, the field of study, and type of university as well as students' attitudes. While the students were found to be financially knowledgeable, it was also found that gender does not impact financial knowledge.

Albeerdy and Gharleghi (2015b) evaluated the determinants of financial literacy among 103 Malaysian college students via a self-administered questionnaire. The survey utilised correlation and multiple regression analysis tables to examine the relationships between socio-demographic variables and financial literacy. Although the study indicated no positive relationship between financial socialisation and financial literacy, education and financial attitudes were found to be significant. This contradicts the findings of an American study, which used the 2015 National Financial Capability Study. It concluded that financial socialisation is a determinant of positive financial behaviour among college students' loan debt decisions (Fan and Chatterjee, 2018).

Er et al. (2017) survey among 1 267 Turkish university students enrolled in an open university programme sought to understand their proficiency in money concepts, financial information for making decisions, and knowledge of financial assets via a structured questionnaire that also recoded demographic details. The results of the factor analysis showed that female students are risk-averse in their financial decisions and that gender and employment were statistically significant.

Jayakumar et al. (2017) cross-sectional survey of first- and fourth-year students across seven American medical schools found that the students were not financially knowledgeable, despite the provision of financial counselling for the fourth-year students. Sarpong-Danquah et al. (2018) investigated the level of financial literacy among students across tertiary institutions in Ghana. The study sampled 480 students via a self-

administered questionnaire. It was found that the majority of the students were highly knowledgeable about savings and investment-related issues, but had little knowledge of insurance. The authors recommended the inclusion of financial education programmes in tertiary curricula, regular seminars to promote financial awareness and the use of digital platforms to improve students' financial knowledge.

Andreou and Philip (2018) adopted a quantitative research approach to examine the financial knowledge of 881 students across universities in Cyprus. The research instrument tested the students' knowledge of basic financial terms such as inflation, interest rates, risk and diversification. While the survey found parental influence to be insignificant, socio-demographic and soft skills traits distinguished highly financially knowledgeable students from less knowledgeable ones. It was further found that financial knowledge is a key safeguard against poor debt decisions as well as vulnerability to Ponzi schemes.

Brooks and Wheeler (2018) sought to establish the effects of financial knowledge, perceived financial well-being and other factors on financial distress among 612 undergraduate students in an American university. The study conceptualised financial knowledge as knowledge of credit, debt, insurance, taxes and savings. Students with a positive financial well-being outlook exhibited lower levels of financial distress, but no relationship was found between financial knowledge and financial distress, although most students demonstrated poor financial knowledge.

Yong et al. (2018) employed the theory of planned behaviour and Partial Least Square (PLS) SEM to examine the relationships between the financial knowledge, attitude, behaviours and literacy of young working adults in Malaysia. The survey included 1 915 young working adults between the ages of 18 and 40 in five regions within Klang Valley. It found that financial education is a key determinant of financial knowledge, as respondents with a financial educational background and those that had been exposed to financial education programmes exhibited better financial knowledge.

Anderson et al. (2018) utilised data from the National Post-Secondary Student Aid Study (NPSAS), which surveyed the financial knowledge of more than 89 200 undergraduate students in America. The study sought to determine students' awareness of loan repayment terms. The study found that only 28% of the respondents were knowledgeable on basic financial terms such as interest rates, inflation, risk diversification and loan repayments. It also revealed that the overall financial literacy of students varies with socio-economic and academic factors relevant in predicting college success. Furthermore, it was found that students who financed their studies via student loans exhibited better financial literacy.

Rajapakse (2018) considered the financial literacy of 132 university academics in the largest university system in Sri Lanka. The results revealed a medium level of financial knowledge (75.9%) and attitude (69.7%). However, this failed to reflect on their financial behaviour, which was measured at 59.96%.

### **3.9 Financial capability and financial attitude – Empirical Literature**

(Kadoya and Khan, 2017) survey of young Japanese adults reported that young male adults have better overall financial literacy and knowledge than their female counterparts, it found that females have better financial behaviour and attitudes than males. Furthermore, the findings from the logistic regression analysis showed that age, utilisation of financial information and educational background have significant impacts on overall financial literacy as well as its subcategories.

Agnew and Harrison (2015) found that university students in New Zealand are more financially literate than their English counterparts. The study surveyed full-time local undergraduate business students in both countries using a 20-item questionnaire which measured the students' financial attitude, financial literacy, personality traits and socio-demographic characteristics. The findings showed that male students were more financially literate than female students, especially when it came to financial quizzes which tested their knowledge of basic personal finance concepts. Furthermore, gender was the only variable that was proven to have a consistent significant relationship with the financial literacy of the students in both countries.

Potrich et al. (2015) considered the financial literacy of 991 young adults in southern Brazil with an average age of 27. An SEM was used to assess the invariances between socio-demographic variables, financial knowledge, financial behaviour and financial attitude. The results showed that the respondents had sound financial attitudes, an intermediate level of financial behaviour and a poor level of financial knowledge. While the study reported similar levels of financial attitude between the genders, it was found that females had lower levels of financial knowledge and financial behaviour than their male counterparts. Furthermore, based on the models used to test the invariances of financial literacy amongst the genders, a significant relationship was found between females' financial knowledge and overall financial literacy. However, this was not the case for males, as it was found that financial behaviour and financial attitudes were key influences on their overall financial literacy.

Jamal et al. (2015a) considered the effects of social influence and financial literacy on the savings behaviours among tertiary students in Sabah province, Malaysia. The data, which was analysed using a SMART-PLS found that parental and peer influences were major drivers of savings behaviours among students. While it was found that financial attitude does not influence savings behaviour, a positive relationship was found between financial literacy and savings behaviour.

Németh et al. (2015) study concluded that young Hungarian adults between the ages of 18 and 25 have a negative financial attitude towards loans. It found that most of the students considered the family as the primary source of information for financial decisions while balancing this with information from other sources such as the internet. While there is a dual risk with the former source, as studies have reported poor levels of financial literacy among Hungarians in general, it was found that the use of the internet as a secondary source of validation positively affected their financial literacy. Furthermore, the study found that the negative attitude of the students towards student loans was due to the fact that most of the respondents had never considered loans as a means of financing their studies.

Nga and Yeoh (2015) investigated 248 Malaysian undergraduate students' attitudes towards money. The study employed the theory of planned behaviour and the social cognitive theory to assess effective, social and cognitive behaviours. It was found that financial awareness was a key determinant of the students' attitudes towards money across all dimensions. Furthermore, parental and peer influence were found to have positive impacts on students' attitudes towards money, while mass media negatively affected them due to its promotion of materialistic values.

Paluri and Mehra (2016) explored the financial attitudes of women in the city of Nashik in India via Confirmatory Factor Analysis. The women's financial attitude was categorised into clusters based on nine drivers of financial attitudes, namely, interest in financial issues; intuitive decisions; precautionary saving; free-spending; anxiety; and propensity to plan for both short- and long-term financial goals.

The analysis revealed that interest in financial issues was prevalent in the formation of clusters, while fatalistic attitude was least influential. Based on these drivers, the study concluded that financial attitude could be grouped into four clusters: conservative consumers, acquisitive consumers, unsure consumers and judicious consumers.

Herdjiono and Damanik (2016) survey of 382 respondents in Merauke, Indonesia, found that financial attitude is driven by environmental factors and social interactions, which subsequently affect financial management behaviours and financial knowledge. Furthermore, due to poor financial education in low-medium income regions, financial knowledge does not effectively impact financial management behaviour. Susan and Djajadikerta (2017) established that a relationship exists between financial knowledge and the financial attitude of college students in Bandung, West Java, Indonesia. The study, which utilised an SEM also showed that positive attitudinal traits among students are positively linked with their financial knowledge and financial behaviour. These attitudinal traits include making plans to reach preset financial goals, retention planning, achievement esteem, power-prestige, etc.

Isomidinova and Singh (2017) investigated the relationship between financial literacy, financial education, financial socialisation and attitudes towards money among young students in Tashkent, Uzbekistan. The survey of 110 students found that their financial literacy was influenced by financial education and financial socialisation, whereas their attitude towards money did not necessarily impact their financial literacy.

### **3.10 Financial capability and financial behaviour - Empirical Literature**

Herawati et al. (2018) likened financial behaviour among individuals to the functions performed by a financial manager. These include planning, management and controlling the financial resources of the business. Within the context of college students, the concept of financial behaviour considers how students plan, manage and control their financial resources in the form of their stipends and pocket monies.

Shih and Ke (2014) sought to understand the determinants of financial behaviours from the perspective of individuals' attitudes towards money. The study, which utilised a logistic regression model surveyed high-risk financial behaviours among 535 college students in Taiwan via a structured questionnaire. It found that the financial behaviours of the students were influenced by their general financial knowledge, financial product knowledge and financial practice. It was further found that socio-demographic variables such as age, gender and type of school only play a segmentation role.

Akben-Selcuk (2015) investigation of the factors that influence the financial behaviours of university students in Eastern Europe found a major difference between the budgeting behaviours of male and female students, with the latter exhibiting better financial behaviours in this area. Tang and Peter (2015) assert that a plausible explanation for the weak relationship between financial knowledge and financial behaviour could be the role of parental influence and self-discipline. Allgood and Walstad (2016) National Financial Capability Study (NFCS) baseline study found that the self-perceived financial capability of individuals in the US can impact their subsequent financial behaviours.

Serido et al. (2016) considered the influence of financial socialisation and self-efficacy on the financial behaviours of first-year university students in America. The study covered a racially diverse sample of 845 students, both Asian and white. It found that financial behaviour is influenced by gender, race, and first-generation status as well as parental financial socialisation during childhood, which subsequently impacts students' financial self-efficacy.

Chmelíková (2016) examined the financial behavioural patterns among finance major students at Masaryk University, Czech Republic. The study was conducted among students between the ages of 19 and 25 and focused on financial behaviours vis-à-vis socio-demographic dynamics. It was found that gender and experience in budgeting are key factors that drive financial behaviours among students. Furthermore, students' experience of loans was a key determinant of their debt behaviours.

Strömbäck et al. (2017) investigated the influence of individual self-control on financial behaviour and subsequent financial well-being, using a web-based survey of 2 063 Swedish nationals. The study sought to extend existing knowledge on the behavioural Lifecycle hypothesis from the perspective of financial behaviour as it relates to self-control in financial decision making. The questionnaire tested the respondents' financial behaviour, self-control, subjective financial well-being, critical reasoning, and levels of optimism and gathered information on their socio-demographic characteristics. A positive relationship was found between financial behaviour and self-control, as respondents who exhibited self-control were likely to be better prepared for unforeseen expenses via regular savings.

Harrington et al. (2017) assert that encouraging budgeting behaviours among students by direct teaching can deter overspending. Their study among college students in America found that students' subjective norms, attitudes and perceived behavioural control are significant in determining their behavioural dispositions towards budgeting.

Angus (2018) study on financially vulnerable students in an Australian university suggests that providing financial counselling to university students experiencing financial stress can produce positive results. Grohmann (2018) considered the financial literacy and financial behaviour of middle-class individuals residing in developing countries by conducting a survey among 500 people residing in Bangkok. The study concluded that there is no difference between the financial behaviours of residents of developed and developing countries.

Zhu (2018a) examined the financial behaviours of economically disadvantaged adolescents in Hong Kong with a view to understanding how material hardship in families impacts financial behaviours at adolescence. The survey which covered 1 635 adolescent students, utilised two conceptual models, parental financial socialisation and overall poverty. The study concluded that the financial behaviours of adolescents are influenced by parental financial socialisation.

Herawati et al. (2018) considered the effects of financial literacy, financial self-efficacy and the socio-economic status of students' parents on the financial behaviours of accounting students in Bali, Indonesia. The study found all three variables to have a positive relationship with the students' financial behaviour.

### **3.11 Financial capability and numeracy skills - Literature**

In a quest to understand what drives personal financial behaviour, Nye and Hillyard (2013) considered the effects of quantitative literacy and materialism on the financial behaviours of American consumers. The survey of 267 individuals found that while materialistic tendencies drive impulsive purchase behaviours, numeracy reduces such tendencies. Similarly, Gao (2017) established a positive relationship between numeracy capabilities and the investment behaviours of young adults. An online study among 235 participants revealed that objective numeracy skills, as well as financial knowledge, contribute to positive investment behaviours such as investment in financial markets and retirement planning.

Although South African students have good knowledge of general financial literacy, they are knowledge deficient in the areas of financial planning, investments, taxation and banking (Louw et al., 2013). This was found in a survey of 424 third-year students in Northwest University, South Africa. The study further observed that most of the students had not been exposed to financial practices such as debt investments, as their parents were supporting them financially. However, it was found that the students are mainly in charge of managing their cash in terms of day-to-day spending (Louw et al., 2013).

Brennan and Vos (2013) suggest that a marketing simulation game can be used as an educational strategy to improve the financial skills and numeracy skills of college students. This was found in a quasi-experimental study conducted at a large, public university in London. The study focused on 127 final-year students studying strategic marketing and found that the participants' mean scores in numeracy and financial skills improved significantly after their participation in the simulation game.

Lusardi and Wallace (2013) found that being capable of making good financial decisions was dependent on quantitative literacy among high school and university students in different countries such as the US, Romania, France, Switzerland, Australia, etc. Although it was established earlier that numeracy capabilities among the general population are relatively low, it was found to be more drastic among segments of the population such as the older generation, individuals with low academic qualifications, and women (Lusardi, 2012).

French and McKillop (2016) survey of residents in Northern Ireland concluded that although money management skills are important determinants of financial outcomes, numeracy skills do not necessarily influence the outcomes of individual financial decisions. Although numeric competency can be either objective or subjective, numeracy skills are crucial to making sound financial decisions (Gao, 2017). Objective numeracy relates to being able to interpret and apply mathematical and probabilistic concepts; this type of numeracy capability is measured based on math skills (Peters, 2012; Gao, 2017). On the other hand, subjective numeracy relates to being confident with numbers.

This type of numeracy capability is based on a subjective rating of perceived numerical capabilities as well as a positive emotional aptitude for numbers (Peters, 2012; Gao, 2017).

Skagerlund et al. (2018) found that there is a positive relationship between financial literacy and numeracy skills. Their study among 2 063 individuals in Sweden, found that numeracy proficiency and a positive attitude towards numbers are core components of financial literacy. Jayaraman et al. (2018) concluded that the financial literacy of students in India is primarily influenced by their numeracy capabilities. The study, which considered 536 high school students, advocates for the inclusion of basic financial numeracy subjects such as interest rates calculations, charts/data comparisons, etc. in the school curriculum.

### **3.12 Financial capability and Parental influence - Literature**

Amongst other factors, parents' financial experience is a key determinant of financial knowledge among young adults (Tang and Peter, 2015). Van Campenhout (2015) calls for the re-evaluation of the pivotal role of parents in the financial socialisation of young adults in both existing and prospective financial literacy programmes. The study further suggests that a partnership between proponents of financial literacy programmes and parents can maximise positive outcomes in the financial socialisation of young adults. Tang et al. (2015) argue that while financial knowledge is not enough to guarantee positive financial behaviour among young adults, parental influence, as well as self-discipline, are key determinants of positive financial behaviours.

Albeerdy and Gharlegghi (2015b) empirical survey of 105 Malaysian students using a multiple regression model concluded that there was no significant relationship between financial socialisation and the students' financial literacy. The study indicated that students' financial literacy is better determined by their attitude towards money as well as their level of education.

Angulo-Ruiz and Pergelova (2015) found that interactional factors such as parental financial teachings and behaviour are crucial impacts on financial behaviour among the youth in western Canada.

Serido et al. (2016) are of the view that, amongst other socio-demographic factors such as race, gender and first-generation status, first-year students who are financially socialised during their formative years tend to exhibit more positive financial behaviours than their peers who are not. LeBaron et al. (2018) solicited the opinions of 126 undergraduate students on the role parents should play in their children's financial socialisation. The qualitative study found that most of the undergraduates would teach their future children financial capability issues relating to the process of savings, the value of hard work, taking responsibility for opportunities and how to communicate family finances.

Finally, a study conducted among 518 accounting students in Bali, Indonesia found that parents' socio-economic status has a major influence on students' ability to make sound financial decisions (Herawati et al., 2018).

### **3.13 Financial capability of South African students - Literature**

While there is no existing literature on the financial capability of South African students, related studies have been conducted on financial literacy and financial decision making among South Africans and the country's students.

Roberts et al. (2012) FSB baseline study found that South Africans across all age group and socio-demographic groups generally have low financial literacy levels. This was affirmed by Ndou (2016) who found that the financial literacy rate of adults in Vhembe Municipality in Limpopo stood at a low 38.3%.

Motsepe (2016) research on the Howard College campus of UKZN concluded that first-year students had generally low levels of financial literacy.

The study, which focused on 20 first-year students in the College of Humanities, utilised thematic analysis and found that there was no relationship between the students' perceived financial knowledge and their savings and debt behaviours. A study conducted among 286 business management students at the University of Free State concluded that poor financial knowledge and a lack of personal savings contribute to a lack of confidence in financial decisions and poor level of entrepreneurial development in South Africa (Kotzé and Smit, 2008). Van Nieuwenhuyzen (2009) doctoral study surveyed 134 students at the South African Military Academy. The students' average financial literacy was found to be 50.17%, while most (39%) showed the lowest literacy levels in personal finance-related questions such as insurance, investing and inflation. Interestingly, the students exhibited the highest literacy (72%) in retirement-related questions, which could mean that they are conscious of the need for financial capability, but currently lack it.

De Clercq and Venter (2009) used an exploratory study methodology to consider the determinants of financial literacy levels among prospective Chartered Accountants in South Africa. The study found that socio-demographic factors such as gender, age, language, race and income levels are drivers of financial literacy levels among these students.

Botha (2013) found a generally low level of financial literacy among postgraduate diploma students studying finance and non-finance related courses at the University of Johannesburg, with a literacy level of 53.4%. The comparative study which surveyed 163 students, found that students enrolled for a finance-related postgraduate diploma were slightly more financially literate than those in a non-finance related course. (Louw et al., 2013) surveyed 424 third-year undergraduate students at North-West University. The study tested their financial knowledgeability under the four themes of financial planning and investments, and legal, banking and taxation as well as other sundry financial matters using a structured questionnaire. It found a low level of financial knowledgeability amongst the students, with the lowest in the area of financial planning and banking.

Fatoki (2014b) research among final-year students studying chemistry and agriculture in two universities, in Gauteng and Limpopo provinces, found that there is a dearth of

financial literacy among non-business students. Of the 99 students, 77 did not save. However, most supported the idea of the inclusion of a personal finance-related module in their curriculum.

Oseifuah and Gyekye (2014) survey of 45 final-year BCom accounting students at the University of Venda concluded that the students are not financially literate. While male students showed more interest in improving their financial capability than female students, students with a monthly allowance of less than R500 were less financially knowledgeable than those that received more. The authors suggested that this could be due to the fact that students that receive small allowances are focused on consumption and do not have money left over to save.

Kostov et al. (2015) considered the financial capability of South Africans over the age of 16 with basic literacy, but insufficient financial knowledge, from the perspective of access to financial products (Mzansi account). The study utilised the 2007 Finscope South Africa dataset and found that financial access is largely dependent on the individual aspiration to be financially capable. This was evident as the introduction of financial education was not sufficient to improve financial inclusion. However, it does create a platform for individuals to aspire to advance their position on the financial ladder.

Rousseau and Venter (2016) asserted that there is a high level of financial illiteracy among young South Africans who are single and unemployed. This was based on a survey of the financial behaviour and capabilities of 560 individuals residing in Port Elizabeth. The study noted that employment level, age, gender, marital status and education are significant in financial decision making. The Exploratory Factor Analysis also found that financial planning, execution, vigilance and discipline are key factors in financial behaviour and capability.

### **3.14 Importance of Financial capability**

#### **3.14.1 Money management**

Financial capability improves individuals' money management proficiencies. Fessler et al. (2007) describe money management as making ends meet, as well as keeping track of one's finances. Based on the UK's Financial Services Authority (FSA) survey, financially capable individuals are better prepared to meet upcoming expenses and actively participate in household financial decisions. Financial capability in this context involves (Bagwell et al., 2014):

- *Keeping a record of income and spending.*
- *Managing payments of bills.*
- *Establishing and following a viable budget plan.*
- *Maximising income via claiming purchase benefits/coupons and shopping for discounts.*

#### **3.14.2 Planning Ahead**

Financial capability helps individuals to plan ahead for their anticipated future needs. The FSA survey revealed the need for this kind of financial capability by observing the frequent unexpected financial setbacks and expenses that people experienced, and how well these setbacks had been prepared for (Fessler et al., 2007).

Furthermore, several studies (Taylor et al., 2011a; Von Stumm et al., 2013) have stressed the importance of financial planning in respect to long-term considerations such as retirement planning and wealth accumulation. Financially capable individuals are conscious of making sound long-term financial decisions.

Financial capability in this context involves (Bagwell et al., 2014):

- *Saving to cover small- and medium-term unexpected expenses such as renovations, fixing broken appliances, etc.*
- *Working towards long-term time-bound financial stability goals such as owning a home.*
- *Savings against unforeseen life occurrences such as job loss.*
- *Having a nest egg for retirement.*
- *Anticipating and making provision for future expenses such as children's college tuition.*

### **3.14.3 Making choices/choosing products**

Financial capability helps individuals to make choices in choosing the right financial product over time. Fessler et al. (2007) assert that being financially capable helps individuals to take appropriate steps to choose the financial products and services that satisfy their financial need at a particular point in time. Financial products and services in this context include savings products, credit cards, mortgages, life insurance and other insurance products, etc. Financially capable individuals pay attention to financial product and service features, risks and long-term implications before making a purchase. Adequate consideration is also made of the costs of switching products or service providers, as well as product flexibility. Financial capability in this context involves (Bagwell et al., 2014):

- *Choosing the right insurance product/service.*
- *Seeking debt counselling before making debt decisions.*
- *Choosing the right debt/income product/service.*
- *Comparing the details of several financial products/services before making financial decisions.*

### **3.14.4 Getting Help/staying Informed**

The financial capability provides individuals with financial knowledge and access to financial information in order to make sound financial decisions. Financial capability seeks to evaluate people's knowledge of financial matters via surveys, campaigns and other

financial awareness programmes. It requires that people want to address their financial deficiencies and keep abreast of financial developments (Fessler et al., 2007). Financial capability also provides individuals with information relating to financial products and services, as well as how to access such. Financial capability in this context involves (Bagwell et al., 2014):

- *Proactively seeking professional advice and guidance.*
- *Having a life-time financial planner.*
- *Taking steps to reduce debt exposure.*

### **3.15 Data Analysis and Interpretation of Findings**

#### **3.15.1 Financial Capability of Accounting Students**

H1: Accounting students at universities in KwaZulu-Natal are financially capable.

H1<sub>0</sub>: Accounting students at universities in KwaZulu-Natal are not financially capable.

##### *Respondents' Financial Knowledge assessment*

With an overall mean value of (M=1.22) and Standard Deviation of (SD= 0.416), the descriptive statistics of all 16 questions on Financial Knowledge suggested that most of the respondents (n=1228; 77.6%) are financially knowledgeable, compared to (n=354; 22.4%) who are not financially knowledgeable. This analysis was computed for each question. Hence, for questions 1, 2, 3, 7, 9, 10, 12, and 14, the computation suggested that most of the respondents were financially knowledgeable with 50.6%, 93.9%, 54.6%, 54.5%, 54.9%, 78.3%, 84.5%, and 63.7%, respectively. However, for questions 4, 5, 6, 8, 11, 13, 15, and 16, the descriptive analysis revealed that the majority of the respondents are not financially knowledgeable with 77.4%, 51.8%, 67.4%, 54.0%, 52.0%, 88.4%, 55.4%, and 82.4%. See **Table 3.1** below for a detailed representation of the analysis.

**Table 3. 1: Respondents' financial knowledge**

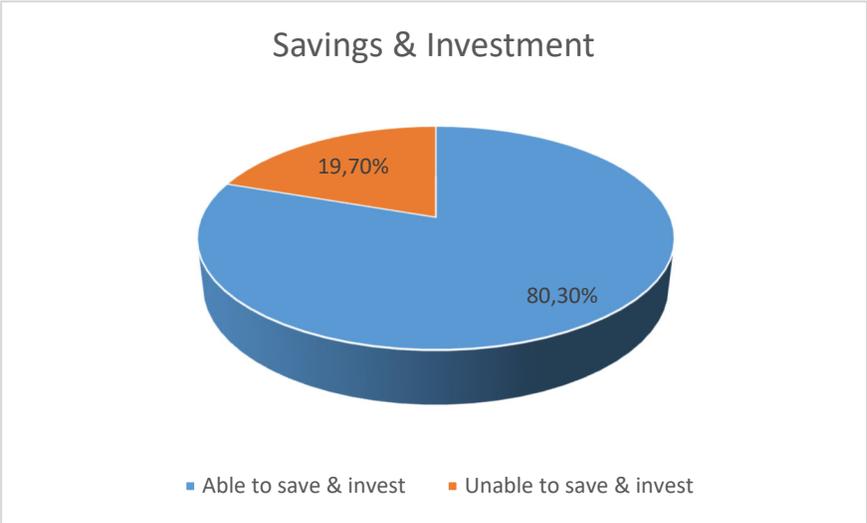
<b>Financial knowledge items</b>	<b>Knowledgeable</b>	<b>Not Knowledgeable</b>	<b>M</b>	<b>SD</b>
Question 1	800 (50.6%)	782 (49.4%)	1.49	.500
Question 2	1485 (93.9%)	97 (6.1%)	1.06	.239
Question 3	864 (54.6%)	718 (45.4%)	1.45	.498
Question 4	357 (22.6%)	1225 (77.4%)	1.77	.418
Question 5	762 (48.2%)	820 (51.8%)	1.51	.499
Question 6	516 (32.6%)	1066 (67.4%)	1.67	.468
Question 7	862 (54.5%)	720 (45.5%)	1.45	.498
Question 8	727 (46.0%)	855 (54.0%)	1.54	.498
Question 9	869 (54.9%)	713 (45.1%)	1.45	.497
Question 10	1238 (78.3%)	344 (21.7%)	1.21	.412
Question 11	759 (48.0%)	823 (52.0%)	1.52	.499
Question 12	1337 (84.5%)	245 (15.5%)	1.15	.361
Question 13	183 (11.6%)	1399 (88.4%)	1.88	.319
Question 14	1010 (63.8%)	572 (36.2%)	1.36	.480
Question 15	706 (44.6%)	876 (55.4%)	1.55	.497
Question 16	278 (17.6%)	1304 (82.4%)	1.82	.380
<b>Total scores</b>	<b>1228 (77.6%)</b>	<b>354 (22.4%)</b>	<b>1.22</b>	<b>.416</b>

Source: SPSS

Furthermore, since the financial knowledge questions were categorised into four (4) groups (savings and investment, spending and credit, income, and money management), a descriptive analysis was conducted to measure the respondents' performance in each of the categories.

On **savings and investment**, the analysis suggested that the majority of the respondents (n=1270; 80.3%) can save and invest compared to the (n=312; 19.7%) of the respondents who are unable to save and invest.

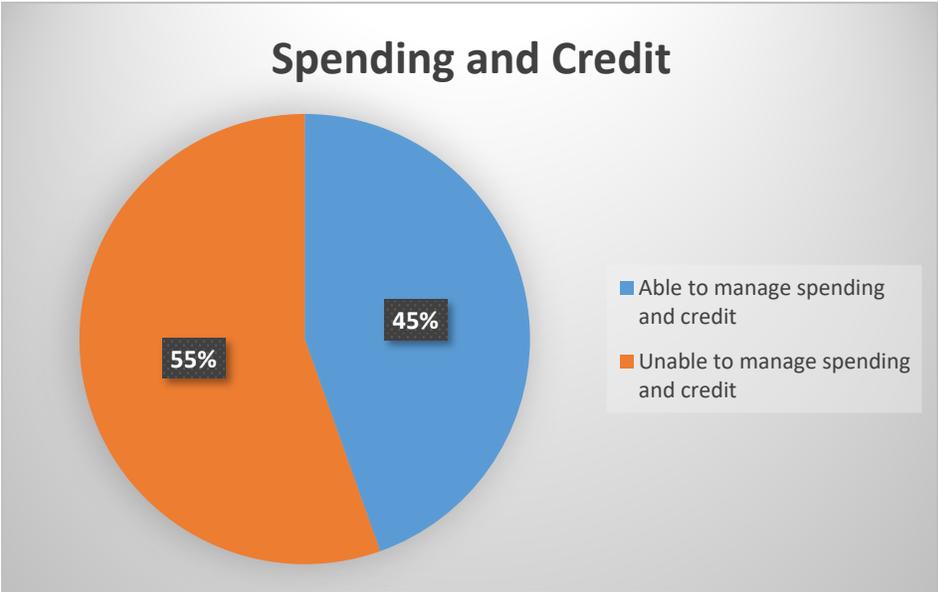
**Figure 3. 2 Respondents' savings and investment knowledge**



Source: SPSS

Again, with regard to **spending and credit**, the analysis revealed that most of the respondents (n=877; 55.4%) are unable to manage their spending and credit as opposed to the (n=705; 44.6%) of the respondents who can manage their spending and credit.

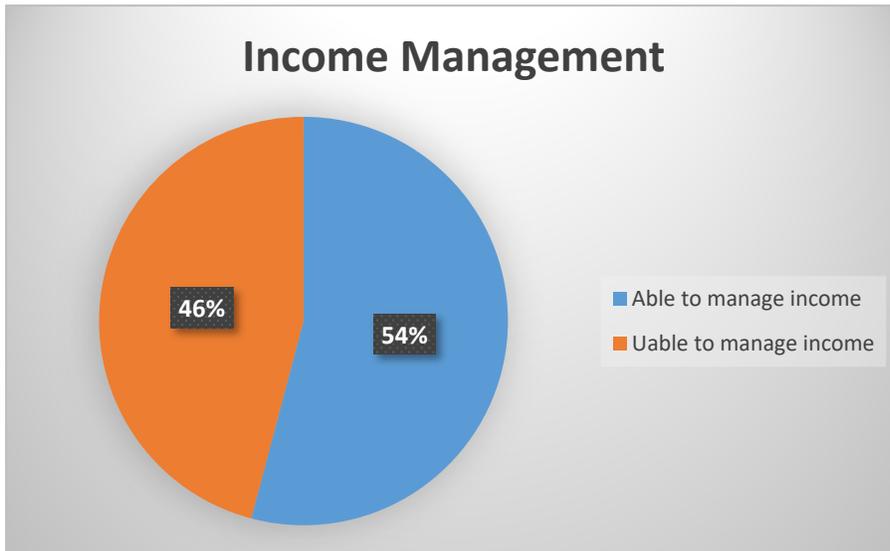
**Figure 3. 3 Respondents' spending and credit knowledge**



Source: SPSS

With (n=856; 54.1%), the computation indicates that most of the respondents can **manage their income** as compared to the (n=726, 45.9%) of the respondents who are not able to manage their income.

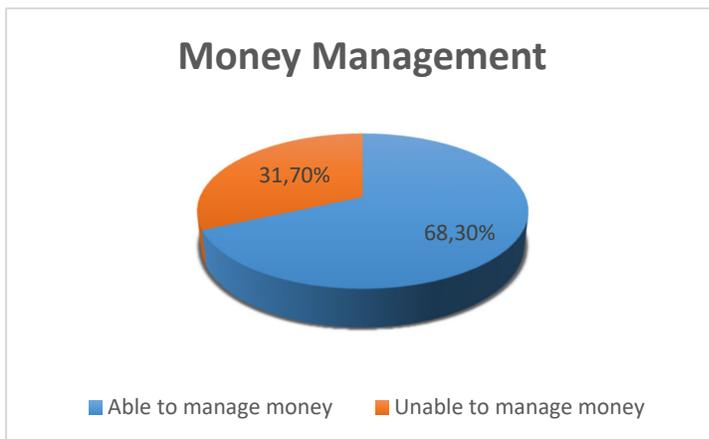
**Figure 3. 4 Respondents' income management**



Source: SPSS

Regarding **money management**, the analysis suggested that the majority of the respondents (n=1080; 68.3%) can manage their money as opposed to the (n=502; 31.7%) of the respondents who are unable to manage their money.

**Figure 3. 5 Respondents' money management**

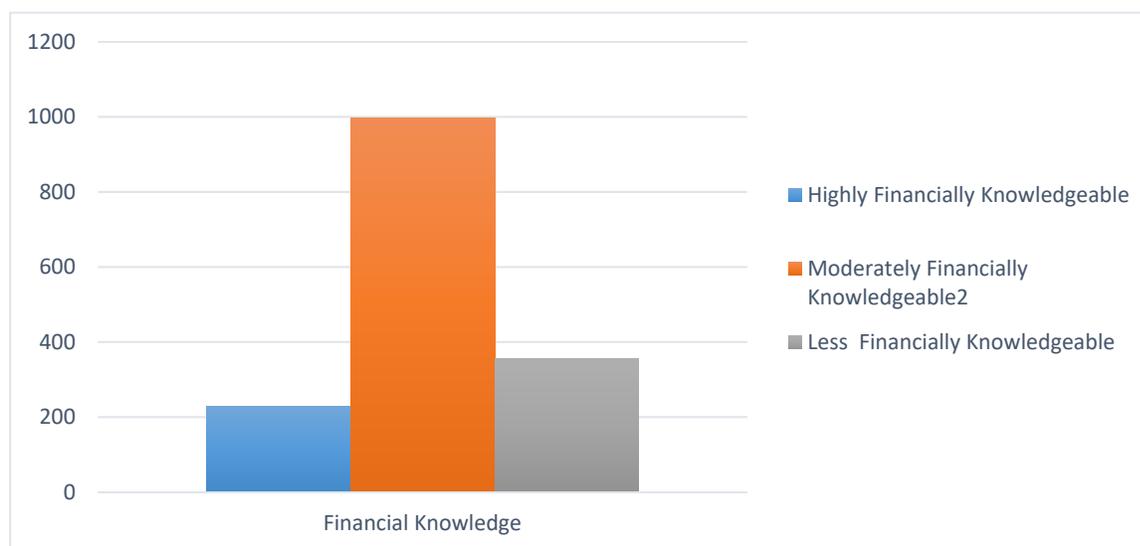


Source: SPSS

### *Respondents' aggregate financial knowledge*

To accurately determine the respondents' financial knowledge, the researcher used the average scores of every respondent on each of the 16 items of the financial knowledge questions. The overall mean scores of each respondent were categorised into three categories of highly financially knowledgeable (mean scores of >65%); moderately financially knowledgeable (50 – 64%); and less financially knowledgeable (<49%). The analysis indicated that the majority of the respondents (n=999; 63.1%) are moderately financially knowledgeable. In addition, the computation indicates that only (n=229; 14.5%) of the respondents are highly financially knowledgeable. However, about (n=354; 22.4%) of the respondents are less financially knowledgeable. (M=2.07 and SD= 0.602).

**Figure 3. 6 Respondents' Financial Knowledge**



Source: SPSS

### *Assessment of Financial behaviour*

With the exception of questions 4 and 5, the descriptive analysis of all 10 items of Financial Behaviour, revealed that the majority of the respondents have good financial behaviour on all the items. See **Table 3.2** below for a detailed representation of the results.

**Table 3. 2 Respondents' financial behaviour**

Financial Behaviour items	Good Behaviour	Poor Behaviour	M	SD
Question 1	1329 (84.0%)	253 (16.0%)	1.15	.366
Question 2	1302 (82.3%)	280 (17.7%)	1.17	.381
Question 3	1325 (83.8%)	257 (16.2%)	1.16	.368
Question 4	776 (49.1%)	806 (50.9%)	1.50	.500
Question 5	611 (38.6%)	971 (61.4%)	1.61	.487
Question 6	1125 (71.1%)	457 (28.9%)	1.28	.453
Question 7	870 (55.0%)	712 (45.0%)	1.45	.497
Question 8	949 (60.0%)	633 (40.0%)	1.40	.490
Question 9	943 (59.6%)	639 (40.4%)	1.40	.490
Question 10	1168 (73.8%)	414 (26.2%)	1.26	.439
<b>Total scores</b>	<b>1286 (81.3%)</b>	<b>296 (18.7%)</b>	<b>1.18</b>	<b>.390</b>

Source: SPSS

In addition, with M= 1.18 and SD= 0.390, the overall analysis conducted on all 10 items of financial behaviour revealed that most of the respondents (n=1286; 81.3%) have good financial behaviour as opposed to the (n=296; 18.7%) of the respondents who have poor financial behaviour.

**Figure 3. 7 Respondents' Financial Behaviour**



Source: SPSS

### *Respondents' Financial Knowledge vs Financial Behavior*

Thereafter, the analysis of financial knowledge indicated that most of the 229 respondents that are highly financially knowledgeable have good financial behaviour, with (n=194; 84.7%). Again, the analysis also indicated that most of the respondents (n=813; 81.4%) with moderate financial knowledge have good financial behaviour. In contrast, the results indicated that most of the respondents with less financial knowledge have good financial behaviour. This suggests that having good financial behaviour is not necessarily an indication of being financially knowledgeable.

**Table 3. 3** Respondents' Financial Knowledge vs Financial Behavior

<b>FINANCIAL KNOWLEDGE</b>	<b>FINANCIAL BEHAVIOUR</b>	
	Good Behaviour	Poor Behaviour
Highly Financial Knowledgeable	194 (84.7%)	35 (15.3%)
Moderately Financially Knowledgeable	813 (81.4%)	186 (18.6%)
Less Financially Knowledgeable	279 (78.8%)	75 (21.2%)
<b>Total</b>	<b>1286 (81.3%)</b>	<b>296 (18.7%)</b>

Source: SPSS

### *Assessment of Numeracy skills*

Apart from question 4, the analysis indicates that most of the respondents are numerically skilled with, 94.1%, 91.4%, 90.6%, 92.8%, and 62.6%, for questions 1, 2, 3, 5, and 6, respectively. Furthermore, with M= 1.06 and SD= 0.238, an overall analysis was conducted on all six items, and the results suggested that most of the respondents (n=1486, (93.9%) are numerically skilled. On the other hand, about (n=96; 6.1%) of the respondents are less numerically skilled.

**Table 3. 4 Respondents' Numerical skills**

<b>Financial knowledge items</b>	<b>Numerically skilled</b>	<b>Less numerically skilled</b>	<b>M</b>	<b>SD</b>
Question 1	1488 (94.1%)	94 (5.9%)	1.05	.236
Question 2	1446 (91.4%)	136 (8.6%)	1.08	.280
Question 3	1434 (90.6%)	148 (9.4%)	1.09	.291
Question 4	472 (29.8%)	1110 (70.2%)	1.70	.457
Question 5	1468 (92.8%)	114 (7.2%)	1.07	.258
Question 6	990 (62.6%)	592 (37.4%)	1.37	.484
<b>Total scores</b>	<b>1486 (93.9%)</b>	<b>96 (6.1%)</b>	<b>1.06</b>	<b>.238</b>

Source: SPSS

#### *Assessment of Financial Attitudes*

On financial attitudes, the descriptive analysis of all 13 items of Financial Attitude suggested that most of the respondents have positive financial attitudes on all 13 items. See **Table 3.5** below for a detailed representation of the results.

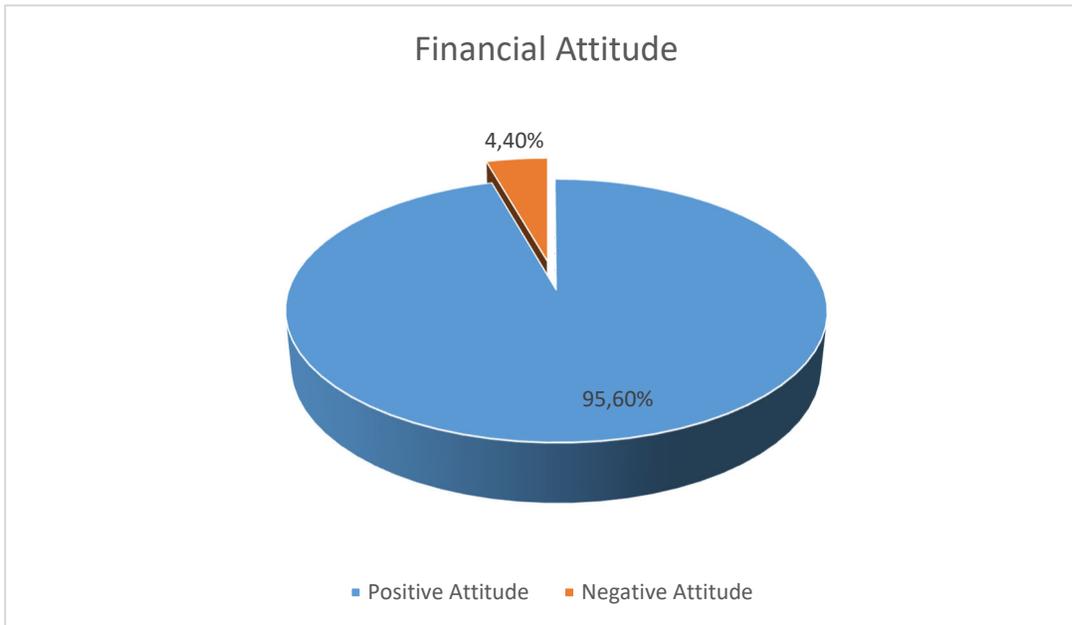
**Table 3. 5 Respondents' financial attitude**

<b>Financial Attitude items</b>	<b>Positive Attitude</b>	<b>Negative Attitude</b>	<b>M</b>	<b>SD</b>
Question 1	1518 (96.0%)	64 (4.0%)	1.04	.197
Question 2	1511 (95.5%)	71 (6.1%)	1.04	.207
Question 3	1405 (88.8%)	177 (11.2%)	1.11	.315
Question 4	1224 (77.4%)	358 (22.6%)	1.22	.418
Question 5	1203 (76.0%)	379 (24.0%)	1.23	.426
Question 6	1357 (85.8%)	225 (14.2%)	1.14	.349
Question 7	1440 (91.0%)	142 (9.0%)	1.08	.285
Question 8	1305 (82.5%)	277 (17.5%)	1.17	.380
Question 9	1262 (79.8%)	320 (20.2%)	1.20	.401
Question 10	1396 (88.2%)	186 (11.8%)	1.11	.322
Question 11	1484 (93.8%)	98 (6.2%)	1.06	.241
Question 12	1304 (82.4%)	278 (17.6%)	1.17	.380
Question 13	1406 (88.9%)	176 (11.1%)	1.11	.314
<b>Total scores</b>	<b>1513 (95.6%)</b>	<b>69 (4.4%)</b>	<b>1.04</b>	<b>.204</b>

Source: SPSS

Furthermore, with a mean value of 1.04 and a standard deviation of 0.204, the overall analysis conducted on all 13 items of financial attitude suggested that most of the respondents (n=1513; 95.6%) have positive financial attitudes compared to the (n=69; 4.4%) of the respondents who have negative financial attitudes.

**Figure 3. 8 Respondents' financial attitude**



Source: SPSS

#### *Assessment of respondents' Financial capability*

The respondents' financial knowledge, numeracy skills, financial attitude, and financial behaviour were used to establish the level of financial capability among accounting students. The researcher transformed the responses on financial knowledge, numeracy skills, financial attitude, and financial behaviour based on the individual overall average score of  $\leq 49\%$ ,  $50\% - 64\%$ , and  $\geq 65\%$ . These were later transformed into "Low Financial Capability" = ( $\leq 49\%$ ); "Moderate Financial Capability" = ( $50\% - 64\%$ ); and "High Financial Capability" = ( $\geq 65\%$ ). The reason was to analyse the data to achieve the research objectives more easily. Furthermore, the transformed financial knowledge, numeracy skills, financial attitude, and financial behaviour were used to run the descriptive statistics as demonstrated here.

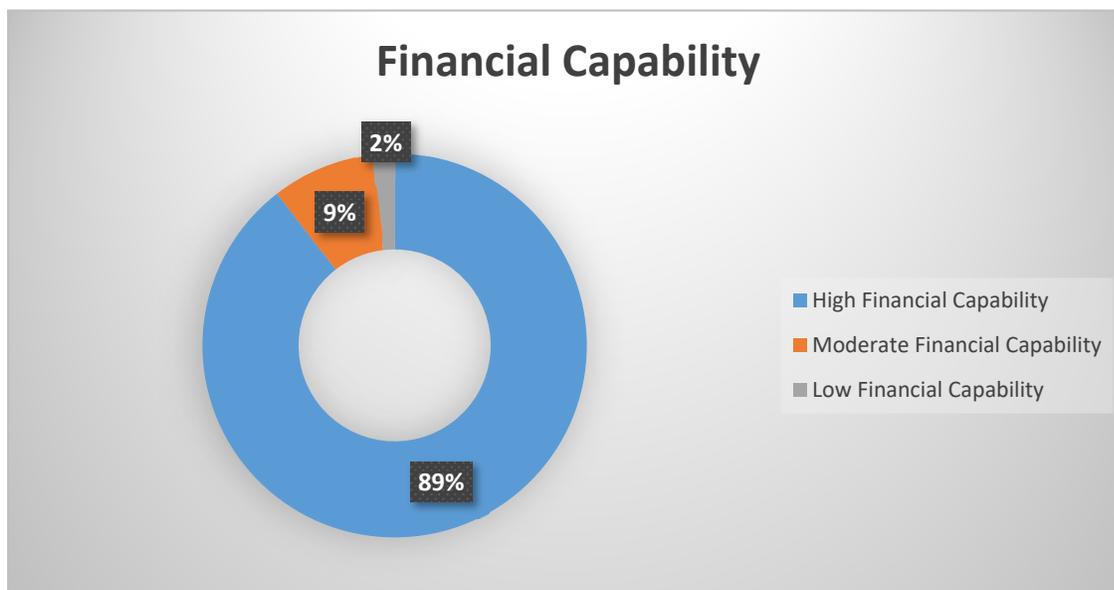
With a mean value of 1.12 and a standard deviation of 0.382, the computation revealed that most of the respondents have High Financial Capability, with ( $n=1416$ ;  $89.5\%$ ). Again, the analysis indicates that about ( $n=136$ ;  $8.9\%$ ) of the respondents have Moderate Financial Capability. However, of the 1 582 respondents, only ( $n=30$ ;  $1.9\%$ ) have Low Financial Capability.

**Table 3. 6 : Respondents' financial capability**

Competencies	Frequency	Percent
High Financial Capability	1416	89.5
Moderate Financial Capability	136	8.6
Low Financial Capability	30	1.9
<b>Total</b>	<b>1582</b>	<b>100.0</b>

Source: SPSS

**Figure 3. 9 Financial Capability of Accounting Students**



Source: SPSS

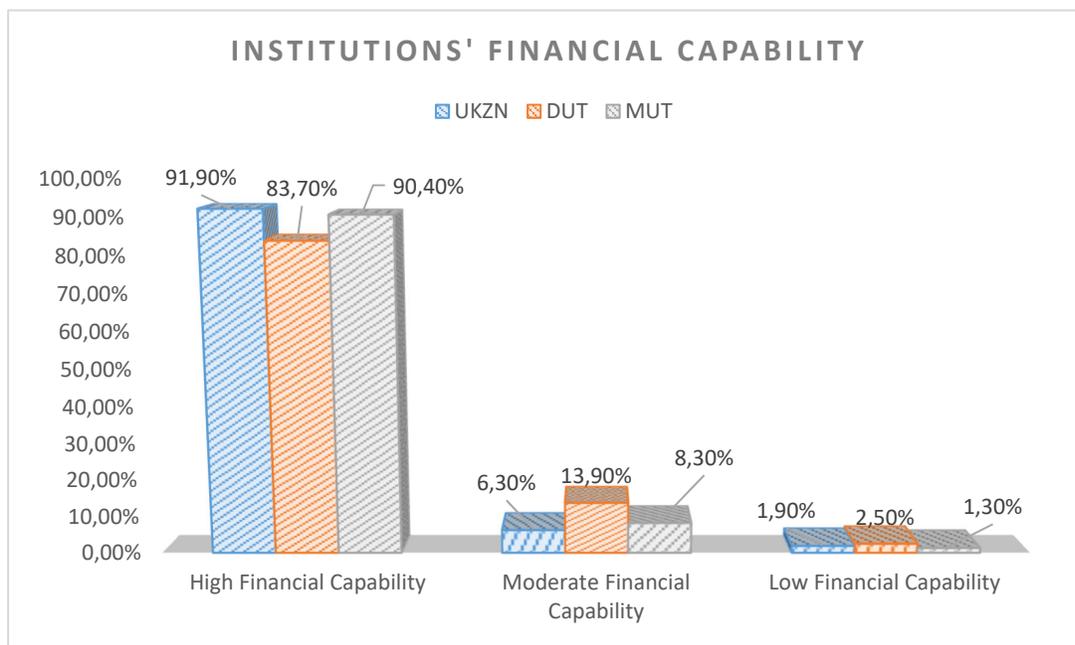
In addition, a descriptive analysis between the respondents' institutions and financial capability was estimated. The results revealed that most of the 864 respondents from UKZN, have the high financial capability, with (n=794; 91.9%). Similarly, the results revealed that of the 404 and 314 respondents in DUT and MUT, most have high financial capability, with (n=388; 83.7%) and (n=284; 90.4%), respectively.

**Table 3. 7 Respondents' financial capability (FC) versus institutions**

Institutions	Financial Capability (FC)			Total
	High FC	Moderate FC	Low FC	
UKZN	794 (91.9%)	54 (6.3%)	16 (1.9%)	864
DUT	388 (83.7%)	56 (13.9%)	10 (2.5%)	404
MUT	284 (90.4%)	26 (8.3%)	4 (1.3%)	314
<b>Total</b>	<b>1416 (89.5%)</b>	<b>136 (4.8%)</b>	<b>30 (1.9%)</b>	<b>1582</b>

Source: SPSS

**Figure 3. 10 Respondents' financial capability according to the institution**



Source: SPSS

### 3.15.2 Confirmatory Factor Analysis (CFA)

#### 3.15.2.1 CFA - Financial Knowledge

Confirmatory Factor Analysis (CFA) was used to test whether the measures of a construct were consistent with the researcher's understanding of the financial knowledge factors (Income, Money Management, Savings and Investment and Spending and Credit).

***Hypothesis:*** *Individual components of financial capability will significantly influence the financial capability of the students.*

***Hypothesis 2a:*** *Income is a subset of financial knowledge*

***Hypothesis 2b:*** *Money management is a subset of financial knowledge*

***Hypothesis 2c:*** *Savings and Investment is a subset of financial knowledge*

***Hypothesis 2d:*** *Spending and Credit is a subset of financial knowledge*

#### *Background*

In the above hypothesis, we have expanded from the components of financial capability and we looked, in particular, the individual relationship of the components that make up financial knowledge as follows; Income, Money Management, Savings and Investments and Spending & Credit.

The CFA expresses the degree of discrepancy between the predicted structure of the empirical factor and the "goodness of fit" (GOF) indices, while the primary factor loading and modification in the dices provide some feedback on the level of the item. The latter feedback, however, is very limited, while the GOF indices seem to be problematic. A selective review of the CFA literature demonstrates this.

Researchers often use CFA to validate psychopathology and personality questionnaires, especially if the tests are supposed to be multidimensional. A covariance matrix is calculated on the scores of a number of subjects and CFA is then used to test whether

this matrix does not contradict the presumed factor structure or pattern. CFA is carried out using SEM, a very sophisticated statistical procedure for testing complex data theoretical models. CFA is only used for measuring the models.

### *Model for CFA*

Although we had done exploratory factor analysis, it was necessary to perform CFA, in particular, a statistical test of how well a factor model specified a priori explains the observed pattern of sample correlations or covariance's, commonly referred to as "model fit."

In this study, we wanted to confirm if all Financial Knowledge components are related to a single factor or if there is a strong relationship between income, money management, savings and investment and spending and credit. The model resulted in a four-factor model with the following number of questions for each factor: Income (five questions); Money Management (four questions); Savings and Investment (four questions) and Spending and Credit (four questions). There were no missing data for the 1 582 respondents

A hypothetical sample of 1 582 responses was drawn on four items from the survey of accounting students. Therefore, students were asked questions on Financial Knowledge in four possible options:

1. Income
2. Money Management
3. Savings and Investment
4. Spending and Credit

A large population has the potential to affect the goodness fit of the model.

### *Model Fit*

Before analysing the model, it is essential to understand how to evaluate it. A number of measurements of fit models were performed to establish if the model was fit for analysis as anticipated. In addition to the minimum value of the discrepancy function, dozens of statistics were proposed as measures of a model's merit. Fit measurements are reported

for each model specified by the user and for two other models called the saturated model and the independence model.

*Independence of the model*

The model of independence is the opposite extreme. The observed variables in the independence model are assumed to be uncorrelated. If the means are estimated or limited, the means of all observed variables are set at 0. The independence model is so severely and unbelievably restricted that one would expect it to fit any interesting data poorly.

*Saturated model*

There are no constraints on the moments of the population. The most general model is the saturated model. It is an empty model in the sense that it fits perfectly with any set of data. Any Amos model is a limited version of the saturated model.

*Measures of Model-fit*

**Table 3. 8** CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	38	114.714	82	.010	1.399
Saturated model	120	.000	0		
Independence model	15	509.670	105	.000	4.854

Source: SPSS\_AMOS

The *p*-value is between .01 and .05 ( $.01 \leq p \leq .05$ ) indicating an acceptable fit. In this case, the *p*-value is 0.010 indicating acceptable fit.

**Table 3. 9** RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.021	.990	.986	.677
Saturated model	.000	1.000		
Independence model	.044	.950	.943	.831

Source: SPSS\_AMOS

The smaller RMR, the better; 0 indicates perfect fit. RMR in this model is 0.021 indicating an acceptable fit.

If GFI  $\geq$  .95, it is not generally recommended.

**Table 3. 10** Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	.775	.712	.924	.896	.919
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Source: SPSS\_AMOS

The **CFI** ranges from zero to one with higher values indicating better fit. A rule of thumb for this index is that .97 is indicative of good fit relative to the independence model, while values greater than .95 may be interpreted as an acceptable fit. Again, a value of .97 seems to be more reasonable as an indication of a good model fit than the often stated cut-off value of .90. In this case, the CFI value is 0,919, indicating that the model is an acceptable fit.

Higher **TLI** values indicate better fit. A rule of thumb for this index is that .97 is indicative of good fit relative to the independence model, whereas values greater than .95 may be interpreted as an acceptable fit. As the independence model almost always has a large  $\chi^2$ , TLI values are often very close to one. TLI value in this model is .896, indicating poor fit; this is also in line with CFI.

NFI values range from 0 to 1, with higher values indicating better fit.  $.90 \leq$  NFI < .95, indicating an acceptable fit. The NFI for the study is 0.775, indicating a poor fit.

IFI  $\geq$  .95 for acceptance. In this study, IFI is 0.924, indicating an acceptable model fit.

**Table 3. 11** RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.016	.008	.022	1.000
Independence model	.049	.045	.054	.586

Source: SPSS \_AMOS

RMSEA values  $\leq .05$  can be considered as a good fit, values between .05 and .08 as an adequate fit, and values between .08 and .10 as a mediocre fit, whereas values  $> .10$ , are not acceptable. In this case, RMSEA is at .016. Thus, it should be considered as a good fit.

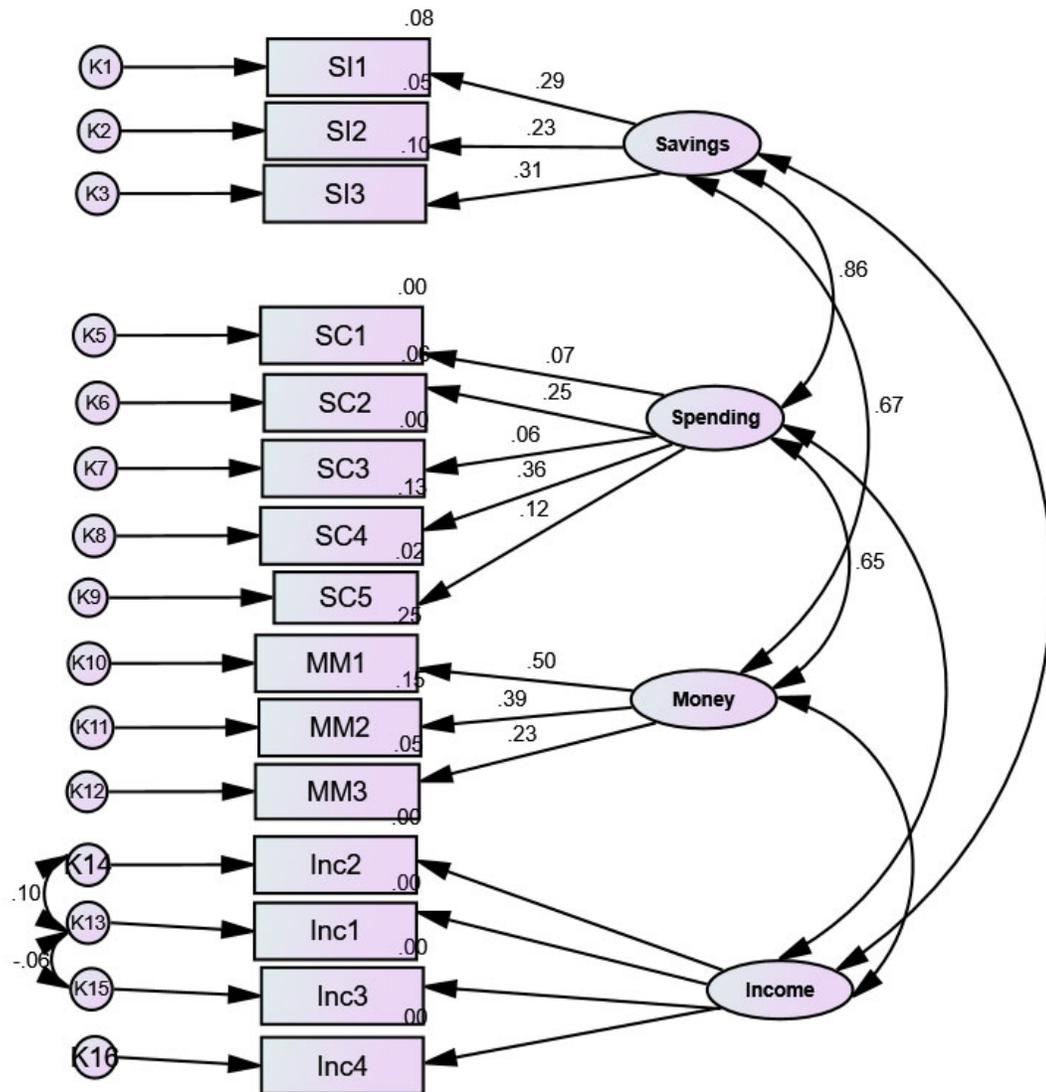
**Table 3. 12 Parsimony-Adjusted Measures**

Model	PRATIO	PNFI	PCFI
Default model	.781	.605	.718
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

Source: SPSS \_AMOS

PNFI is a result of applying as per (Mulaik et al., 1989); the parsimony is an adjustment to the NFI.

Figure 3. 11 CFA path diagram (Financial knowledge)



*Result (Default model)*

Minimum was achieved  
 Chi-square = 114.714  
 Degrees of freedom = 82  
 Probability level = .010

The model has 82 degrees of freedom, and there is evidence that the model is statistically significant with a p-value of less than 0.05.

**Table 3. 13** Computation of degrees of freedom (Default model)

The number of distinct sample moments:	120
The number of distinct parameters to be estimated:	38
Degrees of freedom (120 - 38):	82

Source: SPSS AMOS

**Table 3. 14** P-value analysis

	Estimate	S.E.	C.R.	P	Label
SI1 <--- Savings Investment	1.000				
SI2 <--- Savings Investment	1.931	.438	4.410	***	Sig
SI3 <--- Savings Investment	2.436	.484	5.033	***	Sig
SC1 <--- Spending Credit	1.000				
SC2 <--- Spending Credit	2.805	1.672	1.677	.093	
SC3 <--- Spending Credit	.993	.843	1.178	.239	
SC4 <--- Spending Credit	4.501	2.643	1.703	.089	
Inc3 <--- Income	.604	.458	1.319	.187	
MM1 <--- Money Management	1.000				
MM3 <--- Money Management	.575	.109	5.296	***	Sig
SC5 <--- Spending Cred	1.496	.982	1.524	.128	
Inc1 <--- Income	.270	.420	.643	.520	
MM2 <--- Money Management	.670	.096	6.973	***	Sig
Inc4 <--- Income	3.647	1.416	2.575	.010	Sig
Inc2 <--- Income	1.000				

Source: SPSS

SI1, SC1, MM1 and Inc2 had their p values constrained to 1 . SI2, SI3, MM3, Inc4 and MM2 are statistically significant.

The rest of the weights are statistically insignificant and account for the majority of the weights. This confirms that the null hypothesis should be accepted and not rejected.

**Table 3.15** Standardised Regression Weights: (Group number 1)

	Estimate
SI1 <--- Savings Investment	.290
SI2 <--- Savings Investment	.233
SI3 <--- Savings Investment	.311
SC1 <--- Spending Credit	.070
SC2 <--- Spending Credit	.249
SC3 <--- Spending Credit	.064
SC4 <--- Spending Credit	.362
MM1 <--- Money Management	.504
MM3 <--- Money Management	.230
SC5 <--- Spending Credit	.125
MM2 <--- Money Management	.386

Source: SPSS

The standard regression weights also confirm that the null hypothesis must be accepted as there are very low factor loadings on the model, with only money management achieving majority.

**Table 3.16** Co-variances: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P	Label
Savings and Investments	<--> Spending and Credit	.010	.006	1.667	.096	
Savings and Investments	<--> Money Management	.027	.005	5.265	***	Supported
Savings and Investments	<--> Income	.011	.004	2.378	.017	Supported
Spending and Credit	<--> Money Management	.017	.010	1.693	.090	
Spending and Credit	<--> Income	.007	.005	1.432	.152	
Income	<--> Money Management	.026	.010	2.606	.009	Supported
Savings and Investments	<--> Spending and Credit	.010	.006	1.667	.096	
Savings and Investments	<--> Money Management	.027	.005	5.265	***	Supported

Source: SPSS AMOS

### Findings

The  $p$ -value between saving and investments, and money management is less than  $p= 0.001$  indicating a significant relationship between the variables. Furthermore, the  $p$ -value between savings and investment and income is  $p =0.017$  indicating that there is a statistical relationship between the two variables. Spending and Credit with Money Management have a  $p=0.090$  indicating that there is no significant relationship between the two variables. Similarly, Income with Spending and Credit have a  $p$ -value of  $p=0.152$  indicating that there is no significant relationship between the two. Savings and Investment with Spending and credit have a  $p$ -value of  $0.096$  indicating that there is no statistical relationship between the two variables. The  $p$ -value between Savings and Investments and Money Management is less than  $p = 0.001$  indicating that there is a statistical relationship between the two variables.

### 3.15.2.2 CFA - Financial Capability

#### ***Background***

The CFA expresses the degree of discrepancy between the empirical factor's predicted structure and the indices of "goodness of fit" (GOF), while the primary dice loading and modification factor provide some feedback on the item's level. However, the latter feedback is very limited, while it appears that the GOF indices are problematic. This is demonstrated by a selective review of the CFA literature.

Researchers often use CFA for the validation of psychopathology and personality questionnaires, especially if the tests are supposed to be multidimensional. A covariance matrix is calculated on the scores of a number of subjects and CFA is then used to test whether this matrix does not contradict the presumed structure or pattern of the factor. CFA is performed using the SEM, a very sophisticated statistical procedure for testing complex theoretical models of data. CFA is only used to measure models.

#### ***Model to be considered for CFA***

Although we had done exploratory factor analysis, it was necessary to perform CFA, in particular, a statistical test of how well a factor model specified a priori explains the observed pattern of sample correlations or covariances, commonly referred to as "model fit."

In this study, we wanted to confirm if all Financial Capability constructs are in fact related statistically on constituting a single combined factor or if there is a strong relationship between Financial Knowledge, Financial Behaviour, Financial Attitudes and Numeracy Skills. The model resulted in a four-factor model: Financial Knowledge; Financial Behaviour; Financial Attitudes and Numeracy Skills. There were **no** missing data from the 1 582 respondents.

A hypothetical sample was drawn of 1 582 responses on four items from the survey of accounting students. Therefore, students were asked questions on Financial Capability in four possible options:

- 1 Numeracy Skills
- 2 Financial Knowledge
- 3 Financial Behaviour
- 4 Financial Attitudes

A large population has the potential of affecting the goodness of fit of the model.

### ***Model Fit***

Before analysing the model, it is essential to understand how to evaluate it. A number of measurement of fit models were performed to establish if the model was fit for analysis as anticipated. In addition to the minimum value of the discrepancy function, dozens of statistics were proposed as measures of a model's merit. Fit measurements are reported for each model specified by the user and for two other models called the saturated model and the independence model.

### ***Independence of the model***

The model of independence is the opposite extreme. The observed variables in the independence model are assumed to be uncorrelated. If the means are estimated or limited, the means of all observed variables are set at 0. The independence model is so severely and unbelievably restricted that one would expect it to fit any interesting data poorly.

### ***Saturated model***

There are no constraints on the moments of the population. The most general model is the saturated model. It is an empty model in the sense that it fits perfectly with any set of data. Any Amos model is a limited version of the saturated model.

## Measures of Model-fit

**Table 3. 17** CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	72	2947.111	489	.000	6.027
Saturated model	561	.000	0		
Independence model	33	10565.031	528	.000	20.010

The  $p$ -value is between .01 and .05 ( $.01 \leq p \leq .05$ ) indicating an acceptable fit. In this case, the  $p$ -value is 0.000 indicating perfect fit.

**Table 3. 18** RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.038	.887	.870	.773
Saturated model	.000	1.000		
Independence model	.106	.548	.520	.516

The smaller RMR, the better; 0 indicates perfect fit. RMR is 0.038 indicating an acceptable fit.

The GFI is 0.887, which indicates that  $.90 \leq \text{GFI} < .95$  indicating an acceptable fit.

**Table 3. 19** Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	.721	.699	.756	.736	.755
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

The **CFI** ranges from zero to one with higher values indicating better fit. A rule of thumb for this index is that .97 is indicative of good fit relative to the independence model, while values greater than .95 may be interpreted as an acceptable fit. Again, a value of .97 seems to be more reasonable as an indication of a good model fit than the often stated cut-off value of .90. In this case, the CFI value is 0,755 indicating the model is poorly fit.

Higher **TLI** values indicate a better fit. A rule of thumb for this index is that .97 is indicative of good fit relative to the independence model, whereas values greater than .95 may be interpreted as an acceptable fit. As the independence model almost always has a large  $\chi^2$ , TLI values are often very close to one. TLI value, in this model, is .736 indicating poor fit; this is also in line with CFI.

**NFI** values range from 0 to 1, with higher values indicating better fit.  $.90 \leq \text{NFI} < .95$  indicating an acceptable fit. The NFI for the study is 0.721, indicating a poor fit.

IFI  $\geq .95$  for acceptance. In this study, IFI is 0.756 indicating poor model fit.

**Table 3. 20** RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.056	.054	.058	.000
Independence model	.110	.108	.111	.000

RMSEA values  $\leq .05$  can be considered as a good fit, values between  $.05$  and  $.08$  as an adequate fit, and values between  $.08$  and  $.10$  as a mediocre fit, whereas values  $> .10$ , are not acceptable. In this case, RMSEA is at  $.056$ . Thus, it should be an adequate fit.

PCLOSE is a test of closeness to the fit where the p test measures the exact fit of the model. The model is not close to fit as it is not closer to 1.

**Table 3. 21** Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.926	.668	.699
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

PNFI is a result of applying of (Mulaik et al., 1989); the parsimony is an adjustment to the NFI.

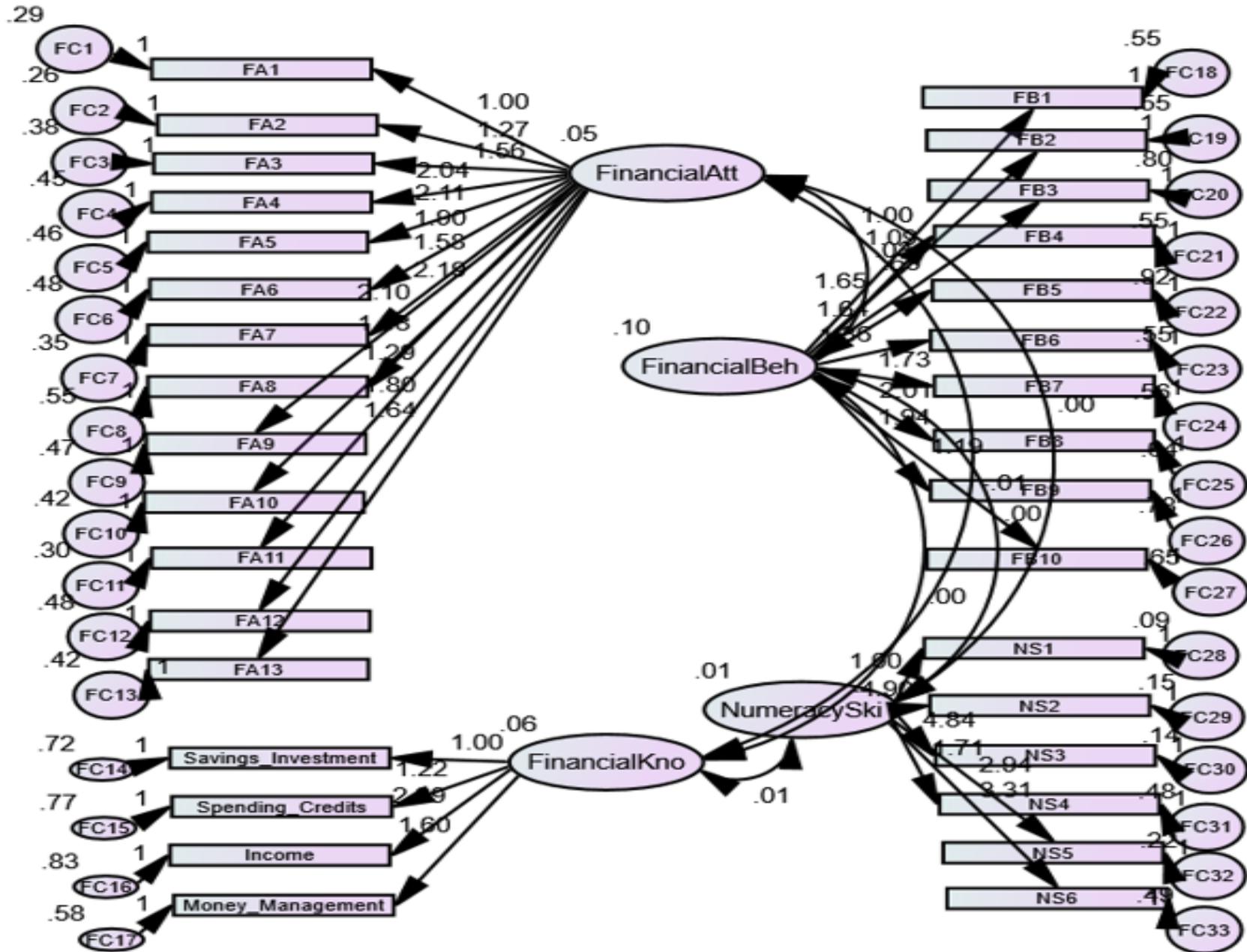
**Table 3. 22** Hoelter

Model	HOELTER .05	HOELTER .01
Default model	1436	1581
Independence model	404	440

In a 0.05 HOELTER model, 291 was achieved which is far less than the four times of the critical N of 200, which should be 800, meaning that the null hypothesis should be rejected.

Minimisation: .041  
 Miscellaneous: 2.325  
 Bootstrap: .000  
 Total: 2.366

Figure 3. 12 CFA path diagram (Financial Capability)



**Computation of degrees of freedom (Default model)**

The number of distinct sample moments: 561  
 The number of distinct parameters to be estimated: 72  
 Degrees of freedom (561 - 72): 489

**Result (Default model)**

Minimum was achieved  
 Chi-square = 2947.111  
 Degrees of freedom = 489  
 Probability level = .000

**Table 3. 23 Regression Weights: (Group number 1)**

			Estimate	S.E.	C.R.	P	Label
FA11	<---	Financial Att	1.289	.106	12.121	***	Supported
FA10	<---	Financial Att	1.577	.128	12.312	***	Supported
FA8	<---	Financial Att	2.188	.167	13.109	***	Supported
FA7	<---	Financial Att	1.576	.124	12.689	***	Supported
FA6	<---	Financial Att	1.899	.148	12.813	***	Supported
FA5	<---	Financial Att	2.108	.159	13.261	***	Supported
FA4	<---	Financial Att	2.040	.155	13.199	***	Supported
FA3	<---	Financial Att	1.558	.125	12.479	***	Supported
FA2	<---	Financial Att	1.271	.102	12.442	***	Supported
FA1	<---	Financial Att	1.000				
FB1	<---	Financial Beh	1.000				
FB2	<---	Financial Beh	1.090	.100	10.947	***	Supported
FB3	<---	Financial Beh	.654	.092	7.130	***	Supported
FB4	<---	Financial Beh	1.645	.131	12.600	***	Supported
FB5	<---	Financial Beh	1.645	.141	11.640	***	Supported
FB6	<---	Financial Beh	1.363	.114	11.939	***	Supported
FB7	<---	Financial Beh	1.735	.136	12.736	***	Supported
FB8	<---	Financial Beh	2.009	.155	12.967	***	Supported
FB9	<---	Financial Beh	1.938	.154	12.568	***	Supported
FB10	<---	Financial Beh	1.193	.109	10.961	***	Supported
Money_Management	<---	Financial Kno	1.596	.229	6.959	***	Supported
Income	<---	Financial Kno	2.292	.322	7.128	***	Supported
Spending_Credits	<---	Financial Kno	1.219	.196	6.214	***	Supported
Savings_Investment	<---	Financial Kno	1.000				

		Estimate	S.E.	C.R.	P	Label
NS1	<--- Numeracy Ski	1.000				
NS2	<--- Numeracy Ski	-4.901	.559	-8.772	***	Supported
NS3	<--- Numeracy Ski	4.838	.551	8.774	***	Supported
NS4	<--- Numeracy Ski	-1.709	.311	-5.492	***	Supported
NS5	<--- Numeracy Ski	2.941	.363	8.097	***	Supported
NS6	<--- Numeracy Ski	3.306	.440	7.516	***	Supported
FA12	<--- Financial Att	1.804	.143	12.586	***	Supported
FA13	<--- Financial Att	1.643	.131	12.508	***	Supported
FA9	<--- Financial Att	2.099	.159	13.223	***	Supported

**Table 3. 24 Standardized Regression Weights ( Group 1)**

		Estimate
FA11	<--- Financial Att	.473
FA10	<--- Financial Att	.489
FA8	<--- Financial Att	.563
FA7	<--- Financial Att	.522
FA6	<--- Financial Att	.533
FA5	<--- Financial Att	.580
FA4	<--- Financial Att	.573
FA3	<--- Financial Att	.503
FA2	<--- Financial Att	.500
FA1	<--- Financial Att	.395
FB1	<--- Financial Beh	.392
FB2	<--- Financial Beh	.422
FB3	<--- Financial Beh	.225
FB4	<--- Financial Beh	.574
FB5	<--- Financial Beh	.477
FB6	<--- Financial Beh	.504
FB7	<--- Financial Beh	.591
FB8	<--- Financial Beh	.622
FB9	<--- Financial Beh	.570
FB10	<--- Financial Beh	.423
Money_Management	<--- Financial Kno	.450
Income	<--- Financial Kno	.521
Spending_Credits	<--- Financial Kno	.319
Savings Investment	<--- Financial Kno	.273
NS1	<--- Numeracy Ski	.261
NS2	<--- Numeracy Ski	-.717
NS3	<--- Numeracy Ski	.720
NS4	<--- Numeracy Ski	-.196

			Estimate
NS5	<---	Numeracy Ski	.452
NS6	<---	Numeracy Ski	.358
FA12	<---	Financial Att	.512
FA13	<---	Financial Att	.506
FA9	<---	Financial Att	.576

**Table 3. 25 Covariances ( Group 1)**

			Estimate	S.E.	C.R.	P	Label
Financial Attitude	<-->	Financial Behaviour	.033	.004	8.564	***	Supported
Financial Attitude	<-->	Numeracy Skills	-.004	.001	-4.778	***	Supported
Financial Attitude	<-->	Financial Knowledge	-.012	.003	-4.221	***	Supported
Financial Behaviour	<-->	Numeracy Skills	.001	.001	1.440	.150	Not Supported
Financial Behaviour	<-->	Financial Knowledge	.002	.003	.528	.597	Not Supported
Financial Knowledge	<-->	Numeracy Skills	.013	.002	5.700	***	Supported

**Table 3. 26 Correlations (Group1)**

			Estimate
Financial Attitude	<-->	Financial Behaviour	.456
Financial Attitude	<-->	Numeracy Skills	-.195
Financial Attitude	<-->	Financial Knowledge	-.212
Financial Behaviour	<-->	Numeracy Skills	.049
Financial Behaviour	<-->	Financial Knowledge	.023
Financial Knowledge	<-->	Numeracy Skills	.637

**Table 3. 27 Variances(Group 1)**

	Estimate	S.E.	C.R.	P	Label
Financial Attitude	.053	.007	7.505	***	
Financial Behaviour	.100	.014	7.200	***	
Financial Knowledge	.058	.014	4.071	***	
Numeracy Skills	.007	.001	4.552	***	
FC11	.305	.011	26.533	***	
FC10	.419	.016	26.394	***	
FC9	.471	.019	25.394	***	
FC8	.545	.021	25.563	***	
FC7	.351	.013	26.063	***	
FC6	.480	.019	25.932	***	
FC5	.464	.018	25.334	***	

	Estimate	S.E.	C.R.	P	Label
FC4	.451	.018	25.432	***	
FC3	.380	.014	26.258	***	
FC2	.257	.010	26.289	***	
FC1	.286	.011	27.102	***	
FC18	.551	.021	26.718	***	
FC19	.547	.021	26.445	***	
FC20	.801	.029	27.706	***	
FC21	.552	.023	24.324	***	
FC22	.921	.036	25.851	***	
FC23	.547	.021	25.496	***	
FC24	.562	.023	23.973	***	
FC25	.641	.028	23.235	***	
FC26	.782	.032	24.398	***	
FC27	.652	.025	26.436	***	
FC17	.584	.026	22.189	***	
FC16	.825	.043	19.285	***	
FC15	.769	.030	25.559	***	
FC14	.723	.027	26.299	***	
FC28	.091	.003	27.405	***	
FC29	.151	.009	16.838	***	
FC30	.144	.009	16.665	***	
FC31	.484	.017	27.728	***	
FC32	.223	.009	25.569	***	
FC33	.492	.018	26.673	***	
FC12	.484	.019	26.162	***	
FC13	.416	.016	26.232	***	

### *Findings*

The  $p$ -value between financial attitude with financial behaviour is less than  $p= 0.001$  indicating a significant relationship between the variables. The  $p$ -value between financial attitude and numeracy skills is  $p =0.001$  indicating that there is a statistical relationship between the two variables. Financial attitude with financial knowledge has a  $p =0.00$  indicating that there is a statistical relationship between the two variables. Financial behaviour with numeracy skills has a  $p$ -value of  $p=0.150$  indicating that there is no significant relationship between the two. Financial behaviour with financial knowledge has

a p-value of 0.597 indicating that there is no statistical relationship between the two variables. The  $p$ -value between financial knowledge with numeracy skills is less than  $p = 0.001$  indicating that there is a statistical relationship between the two variables.

### **3.15.3 Factors influencing the financial capability of accounting students**

*H2: Individual components of financial capability will significantly influence the financial capability of the students.*

In this study, inferential statistics were used to test the relationship between dependent variables and their associated variables. Thus, Exploratory Factor Analysis, regression analysis, and a Chi-square test were used for the inferential statistical analysis.

EFA and principal component analysis (PCA) methods were used by the researcher to analyse and present the relationships on the factors that influence respondents' financial capability. As a descriptive or exploratory technique, the aim of EFA and PCA in this study is:

1. To reduce the original variables into a lower number of orthogonal (non-correlated) synthesised factors (variables);
2. To visualise the correlations between the factors and the original variables; and
3. To visualise proximities among mathematical units.

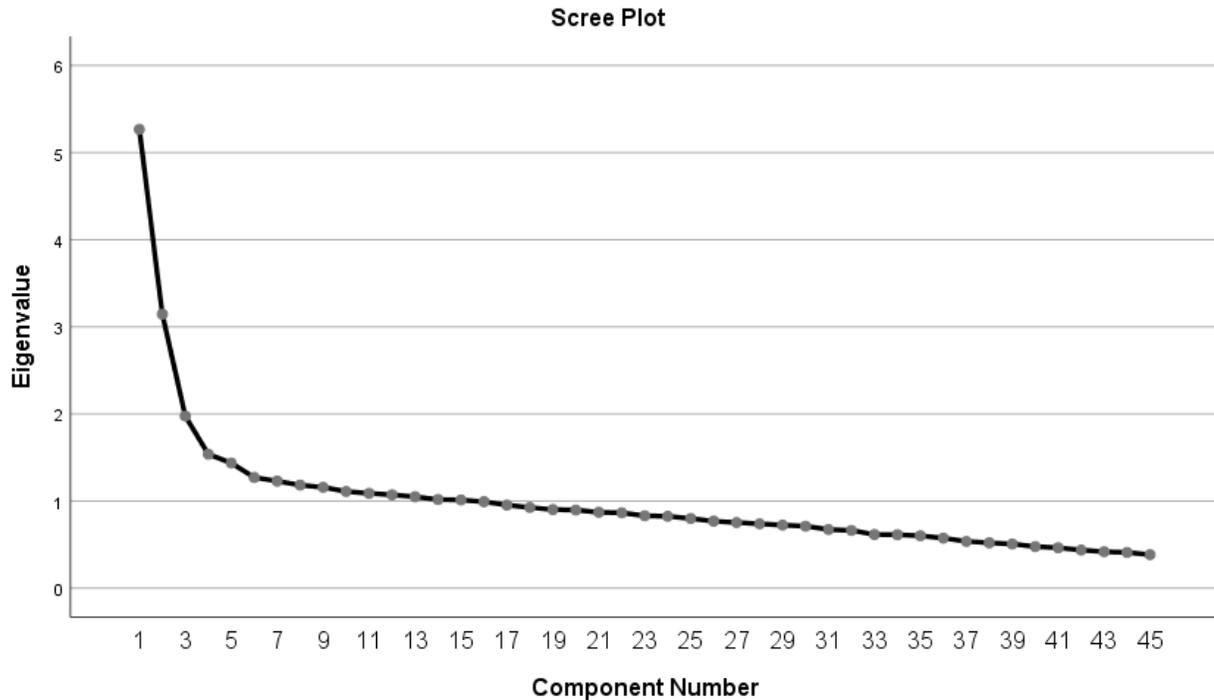
Therefore, the primary difference between EFA and PCA in this study is that EFA was used to understand the relationship among the variables by understanding the constructs that underlie variables; while PCA was merely used to derive fewer variables from providing the same information that is found in the larger set of variables.

#### *Construct Validity of Components (factors)*

To identify the component (factor) structure of the factors influencing the financial capability of accounting students, PCA was conducted on 45 items with orthogonal rotation (Varimax). Thereafter, three (3) components or factors were extracted from this study which was based on Eigenvalue (Eigenvalue of  $>1.5$ ); and before executing the EFA, items

with high internal consistency (i.e., item-to-total correlation coefficient of  $> 0.1$ ) were utilised for the analysis. Here, the Eigenvalues related to each factor represent the variance explained by each linear component, which is also displayed in terms of the percentage of variance explained. Therefore, the three-factor solution accounted for 23.08% of the explained variance of the factors influencing accounting students' financial capability, which ranges from 4.38% to 11.70%, as shown in **Table 3.28** below. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was significant at 0.829 ( $>0.50$ ), and Bartlett's assessment of sphericity was also statistically significant and grounded on ( $X^2 = 11306.513$ ;  $P = 0.000$ ). Therefore, factor analysis was appropriate for this analysis. Here, the value of 0.829 for the KMO measure of sampling adequacy for the analysis suggested that the percentage of variance in the variables was caused by underlying factors, which also indicates that patterns of correlations are relatively solid. Therefore, factor analysis in this study should yield distinct and reliable factors. This value is to be considered above the acceptable limit of 0.5, as argued by (Kaiser, 1974). According to Hutcheson and Sofroniou (1999), any value of KMO between 0.7 and 0.8 is to be regarded as good. Therefore, the KMO value and Bartlett's assessment of sphericity value in this study allowed the application of factor analysis which indicates that relationships between the items were sufficiently large for PCA.

**Figure 3. 13 Scree plot of components based on the Eigenvalue of  $>1$**



Source: SPSS

**Table 3. 28 Factors influencing financial capability using EFA**

<b>Initial Eigenvalues</b>			
Factors/Components	Total	% of Variance	Cumulative %
<b>1</b> FA8, FA6, FA9, FA7, FA5, FA2, FA13, FA4, FA12, FA10, FA3, FA1	5.267	11.704	11.704
<b>2</b> FB8, FB9, FB7, FB4, FB5, FB6, FB2, FB10, FB1	3.146	6.990	18.694
<b>3</b> NS2, NS3, NS5, NS6, FK13, FB3, FK9	1.975	4.389	23.083
Extraction Method: Principal Component Analysis.			

The dependable variables in this study are 45 items from FK0 to FB10 in the database which falls under the study's three factors. As stated earlier, the three factors had Eigenvalues of >1.5, as shown in **Table 3.28** above.

Therefore, the factors extracted in this study include: **1)** Financial Attitude – FA8, FA6, FA9, FA7, FA5, FA2, FA13, FA4, FA12, FA10, FA3, FA1; **2)** Financial Behaviour – FB8,

FB9, FB7, FB4, FB5, FB6, FB2, FB10, FB1; and 3) Numeracy Skills – NS2, NS3, NS5, NS6, FK13, FB3, FK9. See **Table 3.29** below.

**Table 3. 29 Rotated Component Matrix of the factors**

Items	Rotated Component Matrix		
	Factor 1	Factor 2	Factor 3
FA8	.610		
FA6	.606		
FA9	.587		
FA7	.583		
FA5	.566		
FA2	.564		
FA13	.557		
FA4	.556		
FA12	.549		
FA10	.546		
FA3	.542		
FA11	.533		
FA1	.403		
FK0			
FB8		.646	
FB9		.638	
FB7		.630	
FB4		.623	
FB5		.545	
FB6		.524	
FB2		.482	
FB10		.453	
FB1		.449	
FK7			
FK10			
NS2			.678
NS3			-.667
NS5			-.532
NS6			-.481
FK13			.460
FB3			-.422
FK9			.406
FK11			

FK1			
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Source: SPSS			

For the data used in this study, the value of the determinant of the correlation matrix is 0.001, which is higher than the necessary value of 0.00001. Therefore, multi-collinearity is not a problem for these data. This entails that all questions in the factors influencing financial capability relate well and none of the correlation coefficients is particularly significant. In this case, it is not necessary to consider eliminating any question.

**Table 3. 30 Reliability and correlation analysis of factors**

Factor	Cronbach's Alpha	# of Items
1 Financial Attitude	.826	13
2 Financial Behaviour	.757	9
3 Numeracy Skills	.496	4

Source: SPSS

Cronbach's alpha of 0.5 is still acceptable if the research consists of a few variables, based on a research by Dall'Oglio et al. (2015). Even Nguyen et al. (2019) said research with items or indicators that tend to have a small Cronbach alpha value was appropriate or reliable for psychological studies with a Cronbach alpha value. Numerical Skills of 0.496 is still acceptable because of the lower items involved consistent with previous studies

Therefore, the overall analysis suggested that three main factors influence accounting students' financial capability: Financial Attitude; Financial Behaviour; and Numeracy Skills. All these factors are significantly influential, with a p-value of <0.05.

#### **3.15.4 The impact of the level of study and other socio-demographic variables on financial capability**

*H3: Students' level of study and socio-demographic characteristics influence their financial capability.*

Socio-demographic variables vs financial capability among accounting students.

A bivariate regression was used to establish the relationship between respondents' socio-economic characteristics and financial capability. The primary purpose was to examine how well respondents' socio-economic characteristics could predict the level of financial capability. A scatterplot of the analysis that demonstrates the relationship between the respondents' socio-economic characteristics and financial capability suggested that it was negative and linear and did not reveal any bivariate outliers. The variable used in this model includes the respondents' campus, level of study, year of study, current qualification, racial groups, parents' education level, and pattern of savings. Herein, the correlation between the predictive variables (respondents' socio-economic characteristics) and financial capability was statistically significant, with  $r(1578) = .197$ ,  $p = .000$ . Moreover, as determined by an ANOVA test in the regression analysis, the results suggested that the regression model works better with seven predictors (respondents' socio-economic characteristics) than simply predicting using the mean, with  $F = 9.090$ ;  $p = .000$ . The p-value obtained is an indication that the regression model employed – using the seven predictors – was significantly more fitting than predictions without the seven predictors in the model. Hence, there is a statistically significant relationship between the predicting variables (respondents' socio-economic characteristics) and the outcome variable (financial capability) – thus, respondents' socio-economic characteristics were used to predict financial capability among accounting students.

The regression equation for predicting the financial capability of accounting students from the respondents' socio-economic characteristics was  $\hat{y} = 4.348 - (0.016 + 0.161 + 0.200 + 0.028 + 0.057 + 0.010 + 0.034)x$ . The  $r^2$  for this equation was .039; that is, 3.9% of the variance in financial capability was predictable from the respondents' socio-economic characteristics. This suggests that the coefficients for Level of study, Year of study, Current qualification, and Racial group were statistically significant. This is an indication that that respondents' level of study, year of study, current qualification, and racial group influence their financial capability. These factors impact on the respondents' financial capability, with a significant value of 0.000, 0.000, 0.006, and 0.011, respectively.

**Table 3. 31 Regression model of financial capability**

## Coefficients

Model	Unstandardised Coefficients		Standardised Coefficient Beta	T	Sig.	95,0% Confidence interval for B	
	B	Std. Error				Lower Bound	Upper Bound
<b>(Constant)</b>	<b>4.348</b>	<b>.096</b>		<b>45.336</b>	<b>.000</b>	<b>4.160</b>	<b>4.536</b>
<b>Campus</b>	.016	.030	.018	.018	.583	-.042	.075
<b>Level of Study</b>	-.161	.034	-.209	-4.720	.000*	-.229	-.094
<b>Year of Study</b>	.200	.038	.226	5.231	.000*	.125	.275
<b>Current Qualification</b>	.028	.010	.087	2.766	.006*	.008	.048
<b>Racial group</b>	-.057	.022	-.067	-2.543	.011*	-.101	-.013
<b>Parents' Educational level</b>	.010	.020	.012	.499	.618	-.029	0.50
<b>Pattern of savings</b>	.034	.019	.045	1.813	.070	-.003	.071

*Dependent Variable: Financial Capability*  
 \*= $p < 0.05$

Source: SPSS

### Level of study vs financial capability among accounting students.

The analysis of the respondents' financial capability according to their level of study suggested that most of the respondents from each class have high financial capability. It was found that the majority of the 180 respondents from a first-year non-accounting specialisation had high financial capability, with (n=151; 83.9%). Similarly, the analysis revealed that most of the 579 respondents from first-year mainstream had high financial capability, with (n=528; 91.2%). Finally, most of the 470 respondents in second year had high financial capability, with (n=428; 91.1%) as did the majority of the 353 third-year respondents with (n=309; 87.5%).

**Table 3. 32 Financial capability versus level of study**

### Financial Capability (FC)

<b>Level of Study</b>	<b>High FC</b>	<b>Moderate FC</b>	<b>Low FC</b>	<b>Total</b>
1 <sup>st</sup> Year non	151 (83.9%)	24 (13.3%)	5 (2.8%)	180
1 <sup>st</sup> Year main	528 (91.2%)	41 (7.1%)	10 (1.7%)	579
2 <sup>nd</sup> Year	428 (91.1%)	30 (6.4%)	12 (2.6%)	470
3 <sup>rd</sup> Year	309 (87.5%)	41 (11.6%)	3 (0.8%)	353
<b>Total</b>	<b>1416 (89.5%)</b>	<b>136 (4.8%)</b>	<b>30 (1.9%)</b>	<b>1582</b>

Source: SPSS

A bivariate regression was used to ascertain the relationship between the level of study and financial capability. The primary purpose was to examine how well the respondents' level of study could predict their level of financial capabilities. A scatterplot of the analysis that demonstrates the relationship between the respondents' level of study and financial capability suggested that it was negative and linear and did not reveal any bivariate outliers. The variable used in this model includes respondents' level of study, current qualification, and year of study. Herein, the correlation between the predictive variables (level of study, current qualification, and year of study) and financial capability was statistically significant, with  $r(1578) = .136$ ,  $p = .000$ . Moreover, as determined by an ANOVA test in the regression analysis, the results suggested that the regression model works better with three predictors (level of study, current qualification, and year of study) than simply predicting using the mean, with  $F = 9.925$ ;  $p = .000$ . The p-value here means that the regression model employed – using the three predictors – was more significantly fitting than predictions without the three predictors in the model. Hence, there is a statistically significant relationship between the predicting variables (level of study, current qualification, and year of study) and the outcome variable (financial capability) – these factors were used to predict financial capability among accounting students.

Therefore, the regression equation for predicting the financial capability of accounting students from the level of study, current qualification and year of study was  $\hat{y} = 1.034 - (0.69 + 0.013 + 0.083)x$ .

The  $r^2$  for this equation was .019; that is 1.9% of the variance in financial capability was predictable from the level of study, current qualification and year of study. The

bootstrapped 95% confidence interval for the slope to predict financial capability from the level of study, current qualification, and year of study ranges from -0.103 to -0.035; 0.005 to 0.021; and 0.044 to 0.122. This suggests that for each unit increase in the level of study, financial capability decreases by about 0.04 to 0.1 points. It also suggests that for each unit increase in current qualification, financial capability increases by about 0.01 to 0.02; and for each unit increase in year of study, financial capability increases by about 0.05 to 0.12.

**Table 3. 33 Bivariate regression model of financial capability**

<b>Coefficients</b>							
Model	Unstandardised Coefficients		Standardised Coefficient Beta	T	Sig.	95,0% Confidence interval for B	
	B	Std. Error				Lower Bound	Upper Bound
<b>(Constant)</b>	<b>1.034</b>	<b>.027</b>		<b>38.922</b>	<b>.000</b>	<b>.982</b>	<b>1.086</b>
<b>Level of Study</b>	-.069	.017	-.172	-3.996	.000	-.103	-.035
<b>Current Qualification</b>	.013	.004	.079	3.150	.002	.005	.021
<b>Year of Study</b>	.083	.020	.180	4.155	.000	.044	.122
<i>Dependent Variable: Financial Capability</i>							

Source: SPSS

### **3.16 Discussion and implications of the findings.**

This section discusses the research findings. The tested hypotheses are discussed in detail, vis-à-vis their corresponding null hypotheses as well as the findings from existing studies presented in the literature review.

### 3.16.1 Hypothesis One

The first hypothesis and its corresponding null hypothesis considered the financial capability of accounting students in universities within KwaZulu-Natal. Hence, the hypothesis for testing was:

H1: Accounting students at universities in KwaZulu-Natal are financially capable.

H1<sub>0</sub>: Accounting students at universities in KwaZulu-Natal are not financially capable.

To determine this hypothesis, the relevant collected data was analysed in line with the corresponding research objective and research question and the results were compared with the relevant literature.

**Research Objective One:** This research objective sought to establish the levels of financial capability (financial knowledge, financial attitude, financial behaviour and numeracy skills) among accounting students at universities in KwaZulu-Natal.

**Research Question One:** *What are the levels of financial capability (financial knowledge, financial attitude, financial behaviour and numeracy skills) among the accounting students at universities in KwaZulu-Natal in aggregate and component terms?*

#### Assessment of respondents' financial capability

With a mean value of 1.12 and a standard deviation of 0.382, the computation revealed that most of the respondents have high financial capability, with a capability score of 89.5%. This depicts that accounting students are generally financially capable. Although this affirms acceptance of the alternative hypothesis, it is necessary to compare this percentage score with other studies.

Lin et al. (2016) noted a poor level of financial capability (39%) among American millennials between the ages of 18 and 34 years in the FINRA financial capability study. Similarly, Mandell and Klein (2009) found that the overall financial literacy of full-time college students in America was 62.2%.

This was based on the Jumpstart survey, which assessed the capability of 1 030 full-time American college students between the ages of 18 and 23 in critical financial decision-making roles.

The study also found that 8.9% of the respondents have moderate financial capability and only 1.9% exhibited a low level of financial capability. Based on the descriptive analysis between the respondents' institutions and their financial capability, the results showed that 91.9% of the respondents from UKZN have high financial capability, and 83.7% and 90.4% of the respondents at DUT and MUT have high financial capability.

### *Respondents' financial knowledge*

The analysis indicated that the majority of the respondents (63.1%) are moderately financially knowledgeable, with only 14.5% highly financially knowledgeable and 22.4% less financially knowledgeable.

While several recent studies have found low levels of financial knowledge among college students (Jayakumar et al., 2017; Andreou and Philip, 2018; Brooks and Wheeler, 2018; Anderson et al., 2018), others have suggested that these students have good financial knowledge (Sarpong-Danquah et al., 2018). The findings of this study are similar to those of (Thapa, 2015), who found that college students in Nepal have a moderate level of basic financial knowledge at 62% mean score.

Turning to savings and investment literacy, the analysis revealed that the majority of the respondents (80.3%) have positive savings and investment literacy compared to 19.7% that do not. Although higher than the findings of existing studies, this is consistent with Amari and Jarboui (2015) and Thapa's (2015) studies which point to positive savings and investment literacy among college students.

Furthermore, the analysis revealed that most of the respondents (55.4%) are unable to manage their spending and credit as opposed to the 44.6% that are able to do so.

This finding is consistent with those of other studies which indicate negative spending and credit literacy among college students (Thapa, 2015; Lusardi and Tufano, 2015; Brown et al., 2016; Chmelíková, 2016).

Again, 54.1% of the respondents exhibited good proficiency in managing their income as compared to 45.9% who displayed poor proficiency. This finding is inconsistent with the existing literature which points to poor income management literacy among college students (Harrison et al., 2015; Manju, 2016).

With regard to money management literacy, the analysis shows that the majority of the respondents (68.3%) can manage their money as opposed to 31.7% who are unable to do so. This finding is inconsistent with the existing literature which reveals poor income management literacy among college students (Harrison et al., 2015; Manju, 2016). French and McKillop (2016) argue that poor money management skills contribute to the high rate of indebtedness among individuals.

#### *Assessment of Financial behaviour*

Based on the overall analysis conducted on all 10 items of financial behaviour, it was found that most of the respondents (81.3%) have good financial behaviour as opposed to 18.7% that exhibit poor financial behaviour.

While some studies have found that university students have good financial behaviour (Thapa, 2015), others have concluded that they do not (Allgood and Walstad, 2016; Chmelíková, 2016; Harrington et al., 2017). Chmelíková (2016) found that experience of budgeting could influence the financial behaviour of university students. Poor financial behaviours such as overspending can be addressed by teaching and encouraging budgeting behaviours among university students (Harrington et al., 2017).

Similarly, Strömbäck et al. (2017) found a positive relationship between financial behaviour and self-control, as respondents who exhibited self-control were more likely to be better prepared for unforeseen expenses via regular savings.

The study further concludes that good financial behaviour is pivotal to subsequent financial well-being in life. Angus (2018) suggests that providing financial counselling to university students experiencing financial stress can produce positive results. This was evident among financially vulnerable students in an Australian university.

#### *Respondents' financial knowledge vs financial behaviour*

The analysis of financial knowledge indicated that of the 229 respondents that are highly financially knowledgeable, most exhibit good financial behaviour, with (n=194; 84.7%). Again, the analysis indicated that most of the respondents (n=813; 81.4%) that have moderate financial knowledge have good financial behaviour. However, the results also indicated that most of the respondents with less financial knowledge have good financial behaviour. This suggests that good financial behaviour is not necessarily an indication of being financially knowledgeable.

Some studies agree that there is a positive relationship between financial knowledge and financial behaviour (Shih and Ke, 2014; Angus, 2018; Herawati et al., 2018). Shih and Ke (2014) found that general financial knowledge influences students' financial behaviours. Angus (2018) suggests that providing financial counselling to university students experiencing financial stress can produce positive results. Herawati et al. (2018) considered the effects of financial literacy, financial self-efficacy and the socio-economic status of students' parents on the financial behaviours of accounting students in Bali, Indonesia. The study found all three variables to have a positive relationship with the students' financial behaviour.

However, some studies have found otherwise (Mandell and Klein, 2009; Tang and Peter, 2015). For instance, Tang and Peter (2015) found a weak relationship between financial knowledge and financial behaviour and suggested that this could be due to parental influence and self-discipline.

#### *Assessment of Financial Attitudes*

The overall analysis conducted on all 13 items of financial attitude suggested that most of the respondents (n=1513; 95.6%) have a positive financial attitude compared to the (n=69; 4.4%) of the respondents who have a negative financial attitude.

While this finding is consistent with some of the literature (Potrich et al., 2015), several studies have asserted that college students and young adults, in general, have a negative financial attitude (Németh et al., 2015). Nga and Yeoh (2015) found that financial awareness is a key determinant of students' attitudes towards money across all dimensions. It was also found that parental influence and peer influence have positive impacts on students' attitudes towards money, while mass media negatively affects them via the promotion of materialistic values.

However, Isomidinova and Singh (2017) inquiry on the relationship between financial literacy, financial education, financial socialisation and attitude towards money among young students in Tashkent, Uzbekistan, found that there is no relationship between students' financial literacy and their financial attitudes. In contrast, Susan and Djajadikerta (2017) found a relationship between financial knowledge and the financial attitude of college students in Bandung, West Java, Indonesia. The study, which utilised an SEM, also showed that positive attitudinal traits among students are positively linked to their financial knowledge and financial behaviour. These traits include making plans to achieve preset financial goals, retention planning, achievement esteem, power-prestige, etc.

### *Assessment of Numeracy skills*

Based on the overall analysis conducted on all six items that tested numeracy skills among the students, the results suggested that most of the respondents (n=1486, (93.9%) are numerically skilled. On the other hand, (n=96; 6.1%) of the respondents are less numerically skilled.

While this finding is consistent with some literature (Gao, 2017; Jayaraman et al., 2018), several studies have asserted that college students and young adults, in general, have low levels of numeracy skills (Almenberg and Widmark, 2011; Fornero and Monticone,

2011; Lusardi and Wallace, 2013; French and McKillop, 2016). The results in this study contradict the majority of the literature reviewed and thus offer a different perspective on numeracy skills. When this study was undertaken, we anticipated that accounting students would have better numeracy skills, but we did not anticipate such a high level of numeracy.

Lusardi and Wallace (2013) highlight that being capable of making good financial decisions is dependent on quantitative literacy. This was found to be true among both high school students as well as university students in different countries such as the US, Romania, France, Switzerland, Australia, etc. Sadly, it has been found that numeracy capabilities among the general population worldwide are relatively low, with certain segments of the population such as the older generation, individuals with low academic qualifications, and women exhibiting particularly low levels (Lusardi, 2012).

Almenberg and Widmark (2011) found a low level of numeracy and financial literacy in Sweden, while Fornero and Monticone (2011) found low levels of numeracy among Italians. Using data from the 2009 National Financial Capability survey, Lusardi (2013) found a generally low level of numerical proficiency among Americans. However, Jayaraman et al. (2018) reported that Indian college students have good numeracy skills, with a percentage score of 81% and Skagerlund et al. (2018) concluded that numeracy is the strongest predictor of financial outcomes in individuals' financial decisions.

### **3.16.2 Hypothesis Two**

The second hypothesis and its corresponding null hypothesis considered the factors that influence financial capability among accounting students in universities within KwaZulu-Natal. Hence, the hypothesis for testing was:

H2: Individual components of financial capability will significantly influence the financial capability of the students.

H2<sub>0</sub>: Individual components of financial capability will not significantly influence the financial capability of the students.

To determine this hypothesis, the relevant collected data was analysed in line with the corresponding research objective and research question and the results were compared to the relevant literature.

**Research Objective Two:** This research objective sought to determine the intra-component drivers of financial capability among accounting students at universities in KwaZulu-Natal.

**Research Question Two:** What are the intra-component drivers of financial capability among accounting students at universities in KwaZulu-Natal?

*Intra-component drivers of financial capability*

The findings of this study suggest that three main factors influence accounting students' financial capability, namely, *Financial Attitude; Financial Behavior; and Numeracy Skills*. All these factors are significantly influential, with a p-value of <0.05. It has been said that financial capability can improve both financial decision making as well as access to suitable financial products and services, which are the two defining elements of financial inclusion (Mitton, 2008). This view is in consonance with the combined capability approach, which posits that both internal capacity and external conditions affect the capability of individuals (Nussbaum, 2000). Sherraden et al. (2015) explain that while internal capabilities comprise of an individual's skills set, knowledge and ability, external conditions consist of a plethora of opportunities available to such individual in the form of access to products, institutions and services within society.

Zottel (2013) asserts that financial capability encompasses the financial knowledge, financial attitudes and skills as well as the financial behaviours of consumers with regard to managing their resources, and understanding, selecting and making use of financial services that meet their needs.

Robeyns (2016) states that the financial capability of an individual is evident in the alternative combinations of functionings that such an individual can achieve. Hence, financially capable individuals are not only financially literate, but also have access to

financial products and services that contribute to their financial functioning, well-being and life chances (Sherraden et al., 2015).

While some studies have shown that not all components of financial capability necessarily drive financial capability (Sherraden and Grinstein-Weiss, 2015; Xiao and O'Neill, 2016; Xiao and Porto, 2017; Drever et al., 2015), others have reported otherwise (Tang et al., 2015). The findings of this study are consistent with other studies that suggest a relationship between financial attitude, financial behaviour, numeracy skills and financial capability (Allgood and Walstad, 2016; Strömbäck et al., 2017).

Strömbäck et al. (2017) assert that financial behaviour, self-control, subjective financial well-being, critical reasoning, and optimism as well as socio-demographic characteristics influence financial capability. A positive relationship was found between financial behaviour and self-control, as respondents who exhibited self-control were more likely to be better prepared for unforeseen expenses via regular savings.

While some studies have established a link between financial knowledge and financial capability (Brown et al., 2014; Drever et al., 2015; Xiao and O'Neill, 2016; Xiao and Porto, 2017), this is not consistent with this study. For instance, Xiao and O'Neill (2016) investigation of the impacts of financial education on the financial capability of Americans, found that consumers who are financially knowledgeable exhibited better financial capability.

The current study's finding that there is no link between financial knowledge and financial capability in financial decision is supported by recent studies (Tang et al., 2015; Friedline and West, 2016). Tang et al. (2015) argues that financial knowledge is not sufficient to guarantee positive financial behaviour among young adults and that parental influence as well as self-discipline, are key determinants of positive financial behaviours.

### 3.16.3 Hypothesis Three

The third hypothesis and its corresponding null hypothesis considered how the level of study and other socio-demographic variables influence financial capability levels among accounting students at universities in KwaZulu-Natal. The hypothesis for testing was:

H3: Students' level of study and socio-demographic variables do influence their financial capability.

H3<sub>0</sub>: Students' level of study and socio-demographic variables do not influence their financial capability.

To determine this hypothesis, the relevant collected data was analysed in line with the corresponding research objective and research question and the results were compared with the relevant literature.

**Research Objective Three:** This research objective sought to ascertain whether the level of study and other socio-demographic variables have an influence on financial capability levels among accounting students at universities in KwaZulu-Natal.

**Research Question Three:** How do the level of study and other socio-demographic factors influence financial capability?

#### Level of study vs financial capability

The analysis suggested that most of the respondents from each class have high financial capability. The majority of the 180 respondents from first-year non-accounting specialisation have high financial capability, with (n=151; 83.9%). Similarly, most of the 579 respondents from first-year mainstream have high financial capability, with (n=528; 91.2%). Moreover, the majority of the 470 respondents in their second year of study have high financial capability, with (n=428; 91.1%) as do most of the 353 respondents in their third year of study, with (n=309; 87.5%).

Hence, there is a statistically significant relationship between the predicting variables (level of study, current qualification, and year of study) and the outcome variable (financial capability) – the level of study, current qualification, and year of study were used to predict financial capability among accounting students.

These findings are inconsistent with related studies on the financial literacy of students (Ansong and Gyensare, 2012; Botha, 2013; Chmelíková, 2016; Motsepe, 2016). However, they are consistent with the findings of other studies (Shahrabani, 2013; Fatoki, 2014b; Albeerdly and Gharlegghi, 2015b). For instance, Shahrabani (2013) observed that students studying economics and business-related degrees in Israel were much more financially inclined than their peers in other disciplines. Similarly, Albeerdly and Gharlegghi (2015b) found a strong relationship between the level of education and financial literacy of college students in Malaysia. It was observed that students' level of education is a key factor in their ability to make better financial decisions.

### *Socio-economic factors vs financial capability*

#### *Gender*

Based on the results from the regression model, *Gender* is not statistically significant in determining accounting students' financial capability. This finding is consistent with some existing studies (Thapa, 2015). However, other studies have found that there is a positive relationship between gender and financial capabilities (De Clercq and Venter, 2009; Oseifuah and Gyekye, 2014; Agnew and Harrison, 2015).

Whilst several studies have concluded that male students are more financially capable than female students (Oseifuah and Gyekye, 2014; Montford and Goldsmith, 2016; Bucher-Koenen et al., 2017; Chen and Garand, 2018), a few have asserted that female students are better equipped to make financial decisions than male students (Shaari et al., 2013; Fatoki, 2014b). Fatoki's (2014b) study at two South African universities concluded that female students enrolled in a non-business degree had better financial capability than their male counterparts.

### *Age*

Based on the results from the regression model, *Age* is not statistically significant in determining accounting students' financial capability. Except for studies like Özdemir et al. (2015), most studies have found a positive relationship between college students' age and their financial capability (Volpe et al., 1996; Chen and Volpe, 1998; de Bassa Scheresberg, 2013; Xiao et al., 2015).

Volpe et al. (1996) found that the financial decision-making proficiency of American college students in the area of investment literacy is consistent with age progression. This finding was affirmed by another study on the general financial literacy of university students in America (Chen and Volpe, 1998) that found evidence that older students tend to make better financial decisions than younger students. A similar study conducted among South African students studying to become Chartered Accountants, found that there is a positive relationship between age and financial decisions (De Clercq and Venter (2009).

More recently, Xiao et al. (2015) found a positive relationship between age and financial capability. The study measured financial capability using five variables: objective financial literacy, subjective financial literacy, desirable financial behaviour, perceived financial capability and a financial capability index based on data from the US 2012 National Financial Capability Study. The youngest age group (18-24) exhibited the lowest score across all measures of financial capability.

The findings of this study are consistent with those of Özdemir et al. (2015) who reported that age did not influence financial capability among Turkish students at Anadolu University.

### *Education*

Based on the results from the regression model, *Education* is statistically significant in determining accounting students' financial capability. For the purposes of this study, education comprised of students' level of study, year of study and current qualification.

This finding is consistent with some studies (Shahrabani, 2013; Fatoki, 2014b; Albeerdy and Gharlegghi, 2015b), but contradicts those of others that did not establish a relationship between education and financial capabilities (Ansong and Gyensare, 2012; Botha, 2013; Chmelíková, 2016; Motsepe, 2016). These studies were discussed above (see the level of study vs financial capability).

### *Income*

Based on the results from the regression model, *Income* is not statistically significant in determining accounting students' financial capability. This finding is inconsistent with some studies (De Clercq and Venter, 2009; Ansong and Gyensare, 2012; de Bassa Scheresberg, 2013; Thapa, 2015).

De Clercq and Venter (2009) found that there is a positive relationship between income and the financial literacy of South African students studying to become Chartered Accountants. Ansong and Gyensare (2012) concluded that work experience influences students' personal financial decision making, as postgraduate students who earn an income independent of family sources exhibited better financial capability than those that depended on their parents. de Bassa Scheresberg (2013) found that financial capability is particularly low among young adults who are less educated and earn a lower income. This was based on a national study on the financial capability of more than 4 500 individuals. Thapa (2015) asserts that students' income is a key factor in determining their financial capability.

### *Race*

Based on the results from the regression model, *Race* is statistically significant in determining accounting students' financial capability. This finding is consistent with existing studies which have reported that race influences financial capabilities (De Clercq and Venter, 2009; Shahrabani, 2013; Agnew and Harrison, 2015; Serido et al., 2016).

De Clercq and Venter (2009) found that there is a positive relationship between race and the financial literacy of South African students studying to become Chartered Accountants.

Shahrabani (2013) found that Jewish students had better financial literacy than Arabian students. While the former had an overall mean score of 50%, the latter only scored 39%. The study further concludes that nationality influences financial decision-making capabilities. Agnew and Harrison (2015) found that New Zealand students are more financially literate than native English students. Serido et al. (2016) found that race and ethnicity are key determinants of financial capability. This was evident as students with Asian ancestry exhibited more responsible financial behaviours than white students in America. However, some studies did not find a significant relationship between race and financial capabilities (Volpe et al., 1996; Chen and Volpe, 1998; Botha, 2013).

#### *Parents' income*

Based on the results from the regression model, *Parents' income* is not statistically significant in determining accounting students' financial capability. This finding is consistent with some studies (Mandell and Klein, 2007; Jorgensen and Savla, 2010). However, other studies have found that there is a positive relationship between parents' income and financial capability (Botha, 2013; Herawati et al., 2018; Zhu, 2018a). Botha (2013) found that parental income was a key determinant of the financial capability of South African students. Soria et al. (2014) concluded that undergraduate students from low-income backgrounds are susceptible to poor financial decisions. Herawati et al. (2018) suggested that financial literacy, financial self-efficacy and parents' economic status impact the financial behaviours of accounting students in Bali, Indonesia. Zhu (2018a) discovered that the financial capability of economically disadvantaged adolescents is largely influenced by their poor economic circumstances as well as parental financial socialisation.

#### *Parents' education*

Based on the results from the regression model, *Parents' education* is not statistically significant in determining accounting students' financial capability. This finding is consistent with some studies (Albeerdly and Gharleghi, 2015b).

However, other studies have found that there is a positive relationship between parents' education and financial capability (Ansong and Gyensare, 2012; Angulo-Ruiz and Pergelova, 2015; Németh et al., 2015; Tang and Peter, 2015).

While Ansong and Gyensare (2012) found that the mother's level of education can impact the financial capability of university students in Ghana, Tang and Peter (2015) suggest that the financial capability of young Americans is enhanced via the interaction of individual financial knowledge, financial experience and parental education. Hence, there is a positive relationship between parents' financial education and individual financial capability. Van Campenhout (2015) found that parental financial teaching goes a long way in the development of financial capability, and advocates for a re-evaluation of the parental role in financial socialisation within society.

### **3.17 Chapter Summary**

This chapter considered the financial capability of accounting students at universities in KwaZulu-Natal. It commenced by conceptualising this phenomenon based on several perspectives and definitions. The theoretical framework for this chapter was built via a discussion on the capability approach, including its origins, evolution and studies in the context of financial capability and decision making. This was followed by a review of relevant empirical literature across the broad dimensions of financial knowledge, attitude, behaviour, numeracy, and socio-demographic factors. The importance of financial capability was emphasised and discussed thematically. This was followed by an analysis and interpretation of the data collected for this study. The chapter concluded with a discussion on the results and the implications of the findings.

The following chapter focuses on the financial socialisation of university students.

## **CHAPTER FOUR**

### **FINANCIAL SOCIALISATION**

#### **4.1 Introduction**

This chapter considers the financial socialisation of university students and the factors that influence the financial socialisation of accounting students. The local and international literature on financial socialisation is reviewed, especially within the context of university students and the data collected for this study is presented, analysed and discussed vis-à-vis the relevant literature.

Financial socialisation as a subset of human socialisation, has received increased attention within the academic sphere (Gudmunson et al., 2016) as one of the ways of improving general financial literacy. Studies such as that by Lusardi (2012) have shown that most young people have limited knowledge and are ill prepared for key financial decisions in life. While some studies have identified the causes of this deficiency, others have noted the drastic repercussions of poor financial literacy on financial decision making.

Some studies have concluded that financial socialisation is a key cause of financial illiteracy among students, the youth and young adults. Different scholars have conceptualised financial socialisation in different ways (Kim and Chatterjee, 2013; Copur, 2015; Gudmunson et al., 2016). It has been described as the process whereby young adults acquire and develop their financial values, attitudes and behaviours which foster their financial independence and help to facilitate successful transition into adulthood (Kim and Chatterjee, 2013). From a behavioural finance perspective, Copur (2015) conceptualised financial socialisation as an individual's ability to acquire the necessary technical, commercial, behavioural and emotional information that contributes to his/her financial knowledge, skills and proficiencies. The author stressed that financial socialisation often emanates from the social environment.

Gudmunson et al. (2016) highlight that social processes play a crucial role in childhood development and that they also shape children into producers, consumers and agents of financial socialisation in adulthood. These processes, otherwise known as socialisation agents, comprise of family, peers, and the media, etc. have a significant impact on an individual's financial mentality over their life time (Albeedy and Gharleggi, 2015a). While some studies have noted that socialisation agents have a significant impact on individual financial decisions and financial well-being (Drever et al., 2015; Serido and Deenanath, 2016; Brügger et al., 2017), others have claimed that family financial socialisation plays the most crucial role (Tang et al., 2015; Van Campenhout, 2015; Sundarasan et al., 2016; Jorgensen et al., 2017; Curran et al., 2018).

## **4.2 Theoretical framework**

### **4.2.1 Social learning theory**

The social learning theory posits that people learn largely by observing, imitating, and modelling. It demonstrates that people learn not only by being rewarded or punished (behaviourism), but they can also learn from watching somebody else being rewarded or punished (observational learning) (Bandura, 2001). This theory was popularised by Albert Bandura in 1961 after the famous Bobo doll experiments.

Other traditional theories of behavioural learning argue that individual behavioural dispositions are a function of response consequences that are experienced directly. This is distinct from the social learning theory, which asserts that human behaviours are neither driven by inner forces nor by uncontrollable environmental factors. This school of thought believes that human behavioural tendencies can be best understood via continuous interactive reciprocity between individual behaviours and controlling conditions within the human environment (Bandura, 1969).

The core tenet of the social learning theory is a paradigm within the learning and social behaviour theory, which asserts that new behaviours can be developed via observation and imitation of others, often referred to as model reference points.

Whilst this theory affirms that learning is a cognitive process that occurs within a social context, it further posits that learning primarily occurs via observation and direct instruction (direct reinforcement) as well as observation of rewards and punishments (vicarious reinforcement). Vicarious reinforcement assumes that when a behaviour is constantly rewarded, it will often persist. Likewise, when a behaviour is constantly punished, it will most likely desist (Bandura, 1969).

#### **4.2.2 Observation vs Direct experience**

Whilst the Stimulus-Response theory is built on the idea that learning mainly occurs via direct experience, Bandura expands this notion that has been the crux of traditional learning by introducing observation as a possibility for learning behaviors. He stressed that this form of learning involves modelling behaviours, which he defines as the symbolic representation of actual outcomes which are cognitively mediated by the models to predict future consequences of actions that have as much impact as actual consequences in direct experience learning.

#### **4.2.4 The Social Learning process via Observation**

To ensure that learning occurs, due attention must be devoted to the modelled behaviours. Attention in this regard relates to constant awareness of what is being learned as well as the reinforcement mechanisms that facilitate successful learning outcomes.

#### **4.2.5 Social Cognitive Theory**

The Social Cognitive Theory is an extension of the Social Learning Theory, which suggests that portions of an individual's knowledge acquisition can be directly related to observing others within contexts of experiences, social interaction and media influences. In his second book, Bandura (1986) expanded and renamed his original theory and work on the social learning theory. He called this new theory the *Social Cognitive Theory*. The name change was necessary to emphasise the major role that cognition plays in encoding and performing behaviours.

The key tenets of this theory were further clarified via a schematisation of triadic reciprocal causation; the schema shows how reproduction of observed behaviour is influenced by the interaction of the following three determinants (Bandura, 1986; Bandura, 2009):

- **Personal influence:** This relates to whether an individual has low or high self-efficacy toward the behaviour. It involves getting the learner to believe in his or her personal ability to correctly complete a behaviour (Bandura, 1986; Bandura, 2009).
- **Behavioural influence:** This considers the response an individual receives after they perform a behaviour. It relates to providing opportunities for the learner to experience successful learning as a result of performing the behaviour accurately (Bandura, 1986; Bandura, 2009).
- **Environmental influence:** This evaluates every aspect of the learning environment or setting that influences the individual's ability to successfully complete a behaviour. It relates to making environmental conditions conducive for improved self-efficacy by providing the necessary support and materials (Bandura, 1986; Bandura, 2009).

The Social Cognitive Theory proposes an agency-like perspective, which posits that, instead of just being shaped by environments or inner forces, individuals are self-developing, self-regulating, self-reflecting and proactive in nature. More particularly, the human agency operates within three modes (Bandura, 2001; Bandura, 2009):

- **Individual Agency:** This considers a person's influence on the environment (Bandura, 2001; Bandura, 2009).
- **Proxy Agency:** Considers another person's efforts in securing the individual's interests (Bandura, 2001; Bandura, 2009).
- **Collective Agency:** Relates to a group of people working together to achieve common benefits (Bandura, 2001; Bandura, 2009).

Moreover, individual agency has the following four core components (Bandura, 2001; Bandura, 2009):

- **Intentionality:** This relates to an individual's active decision to engage in certain activities.
- **Forethought:** Relates to an individual's ability to anticipate the outcome of certain actions.
- **Self-reactiveness:** Relates to an individual's ability to construct and regulate appropriate behaviours.

### 4.3 Human capability

Evolving over time, human beings have advanced cognitive capabilities that enhance their ability to acquire knowledge and skills via both direct and symbolic forms. Studies have highlighted the four primary capabilities that are considered as the crucial foundations of social cognitive theory. These include symbolising capability, self-regulation capability, self-reflective capability, and vicarious capability (Bandura, 1977; Bandura, 1986; Bandura, 2001).

- **Symbolising Capability:** This social cognitive perspective posits that individuals are not only affected by direct experience but are also influenced by indirect events. Hence, instead of learning via a trial-and-error process, individuals are capable of perceiving events symbolically conveyed in messages, devising possible solutions, and assessing the anticipated outcomes (Bandura, 1977; Bandura, 1986; Bandura, 2001).
- **Self-regulation Capability:** This social cognitive ideal posits that individuals can regulate their own intentions and behaviours by themselves. Thus, self-regulation relies on both negative and positive feedback systems, in which discrepancy reduction and discrepancy production are involved. This further implies that individuals proactively motivate and guide their actions by setting challenging goals and then making an effort to fulfil them. In doing so, they gain skills, resources, self-efficacy and beyond (Bandura, 1977; Bandura, 1986; Bandura, 2001).

- **Self-reflective Capability:** This social cognitive perspective holds that individuals can evaluate their thoughts and actions by themselves, which is identified as another distinct feature of being human. By verifying the adequacy and soundness of their thoughts through judicious social or logical approaches, individuals can generate new ideas, adjust their thoughts, and take action accordingly (Bandura, 1977; Bandura, 1986; Bandura, 2001).
- **Vicarious Capability:** This social cognitive principle asserts that the critical ability of an individual can be ascribed to the adoption of skills and knowledge from information communicated through a wide array of mediums. By vicariously observing others' actions and the consequences, individuals can gain insight into their activities. Vicarious capability is of significant value to an individual's cognitive development in modern times because more of the information he/she encounters emanates from the mass media than from trial-and-error processes (Bandura, 1977; Bandura, 1986; Bandura, 2001).

#### 4.4 Financial Socialisation

Socialisation is a developmental process whereby the ideals and norms of a society are transferred, impacted and internalised. This process involves both teaching and learning and serves as a means by which social and cultural continuity are achieved. Grusec and Hastings (2014) refer to socialisation as a process whereby naïve individuals such as babies, children, young adults and workers are taught the skills, behavioural patterns, and motivations required for competent functioning in the culture in which the child is growing up. Crucial among these social skills are the vital social understanding and emotional maturity required for interaction, engagement and functioning with other individuals within the society or a larger group. Socialisation is also a process whereby training, norms and cultures are transferred from one generation to another for diverse reasons. These are often life skills that an older generation deems as a way of life to help the succeeding generation to successfully deal with diverse life issues (Zhu, 2018b).

From the perspective of finance and money management, financial socialisation has been defined by several authors and scholars (Danes, 1994; Bowen, 2002; Gudmunson and Danes, 2011). Danes (1994) suggested that “financial socialisation is much more inclusive than learning to effectively function in the marketplace. It is the process of acquiring and developing values, attitudes, standards, norms, knowledge, and behaviours that contribute to the financial viability and individual well-being.”

Financial socialisation is a learned process of acquiring knowledge about money and money management and developing skills in various financial practices such as banking, budgeting, saving, insurance, and credit card use (Bowen, 2002; Gudmunson and Danes, 2011). Several studies have noted that the financial socialisation process occurs through diverse influences within society (Shim et al., 2015; Van Campenhout, 2015; Sundarasan et al., 2016). These have been referred to as agents of socialisation (Isomidinova and Singh, 2017) and include family, peers, and the media, etc.

The family is credited with being a critical source of socialisation, especially among children and young adults (Beutler and Dickson, 2008; Solheim et al., 2011; Zhu, 2018b). Several studies have found that children learn the most via observing their parents engaging in financial practices, and taking instructions from their parents (Drever et al., 2015; Tang and Peter, 2015; Van Campenhout, 2015; Serido et al., 2016; Sundarasan et al., 2016; Jorgensen et al., 2017; Curran et al., 2018). Likewise, numerous studies have highlighted that peers and friends play a significant role in the financial socialisation of individuals through direct experience and observation (Kretschmer and Pike, 2010; Montandon, 2014; Mitchell et al., 2015; Jamal et al., 2015b; Isomidinova and Singh, 2017). Furthermore, some studies have found that various media platforms such as the internet, television and books, also play a crucial role in the financial socialisation of individuals (Forbes, 2013; Hira et al., 2013; Albeerdy and Gharlegghi, 2015a; Xiang et al., 2016; Ergün, 2018).

## **4.5 Assessment of financial socialisation**

### **4.5.1 General assessment of financial socialisation**

Shim et al. (2010) found that young adults in their first year of college are largely influenced by financial socialisation via their parents, work and the inclusion of financial education in their high school curriculum during their formative years. The cross-sectional study which surveyed 2 098 first-year students in an American university, utilised a conceptual model which sought to establish the link between the students' financial socialisation during adolescence and their current financial learning as young adults in college.

In a survey conducted among 420 college students, Jorgensen and Savla (2010) discovered that perceived parental influence plays a crucial role in the general financial literacy of most students. The study further noted that although perceived parental influence does not necessarily affect students' financial knowledge, it has direct and indirect relationships with students' financial attitude and financial behaviours, respectively.

However, Albeerdy and Gharleghi (2015a) reported that financial socialisation is not a key factor in making good financial decisions. The study surveyed 105 Malaysian college students using Pearson correlation and multiple regression analysis. Sundarassen et al. (2016) found that, amongst other things, financial socialisation agents play a significant role in postgraduate students and young adults' money management and financial decision proficiencies. The study which utilised an SEM analysis, was conducted among 300 students in private and public universities in Malaysia.

Friedline et al. (2017) found that the community in which a child/young adult is nurtured could significantly impact his/her financial socialisation and subsequent credit card behaviours. This was discovered in a longitudinal survey of 748 students and young adults. The study found that students and young adults from communities characterised by a high unemployment rate, average total debt, average credit score and few bank branch offices are vulnerable to acquisition and accumulation of credit card debt.

Ergün (2018) study among 409 university students in Germany, Poland, Estonia, Russia, Italy, Romania, The Netherlands and Turkey found an overall average literacy rate of 72.2%. The study observed that students that are male, business majors, doctoral students, live in rented apartments, have rich parents and often seek financial advice from their friends were more financially literate than their peers.

#### **4.5.2 Categorical assessment of financial socialisation**

Wagner and Walstad (2015) assert that engaging in social learning opportunities is an effective path to improving long-term financial behaviours and capability. This is consistent with previous studies which showed that people do not only obtain financial knowledge via financial educational networks but also from interactions with socialisation agents (Mitchell et al., 2009). These agents include family members, peers, school friends and social media (Mitchell et al., 2009; Isomidinova and Singh, 2017).

#### **4.5.3 Family influence**

Most financial socialisation occurs within the family circle (Danes and Yang, 2014). The family financial model enables the development of positive financial behaviours during the formative years. Furthermore, more often than not, the necessary motivation for future changes in financial behaviours emanates from relationships and interactions within family circles, from early childhood socialisation to making diverse financial decisions over a life time. Lee and Mortimer (2009) found that financial independence among adolescents and young adults in the transition towards adulthood is influenced by direct communication and a positive self-concept. Serido et al. (2010) note that factors such as the parent-child relationship as well as parental expectations of children psychologically influence financial coping behaviours among students and young adults. Gudmunson and Danes (2011) stress the importance of family financial socialisation as a plausible alternative to improving financial illiteracy. The authors conducted a critical meta-analysis of 100 interdisciplinary articles that consider the effects of such socialisation.

Whilst many students agree that their financial socialisation was significantly influenced by observing how family responsibilities were shared among family members (Solheim et

al., 2011; Serido and Deenanath, 2016), Solheim et al. (2011) found that inculcating financial responsibility in children for their own desires via mandatory and target-savings approaches, influence their financial decision making in later years. This was affirmed by Drever et al. (2015) who posited that being financially responsible at an early age builds the necessary foundation for financial well-being later in life.

Mimura et al. (2015) are of the view that parents, as well as taking personal finance courses at university play a significant role in the financial socialisation of students and young adults regardless of their socio-demographic characteristics. This was revealed in a survey among 1 249 first-generation students at a large provincial university in America. The study group consisted off a diverse cohort of native Americans, as well as immigrants or children of immigrants studying towards undergraduate degrees. Agnew and Harrison (2015) asserted that gender bias exists within family financial socialisation.

Their study found that male children are more likely to be financially socialised by their parents at an early age than female children. The authors observed that this could be a plausible explanation for the existing narrative of male individuals being more financially literate and capable than females.

Serido and Deenanath (2016) investigation of parents' role in influencing their children's progress towards being financially independent and capable adults, recommends financial parenting practices that encourage the development of financial knowledge and skills amongst children at an early age. Sundarasan et al. (2016) found that parental norms and other financial socialisation agents such as financial educators, friends, and the media are key influencers of money management habits and wealth optimisation among students and young adults. Likewise, Curran et al. (2018) survey of 504 university students in the southwest region of the US found that young adults' financial capability and well-being is determined by financial socialisation by their romantic partners, their self-behaviours and parental socialisation.

In contrast, Ergün (2018) study on financial literacy amongst university students in eight European universities found that in recent years, technological and environmental

influences have been more influential in university students' financial socialisation than parental influence.

#### **4.5.4 Friends' influence**

Kretschmer and Pike (2010) surveyed 102 adolescent siblings in order to understand the impact of peer socialisation on aspirations, affiliations and financial success. The study concluded that friendship experiences have more influence on young adults than their relationships with siblings. The study also found that being socialised by the same parent does not result in siblings having shared aspirations, affiliations and financial success and that these outcomes are largely influenced by friendships and peer groups.

Montandon (2014) explored the role played by siblings and friends in influencing Generation Y's risk behaviours. The study concluded that peer pressure plays a significant role in the critical choices made by this age group. Although it was found that a parental protective style has the greatest impact on children, (Mitchell et al., 2015) assert that peers and friends are more influential in young adults' choices when there are disagreements between parents and their adolescent children. This is due to the direct and indirect interactions between young adults and their peers as well as social media's influence on young adult behaviours (Mitchell et al., 2015; Isomidinova and Singh, 2017).

Alwi et al. (2015) found that self-determination was the weakest influence on the savings behaviours of Malaysian millennials enrolled in a business school. The study concluded that parental and peer socialisation agents contribute to the millennials' financial decision-making capacity. This finding was affirmed by Jamal et al. (2015b) who found that friends influenced the savings habits and money management practices of students in higher education institutions in the Kota Kinabalu region of Malaysia.

Jamal et al. (2015b) found that peer influence, the individual's own financial literacy and family socialisation are statistically significant in determining savings behaviours among students. Wagner (2015) applied the social learning theory within the context of students' financial literacy and financial behaviours and concluded that students who had better opportunities to observe and hold discussions with their parents, peers and friends were more likely to save and budget than those that did not. Similarly, a study conducted among

110 university students in Uzbekistan found that financial socialisation agents such as family, financial educators, friends, peer groups and the media were crucial in improving financial decisions and money management practices among students (Isomidinova and Singh, 2017).

#### **4.5.5 Media Influence**

In general, studies have found that social media is a powerful tool in shaping consumer buying decisions (Berger Paul et al., 2012; Forbes, 2013; Hira et al., 2013; Xiang et al., 2016). A few studies (Albeerdy and Gharleghi, 2015a; Mimura et al., 2015; Ergün, 2018) have also found that it plays a vital role in the financial socialisation of students.

Berger Paul et al. (2012) assert that social media plays a fundamental role in individual purchase decisions as well as consumer values. Forbes (2013) found that majority of consumers under the age of 22 used social media such as Twitter for purchase recommendations and buying decisions. This could be related to the modern trend of wanting instant results. However, it could also explain impulsive buying decisions via social media platforms (Xiang et al., 2016).

Hira et al. (2013) stress that the media plays a crucial role in financial socialisation by affecting purchase decisions. Furthermore, in choosing financial investment products, many consumers are influenced by the amount of information available and accessible on media outlets such as the internet. Albeerdy and Gharleghi (2015a) highlighted that peer groups, family, schools and the media are students' main financial socialisation agents. Furthermore, at some point in time, all these agents socialise individuals. They added that students and young adults' financial literacy can be significantly impacted by social media.

Mimura et al. (2015) found that social media was statistically insignificant as a determinant of financial knowledge and practices among 1 249 American college students. In contrast, Sundarasan et al. (2016) SEM analysis revealed that individuals that access information via the media and their parents are likely to exhibit better financial practices.

They add that the media is an alternative essential socialisation mechanism for youngsters and teenagers. Likewise, Ergün (2018) asserts that in recent years, technological and environmental influences are more influential in university students' financial socialisation than parental influence.

#### **4.6 Financial socialisation and Socio-economic factors**

##### **4.6.1 Gender**

Ruspini (2012) found that girls undergo a higher level of family socialisation to become more financially disciplined than boys. This was found in a survey among Milanese families in Italy. Sereetrakul et al. (2013) survey of 455 young adults found no disparities between the saving behaviours of the genders; however, it was noted that young male adults have better spending behaviors than their female counterparts. Agnew and Harrison (2015) assert that gender bias exists within family financial socialisation. Their study found that male children are more likely to be financially socialised by their parents at an early age than female children. The authors believe that this could be a plausible explanation for the existing narrative of male individuals being more financially literate and capable than female individuals.

##### **4.6.2 Age**

In a study conducted among 250 undergraduate and postgraduate students in Ghana, Ansong and Gyensare (2012) found a positive relationship between the students' age and their financial understanding and literacy. The authors assert that it is safe to say that peoples' level of financial literacy increases as they grow older. It was found that the effects of financial socialisation linger even after college and the adolescent years. Cho et al. (2012) examined the effects of financial socialisation among low and moderate-income individuals between the ages of 24 and 26 and concluded that financial socialisation has significant effects during both the formative years and adulthood

##### **4.6.3 Education**

Whilst Isomidinova and Singh (2017) found that there is no significant relationship between attitudes towards money and financial literacy, their study found a positive relationship between financial education and the financial literacy of 110 students in Uzbekistan.

The findings of a survey conducted among students in eight European countries (Estonia, Germany, Italy, The Netherlands, Poland, Romania, Russian and Turkey), suggest that majority of the business students and students who had taken at least a finance course, exhibited better knowledge of personal finance than those that had not enrolled in such courses (Ergün, 2018). Students studying at Polish universities exhibited the highest level of financial knowledge. This could imply that there is a positive link between educational institutions and students' financial socialisation.

However, other studies conducted in more than one university did not indicate a link between the educational institution and students' financial literacy (Cude et al., 2006). Although Cude et al. (2006) study among students at Louisiana State University and the University of Georgia noted that parental factors play a crucial role in children's financial socialisation, no relationship was established between students' financial socialisation and their place of study.

#### **4.6.4 Income**

Oseifuah et al. (2018) study among 342 students in Ghana found that savings from their monthly income are crucial to students' finance and that having an allowance increased their propensity to save. Other studies have found that giving children a monthly allowance can be an effective tool for engagement between parents and children in the financial socialisation process (Furnham and Milner, 2017; Agnew, 2018). Whilst Agnew (2018) suggests that a monthly allowance can provide parents with opportunities to engage their children in financial socialisation, gender disparities have been found between parental beliefs with regard to such allowances (Furnham and Milner, 2017). A study conducted in the United Kingdom concluded that fathers have more liberal views that encourage children's independence in managing their monthly income as they deem fit. Mothers were found to be more rule-based and critical of how children manage their monthly income. The study further found that individuals from lower-income households are socialised to be more frugal in managing their monthly income than those from high-income backgrounds.

#### **4.6.5 Parental factors**

Serido et al. (2010) survey of 2 098 first-year college students, found that the quality of parental communication on financial topics is the most influential predictor of a child's financial, psychological and personal well-being. The study further suggested that parents' expectations have a significant indirect effect on children's financial coping behaviours and personal well-being. Similarly, Agnew (2018) suggests that apart from the inclusion of finance-related subjects in students' curricula, open discussions about financial decisions and finance related topics at home is one of the most potent ways of stimulating financial socialisation among children. Rosenberg (2017) asserts that parental advice, as well as the source of parental advice, are statistically significant in children's financial socialisation and subsequent decisions. This was based on an analysis of a national study conducted among 8 984 teenagers born between 1980 and 1984. The study further found that male parents have more knowledge, education and experience in financial matters than female parents.

Furnham and Milner (2017) observed that, to a large extent, parental beliefs determine how children are financially and economically socialised. The authors investigated the drivers of monthly allowances among 512 participants comprising of both parents and children. The study found that parental income was significant, as parents with low income are critical of their children's spending and money management habits. Furthermore, gender was found to be significant as male parents were more liberal with regard to how children manage their allowances, while female parents placed more emphasis on being conscious and spending based on how children had been financially socialised at home. Lux et al. (2018) found that family financial socialisation plays a key role in intergenerational financial transfers and home ownership in the Czech Republic.

#### **4.6.6 Place of residence**

Ansong and Gyensare (2012) found that the father's education, access to media, work location, level of study, and source of education did not determine the financial literacy of working students in Ghana; instead, the study found a statistically significant relationship

between the mother's education and the students' financial literacy. Friedline et al. (2017) revealed that the community where a child/young adult is nurtured could significantly impact his/her financial socialisation and subsequent credit card behaviours. Their longitudinal survey among 748 students and young adults concluded that those from communities characterised by a high unemployment rate, average total debt, average credit score and few bank branch offices are vulnerable to acquisition and accumulation of credit card debt.

#### **4.7 Factors influencing the financial socialisation of University students**

Several studies have considered financial socialisation from the perspective of university students (Shim et al., 2010; Ansong and Gyensare, 2012; Mimura et al., 2015; Tang and Peter, 2015; Shim et al., 2015; Van Campenhout, 2015; Serido and Deenanath, 2016; Sundarasan et al., 2016; Isomidinova and Singh, 2017; Yew et al., 2017).

Sohn et al. (2012) found that financial independence among students and young adults in South Korea is often driven by their perception of money and pecuniary rewards for effort. Shim et al. (2015) concur and state that perceived parental socialisation had the strongest association with a positive change in financial attitude, financial control, and financial efficacy. In addition, both formal and informal financial education played a significant role (Lusardi and Tufano, 2015; Nga and Yeoh, 2015). Wagner (2015) established a positive relationship between social learning opportunities and saving and budgeting. The study found that financial behaviours are improved by an increase in the frequency of engagement in social learning opportunities. Students who had more opportunities to discuss and observe their parents and peers were more likely to save and budget.

Mimura et al. (2015) employed cross-sectional data to examine the association among financial information sources, financial knowledge and the financial practices of young adults, many of whom were first-generation college students, ethnic minorities, and immigrants or children of immigrants. The survey of 1 249 undergraduate students at a large regional comprehensive university found that personal financial information obtained from parents had a positive relationship with levels of financial knowledge and financial

practices. It was also found that information obtained from other family members and college courses was positively associated with better financial practices. These findings suggest that parents and personal finance courses at university level serve as positive inputs for financial socialisation among students and young adults regardless of their demographic backgrounds. Based on their finding that parental guidance and life experiences are significant predictors of financial literacy, Yew et al. (2017) advocate that experiential learning could improve financial literacy among Malaysian college students.

## **4.8 Relationship among socialisation, capabilities and professional skills**

### **4.8.1 Financial socialisation versus financial capabilities**

Several studies have considered financial socialisation from the perspective of financial capabilities (Shim et al., 2009; Jorgensen and Savla, 2010; Serido and Deenanath, 2016; Hudson et al., 2017; Jorgensen et al., 2017).

Shim et al. (2009) study among 781 students in a large state university in the southwestern US found that financial domains such self-actualisation values, financial education at home and formal financial education at school, coupled with parental normative expectations and students' perceived behavioural control, were crucial to the students' overall financial well-being and financial capability. Jorgensen and Savla (2010) concluded that perceived parental influence had a direct and moderately significant influence on financial attitude, but did not affect financial knowledge. However, it had an indirect and moderately significant influence on financial behaviour, mediated through financial attitude.

Serido and Deenanath (2016) assert that financial parenting habits and practices are crucial to improving financial knowledge and skills amongst children and developing self-reliant and financially capable individuals. Based on data from the Adult Financial Capability Study conducted in a large university in south east America, Jorgensen et al. (2017) concluded that close attachment to parents and financial communication within the family is a precursor to financial capability among emerging adults. Hudson et al. (2017) employed the 2015 FINRA survey data and found that three main influences on financial

socialisation are parental influence, life experiences and formal influences. The study further also found that students that were financially socialised were more financially knowledgeable and capable than those that were not.

#### **4.9 Importance of Financial socialisation**

As a research construct within behavioural economics and behavioural finance, financial socialisation is distinct from other related constructs such as financial literacy and financial capability. This is because financial socialisation considers human financial decisions vis-à-vis human development over time. The theoretical framework of financial socialisation proposes that intra-human and inter-human diversities emanate from variations in human relationships and social interactions that are formed over time (Gudmunson et al., 2016). Furthermore, financial socialisation research is constantly evolving based on environmental changes that are consistent with human development and behavioural dynamics. Much of the recent research in the field of financial decision making aims to provide clarity and in-depth understanding of the human behavioural interactions and dynamics applicable within financial contexts (Gudmunson et al., 2016). While several studies have assessed the relative influence of financial socialisation agents such as parents, peers, the media and school; they have also stressed the underlying notion and contributory role of social interactions and human relationships in the financial socialisation process (Alwi et al., 2015; Sundarassen et al., 2016).

The role of “financial parenting” and parental monitoring of children’s financial development and choices is emphasised. Several studies such as Serido and Deenanath (2016) have highlighted the particular role of the family and parents in the foundational development of positive financial behaviour and financial well-being later in life. Shim et al. (2015) explain the mediating effects of parents, peers and other social agents on individuals’ financial mentality, whilst Tang et al. (2015) note that parental influence is pivotal in enhancing positive financial behaviours among young adults.

Financial socialisation also serves as an objective prerequisite for determining individuals' financial behaviour and financial well-being (Drever et al., 2015; Gudmunson et al., 2016; Brügggen et al., 2017). This is because financial behaviour and financial well-being are distal ends of financial socialisation. Although financial literacy as a general measure of financial behaviour and financial wellbeing has proven to be effective as a broad measurement of financial decisions; the shared contextual dependence of financial well-being and financial behaviour makes financial socialisation a better model to determine individuals' financial behaviour and well-being (Gudmunson et al., 2016).

Financial socialisation via strong parenting practices creates opportunities for purposive learning experiences via both direct and indirect learning (Jorgensen and Savla, 2010; Sundarasan et al., 2016). The direct learning experience entails consciously involving children in financial discussions, and inculcating financial responsibility and discipline among children via managing their allowances. On the other hand, the indirect learning experience involves the creation of a financial culture within the family. The financial culture could be indirect exposure of children to how finances and money management issues are handled in the home, and the idea of a family budget. Purposive learning experiences are necessary to develop financial responsibility, self-reliance and financial capability among young adults in later years (Serido and Deenanath, 2016).

Financial socialisation plays a role in individual financial practices and short-term financial management behaviours (Drever et al., 2015; Henager and Cude, 2016). Positively financially socialised individuals exhibit short-term financial practices that foster and enhance their financial well-being. These include keeping a budget to track and control spending behaviours, as well as having a nest egg for contingent and unplanned expenses. Being financially socialised can also reduce an individual's vulnerability to poor financial decisions (Sherraden and Grinstein-Weiss, 2015; Kagotho et al., 2017). By constantly seeking accurate, relevant and comprehensive information concerning diverse financial products and services, financially socialised individuals are less prone to poor

financial decisions such as scams, swindles and long-term detrimental financial commitments. Financial socialisation agents such as the media and peers often play an impactful role via interaction and provision of timely information for critical financial decisions (Sundarassen et al., 2016).

Financial socialisation is a key determinant of the financial and economic lifestyle of individuals (Gudmunson and Danes, 2011; Kim and Chatterjee, 2013; Payne et al., 2014), as is evident in materialistic taste, priorities and preferences. How an individual has been financially socialised and is being socialised financially, is evident in their financial choices via their materialistic values, preference, priorities, taste and choices. While individuals who have been or are being conservatively financially socialised tend to make conservative choices regardless of their financial buoyancy, those that have been or are being luxuriously financially socialised often tend to want to “keep up with the Joneses” regardless of their financial buoyancy (Kim and Chatterjee, 2013; Payne et al., 2014).

Financial socialisation improves long-term financial well-being via financial planning, savings and asset accumulation (Lusardi and Mitchell, 2014; Drever et al., 2015). This stems from the development of financial awareness and consciousness among individuals via financial socialisation agents over a life time. Shim et al. (2015) stressed the importance and long-term benefits of inculcating a savings culture in children and young adults.

Exposure to positive financial practices from other socialisation agents such as friends, the media and educational institutions plays a significant role in individuals’ financial planning and long-term financial well-being.

From a national perspective, financial socialisation encourages savings and investment behaviours that help to enhance economic growth and prosperity (Hira et al., 2013). Several studies have established positive links between savings and investment in financial assets, and economic growth (Jagadeesh, 2015; Hussein et al., 2017). Socialisation of individuals via diverse socialisation agents plays a crucial role in

encouraging young, future citizens to cultivate the habit of savings and to invest in the economy, facilitating economic prosperity and stability (Hussein et al., 2017).

#### 4.10 Data Analysis and interpretation

##### 4.10.1 Financial Socialisation versus Demographic data

**Table 4. 1 Financial Socialisation vs Respondents' Campus**

Financial Socialisation	Respondents' Campus			Total
	UKZN	DUT	MUT	
Influenced by financial socialisation	346 (50.4%)	203 (29.5%)	138 (20.1%)	<b>687</b>
Not influenced by financial socialisation	518 (57.9%)	201 (22.5%)	176 (19.7%)	<b>895</b>
<b>Total</b>	<b>864 (54.6%)</b>	<b>404 (25.5%)</b>	<b>314 (19.8%)</b>	<b>1582</b>

Source: SPSS

**Table 4. 2 Financial Socialisation vs Respondents' Place of Residence**

Financial Socialisation	Respondents' Place of Residence				Total
	Parents / Guardian	University Res	Private Res	Other	
Influenced by financial socialisation	27 (40.5%)	300 (43.7%)	103 (15.0%)	6 (0.9%)	<b>687</b>
Not influenced by financial socialisation	309 (34.5%)	443 (49.5%)	125 (14.0%)	18 (2.0%)	<b>895</b>
<b>Total</b>	<b>587 (37.1%)</b>	<b>743 (47.0%)</b>	<b>228 (14.4%)</b>	<b>24 (1.5%)</b>	<b>1582</b>

Source: SPSS

**Table 4. 3 Financial Socialisation vs Respondents' Parents' Educational Level**

Financial Socialisation	Respondents' Parents' Educational Level				Total
	Not Completed High Sch.	Completed High Sch.	University Graduate	Don't Know	
Influenced by financial socialisation	126 (18.3%)	241 (35.1%)	248 (36.1%)	72 (10.5%)	<b>687</b>
Not influenced by financial socialisation	222 (24.8%)	307 (34.3%)	291 (32.5%)	75 (8.4%)	<b>895</b>
<b>Total</b>	<b>348 (22.0%)</b>	<b>548 (34.6%)</b>	<b>539 (34.1%)</b>	<b>147 (9.3%)</b>	<b>1582</b>

Source: SPSS

#### 4.11 Assessment of financial socialisation

In quantifying the respondents' financial socialisation, the researcher transformed the seven Likert scale questions on "Financial Socialisation" into a binary variable. This assisted in easily quantifying the means scores into two categories of "Not influential" = (1 Strongly disagree + 2 Disagree) and "Influential" = (3 Agree + 4 Strongly Agree). It enabled the researcher to determine which of these items influences or does not influence respondents' decisions in terms of financial socialisation.

The analysis of each of the items suggested that most of the respondents reported that questions 3, 4, 5, and 7 are influential regarding financial socialisation, with 55.1%, 72.6%, 78.6, and 80.9%, respectively. On the other hand, the descriptive analysis of questions 1, 2, and 6 revealed that the majority of the respondents reported that they are not influenced by them in terms of financial socialisation, with 65.1%, 55.1%, and 58.6%. See **Table 4.4** below for a detailed representation of the results.

**Table 4. 4 Respondents' financial Socialisation**

<b>Financial Socialisation items</b>	<b>Influential</b>	<b>Not Influential</b>	<b>M</b>	<b>SD</b>
Question 1	552 (34.9%)	1030 (65.1%)	1.34	.476
Question 2	711 (44.9%)	871 (55.1%)	1.44	.497
Question 3	871 (55.1%)	711 (44.9%)	1.55	.497
Question 4	1149 (72.6%)	433 (27.4%)	1.72	.446
Question 5	1244 (78.6%)	338 (21.4%)	1.78	.410
Question 6	655 (41.4%)	927 (58.6%)	1.58	.492

Question 7	1280 (80.9%)	302 (19.1%)	1.19	.393
<b>Total scores</b>	<b>687 (43.4%)</b>	<b>895 (56.6%)</b>	<b>1.56</b>	<b>.495</b>

Source: SPSS

In addition, with a mean value of 10.63 and a standard deviation of 1.537, the overall analysis conducted on all seven items of financial socialisation revealed that most of the respondents (n=895; 56.6%) are not influenced by financial socialisation as opposed to the (n=687; 43.4%) of the respondents who are influenced by financial socialisation.

Since the financial socialisation items were categorised into Family Influence, Friends' Influence, and Social Media Influence, the analysis of financial socialisation was decomposed with the aim of determining which of these factors are impactful or influential regarding financial socialisation. On family influence, the analysis suggested that most of the respondents (n=1268; 80.2%) reported that family influence is influential in terms of financial socialisation as opposed to the (n=314; 19.8%) of the respondents who argued that family influence is not instrumental with reference to financial socialisation.

Regarding influence from friends, most of the respondents (n=825; 52.1%) argued that influence from friends is not dominant in their financial socialisation compared to the (n=757; 47.9%) of the respondents who considered influence from friends to be influential concerning financial socialisation.

Similarly, the analysis of social media influence revealed that most of the respondents (n=1149; 72.6%) argued that they are not influenced by social media in terms of financial socialisation compared to the (n=433; 27.4%) of the respondents who argued that social media is an influential factor with reference to financial socialisation.

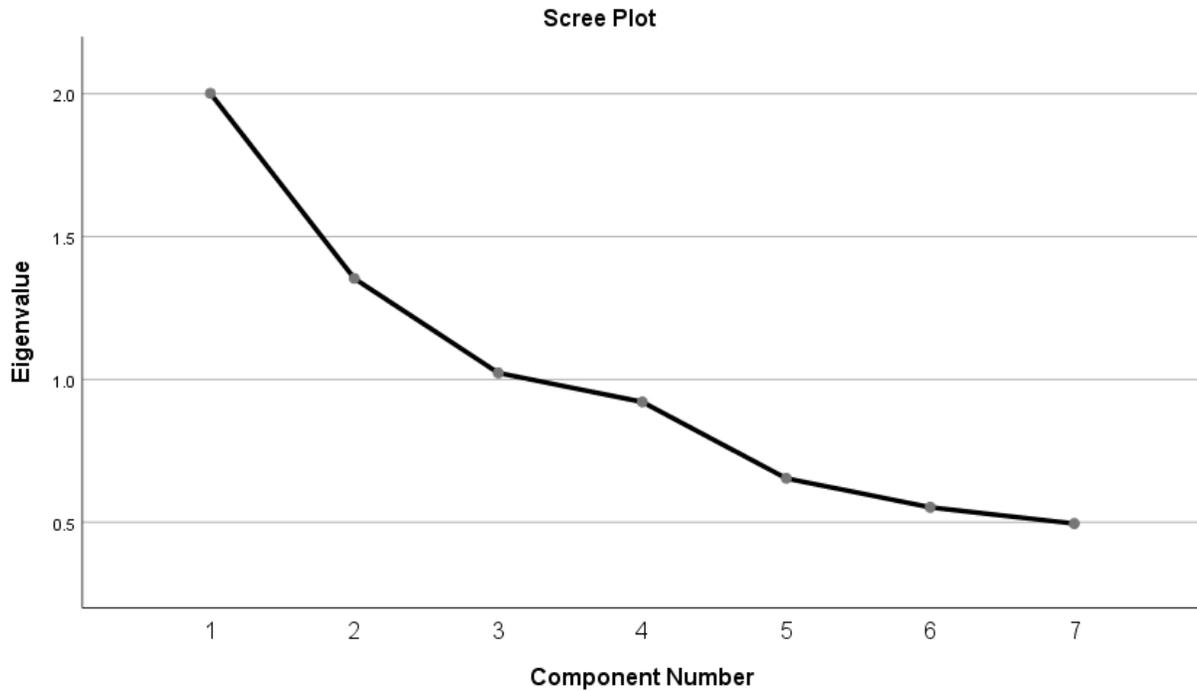
Based on the results of the analysis, it is clear that the majority (n=895; 56.6%) of the students' financial decisions are not affected by their financial socialisation.

#### **4.12 Factors influencing the financial socialisation of Accounting students**

To identify the component structure of the factors influencing the financial socialisation of accounting students, Principle Component Analysis (PCA) was conducted on seven items

with an Oblimin rotation (Direct Oblimin). Thereafter, three (3) components or factors were extracted from this study which was based on Eigenvalue (Eigenvalue of >1); and before executing the Exploratory Factor Analysis (EFA), items with high internal consistency (i.e., item-to-total correlation coefficient of > 0.1) were utilised for the analysis. Here, the Eigenvalues related to each factor represent the variance explained by each linear component, which is also displayed regarding the percentage of variance explained. The three-factor solution accounted for 62.54% of the explained variance of the factors influencing the financial socialisation of accounting students, which ranges from 14.61% to 28.60%, as shown in **Table 4.5** below. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was significant at 0.622 (>0.50), and Bartlett's assessment of sphericity was also statistically significant and grounded on ( $X^2 = 1238.278$ ;  $P = 0.000$ ). The KMO value and Bartlett's assessment of sphericity value in this study allowed the application of factor analysis which indicates that relationships between the items were statistically sufficient for PCA.

**Figure 4. 1 Scree plot of components based on the Eigenvalue of >1**



Source: SPSS

The Scree Plot shows the fraction of total variance in the data, as represented by each Principal Component (PC) as a simple line segment plot. The PCs are ordered, and are further assigned a number label, by decreasing order of contribution to the total variance.

**Table 4. 5 Factors influencing financial capability**

<b>Initial Eigenvalues</b>			
Factors/Components	Total	% of Variance	Cumulative %
<b>1</b> FS5, FS4, FS6	2.002	28.595	28.595
<b>2</b> FS1, FS2	1.353	19.336	47.931
<b>3</b> FS7	1.023	14.608	62.539
Extraction Method: Principal Component Analysis.			

Source: SPSS

The dependable variables in this study are seven items from FS1 to FS7 in the database which fall under the three factors of this study. As indicated earlier, the three factors in this study had Eigenvalues of >1 (see **Table 4.5** above).

Therefore, the factors extracted in this study include **1)** External Factors – FS5, FS4, FS6; **2)** Internal Factors (Dependent) – FS1, FS2; and **3)** Internal Factors (Non-Independent) – FS7. See **Table 4.6** below.

**Table 4. 6 Rotated Component Matrix of financial socialisation by using EFA**

Items	Rotated Component Matrix		
	Factor 1	Factor 2	Factor 3
FS5	.815		
FS4	.771		
FS6	.721		
FS1		.843	
FS2		.809	
FS3			
FS7			.975
Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.			

Source: SPSS

For the data used in this study, the value of the determinant of the correlation matrix is 0.456, which is greater than the necessary value of 0.00001. Therefore, multi-collinearity is not a problem for these data. This means that all questions in the factors influencing financial socialisation relate well and none of the correlation coefficients is particularly large. In this case, it is not necessary to consider eliminating any question.

**Table 4. 7 Reliability and correlation analysis of the factors**

Factor	Cronbach's Alpha	# of Items
1 External Factors	.667	3
2 Internal Factors (Dependent)	.605	2
3 Internal Factors (Non-Independent)	.	1

Source: SPSS

Based on the overall analysis, it is revealed that three main factors influence accounting students' financial socialisation. These include External Factors; Internal Factors (Dependent); and Internal Factors (Non-Independent). All these factors are significantly influential, with a p-value of <0.05. They are summarised in the table above with their corresponding Cronbach Alphas.

#### **4.12.1 Socio-economic factors versus financial socialisation**

##### ***Correlation***

A p-value set at  $<0.05$  suggests strong statistical significance between the respondents' institutions and the financial socialisation of accounting students as determined by the Pearson Chi-square test and Likelihood ratio test ( $X^2 = 11.704$ ,  $p = 0.003$ ; Likelihood Ratio = 11.663,  $p = 0.003$ ). This means that students' campuses influence their financial socialisation. Moreover, the analysis suggested strong statistical significance between the respondents' place of residence and financial socialisation, with ( $X^2 = 10.109$ ,  $p = 0.018$ ; Likelihood Ratio = 10.311,  $p = 0.016$ ). This infers that the respondents' place of residence has an impact on their financial socialisation.

Furthermore, as determined by the Pearson Chi-Square test and Likelihood ratio test, there is a strong relationship between the respondents' parents' educational level and the financial socialisation of accounting students, with ( $X^2 = 10.762$ ,  $p = 0.013$ ; Likelihood Ratio = 10.866,  $p = 0.012$ ). This relationship was further determined by one-way ANOVA that revealed strong statistical significance between the respondents' parents' educational level and the financial socialisation of accounting students, with  $F = 4.221$  and  $p = 0.015$ . This suggests that the respondents' parents' educational level also impacted on their financial socialisation.

##### ***Regression***

Bivariate regression analysis was used to establish the relationship between the respondents' socio-economic characteristics and financial socialisation. This assisted in determining how well the respondents' socio-economic characteristics could predict their financial socialisation. A scatterplot of the analysis that demonstrates the relationship between the respondents' socio-economic characteristics and financial socialisation suggested that it was negative and linear and did not reveal any bivariate outliers. The variables used in this model include the respondents' campus, parents' educational level, and respondents' place of residence. The correlation between the predictive variables (respondents' socio-economic characteristics) and financial socialisation was statistically significant, with  $r(1578) = .107$ ,  $p = .000$ .

Moreover, as determined by an ANOVA test in the regression analysis, the results suggested that the regression model works better with three predictors (respondents' socio-economic characteristics) than simply predicting using the mean, with  $F = 6.097$ ;  $p = .000$ . The p-value obtained is an indication that the regression model used – using the three predictors – was significantly more fitting than predictions without the three predictors in the model. Hence, there is a statistically significant relationship between the predicting variables (respondents' socio-economic characteristics) and the outcome variable (financial socialisation). The respondents' socio-economic characteristics were thus used to predict the financial socialisation of the accounting students.

Therefore, the regression equation for predicting the financial socialisation of accounting students from the respondents' socio-economic characteristics was  $\hat{y} = 10.913 - (0.152 + 0.100 + 0.089) x$ . The  $r^2$  for this equation was .011; that is 1.1% of the variance in financial socialisation was predictable from the respondents' socio-economic characteristics. The analysis suggests that the coefficients for the respondents' institution and their parents' level of education were statistically significant. This is an indication that the respondents' institution and their parents' level of education influence their financial socialisation. In other words, the respondents' institution and their parents' level of education impact on the respondents' financial socialisation, with a significant value of 0.002, and 0.038; respectively.

**Table 4. 8 Regression model of financial socialisation**

**Coefficients**

Model	Unstandardised Coefficients		Standardised Coefficient Beta	T	Sig.	95,0% Confidence interval for B	
	B	Std. Error				Lower Bound	Upper Bound
(Constant)	10.913	.173		63.043	.000	10.573	11.252
Campus	-.152	.049	-.078	-3.114	.002*	-.247	-.056
Place of residence	.100	.053	.048	1.886	.059*	-.004	.204
Parents' educational lev.	-.089	.043	-.053	-2.081	.038	-.172	-.005

*Dependent Variable: Financial socialization \*= $p < 0.05$*

#### **4.13 The impact of financial socialisation on financial capabilities**

With a p-value set at  $<0.05$ , the analysis suggested that there is no statistical significance between the financial socialisation of accounting students and their financial capability as determined by the Pearson Chi-square test and Likelihood ratio test ( $X^2 = 1.781$ ,  $p = 0.410$ ; Likelihood Ratio = 1.693,  $p = 0.429$ ). This means that financial socialisation does not impact on the financial capability of accounting students.

#### **4.14 The impact of financial socialisation on professional skills**

The correlation analysis suggested that there is strong statistical significance between the financial socialisation of accounting students and their professional skills as determined by the Pearson Chi-square test and Likelihood ratio test ( $X^2 = 41.728$ ,  $p = 0.000$ ; Likelihood Ratio = 39.846,  $p = 0.000$ ). This relationship was further determined by one-way ANOVA that revealed strong statistical significance between financial socialisation and the professional skills of accounting students, with  $F = 8.138$  and  $p = 0.004$ . This suggests that financial socialisation impacts on professional skills.

#### **4.15 Discussion and Implications of the Research Findings**

This section discusses the research findings. The results of the tested hypotheses are discussed in detail, vis-à-vis the corresponding null hypotheses as well as findings from studies examined in the literature review.

##### **Hypothesis Four**

The fourth hypothesis, and its corresponding null hypothesis considered the financial capability of accounting students in universities within KwaZulu-Natal. The hypothesis for testing was:

H4: Socio-demographic factors influence the financial capability, financial socialisation and professional skills of accounting students.

H4<sub>0</sub>: Socio-demographic factors do not influence the financial capability, financial socialisation and professional skills of accounting students.

To determine this hypothesis, the relevant collected data was analysed in line with the corresponding research objective and research question. The results were further discussed in accordance with the relevant literature.

**Research Objective Four:** This research objective sought to determine the factors that influence the financial capability, financial socialisation and professional skills of accounting students.

**Research Question Four:** What factors influence the financial capability, financial socialisation and professional skills of accounting students?

#### **4.16 Assessment of financial socialisation**

##### **4.16.1 Empirical assessment of financial socialisation**

With a mean value of 10.63 and a standard deviation of 1.537, the overall analysis conducted on all seven items of financial socialisation revealed that most of the respondents (n=895; 56.6%) are not influenced by financial socialisation as opposed to (n=687; 43.4%) of the respondents who are influenced by financial socialisation. Studies such as Shim et al. (2010) found that young adults in their first year in college are largely influenced by financial socialisation via their parents, work and high school studies during their formative years. Similarly, Jorgensen and Savla (2010) found that perceived parental influence plays a significant role in the general financial literacy of most students in an American university.

Sundarasan et al. (2016) concluded that, amongst other things, financial socialisation agents play a significant role in the money management and financial decision proficiencies of postgraduate students and young adults.

Whilst these findings are not consistent with those of this study, recent research such as (Albeerdy and Gharleghi, 2015a) study on 105 Malaysian college students revealed that financial socialisation is not influential in financial decision making. This is in line with the findings of the current study.

Further analysis on each of the items suggested that most of the respondents reported that questions 3, 4, 5, and 7 are influential with regard to financial socialisation, with 55.1%, 72.6%, 78.6, and 80.9%, respectively. On the other hand, the descriptive analysis on questions 1, 2, and 6 revealed that the majority of the respondents reported that they are not influential in terms of financial socialisation, with 65.1%, 55.1%, and 58.6%, respectively.

Question 3 stated: “I have family responsibilities that affect my financial decisions”. This question sought to understand how family responsibilities influence the students’ financial socialisation. Based on the responses from the students, it is evident that there is a relationship between financial responsibilities and financial socialisation. It can also be assumed that the students’ financial socialisation stems from sharing financial responsibilities within the family. Many students also agreed that their financial socialisation was significantly influenced by observing how family responsibilities are shared among family members. Solheim et al. (2011) and Serido et al. (2016) found that inculcating financial responsibility in children for their own desires through mandatory and target-savings approaches influences their financial decision making in later years. These findings are affirmed by Drever et al. (2015) who posited that being financially responsible at an early age builds the necessary foundation for financial well-being later in life.

Question 4 stated: “Social media groups easily influence my financial choices.” This question sought to understand the influence of social media platforms such as Facebook, Instagram, Snapchat, Twitter WhatsApp, etc. on the students’ financial socialisation. Based on their responses, it was apparent that these platforms play an influential role in how students are financially socialised. This could take the form of materialistic values, a crowd mentality, peer pressure and a sense of belonging with societal trends.

Whilst studies have found that social media is a powerful tool in shaping consumer buying decisions (Shim et al., 2009; Berger Paul et al., 2012; Forbes, 2013; Xiang et al., 2016); some scholars (Shim et al., 2009; Albeerdy and Gharleghi, 2015a) have asserted that it plays a vital role in the financial socialisation of students. Albeerdy and Gharleghi (2015a) highlighted that the main agents for student's socialisation are peer groups, family, schools and the media. They further asserted that students and young adults' financial literacy could be significantly impacted by social media.

Question 5 stated: "My friends and I always buy the same things." This question sought to understand the impact of peer relationships and peer pressure on students' financial socialisation. Based on the student's responses, it is evident that peer relationships and peer pressure tend to influence the mentality and financial socialisation of students (Alwi et al., 2015; Sundarassen et al., 2016). A plausible reason could be that students and young adults desire a sense of belonging ("trying to fit in"). Several studies have suggested that peer influence significantly impacts the financial socialisation of students and young adults (Kretschmer and Pike, 2010; Jamal et al., 2015b; Alwi et al., 2015; Sundarassen et al., 2016). While Kretschmer and Pike (2010) note that friendship experiences have more influence on young adults than their relationships with siblings, Alwi et al. (2015) found self-determination to be the weakest influence on savings behaviours among Malaysian millennials. Alwi et al. (2015) highlight that parental and peer socialisation agents contribute to millennials' financial decision-making capacity. This finding was affirmed by Jamal et al. (2015b) who found that the savings habits and money management practices of students in higher education institutions in the Kota Kinabalu region of Malaysia were influenced by their friends.

Question 7 stated: "I am allowed by my parents to make my own financial decisions individually". This question sought to understand the role of financial independence in the financial socialisation of the students. Based on the responses, it is clear that the majority of the students are allowed to make financial decisions, which plays a pivotal role in their financial socialisation process.

Some studies (Serido and Deenanath, 2016; Kagotho et al., 2017) have found that early exposure to financial decision making contributes to financial independence later in life. The responses to this question corroborate those to Question 3 that were discussed above, which highlight how the students' financial responsibility influences their financial socialisation. Several studies (Lee and Mortimer, 2009; Sohn et al., 2012; Serido and Deenanath, 2016) have found that financial independence among adolescents and young adults in the transition to adulthood is influenced by direct communication and a positive self-concept. Likewise, Sohn et al. (2012) noted that financial independence among students and young adults in South Korea is often driven by their perception of money and pecuniary rewards for effort. Serido and Deenanath (2016) considered financial self-reliance and the role of parents in influencing their children's progress towards becoming financially independent and capable adults. They recommended financial parenting practices that encourage the development of financial knowledge and skills amongst children from an early age.

#### **4.16.2 Categorical assessment of financial socialisation**

##### ***Family influence***

The findings from the analysis revealed that most of the respondents (n=1268; 80.2%) reported that their family is influential in their financial socialisation as opposed to the (n=314; 19.8%) of the respondents who argued that this is not the case. Several studies have found that parental influence plays a vital role in the financial socialisation of students and young adults (Serido et al., 2010; Gudmunson and Danes, 2011; Sundarasan et al., 2016; Curran et al., 2018). Serido et al. (2010) note that factors such as the parent-child relationship as well as parental expectations of children psychologically influence financial coping behaviours among students and young adults. Gudmunson and Danes (2011) stress the importance of family financial socialisation as a plausible alternative to improving financial illiteracy. The study involved a critical meta-analysis of 100 interdisciplinary articles on the role of socialisation in advancing financial literacy.

Sundarasan et al. (2016) found that parental norms and other financial socialisation agents such as financial educators, friends, and the media are key influencers of money management habits and wealth optimisation among students and young adults. Likewise, Curran et al. (2018) found that young adults' financial capability and well-being are determined by financial socialisation by their romantic partners, their self-behaviours and parental socialisation. This study surveyed 504 university students in the southwest region of the US. In contrast, Ergün (2018) investigation of financial literacy amongst university students in eight European universities found that in recent years, technological and environmental influences are more influential in university students' financial socialisation than parental influence.

### ***Friends' influence***

Most of the respondents (n=825; 52.1%) argued that friends do not influence their financial socialisation compared to the (n=757; 47.9%) of the respondents who considered friends to be influential in their financial socialisation. It should be noted that there is a very small difference between the two sides of the argument. Several studies have found that friends and peer influence play a pivotal role in the financial socialisation of individuals (Jamal et al., 2015b; Wagner, 2015; Isomidinova and Singh, 2017). In a study conducted in Malaysia, Jamal et al. (2015b) found that peer influence, self-financial literacy and family socialisation are statistically significant in the determination of savings behaviours among students in higher education institutions. Wagner (2015) applied the social learning theory and concluded that students who had more opportunities to discuss and observe their parents, peers and friends were more likely to save and budget than those that did not. Similarly, a study conducted among 110 university students in Uzbekistan found that financial socialisation agents such as family, financial educators, friends, peer groups and the media were crucial in improving students' financial decisions and money management practices (Isomidinova and Singh, 2017).

## ***Social Media Influence***

The findings from the analysis showed that most of the respondents (n=1149; 72.6%) argued that they are not influenced by social media in terms of financial socialisation compared to the (n=433; 27.4%) of the respondents who felt that social media does influence their financial socialisation. This finding is consistent with Mimura et al. (2015) study that found that social media was statistically insignificant as a determinant of financial knowledge and practices among 1 249 American college students. However, the results of Sundarassen et al. (2016) SEM indicate that individuals who use media for internet, programming and distribution and are influenced by parental norms are more likely to exhibit superior financial practices. Likewise, Ergün (2018) asserts that in recent years, technological and environmental influences are more influential in university students' financial socialisation than parental influence.

### **4.17 Factors influencing the financial socialisation of accounting students**

The overall analysis revealed that three main factors influence accounting students' financial socialisation, namely, External Factors; Internal Factors (Dependent); and Internal Factors (Non-Independent).

#### ***Educational institutions vs financial socialisation***

With a p-value set at <0.05, there is strong statistical significance between respondents' institutions and the financial socialisation of accounting students as determined by the Pearson Chi-square test and Likelihood ratio test ( $X^2 = 11.704$ ,  $p = 0.003$ ; Likelihood Ratio = 11.663,  $p = 0.003$ ). This infers that students' campuses influence their financial socialisation. This finding is consistent with those of studies such as (Isomidinova and Singh, 2017; Ergün, 2018).

Ergün (2018) study across eight European universities, found that although the overall average literacy of the university students was 72.2%, students studying at Polish universities exhibited the highest level of financial knowledge.

This could imply that there is a positive link between educational institutions and the financial socialisation of students. However, other studies conducted in more than one university did not indicate a link between students' educational institution and their financial literacy. Although Cude et al. (2006) study conducted among American students in two universities noted that parental factors play a crucial role in children's financial socialisation, no relationship was established between students' financial socialisation and their place of study.

#### *Place of residence and financial socialisation*

The analysis also suggested that there is strong statistical significance between the respondents' place of residence and financial socialisation, with ( $X^2 = 10.109$ ,  $p = 0.018$ ; Likelihood Ratio = 10.311,  $p = 0.016$ ). This infers that place of residence has an impact on students' financial socialisation. This finding is consistent with (Ergün, 2018; Walczak and Pieńkowska-Kamieniecka, 2018). Ergün (2018) observed that university students who live in rented apartments exhibited better personal financial literacy than their peers who either lived on campus or with their parents. Walczak and Pieńkowska-Kamieniecka (2018) survey of 34 000 Polish citizens over the age of 16 concluded that, apart from socio-demographic factors such as gender, age, social and professional status and education, place of residence was also a determinant of financial decision making.

#### *Parental educational level and financial socialisation*

The findings point to a strong relationship between the respondents' parents' educational level and the financial socialisation of accounting students, with ( $X^2 = 10.762$ ,  $p = 0.013$ ; Likelihood Ratio = 10.866,  $p = 0.012$ ). This relationship was further determined by one-way ANOVA and strong statistical significance was established between the respondents' parents' educational level and the financial socialisation of accounting students, with  $F = 4.221$  and  $p = 0.015$ . This suggests that students' parents' educational level also impacts on their financial socialisation. This finding is consistent with those of other studies (Shim et al., 2010; Ansong and Gyensare, 2012; Van Campenhout, 2015; Shim et al., 2015; Serido and Deenanath, 2016; Sundarasan et al., 2016).

Whilst Ansong and Gyensare (2012) found that the father's education, access to media, work location, level of study, and source of education do not determine the financial literacy of working students in Ghana, the study found a statistically significant relationship between the mother's education and students' financial literacy.

### *Predictors of financial socialisation*

The regression equation for predicting the financial socialisation of accounting students from the respondents' socio-economic characteristics was  $\hat{y} = 10.913 - (0.152 + 0.100 + 0.089) x$ . The  $r^2$  for this equation was .011; that is 1.1% of the variance in financial socialisation was predictable from the respondents' socio-economic characteristics. This suggests that the coefficients for respondents' institution and respondents' parents' level of education are statistically significant. It is an indication that the respondents' institution and their parents' level of education influence their financial socialisation. In other words, respondents' institution and respondents' parents' level of education impact on respondents' financial socialisation, with a significant value of 0.002, and 0.038, respectively. These findings are consistent with those of previous studies (Shim et al., 2010; Ansong and Gyensare, 2012; Mimura et al., 2015; Tang and Peter, 2015; Shim et al., 2015; Van Campenhout, 2015; Serido and Deenanath, 2016; Sundarassen et al., 2016; Isomidinova and Singh, 2017; Yew et al., 2017).

Shim et al. (2015) found that perceived parental socialisation had the strongest association with a positive change in financial attitude, financial control, and financial efficacy. In addition, both formal and informal financial education played a significant role. Wagner (2015) established a positive relationship between financial social learning opportunities and saving and budgeting. The author also found that financial behaviours are improved by an increase in the frequency of engaging in a social learning opportunity. Students who had more opportunities to discuss and observe their parents and peers were more likely to save and budget. This shows that the family has a significant influence on the financial behaviour of individuals.

Mimura et al. (2015) used cross-sectional data to examine the associations among financial information sources, financial knowledge, and the financial practices of young adults, many of whom were first-generation college students, ethnic minorities, and immigrants or children of immigrants. The authors surveyed 1 249 undergraduate students at a large regional comprehensive university and found that personal financial information obtained from parents had a positive relationship with levels of financial knowledge and financial practices. It also established that information obtained from other family members and college courses are positively associated with improved financial practices. These findings suggest that parents and personal finance courses at university level serve as positive inputs for financial socialisation among students and young adults regardless of their demographic backgrounds. Yew et al. (2017) concluded that parental guidance and life experiences are significant predictors of financial literacy and suggested that experiential learning could improve financial literacy among Malaysian college students.

#### **4.18 Relationship among socialisation, capabilities and professional skills**

##### *Financial socialisation and financial capabilities*

With a p-value set at  $<0.05$ , the analysis suggested that there is no statistical significance between the financial socialisation of accounting students and their financial capability as determined by the Pearson Chi-square test and Likelihood ratio test ( $X^2 = 1.781$ ,  $p = 0.410$ ; Likelihood Ratio = 1.693,  $p = 0.429$ ). This means that financial socialisation does not impact on the financial capability of accounting students. This finding is consistent with those of other studies (Taylor et al., 2009; Jorgensen and Savla, 2010; Serido and Deenanath, 2016; Hudson et al., 2017; Jorgensen et al., 2017).

Taylor et al. (2009) study among 781 students in a large state university found that financial domains such as self-actualisation values, financial education at home and formal financial education at school were positively linked to the students' overall financial well-being and financial capability.

Taylor et al. (2009) also found that parental normative expectations and students perceived behavioural control, were crucial to the students' overall financial well-being and financial capability. Jorgensen and Savla (2010) concluded that perceived parental influence had a direct and moderately significant influence on financial attitude, did not have an effect on financial knowledge, and had an indirect and moderately significant influence on financial behaviour, mediated by financial attitude. However, Serido and Deenanath (2016) assert that financial parenting habits and practices are crucial to improving financial knowledge and skills amongst children and developing self-reliant and financially capable individuals.

Based on data from the emerging adult financial capability study conduct in a large university in southeastern America, it was found that close attachment to parents and financial communication with family members are precursors to financial capability among young adults (Jorgensen et al., 2017). Utilising the 2015 FINRA survey data, Hudson et al. (2017) identified three main influences of financial socialisation, namely, parental influence, life experiences and formal influences. The study also found that students that were financially socialised, were more financially knowledgeable and capable than those that were not.

### *Financial socialisation and professional skills*

The correlation analysis suggested that there is strong statistical significance between financial socialisation of accounting students and their professional skills as determined by the Pearson Chi-square test and Likelihood ratio test ( $X^2 = 41.728$ ,  $p = 0.000$ ; Likelihood Ratio = 39.846,  $p = 0.000$ ). This relationship was further determined by one-way ANOVA that showed that there is strong statistical significance between the financial socialisation and professional skills of accounting students, with  $F = 8.138$  and  $p = 0.004$ . This infers that financial socialisation impacts on professional skills.

This finding is consistent with those of studies that established a relationship between financial socialisation and professional skills in relation to critical thinking (Jorgensen and Savla, 2010; Drever et al., 2015); lifelong learning (Solheim et al., 2011; Xiao et al., 2014a), communication skills and professional judgement (Page, 2005; Anderson-Gough, 2018), problem-solving skills (Falahati and Sabri, 2015; Serido and Deenanath, 2016); and information technology skills (Albeerdy and Gharleghi, 2015a).

#### **4.19 Chapter Summary**

This chapter considered the financial socialisation of accounting students in KwaZulu-Natal. The chapter commenced with an introduction that conceptualised the phenomenon based on several perspectives and definitions. Thereafter, the theoretical framework for this chapter was built via a critical inquiry on the social learning theory and social cognitive theory; its origins, evolution and scholarly work on financial socialisation and cognitive decision making. This was followed by a review of the relevant empirical literature (both local and global) across the broad dimensions of general assessments of financial socialisation, categorical assessments of financial socialisation and socio-demographic factors. The importance of financial socialisation as highlighted in existing studies was emphasised and discussed thematically. Thereafter, the data collected for this study was analysed and the results were interpreted. The chapter concluded with a discussion on the findings and their implications.

The following chapter critically assesses the professional skills of the accounting students.

## CHAPTER FIVE

### Professional Skills of Accounting Students

#### 5.1 Introduction to professional skills

This chapter critically assesses the professional skills of the accounting students. It evaluates the differences in professional skills between SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT). The chapter also considers the differences in financial capability between SAICA accredited institutions and non-SAICA accredited institutions using regression analysis. The findings from these analyses are discussed in line with the relevant literature.

Improving the professional skills and ethical conduct of emerging professionals such as accountants has become a global concern that has captured the attention of a range of stakeholders, especially since the 2008 global financial crisis (GFC) (Geiger et al., 2013). Whilst this is driven by the increasing significance of the accounting profession in every society, other factors such as regulatory requirements, technological advances, globalisation and the increasing number of corporate failures have contributed to the scrutiny of accounting education and curriculum in recent decades (Albrecht and Sack, 2000; Samkin and Stainbank, 2016; Handoyo and Anas, 2019).

Many practicing accounting professionals have noted that the majority of accounting graduates do not meet the standards of potential employers within a globalised business environment (Van der Merwe, 2013). Employers seek to employ graduates with multi-faceted skills and attributes that are relevant to changing global norms (Handoyo and Anas, 2019). Given the globalised business environment, professional accounting bodies have also developed guidelines on the range of skills required by the profession to remain relevant.

In 1999, the American Institute of Certified Public Accountants was the first professional body to develop a professional competency framework to bridge the widening gap between theory and practice. The Canadian Institute of Accountants developed a professional competency framework in 2002 and the South African Institute of Chartered Accountants (SAICA) followed suit in 2008.

SAICA's first competency framework document described the skills framework as "a high-level description of the skills that an accounting professional should have when entering the profession (i.e. completion of the required training and training programs and final evaluation)" (Steenkamp and Smit, 2015). Such skills include technical knowledge as well as professional skills (Barac, 2009).

SAICA has been at the forefront of the accounting education offered at tertiary institutions in South Africa and continues to exert strong influence (Villiers & Venter 2010). It evaluates the accounting courses offered at these institutions and after rigorous review, grants accreditation. SAICA requires higher education institutions that deliver chartered accounting education to have appropriate resources and to meet stipulated SAICA requirements (SAICA, 2014). Among other requirements, its competency framework, which must be implemented by all accredited institutions, includes professional skills attributes.

## **5.2 Experimental Learning Theory**

The philosopher of education, Dewey (1938), believed that theory of experiential learning should be implemented in teaching in order to encourage the growth of pervasive abilities (professional skills) through enhanced student engagement. Experiential learning is an educational philosophy based on the concept of learning from real experiences (Kolb and Kolb, 2005; Fouché, 2013) and includes a variety of teaching techniques such as case studies, games, role-plays, field experiences, group projects and simulations (Fouché, 2013).

Experiential learning is aimed at avoiding single-solution situations and encouraging learners to experiment with topic understanding (Kreber, 2001). Experiential learning is discovered to be more efficient than traditional learning (Kolb et al., 2001) because it generates more motivated students (Gentry et al., 1998), provides higher sensitivity to the details needed for efficient decision-making and leadership abilities, and encourages private and professional life-long growth through self-learning and reflection (Hannon et al., 2004).

Experimental Learning Theory (ELT) integrates the basic experiential learning scholars' works around six proposals that they all share:

- (1) Learning is best understood as a process, not as a result. In order to enhance greater education teaching, the main focus should be on engaging learners in a system that best enhances their learning—a process that involves feedback on the efficacy of their teaching attempts: '... education must be conceived as a continuous rebuilding of knowledge... the method and objective of schooling is one and the same thing.' (Dewey, 1938).
- (2) Relearning is all learning. Learning is best supported by a method that attracts the views and thoughts of the learners about a subject in order to examine, test and integrate them with fresh, more sophisticated concepts.
- (3) Learning needs that conflicts be resolved between dialectically opposed modes of world adaptation. What drives the learning process is conflict, distinctions, and disagreement. One is called to move back and forth in the learning process between opposing modes of reflection and action and feeling and thinking.
- (4) (The learning method is a holistic adaptation method. Not only is it the consequence of cognition, but it includes the overall person's integrated functioning—thinking, feeling, perceiving, and behaving. It includes other specific adaptation models from the scientific method to solving issues, decision-making and creativity.
- (5) Learning outcomes from human-environmental synergetic operations. Stable and lasting human learning patterns emerge from coherent transaction patterns between the person and their environment. The way we handle each fresh experience's opportunities determines the variety of choices and choices we see. To some extent, the choices and choices we make determine the events we are

experiencing, and these events influence our future choices. Thus, by choosing the real occasions they live through, individuals generate themselves.

(6) Learning is the knowledge-building method. ELT proposes a constructivist learning theory that creates and recreates social knowledge in the learner's private understanding. This contrasts with the 'transmission' model on which there is a great deal of current educational practice where pre-existing fixed ideas are transmitted to the learner.

### **5.3 EMPIRICAL LITERATURE ON PROFESSIONAL SKILLS**

#### **5.3.1 Professionalisation of the Accounting profession in South Africa**

##### *Development of the SAICA Competency Framework*

Professionalism refers to competency in the form of knowledge and skills, as well as certain behaviour that is consistently displayed in a work environment. Maister (1997) states that "professionalism is not something you can claim for yourself; professionalism is an adjective you hope other people will apply to you. It is something that you have to earn". To be known as a professional means that a person has to be committed to continuous development and mastery of the competencies and skills that define a particular profession.

SAICA is responsible for the regulation and standard setting requirements for the designation of a Chartered Accountant (CA (SA) in South Africa.

In addition to standard setting, the Institute issue verifiable pronouncements (a detailed syllabus of topics and technical knowledge to be acquired by students in the academic programme) (SAICA, 2019). SAICA has developed a competency framework detailing the skills that a CA (SA) should possess when entering the profession. Steenkamp and Smit (2015) note that this framework is important in maintaining the integrity of the CA designation in a changing professional world.

The SAICA Competency Framework consists of three main sections, namely, compulsory competencies, elective competencies and residual competencies (SAICA, 2014). Compulsory competences must be mastered by all CA(SA)s and include both accounting and external reporting skills (SAICA, 2014).

Pervasive competence (skills) are the non-technical skills to be applied when a specific task is undertaken. According to the SAICA (2014) competency framework, there are three main categories of pervasive skills:

- Ethical behaviour and professionalism;
- Personal attributes; and
- Professional skills.

The competency framework details the application of each category of skills, and the skill prerequisites for a CA (SA)'s entry into the profession.

SAICA also describes the qualities underlying the professional skills to provide greater clarity and meaning to students and professionals:

1. **Ethical behaviour and professionalism:** "Protecting public interests, acting honestly and with integrity, exercising due care, being objective and independent, avoiding conflicts of interest, protecting the confidentiality of information, improving the reputation of the profession and respecting professional behaviour".
2. **Personal attributes:** "Demonstrate self-management and leadership, take the initiative and demonstrate competence, innovatively add value, manage change, treat others professionally, understand the national and international environment, be a lifelong learner, be a team member and demonstrate time management".
3. **Professional skills:** "Critical thinking, problem-solving, effective communication, monitoring and management, understanding the impact of information technology and taking basic legal concepts into account".

The core concern of this research study is to critically evaluate the professional skills of accounting students as defined above.

#### **5.4 The Mediating role of the University in Skills Development**

Scholars have expressed concern that universities cannot realistically guarantee employers' skills delivery (Cranmer, 2006). Cranmer (2006) examined the university's role in skills development and cast doubts on tertiary institutions' ability to successfully develop the required skills to the appropriate level.

Clanchy and Ballard (1995) argue that higher education institutions can only ensure that students have the opportunity to acquire technical skills during their undergraduate life. Fogarty (2010) is of the view that these institutions have limited capacity to accommodate the other skills required by the profession/potential employers. Sikka et al. (2007) reviewed accounting instructional material and found that there is limited analysis of ethics, principles, theories, or social responsibility issues in addition to technical instructional material. While many instructors have endeavoured to improve graduates' skills, these efforts have yielded mixed results. It would appear that no studies have been conducted on revisiting the existing curriculum in order to improve the skills acquired at university.

#### **5.5 Accreditation of universities and professional skills**

Since public universities in South Africa have their qualifications recognised and accredited by relevant professional bodies, obtaining a degree from an accredited higher education institution is the first step in becoming a professional accountant. Accreditation is recognition that an institution has met the required standards and that graduates will gain admission to other accredited higher education institutions or will be able to obtain credentials for professional practice. The main aim of accreditation is to ensure that the education provided by institutions of higher education meets acceptable levels of quality (Happe, 2015).

## **5.6 Importance of Accreditation (Happe, 2015)**

- Helps to determine whether an institution meets or exceeds the minimum quality standards.
- Helps students to identify acceptable institutions. Assists institutions in determining transfer credit acceptability.
- Helps employers to determine the validity of study programmes and a graduate's qualification.
- Employers often require evidence from an accredited school or programme that applicants have received a degree.
- Helps employers to identify eligibility for reimbursement programmes for employee tuition. Allows graduates to sit for exams of certification.
- Assists with institutional evaluation and planning with staff, faculty, students, graduates, and advisory boards.
- Creates goals for self-improvement in the institution.
- Provides an alternative to self-regulation for the purpose of state oversight.
- Provides a basis for determining students' eligibility for state support.

## **5.7 Accreditation of the Accounting profession around the world**

Accreditation of the accounting profession differs across countries. For instance, in Australia, the Certified Public Accountant (CPA) designation is understood to mean, "a designation given by the Australian Institute of Certified Public Accountants to those who meet the education and requisite experience requirements and have also passed their professional exams can use the designation CPA".

CPAs have formed a partnership with the Australian Institute and the New Zealand Institute of Accountants to accredit accounting programmes outside Australia for the improvement of the profession. The main purpose of professional accreditation of accounting university programmes is to ensure that their quality as well as the quality of teaching are maintained. The aforementioned partnership has resulted in common professional accreditation guidelines, assessments, site visits and annual reports.

The Tertiary Education Quality Standards Agency (TEQSA), which is Australia's higher education regulator signed a Memorandum of Understanding (MOU) with CPA Australia and agreed to use certain protocols in sharing information relating to the accreditation of accounting programmes, registration of higher education providers and other matters that will enhance the quality of education provided.

The Accounting Institute of Australia accredits about 758 accounting programmes from 231 universities across the world. It also accredits accounting programmes from the following countries: Fiji, China, Hong Kong, Malaysia, New Zealand, Singapore, the United Kingdom, Indonesia, Mauritius, Papua New Guinea, Thailand, Cyprus, India, Macau, Oman, Sri Lanka, and Vietnam.

Upon completion of an accredited programme, students are granted associate membership and commence the CPA Australia programme – the further study and practical experience necessary to become a professional accountant. Through professional accreditation, CPA Australia recognises higher education programmes that meet the knowledge requirements for associate membership and CPA programme professional level commencement.

### **5.7.1 Benefits of professional accreditation with the Accounting Institute of Australia**

The benefits of accreditation by the Accounting Institute of Australia include:

- The Institute attracts students to their accounting programmes.
- Gives assurance to aspiring students and employers of a quality university provider and accounting programme.
- Offers university providers guidance and the clear benchmarks and standards expected by professional bodies of their programmes.
- Provides a streamlined pathway to professional membership - completion of an accredited programme enables the graduate to gain associate membership and commence the CPA programme professional level.

- Ensures that graduates are qualified to take up entry-level accounting roles.
- Provides networking, advocacy and site visit opportunities between university providers and professional bodies.

## **5.8 South African Accreditation**

In South Africa, the following three-stage accreditation approach is used, with the first two stages happening simultaneously:

1. Department of Higher Education and Training (DHET) accreditation.
2. Higher Education Quality Council (HEQC) accreditation.
3. SAICA accreditation.

### **5.8.1 Department of Higher Education and Training (DHET)**

The DHET has adopted the following critical outcomes, often referred to as professional skills, that apply to all registered qualifications in South Africa (SAQA, 2000; Killen, 2007):

- The use of critical and creative thinking in identifying and solving problems.
- Effective participation in a team, group and organisation.
- Responsible and effective management and organising of oneself and one's activities.
- Critically evaluate, organise, collect and analyse information.
- Effective communication using language skills in oral/written persuasions and mathematically.
- Effective use of science and technology, and showing responsibility towards others and the environment.
- Ability to understand and demonstrate understanding that a problem exists as a result of related issues/systems.

These are very similar to the SAICA competency framework requirements.

### **5.8.2 Higher Education Quality Council (HEQC)**

On 7 November 2011, the Council on Higher Education's (CHE) Higher Education Quality Committee (HEQC) became the first quality agency in Africa to be granted formal recognition by the International Assurance Agencies in Higher Education (INQAAHE) for its comprehensive adherence to the good practice guidelines for external quality assurance agencies. INQAAHE is a world-wide association of over 200 organisations that are active in the theory and practice of quality assurance in higher education. They represent more than 130 countries and 14 regional networks (CHE, 2019).

According to the Higher Education Act of 1997, the main purpose of the HEQC is to:

- Promote higher education quality assurance.
- Periodically audit the quality assurance mechanisms of higher education institutions.
- Accredite programmes of higher education.

The HEQC is committed to quality in order to enable the higher education system to contribute to socio-economic development and social justice. It has developed strong relationships with quality assurance agencies worldwide, including MOUs with the quality assurance agencies of the United Kingdom and India.

Matsebetlela (2015) measured the influence of the HEQC's institutional audits on teaching and learning among 58 participants comprising 12 senior management members, 12 academics and 34 students across three South African universities that are part of the HEQC. They included a traditional university, a comprehensive university and a university of technology, and rural-based and urban-based, as well as historically disadvantaged and advantaged institutions. Matsebetlela (2015) found that the audits performed by the HEQC had a positive influence on how the institutions approach teaching and learning. Noted areas of improvement included infrastructure for teaching and learning, contracting experienced postgraduate supervisors from other universities to help supervise postgraduate students and mentor novice supervisors, and the use of technology to enhance the teaching of large classes.

### **5.8.3 South African Institute of Chartered Accountants (SAICA)**

In its role as an Education and Training Quality Assurer (ETQA) and its current standing with the Independent Regulatory Board for Auditors (IRBA), SAICA accredits programmes specifically designed to enable access to the Initial Test of Competence (ITC). The SAICA's accreditation process is over and above the following:

- Institutional audits performed by the Higher Education Quality Council (HEQC).
- Programme accreditation granted by the HEQC in its role as the branch of ETQA for higher education, and
- Recognition of degrees registered on the National Qualifications Framework (NQF), which are awarded by SAQA.

According to the accreditation and monitoring framework, SAICA's accreditation of an accounting program means that ' the appropriate resources have been put in place by the provider ' should, if put into use and in an efficient manner, enable the program to be delivered at the required standards and quality levels and that the program meets the requirements of SAICA in terms of the standards.

Accreditation attests that a particular programme complies with all the requirements to meet SAICA's accreditation standards. It is not an assurance that a higher education institution is achieving the required standards in terms of delivery of the programme. Obtaining accreditation is a process, and SAICA works in partnership with accredited universities to help them maintain their accreditation status and to build a better future for them and their students. Quality control is important when it comes to accreditation; hence, SAICA evaluates and monitors higher education institutions' relevant programmes. Quality assurance includes annual self-evaluation by each university offering an accredited programme, and at least one monitoring visit in every five-year cycle. More frequent visits could take place depending on the accreditation status of the higher education institution (SAICA, 2019).

UKZN is an accredited tertiary institution that adheres to SAICA requirements (UKZN, 2018). de Villiers and Venter (2010) argued that institutions that are not accredited by SAICA but offer accounting programmes, will be in jeopardy and will battle to attract students pursuing the chartered accountancy profession in South Africa.

Universities providing accounting programs adopt an externally prepared structure of competences (SAICA) as part of their curriculum, which then prevents lecturers from creating their own curriculum, a system used by technology universities in South Africa (Livingstone and Lubbe, 2017). Bester and Schultz (2012) identified two possible approaches in review and redesign of the curriculum and concluded that the mapping process was better than the use of a template when focusing on constructive alignment and cognitive complexity.

In granting accreditation, SAICA assigns levels to higher educational institutions. UKZN received a level 1 rating following an intensive review conducted by the accountancy body's Academic Review Committee (ARC). Level 1 is SAICA's top rating and means that the university has met all the body's accreditation requirements for its BCom (Accounting) under- and postgraduate degrees (UKZN, 2018). Through effective monitoring by SAICA, UKZN implemented new strategies that improved the standard and quality of its programmes. In addition, the Certificate in the Theory of Accounting (CTA) throughput rates increased from 38% in 2016 to 49% in 2017, while the number of students enrolling in this programme increased from 248 in 2017 to 373 in 2018. Moreover, UKZN students performed extremely well in the January and June 2018 sitting of the Initial Test of Competence, which proves that the partnership is doing well.

#### **5.8.4 SAICA accredited higher education institutions – 2019**

The following South African higher education institutions were accredited by SAICA for 2019 (SAICA, 2019):

- Independent Institute of Education – Varsity College
- Institute of Accounting Science
- Monash South Africa
- Nelson Mandela University
- North West University
- Rhodes University
- University of Cape Town
- University of Fort Hare
- University of Free State
- University of Johannesburg
- University of Kwa-Zulu-Natal
- University of Limpopo
- University of South Africa
- University of Stellenbosch
- University of Pretoria
- University of the Western Cape
- University of the Witwatersrand
- University of Zululand
- Walter Sisulu University

This list provides a clear picture of the type of institution (traditional universities and not universities of technology as they are now referred to as universities) (SAICA, 2019).

#### **5.9 Professional skills of university students**

Professional skills relate to a professionally accredited degree programme that produces graduates with a technical knowledge foundation and the skills required to effectively apply such knowledge when they enter the profession and further their future development. A number of studies have suggested that accounting programmes are not meeting the

expectations and needs of potential employers or do not provide what is required of them (Jackling and De Lange, 2009; Bui and Porter, 2010). To overcome these issues, Watty (2014) suggested that the next step was to develop important skills within the curriculum.

In order to meet employers' needs, university accounting programmes should provide graduates with strong technical knowledge and job creation skills; such graduates should make an instant contribution to potential business (Albrecht and Sack, 2000; Ellington, 2017; O'Connell et al., 2015 (Behn, 2012). The International Accounting Education Standards Board (IAESB)'s 2015 International Education Standard (IES) 3 Initial Professional Development – Professional Skills sets out the professional skills that employers require from accounting graduates. In assessing a degree for professional accreditation, the IAESB expects to see opportunities for students to develop a number of the skills prescribed in the IES 3. The IES sets out the learning outcomes for professional skills that prospective accountants are required to manifest by the end of Initial Professional Development (IPD).

These are disaggregated into four competency areas namely: **a)** intellectual, **b)** interpersonal communication, **c)** personal, and **d)** organisational skills that a professional accountant integrates with technical competence and professional values, ethics and attitudes to demonstrate professional competence.

- a) Intellectual** relates to the ability of a professional accountant to solve problems, make decisions, and to exercise professional judgement in complex organisational situations.

The required intellectual skills include the following:

- i) When students are given information from numerous sources, they should be able to assess it through research, analysis and integration.

- ii) Professional judgement should be applied at all times, including identification and evaluation of alternatives to reach well-reasoned conclusions based on all relevant facts and circumstances.
- iii) Know when it is appropriate to consult with specialists to solve problems and reach precise conclusions.
- iv) Demonstrate reasoning and innovative thinking to find an answer to a problem.
- v) Recommend solutions to unstructured, multifaceted problems.

**b) Interpersonal Communication** relates to the ability of a professional accountant to work and interact effectively with others for the common good of the organisation, receive and transmit information, form reasoned judgements and make decisions effectively. It is sometimes referred to as “people skills”. Interpersonal communication recognises the human aspect of a business relationship. In accounting, some clients may be very sensitive about their finances. The ability to relate to people from different backgrounds while maintaining professionalism is paramount.

The components of interpersonal communication skills include the following:

- i) When working towards organisational goals, one should cooperate and work in a team.
- ii) Communication should be concise and clear when presenting and when discussing and reporting in formal and informal situations, both in writing and orally.
- iii) Clearly show knowledge of cultural and language differences in all communication.
- iv) Apply active listening and effective interviewing techniques.
- v) Apply negotiation skills to reach solutions and agreements.

- vi) Apply consultative skills to reduce or eliminate conflict, solve problems and maximise opportunities.
  - vii) Come up with ideas, influence the team and provide support and commitment.
- c) **Personal** relates to the personal attributes and behaviour of professional accountants. Developing these skills assists graduates in learning and personal improvement:
- i. Show enthusiasm and commit to lifelong learning.
  - ii. Demonstrate professional doubt through questioning and critically evaluating all information.
  - iii. Ability to set high personal standards for delivery and monitor personal performance through feedback from others and self-reflection.
  - iv. Time management and resources to honour professional commitments.
  - v. Predict challenges and plan for possible solutions.
  - vi. Be open-minded to new opportunities.
- d) **Organisational** relates to the ability of a professional accountant to work effectively within an organisation. Professional accountants should play a more active part in the day-to-day management of organisations. Organisational management skills include:
- i. Take on assignments in accordance with established practices to meet prescribed deadlines.

Research has been conducted on professional skills in both developed and developing countries (Jackling and De Lange, 2009; Kavanagh and Drennan, 2008; Awayiga et al., 2010; Bui and Porter, 2010; Abayadeera and Watty, 2016). Most accounting curricula focuses on developing graduates for entry-level jobs instead of grooming them for long-term career demands. It is the duty of universities together with professional bodies to

develop accounting programmes that will fully equip graduates with the knowledge required to place them in senior roles once they start working. Educators involved in accounting education are therefore required to balance the demands of higher education with those of the professional body, while delivering market-ready graduates that are fully equipped with the necessary competencies (Barac, 2014). The IFAC (2014) also emphasised that the educators in accounting education should equip students with the competencies employers expect, professional skills, technical knowledge and attributes such as values, ethics and professional attitude. The ultimate goal is to produce market-ready graduates to meet the expectations of the rapidly changing work environment and those of the employer.

A study conducted in Egypt by Hussein (2017) sought to answer two questions:

- **Question 1:** Are there any differences in the importance of professional skills items between Egyptian professionals and accounting students?
- **Question 2:** what are the most important professional skills?

The research was conducted using two groups of respondents. The first was professional accountants, 85% of whom worked for large auditing firms in Egypt, with the remaining 15% from other firms.

The second group was final-year accounting students from six private Egyptian universities (British University in Egypt, German University in Cairo, American University in Cairo, Misr International University, Misr University Science and Technology and Modern Science & Art), with 119 responses usable out of 200 (60%) questionnaires completed and returned. The findings were consistent with the IES 3 and many other studies in that they highlighted the importance of the four competencies discussed above. Most importantly, the researcher recommended that Egyptian universities should re-evaluate their accounting education process so as to establish strong links with professional firms.

In South Africa, the DHET, SAICA and prospective employers are the main role players that influence accounting education at universities. In response to identified skills gaps, the DHET also introduced critical cross-field outcomes, better known as professional skills, to be included in all registered qualifications (Killen, 2010; SAQA, 2000).

### **5.10 Accreditation and professional skills**

The main objective of higher education institutions is to ensure the quality of their accounting education programmes as well as their providers, and to promote improvements in the quality of accounting education. Obtaining a degree from an accredited university sets one up for a bright future, as an accredited programme is the first step to a dream job as an accounting student. Accredited universities have the advantage of being monitored by a professional body to evaluate if they are following certain standards and providing the quality education that graduates will need once they start working as professionals. Thus, professional skills are incorporated in the curriculum.

Accredited universities are also well informed on new developments in professional bodies' requirements of students. They have to follow protocol and inform students of any new or revised accounting programmes they may be planning. Professional accreditation aims to enable graduates to take on an entry-level role in the accounting profession. Students receive proper training, which makes them easily employable.

The accounting profession needs graduates from various backgrounds with a range of skills. In addition to adequate written and oral communication and interpersonal skills, graduates must be capable of inquiry, abstract logical thinking and critical analysis. These skills are learnt while they are studying and when placed in training to improving their competence levels. At the time of writing, almost 1 100 SAICA trainees in KwaZulu-Natal were in the process of completing their training contracts, which represents the final stage in the seven-year journey to becoming a qualified CA (SA). According to SAICA, this is the third largest group in the country.

In summary, professional accreditation is about demonstrating the quality of the education experience with higher education providers establishing the objectives to be achieved, the ways to achieve them, proof that the objectives have been achieved, and mechanisms for continuous review and improvement.

In this study, we examine the professional skills of accounting students using five basic questions. As noted previously, the environment in which accounting professionals work is changing rapidly and employers expect that graduates will cope with these changes. They require accounting graduates to possess technical knowledge that will help them with their work and to acquire professional skills that will be of benefit to them in the workplace. They expect the highest level of capability from graduates, whether or not they are supervised.

De Villiers (2010) noted that, in order to remain relevant and competitive, colleges need to find innovative ways to meet stakeholder demands. Hesketh (2011) concurs and adds that “assessing additional skills in professional exams will involve new approaches to academic assessment”, which will influence how academic providers teach and evaluate their students. However, Strauss-Keevy (2014) argues that training institutions are better placed to develop pervasive/professional skills than academic programmes because academics are not equipped in this regard. Thus, Viviers (2016) asserted that universities accredited by SAICA need to develop competency-based teaching methods to develop comprehensive competencies in South Africa.

### **5.11 Technical skills expectations**

Graduates’ technical knowledge has been the subject of research in a number of countries, with the main focus on different modules and courses, including financial accounting and reporting, taxation and audit and assurance (Awayiga et al., 2010; Bui and Porter, 2010; Coetzee and Oberholzer, 2009). Researchers note that accounting practitioners expect graduates to have basic technical knowledge (Hancock et al., 2009). Moreover, firm size affects the technical knowledge expectations of graduates (Bui and Porter, 2010).

The IES 2 prescribes the learning outcomes for technical competence that aspiring professional accountants are required to demonstrate by the end of IPD. Technical competence is the ability to apply professional knowledge to perform a role in a defined structure. IPD continues until aspiring professional accountants can demonstrate the professional competence required for their chosen roles in the accountancy profession. Moreover, it protects the public interest, develops the quality of the work of professional accountants and promotes the credibility of the accounting profession (IFAC, 2014). Low et al. (2016) note that, while accounting graduates have technical skills, fundamental accounting skills remain important.

### **5.12 Professional skills expectations**

Accounting practitioners' expectations regarding the professional skills that accounting graduates should have at the beginning of their entry-level position have been investigated by numerous researchers in different countries (Bui and Porter, 2010; Crawford et al., 2011; Hancock et al., 2009; Jackling and De Lange, 2009). These studies suggest the existence of a huge gap between what graduates know and what they can do, which is consistent with professional bodies' requirements of an accredited institution. *The International Education Standards (IES) 4 – Initial Professional Development – professional Values, Ethics and Attitudes* requires that relevant ethical requirements should be integrated throughout professional accounting education programmes (IFAC, 2015).

### **5.13 Skills gap of accounting graduates**

It has been reported that many of the professional skills accounting practitioners expect graduates to demonstrate are not developed sufficiently in university accounting programmes (Bui and Porter, 2010; Hancock et al., 2009; Kavanagh and Drennan, 2008; Tempone et al., 2012; Van Romburgh and Van der Merwe, 2015). For example, Bui and Porter (2010) study in New Zealand found that graduate students could not use their professional skills in harmony with their technical skills and capabilities. The authors identified what they referred to as the expectation-performance gap between the

professional skills accounting practitioners expect a graduate to hold on arrival, and the actual professional skills they see recently qualified graduates demonstrating (Bui and Porter, 2010).

Barac (2009) found that training officers in South Africa value the generic/professional skills requirements for trainee accountants at entry level. Steenkamp (2012) assessed the perceptions of accounting students when SAICA's training programme switched from a knowledge-based approach to a skills-based approach in 2010. Although the renewed focus on pervasive skills was positive for students, many felt that the changes were communicated to them too late and were concerned about their impact on their assessment.

## **5.14 Components of Professional Skills**

### **5.14.1 Critical thinking skills**

The ability to think critically is vital to creativity, being solution-oriented and eventual career success (Hall, 2018). Hence, inclusion of modules relating to critical thinking in accounting curricula tend to improve the professionalisation of accounting graduates and their career success (Bui and Porter, 2010).

Paul (1988) defines critical thinking as a conclusion based on objectives and knowledge, while Norris (1985) described it as the application of previous knowledge by students and changes made after evaluation (as cited in (Demirel, 2017)). In general, critical thinking involves the ability to look carefully at events, conditions or thoughts, make comments and decisions, and logically examine the reliability and validity of knowledge (Seferoğlu and Akbıyık, 2006). According to Dyer (2011), critical thinking is a way of reading, thinking, and learning that involves asking questions, examining our assumptions and weighing the validity of arguments. Critical thinkers are self-aware, seek more knowledge, and are independent. This ability to think in a higher order enables existing knowledge or a situation to be rethought in order to correct errors and address deficits to reach appropriate solutions (Howard et al., 2015).

Demirel (1997) identifies the following attributes of a critical thinker:

- “Reasoning and suspecting;
- Looking at situations from multiple perspectives and dimensions;
- To be open to changes and innovations;
- To look at thoughts without prejudices;
- Being open-minded;
- Thinking analytically and
- Paying attention to details.”

Ahern et al. (2012) indicated that critical thinking varies with the type of discipline. A comparative analysis between the engineering discipline and humanities revealed that the latter has a clearer critical skills focus. A study in Ghana that solicited the views of graduate students and potential employers on critical thinking skills found that both groups agreed that such skills are lacking among accounting students (Awayiga et al., 2010).

Studies have also investigated critical thinking and the development of skills to solve problems in industrial training. Industrial training is a platform for students to transfer their knowledge to non-educational contexts, which involve practical tasks requiring some reflection on academic knowledge, supplemented by experts (Smith et al., 2007).

Such opportunities enable students to improve their knowledge, skills and attitude as early preparation for their future careers. Smith et al. (2007) conducted interviews with 12 students who had completed their training to assess the development of critical thinking and problem-solving skills. The study found that the students were able solve problems effectively.

Other studies (Andresen et al., 2000; Mestre, 2007; Stefani et al., 2000) demonstrated the self-reflective skills acquired by students during work-based experience (WBE) modules. This aligns with the critical thinking model which also stresses self-reflection that enables students to think critically and look at a problem from various perspectives. This may motivate them to work harder and also increase their job satisfaction.

### 5.14.2 Problem-solving skills

Albrecht and Sack (2000) define problem-solving skills as the:

- Ability to solve various problems that are unstructured.
- Ability to read, criticise and assess the value of written work.

Graduate students need to be able to contribute to the knowledge-based global economy. They also need to be able to cope with increasing levels of uncertainty and be intuitive, synthetic and innovative. They should be able to use their cognitive skills when faced with problem-solving tasks (Barbera, 1996). Educators must thus refrain from teaching curricula in ways that emphasise technical as opposed to conceptual understanding (Coombs, 2000).

Another strategy that educators can adopt is to develop students' analytical skills rather than simply working through single-topic problems (Coombs, 2000). However, Soden and Pithers (2001) argued that people's attributes will affect how they think about problems. These authors suggest that "cognitive skills and ... critical analysis" are among the numerous skills they should master. Therefore, accounting education should also prioritise know-how (Mohamed and Lashine, 2003).

Kavanagh and Drennan (2008) state that students should participate in the learning process as this will quickly develop skills such as creative and critical thinking to help them in problem-solving at an early stage. Lin et al. (2005) add that this could be achieved by applying innovative teaching methods such as case analysis, roleplaying analysis of information, real company assignments and technology assignments. Rodzalan and Saat (2018) note that problem-solving skills occur in stages, with critical thinking being a step up from the memorising stage.

### **5.14.3 Effective communication skills**

Communication can be verbal or nonverbal (Mehrabian, 2017), and can be described as the ability to use language to pass on a message. In an organisation, customer relations, employee relations and public relations, to name but a few, all require effective communication. An accounting degree should develop students' ability to communicate complex information effectively and concisely in both written and oral communication using documents, presentations or discussion. Students should be able to use technical language appropriately and communicate with a variety of audiences.

There is also a need for greater understanding of accountant-client interactions. While group work and presentations have been the focus of oral communication skills development in accounting education, role-plays with feedback are a successful approach to teach interpersonal skills (Daff, 2013; Daff and Jack, 2018). Communication is a necessary skill for accounting students. They do not have to be excellent at writing research papers, but should excel in business writing. Some writing can easily be incorporated into almost all accounting courses. Being able to make presentations is a valuable skill in the business world (Friedman et al., 2016).

### **5.14.4 Oral communication skills**

Oral communication occurs through one-on-one communication, communication in a meeting or a formal presentation.

In one-on-one communication, listening skills are ranked first because this skill enables one to understand verbal and non-verbal information from other individuals and ensure that the right interpretation is made by providing a conclusion of what was said as well as feedback (Arquero et al., 2017).

#### **5.14.4.1 Listening communication skills**

While accountants are well known for their strong problem-solving skills, strong listening skills are equally important (Baker, 2016). The ability to listen effectively to clients can be of great importance as it can help one to identify their needs, address their situation and

provide the best service. Becker (2016) states that in accounting, listening is one of the most important aspects of a client relationship because one is dealing with financial records and other elements that could affect the client's livelihood and financial future. The ways in which listening may improve client relations include:

**Improves the level of trust:** The level of trust is enhanced when the client one is working with is aware that one listens carefully to their issues and will work to resolve them. Clients appreciate being treated as partners and not having to repeat certain things as the client relationship continues.

**Enhances one's credibility:** Credibility is fundamental in effective client relationships. Ability to use the information generated by clients enhances one's credibility, and goes a long way in establishing a loyal client relationship.

**Increases the level of customer service:** Client relationships are improved by high levels of customer service. Listening is an integral tool in developing superior customer service tactics that get results.

**Increases the chance of customer loyalty:** when clients know that they have their accountant's full attention, they will become loyal customers that do not want to use anyone else for their transactions or services.

#### **5.14.4.2 Written communication skills**

Several studies have noted that written communication skills are crucial for professionals (Albrecht and Sack, 2000; Kavanagh and Drennan, 2008; Jones, 2011; Riley and Simons, 2016). Accounting practitioners and educators agree that entry-level professional accountants must have effective written communication skills. Many accounting graduates have been found to be deficient in this regard (Christensen et al., 2005; Jones, 2011).

Since 2000, only two studies have been conducted on the written communication skills required by entry-level accountants (Christensen et al., 2005; Jones, 2011). However, there is consensus that English skills (i.e., spelling, grammar and punctuation) and writing clearly and concisely are of the utmost importance.

Riley and Simons (2016) confirmed the results of previous studies on the importance of written communication skills for entry-level accounting graduates. The study also found that accounting educators incorporate written communication skills in the accounting curriculum.

Written communication is important for writing work documents, routine formal reports, once-off formal reports, business letters and internal memoranda. The reason why educators and practitioners regard these skills as important is because, once graduates have them, they can record ideas clearly and keep them in an orderly manner. They can also easily provide supporting sources for the conclusions that they make and provide sound arguments where necessary, with the correct use of spelling, grammar and punctuation. Furthermore, they are able to read with understanding and can make effective use of methods and formats to ensure that information is relevant and complete.

#### **5.14.5 Information technology skills**

In a rapidly changing globalised world with new economic challenges, professional accountants need to come to grips with information technology (IT). Employers have long expressed concerns regarding the IT knowledge and skills possessed by accounting graduates entering the profession (Cory and Pruske, 2012; Stoner, 2009).

Stoner (2009) found that accounting students were familiar with application software for spreadsheet and word processing and general use of PCs such as email and the Internet, but that there was very limited use of statistical applications and database management.

According to the Pathways Commission on Accounting Higher Education, which was created by the American Accounting Association (AAA) and the American Institute of Certified Public Accountants (AICPA) to study the future structure of higher education for the accounting profession, accountants should have both technical skills and professional skills. These skills, that should be learnt by accounting students in their undergraduate education, can be divided into generic skills and technical skills (Crawford et al., 2011).

The Commission (2012) notes that today's students have access to the internet and personal gadgets, resulting in new skills and learning patterns. Such tools should be utilised to provide project-based learning to students. Sergeant and Camion (2016), suggest that students should make use of outside help and consult with experts.

Chandra et al. (2006) note that a gap exists between the IT skills provided by universities and those required by employers. Boritz (1999) noted that many universities add IT subjects at the expense of important aspects of the accounting degree programme. An accountant must show knowledge of a spreadsheet package, a word processing package, an accounting package, and a database package (Mohamed and Lashine, 2003) and such knowledge should be continually updated (Tam, 2013).

Sarea and Alrawahi (2014) compared the views of undergraduates before joining the work environment and those of professional practitioners. The main difference between the two groups related to IT skills. Undergraduate students rated IT skills the 5<sup>th</sup> most important skills while professional practitioners ranked them 10<sup>th</sup>. General knowledge of IT is important for academic thinking, while experts considered competence in the information system used to be important (Pratama, 2015).

The Pathways Commission (2012) and scholars such as Spraakman et al. (2015) and Guthrie et al. (2014), called for the integration of advanced IT courses into accounting curricula in order to ensure improved IT skills among professional accountants. Accountants perform different roles in the workplace that require knowledge of IT skills. Some support management in monitoring the operations of the business, while some assist in ensuing compliance with tax, regulations and provide the reporting required in the dynamic business environment.

One of the core objectives of accounting education is to provide competencies to students in order to ensure a successful professional life (Mcvay, Murphy & Wook Yoon, 2008).

This has not been fully achieved because IT courses and resources such as hardware, software and IT personnel are either lacking or challenged to prove their legitimacy (Boritz and Stoner, 2014; Bui and Porter, 2010).

Sithole (2015) collected data from employers on accounting graduates' IT skills and knowledge relevant to their roles in providing competent and professional services. The findings suggested that accounting graduates are better trained in word-processing and knowledge of communications software than on accounting packages and spreadsheets, which is what employers expect from entry-level graduates (Sithole, 2015). These findings provide useful information for academics and administrators that are responsible for new developments in curricula.

(Boulianne, 2016) investigated how IT is presented in Canada's accounting programmes. While the data was only drawn from Quebec province, which limited the results, the study found that in merging different programmes to constitute the broader CPA program, IT lost ground.

Pan and Seow (2016) reviewed 34 articles published between 2004 and 2014 and concluded that, given that IT is widely used in accounting practices, students should receive sound technology training. They also proposed that higher education institutions offer International Accounting Standards (IAS).

Tempone et al. (2012) concluded that priority has always been given to technical skills and that professional skills have not been developed. Abayadeera and Watty (2016) agree that, while there have been many studies on professional/general skills, technical skills have been overemphasised. Low et al. (2016) confirmed this gap, while Asonitou (2015) noted that a gap remains between what potential employers in Greece want and what Greek graduates can offer.

#### **5.14.6 Lifelong Learning**

Boud and Falchikov (2006) note that lifelong learning enables individuals to deal with complex circumstances and uncertainty. According to SAICA (2016), a CA (SA) is a lifelong learner if he/she demonstrates intellectual ability and the ability to apply him/herself in the demanding and changing business and economic environment. Lifelong learning is seen as an "active process" (Chiang et al., 2013) and describes how professionals respond to constant changes in their environment by adapting their current knowledge and acquiring new knowledge (Oviedo-Trespalcios et al., 2015).

A culture of lifelong learning could be created in South Africa through a combination of academic, professional and educational programmes (Strauss-Keevy and Maré, 2014). Deliberate steps need to be taken to develop the necessary metacognitive skills in order to transfer lifelong learning skills to subsequent modules and work environments (Becker, 2013; Hassan et al., 2012). Keevy and Mare (2018) suggest that disciplines across academic programmes should use collaborative learning in order to improve lifelong learning. Oviedo-Trespalcios et al. (2015) observe that small-group learning assists with lifelong learning; while some authors suggest that problem-based learning (Shin et al., 1993) and IT (Oviedo-Trespalcios et al., 2015) also assist with lifelong learning skills among accounting students.

Massification of higher education in South Africa adds another challenge to the development of a well-rounded student. Steenkamp et al. (2012) suggest that the student's learning should be self-directed which is necessary in the South African education context.

#### **5.15 Ranking students' professional skills**

Awayiga et al. (2010) study in Ghana among of 131 graduates and 25 practitioners found that graduates rated technical and functional skills as the least important skills. Abayadeera and Watty (2016) examined the gap between accounting Sri Lankan undergraduates and practitioners' perceptions on the importance of generic skills to career success. Two hundred and forty-seven people responded, and these responses were analysed and extracted using factor analysis.

Five factors were ranked in the following order: management skills and work experience; intellectual skills and personal qualities; analytical skills; and communication skills and technical skills.

In Wally-Dima (2011) study, 12 lecturers, 30 accounting students and auditing firms were asked to rank desirable skills. Business decision-making, leadership, computer technology, decision-making, interpersonal skills and critical thinking were ranked highly, while risk analysis and oral communication were considered less important. A study conducted in Malaysia produced the following ranking: critical thinking, risk analysis and oral communication (Ali et al. (2016). However, the authors noted that there were differences in rankings, with some professionals ranking risk analysis as the third most important while others ranked it eighth.

Siriwardane and Durden (2014) investigated professional accountants' written and oral communication skills. The authors critically analysed 19 studies published between 1972 and 2012. Oral communication skills were more highly ranked by professional accountants than written communication skills. Educators and professionals held different views on which are more important. Educators stressed the importance of formal communication, which incorporates both oral and written communication skills, while practitioners focused on the importance of informal communication.

Communication skills are among the most important criteria for selecting accounting employees (Ahadiat and Martin, 2016). Riley and Simons (2016) study verified that it is of vital importance that accounting educators incorporate written communication skills in the accounting curriculum.

Webb and Chaffer (2016) conducted a study in the UK using a sample of 884 graduates. Six factors were ranked as follows: personal, leadership, communication, appreciative, learning and lastly, written communication. The results showed that oral communication skills, the ability to adopt a comprehensive and global vision of an organisation, resilience and ethical awareness could be improved.

Another study in the UK (Hegazy et al. (2017) interviewed 262 heads of forensic departments. All the skills that were listed were considered essential by more than 90% of the respondents. However, the forensic accountants identified communication skills, analytical skills, problem-solving skills and investigative skills as more critical.

## 5.16 Data Analysis and Interpretation of Findings

### 5.16.1 Assessment of professional skills

To measure the respondents' financial professional skills, the researcher transformed the five Likert scale questions on "professional skills" into a binary variable. This enabled the researcher to easily quantify the means scores into two categories of "Poor Professional Skill" = (1 Strongly disagree + 2 Disagree) and "Good Professional Skill" = (3 Agree + 4 Strongly Agree). It also assisted the researcher in accurately gauging the respondents' professional skills.

### 5.16.2 Professional Skills – Cronbach Alpha Reliability

**Table 5. 1 Professional Skills Cronbach Alpha**

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items		N of Items
.321	.372		16
<b>Scale Statistics</b>			
Mean	Variance	Standard Deviation	N of Items
<b>PROFESSIONAL SKILLS: RELIABILITY STATISTICS</b>			
.734	.754		5
16.87	6.897	2.626	5
<b>RELIABILITY STATISTICS OF ALL ITEMS</b>			
.727	.743		57
163.55	150.048	12.249	57

Source: Compiled by the researcher via SPSS

### **Objective Five: Professional skills of Accounting students**

To establish the level of professional skills among accounting students at universities in KwaZulu-Natal.

H5: Accounting students at universities in KwaZulu-Natal are professionally skilled.

H5<sub>0</sub>: Accounting students at universities in KwaZulu-Natal are not professionally skilled.

#### Respondents' Professional skills assessment

The questions used in the research were based on the literature review. Four questions were mainly based on professional skills and one on personal attributes.

**Table 5. 2 Breakdown of Professional Skills questions**

<b>Question number</b>	<b>Question coverage</b>
Question 1	Lifelong Learning
Question 2	Communication skills and Professional Judgement
Question 3	Information Technology Skills
Question 4	Critical Thinking Skills
Question 5	Problem Solving Skills

Source: Extracted from the researcher's questionnaire

The descriptive analysis conducted on each of the five items suggested that most of the respondents have good professional skills, with 72.1%, 90.5%, 92.4%, 93.9%, and 93.2%, respectively. See **Table 5.3** below for a detail representation of the results.

**Table 5. 3 Respondents' professional skills**

<b>Professional Skills (PS) items</b>	<b>Good PS</b>	<b>Poor PS</b>	<b>M</b>	<b>SD</b>
Lifelong Learning	1141 (72.1%)	441 (27.9%)	1.27	.448
Communication skills and Professional Judgement	1431 (90.5%)	151 (9.5%)	1.09	.293
Information Technology Skills	1462 (92.4%)	120 (7.6%)	1.07	.264
Critical Thinking Skills	1485 (93.9%)	97 (6.1%)	1.06	.239
Problem Solving Skills	1474 (93.2%)	108 (6.8%)	1.06	.252
<b>Total scores</b>	<b>1506 (95.2%)</b>	<b>76 (4.8%)</b>	<b>1.04</b>	<b>.213</b>

Source: Compiled by the researcher via SPSS

In addition, with M= 5.57 and SD= 0.966, the overall analysis conducted on all five items of professional skills revealed that most of the respondents (n=1506; 95.2%) have good professional skills as opposed to the (n=76; 4.8%) of the respondents who have poor professional skills.

### **Professional skills versus institutions**

A descriptive analysis of the respondents' institutions and professional skills was also estimated. The results revealed that of the 864 respondents from UKZN, the majority have good professional skills, with (n=829; 95.9%). Similarly, the results showed that most of the 404 and 314 respondents from DUT and MUT have good professional skills, with (n=372; 92.1%) and (n=305; 97.1%), respectively.

**Table 5. 4 Respondents' professional skills versus institutions**

<b>Professional Skills (PS)</b>			
<b>Institutions</b>	<i>Good PS</i>	<i>Poor PS</i>	<i>Total</i>

UKZN	829 (95.9%)	35 (4.1%)	864
DUT	372 (92.1%)	32 (7.9%)	404
MUT	305 (97.1%)	9 (2.9%)	314
<b>Total</b>	<b>1506 (95.2%)</b>	<b>76 (4.8%)</b>	<b>1582</b>

Source: Compiled by the researcher via SPSS

Based on the results of the analysis in **Table 5.4** above, it can be deduced that more than 95% of the respondents from UKZN have good professional skills, over 92% of the respondents from DUT have good professional skills, and more than 97% of the respondents from MUT have good professional skills. Hence, it can be concluded that respondents from MUT exhibit the highest level of professional skills.

**Table 5. 5 Professional Skills vs University of the respondents**

**Respondents' Campus**

<b>Professional Skills</b>	<b>UKZN</b>	<b>DUT</b>	<b>MUT</b>	<b>Total</b>
Good professional skills	829 (55.0%)	372 (24.7%)	305 (20.3%)	<b>1506</b>
Poor professional skills	35 (46.1%)	32 (42.1%)	9 (11.8%)	<b>76</b>
<b>Total</b>	<b>864 (54.6%)</b>	<b>404 (25.5%)</b>	<b>314 (19.8%)</b>	<b>1582</b>

Source: Compiled by the researcher via SPSS

The results also revealed that of the 404 and 314 respondents at DUT and MUT, most of those staying on campus have good professional skills, with (n=372; 24.7%) and (n=305; 20.3%), respectively.

**Table 5. 6 Professional Skills vs Respondents' Level of Study**

**Respondents' Level of Study**

<b>Professional Skills</b>	<b>1<sup>st</sup> Year non</b>	<b>1<sup>st</sup> Year main</b>	<b>2<sup>nd</sup> Year</b>	<b>3<sup>rd</sup> Year</b>	<b>Total</b>
Good professional skills	167 (11.1%)	550 (36.5%)	459 (30.5%)	330 (21.9%)	<b>1506</b>
Poor professional skills	13 (17.1%)	29 (38.2%)	11 (14.5%)	23 (30.3%)	<b>76</b>
<b>Total</b>	<b>180 (11.4%)</b>	<b>579 (36.6%)</b>	<b>470 (29.7%)</b>	<b>353 (22.3%)</b>	<b>1582</b>

Source: Compiled by the researcher via SPSS

Based on the results of analysis in **Table 5.6** above, it can be deduced that of the 1 506 respondents, (n=550; 36.5%) 1<sup>st</sup> year accounting students have the highest percentage of good professional skills and (n=167; 11.1%) 1<sup>st</sup> year non-accounting students have the lowest percentage of good professional skills.

**Table 5. 7 Professional Skills vs Respondents' Year of Study**

**Respondents' Year of Study**

<b>Professional Skills</b>	<b>1<sup>st</sup> Year</b>	<b>2<sup>nd</sup> Year</b>	<b>3<sup>rd</sup> Year</b>	<b>4<sup>th</sup> Year</b>	<b>Total</b>
Good professional skills	604 (40.1%)	524 (34.8%)	354 (23.5%)	24 (1.6%)	<b>1506</b>
Poor professional skills	32 (42.1%)	16 (21.1%)	26 (34.2%)	2 (2.6%)	<b>76</b>
<b>Total</b>	<b>636 (40.2%)</b>	<b>540 (34.1%)</b>	<b>380 (24.0%)</b>	<b>26 (1.6%)</b>	<b>1582</b>

Source: Compiled by the researcher via SPSS

Based on the results of analysis in **Table 5.7** above, it can be deduced that of the 1 506 respondents, (n=604; 40.1%) 1<sup>st</sup> year accounting students have the highest percentage of

good professional skills and (n=2; 2.6%) 4<sup>th</sup> year of study have the lowest percentage of good professional skills.

**Objective Six: The impact of Socio-demographic characteristics on professional skills**

To determine the factors that influence professional skills among the accounting students at universities in KwaZulu-Natal.

H6: The professional skills of accounting students at universities in KwaZulu-Natal are influenced by several factors.

H6<sub>0</sub>: The professional skills of accounting students at universities in KwaZulu-Natal are not influenced by several factors.

**Table 5. 8 Lifelong learning (Skills –Q1)**

**Pearson Chi-Square test**

Descriptive	Educational Level		Racial identity		Year of Study		Age Group	
	Value	Asymptotic Significance (2-sided)						
<b>Pearson Chi-Square</b>	31.653 <sup>a</sup>	.000	42.032 <sup>a</sup>	.000	33.857 <sup>a</sup>	.000	26.751 <sup>a</sup>	.000
<b>Likelihood Ratio</b>	31.317	.000	46.371	.000	33.317	.000	26.534	.000
<b>Linear-by-Linear Association</b>	.645	.422	37.758	.000	.006	.939	21.242	.000
<b>N of Valid Cases</b>	1582		1582		1582		1582	

Source: Compiled by the researcher via SPSS

*Lifelong learning (Skills –Q1) Pearson Chi-Square test*

This analysis indicated a strong association between students' educational level, racial identity, year of study and age group, and lifelong learning as determined by the Pearson Chi - square test and the likelihood test ( $X^2 = 31.653$ ,  $p = 0.000$ ,  $X^2 = 42.032$ ,  $p = 0.000$ ,  $X^2 = 33.857$ ,  $p = 0.000$ ,  $X^2 = 26.751$ ,  $p = 0.000$ ; likelihood ratio =  $31.317$ ,  $p = 0.000$ ,  $46.371$ ,  $p = 0.000$ ,  $33.317$ ,  $p = 0.000$  and  $26.534$ ,  $p = 0.000$ ), respectively, all with a p-value set at  $< 0.05$ .

**Table 5. 9 LIFELONG LEARNING (ANOVA)**

Educational Level		Racial identity		Year of Study		Age Group	
F	Sig.	F	Sig.	F	Sig.	F	Sig.
10.739	.000	10.761	.000	11.503	.000	1.345	6.781

Source: Compiled by the researcher via SPSS

As determined by one-way ANOVA, the results in Table 5.9 indicate a strong association between educational level, racial identity and year of study and lifelong learning, with all having a  $p < 0.05$ . Age group shows no strong association with lifelong learning as the  $p > 0.05$ .

*Educational level vs lifelong learning*

A one-way between groups ANOVA was performed to compare the impact of educational level on lifelong learning. Educational levels were divided into four groups based on the subject major and levels as follows (Group 1: Accounting 1<sup>st</sup> year non-major; Group 2: Accounting 1<sup>st</sup> major; Group 3: Accounting 2<sup>nd</sup> major and Group 4: Accounting 3<sup>rd</sup> major). The outcome variable was not found to be normally distributed and variances were not equal based on the results of Levene's test ( $F (3, 1578) = 38.007$ ,  $p = .000$ ). Levene's test indicates that the null hypothesis is rejected as the population variances are not equal.

There was a statistical difference in lifelong learning scores and educational levels as follows ( $F(3, 1578) = 10.73, p = .000$ ). Post-hoc comparison using the Tukey HSD test indicated that the mean score Group 1 ( $M = 1.33, SD = .473, 95\%CI = 1.26$ ) and Group 3 ( $M = 1.36, SD = .481, 95\%CI = 1.32$ ), respectively similar but different to Group 2 ( $M = 1.23, SD = .422, 95\%CI = 1.20$ ) and Group 4 ( $M = 1.22, SD = .414, 95\%CI = 1.17$ ), respectively.

#### *Racial Identity vs lifelong learning*

A one-way between groups ANOVA was performed to compare the impact of racial identity on lifelong learning. Racial identity was divided into five groups (Group 1: Whites; Group 2: Blacks-RSA; Group 3: Coloureds; Group 4: Indians/Asians and Group 5: Blacks-non-RSA). The outcome variable was not found to be normally distributed and variances were not equal based up the results of Levene's test ( $F(4, 1577) = 66.885, p = .000$ ). Levene's test indicates that the null hypothesis is rejected as the population variances are not equal.

There was a statistical difference in lifelong learning scores and racial identity as follows ( $F(4, 1577) = 10.76, p = .000$ ). Post-hoc comparison using the Tukey HSD test indicated that the mean score Group 1 ( $M = 1.22, SD = .422, 95\%CI = 1.04$ ), Group 2 ( $M = 1.32, SD = .467, 95\%CI = 1.29$ ), Group 3 ( $M = 1.28, SD = .457, 95\%CI = 1.12$ ), Group 4 ( $M = 1.15, SD = .353, 95\%CI = 1.11$ ) and Group 5 ( $M = 1.09, SD = .302, 95\%CI = .89$ ).

#### *Year of study vs lifelong learning*

A one-way between groups ANOVA was performed to compare the impact of the year of study on lifelong learning. Year of study was divided into four groups (Group 1: 1<sup>st</sup> year of study; Group 2: 2<sup>nd</sup> year of study; Group 3: 3<sup>rd</sup> year of study and Group 4: 4<sup>th</sup> year of study). The outcome variable was not found to be normally distributed and variances were not equal based on the results of Levene's test ( $F(3, 1578) = 38.576, p = .000$ ). Levene's test indicates that the null hypothesis is rejected as the population variances are not equal.

There was a statistical difference in lifelong learning scores and year of study as follows ( $F(3, 1578) = 11.503, p = .000$ ). Post-hoc comparison using the Tukey HSD test indicated that the mean score Group 1 ( $M = 1.24, SD = .427, 95\%CI = 1.21$ ) and Group 3 ( $M = 1.23, SD = .419, 95\%CI = 1.18$ ), respectively similar but different to Group 2 ( $M = 1.37, SD = .483, 95\%CI = 1.33$ ) and Group 4 ( $M = 1.15, SD = .368, 95\%CI = 1.01$ ) completely different to Groups 1 or 3.

### Communications Skills (Professional Skills – Q2)

#### *Pearson Chi-Square test*

Table 5.10 below indicates that there is a strong association between the educational level of students and year of study, with communication skills as determined by the Pearson Chi-square test and the likelihood test ( $X^2 = 17.186, p = 0.001$  and  $X^2 = 18.298, p = 0.000$ ; likelihood ratio = 17.491,  $p = 0.001$  and 19.319,  $p = 0.000$ ) respectively, all with a p-value set at  $< 0.05$ .

**Table 5.10 Pearson Chi-Square test – Communication Skills**

	Educational Level		Year of Study	
	Value	Asymptotic Significance (2-sided)	Value	Asymptotic Significance (2-sided)
<b>Pearson Chi-Square</b>	17.186 <sup>a</sup>	.001	18.298 <sup>a</sup>	.000
<b>Likelihood Ratio</b>	17.491	.001	19.319	.000
<b>Linear-by-Linear Association</b>	3.580	.058	.002	.961
<b>N of Valid Cases</b>	1582		1582	

Source: Compiled by the researcher via SPSS

The results in Table 5.11 below indicate that, as determined by one-way ANOVA, there is a strong association between educational level and year of study, and communication skills; all have a  $p < 0.05$ .

**Table 5. 11 ANOVA – Communication Skills**

Educational Level		Year of Study	
F	Sig.	F	Sig.
5.777	.001	6.155	.000

Source: Compiled by the researcher via SPSS

### 5.16 Educational level and Communication Skills

A one-way between groups ANOVA was performed to compare the impact of educational level on communication skills. Educational levels were divided into four groups based on subject major and levels (Group 1: Accounting 1<sup>st</sup> year non-major; Group 2: Accounting 1<sup>st</sup> major; Group 3: Accounting 2<sup>nd</sup> major and Group 4: Accounting 3<sup>rd</sup> major). The outcome variable was not found to be normally distributed and variances were not equal based on the results of Levene's test ( $F(3, 1578) = 38.007, p = .000$ ). Levene's test indicates that the null hypothesis is rejected as the population variances are not equal.

There was a statistical difference in communication skills scores and educational level as follows ( $F(3, 1578) = 5.777, p = .000$ ). Post-hoc comparison using the Tukey HSD test indicated that the mean score Group 1 ( $M = 1.16, SD = .363, 95\%CI = 1.10$ ), Group 2 ( $M = 1.10, SD = .303, 95\%CI = 1.08$ ), Group 3 ( $M = 1.06, SD = .229, 95\%CI = 1.03$ ) and Group 4 ( $M = 1.11, SD = .310, 95\%CI = 1.08$ ).

### 5.17 Year of study and Communication Skills

A one-way between groups ANOVA was performed to compare the impact of the year of study on communication skills. Year of study was divided into four groups based on years spent on campus (Group 1: 1<sup>st</sup> year of study; Group 2: 2<sup>nd</sup> year of study; Group 3: 3<sup>rd</sup> year of study and Group 4: 4<sup>th</sup> year of study). The outcome variable was not found to be normally distributed and variances were not equal based on the results of Levene's test ( $F(3, 1578) = 26.062, p = .000$ ). Levene's test indicates that the null hypothesis is rejected as the population variances are not equal.

There was a statistical difference in communication skills scores and year of study as follows ( $F(3, 1578) = 6.155, p = .000$ ). Post-hoc comparison using the Tukey HSD test indicated that the mean score Group 1 ( $M = 1.11, SD = .319, 95\%CI = 1.09$ ) and Group 3 ( $M = 1.12, SD = .320, 95\%CI = 1.08$ ) respectively similar but different to Group 2 ( $M = 1.05, SD = .226, 95\%CI = 1.03$ ) and Group 4 ( $M = 1.19, SD = .402, 95\%CI = 1.03$ ) completely different to Group 1 or 3.

### ICT Skills (Professional Skills – Q3)

#### Pearson Chi-Square test

The Pearson Chi-Square results in Table 5.13 indicate a strong association between the educational level of students and year of study, and ICT skills as determined by the Pearson Chi-square test and the likelihood test ( $X^2 = 18.359, p = 0.000$ ; likelihood ratio = 17.769,  $p = 0.000$ ) and the p-value set at  $< 0.05$ .

**Table 5. 12 ICT - Pearson Chi-Square test**

Descriptive	Value	Asymptotic Significance (2-sided)
<b>Pearson Chi-Square</b>	18.359 <sup>a</sup>	.000
<b>Likelihood Ratio</b>	17.769	.000
<b>Linear-by-Linear Association</b>	3.419	.064
<b>N of Valid Cases</b>	1582	

Source: Compiled by the researcher via SPSS

The one-way ANOVA results as per Table 5.13 below, indicate that there is a strong association between educational level and with ICT skills; all have a  $p < 0.05$ .

**Table 5. 13 Information Communications Technology (ICT) – ANOVA**

**ANOVA**  
**Educational Level**

F	Sig.
6.176	.000

Source: Compiled by the researcher via SPSS

### 5.18 Educational level and ICT Skills

A one-way between groups ANOVA was performed to compare the impact of educational level on ICT skills. Educational levels were divided into four groups based on subject major and levels (Group 1: Accounting 1<sup>st</sup> year non-major; Group 2: Accounting 1<sup>st</sup> major; Group 3: Accounting 2<sup>nd</sup> major and Group 4: Accounting 3<sup>rd</sup> major). The outcome variable was not found to be normally distributed and variances were not equal based on the results of Levene's test ( $F(3, 1578) = 24.466, p = .000$ ). Levene's test indicates that the null hypothesis is rejected as the population variances are not equal.

There was a statistical difference in ICT skills scores and educational levels as follows ( $F(3, 1578) = 6.176, p = .000$ ). Post-hoc comparison using the Tukey HSD test indicated that the mean score Group 1 ( $M = 1.14, SD = .347, 95\%CI = 1.09$ ), Group 2 ( $M = 1.08, SD = .265, 95\%CI = 1.02$ ), Group 3 ( $M = 1.04, SD = .202, 95\%CI = 1.02$ ) and Group 4 ( $M = 1.09, SD = .283, 95\%CI = 1.06$ ).

## Critical Thinking Skills (Professional Skills – Q4)

### Pearson Chi-Square test

**Table 5. 14 Critical Thinking Skills – Pearson Chi-Square test**

	Educational Level		Year of Study	
	Value	Asymptotic Significance (2-sided)	Value	Asymptotic Significance (2-sided)
<b>Descriptive</b>				
<b>Pearson Chi-Square</b>	11.009 <sup>a</sup>	.012	5.351 <sup>a</sup>	.148
<b>Likelihood Ratio</b>	10.590	.014	5.166	.160
<b>Linear-by-Linear Association</b>	1.763	.184	1.149	.284
<b>N of Valid Cases</b>	1582		1582	

Source: Compiled by the researcher via SPSS

The Pearson Chi-Square results indicated a very strong association between the educational level of students and critical thinking as determined by the Pearson Chi-square test and the likelihood test ( $X^2 = 11.009$ ,  $p = 0.012$ ; likelihood ratio = 10.590,  $p = 0.014$ ) with p-value set at  $< 0.05$  and no strong association between year of study and critical thinking skills with a p-value set at  $> 0.05$ .

**Table 5. 15 Critical Thinking Skills – ANOVA**

Educational Level		Year of Study	
F	Sig.	F	Sig.
3.777	.012	1.785	.148

Source: Compiled by the researcher via SPSS

As determined by one-way ANOVA, there is also a strong association between educational levels and year of study, and communication skills; all have a  $p < 0.05$ .

### **5.19 Educational level and Critical thinking skills**

A one-way between groups ANOVA was performed to compare the impact of educational level on critical thinking skills. Educational levels were divided into four groups based on subject major and levels (Group 1: Accounting 1<sup>st</sup> year non-major; Group 2: Accounting 1<sup>st</sup> major; Group 3: Accounting 2<sup>nd</sup> major and Group 4: Accounting 3<sup>rd</sup> major). The outcome variable was not found to be normally distributed and variances were not equal based on the results of Levene's test ( $F(3, 1578) = 14.587, p = .000$ ). Levene's test indicates that the null hypothesis is rejected as the population variances are not equal.

There was a statistical difference in communication skills scores and educational levels as follows ( $F(3, 1578) = 3.686, p = .000$ ). Post-hoc comparison using the Tukey HSD test indicated that the mean score Group 1 ( $M = 1.11, SD = .308, 95\%CI = 1.06$ ), Group 2 ( $M = 1.06, SD = .239, 95\%CI = 1.04$ ), Group 3 ( $M = 1.04, SD = .192, 95\%CI = 1.02$ ) and Group 4 ( $M = 1.07, SD = .257, 95\%CI = 1.04$ ).

### **Problem Solving Skills (Professional Skills – Q5)**

#### **Pearson Chi-Square test and One-way ANOVA**

The Pearson Chi-Square and ANOVA results showed that there are no strong relationships between the socio-demographic variables with either Pearson Chi-Square or one-way ANOVA.

### **Objective Seven: The impact of SAICA accreditation on professional skills**

To evaluate the differences in professional skills between SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT).

H7: There are differences between the professional skills of accounting students in SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT).

H7<sub>0</sub>: There are no differences between the professional skills of accounting students in SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT).

Multinomial logistic regression was used to model the relationship between the predictor (SAICA accreditation) – that is respondents' institutions – and respondents' professional skills. The addition of the predictor to the model that contained only the intercept statistically improved the goodness of fit between the model and the data,  $X^2(2, N = 1582) = 11.361$ ; Nagelkerke  $R^2 = 0.007$ ; Cox and Snell  $R^2 = 0.008$ , with  $p = 0.003$ . The p-value here means that the regression model used to determine the impact of SAICA accreditation on professional skills was significantly fitting for the analysis. Hence, there is a statistically significant relationship between the predicting variable (SAICA accreditation) and the outcome variable (professional skills).

Furthermore, the goodness of fit was explored by computing Hosmer-Lemeshow tests, and the test was not statistically significant, which means that the model is fitting. Therefore, respondents' institutions were used in this study to predict the difference in the professional skills of accounting students. As suggested in **Table 5.16** below, a statistically significant unique contribution was made by the predictor based on "good professional skills".

In estimating the degree of difference between respondents' institutions (SAICA accreditation) and professional skills, it was found that the coefficients from DUT respondents were statistically significant. With a  $p = 0.005$ , the (B) coefficient for "good professional skills" was  $-0.764$ , suggesting that students at DUT are 0.764 times less likely to have good professional skills compared to students from UKZN.

However, in terms of good professional skills for MUT students, the coefficients were not statistically significant. Therefore, with a significance value of  $p = >0.05$ , the results suggest that, in terms of the outcome (professional skills), there is no statistically significant difference between SAICA accredited institutions and non-SAICA accredited institutions.

**Table 5. 16 Multinomial Logistic Regression - DUT and MUT**

**Parameters Estimates**

Institutions		B	Std. Error	Wald	Df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
DUT	Intercept	-.090	.245	.134	1	.714			
	Good professional skills	-.712	.252	7.950	1	.005*	.491	.299	.805
	Poor professional skills	0 <sup>b</sup>	.	.	0	.	.	.	.
MUT	Intercept	-1.358	.374	13.205	1	.000			
	Good professional skills	.358	.3803	.890	1	.345	1.431	.680	3.011
	Poor professional skills	0 <sup>b</sup>	.	.	0	.	.	.	.
a. The reference category is UKZN. b. This parameter is set to zero because it is redundant.									

Source: Compiled by the researcher via SPSS

## *Socio-economic factors versus professional skills*

### **Correlation**

The p-value set at  $<0.05$  suggested that there is strong statistical significance between the respondents' level of study and professional skills as determined by the Pearson Chi-square test and Likelihood ratio test ( $X^2 = 10.853$ ,  $p = 0.013$ ; Likelihood Ratio = 11.737,  $p = 0.008$ ). This implies that the level of study influences the respondents' professional skills in accounting. The analysis also suggested that there is strong statistical significance between the respondents' institutions and professional skills in accounting, with ( $X^2 = 12.231$ ,  $p = 0.002$ ; Likelihood Ratio = 11.361,  $p = 0.003$ ). This implies that the respondents' institutions have an impact on the professional skills of accounting students.

Likewise, the Pearson Chi-Square test and Likelihood ratio test suggested that there is a strong relationship between the respondents' year of study and professional skills, with ( $X^2 = 8.000$ ,  $p = 0.046$ ; Likelihood Ratio = 8.152,  $p = 0.043$ ). This implies that the respondents' year of study also impacts on their professional skills. In addition, the correlation between financial inclusion and professional skills suggested that there is a strong relationship between the two variables as determined by the Pearson Chi-square test and Likelihood ratio test ( $X^2 = 8.741$ ,  $p = 0.003$ ; Likelihood Ratio = 7.377,  $p = 0.007$ ). This infers that financial inclusion influences the professional skills of accounting students.

### **Regression**

A bivariate regression was used to establish the relationship between the respondents' socio-economic characteristics and professional skills. The aim was to examine how well the respondents' socio-economic characteristics could predict their professional skills. A scatterplot of the analysis that demonstrates the relationship between the respondents' socio-economic characteristics and professional skills suggested that it was negative and linear and did not reveal any bivariate outliers. The variables used in this model include the respondents' campus, level of study, year of study, and financial inclusion.

The correlation between the predictive variables (respondents' socio-economic characteristics) and professional skills was statistically significant, with  $r(1578) = .228$ ,  $p = .000$ . Moreover, as determined by an ANOVA test in the regression analysis, the results suggested that the regression model works better with four predictors (respondents' socio-economic characteristics) than simply predicting using the mean, with  $F = 21.605$ ;  $p = .000$ . The p-value obtained is an indication that the regression model used – using the four predictors – was significantly more fitting than predictions without the four predictors in the model. Hence, there is a statistically significant relationship between the predicting variables (respondents' socio-economic characteristics) and the outcome variable (professional skills). The respondents' socio-economic characteristics were thus used to predict professional skills among accounting students.

Therefore, the regression equation for predicting the financial professional skills of accounting students from the respondents' socio-economic characteristics was  $\hat{y} = 4.982 - (0.249 + 0.249 + 0.189 + 0.222)x$ . The  $r^2$  for this equation was .052; that is 5.2% of the variance in professional skills was predictable from the respondents' socio-economic characteristics. This suggests that the coefficients for level of study, year of study, respondents' institution, and financial inclusion were statistically significant. It is an indication that the respondents' level of study, year of study, and institution, and financial inclusion influence their professional skills. In other words, the respondents' level of study, year of study, respondents' institution, and financial inclusion impact on their financial professional skills, with a significant value of 0.000, 0.000, 0.000, and 0.022, respectively.

**Table 5. 17 Regression model for professional skills**

Coefficients							
Model	Unstandardized Coefficients		Standardised Coefficient Beta	T	Sig.	95,0% Confidence interval for B	
	B	Std. Error				Lower Bound	Upper Bound
<b>(Constant)</b>	4.982	.124		40.200	.000	4.739	5.225
<b>Level of Study</b>	-.249	.044	-.245	-5.656	.000*	-.335	-.163
<b>Campus</b>	.249	.031	-.204	7.935	.000*	.188	.311
<b>Year of Study</b>	.189	.049	.163	3.838	.000*	.093	.286
<b>Financial inclusion</b>	.222	.097	.056	2.293	.022*	.032	.413

*Dependent Variable: Financial Professional Skills*

\*= $p < 0.05$

## 5.20 DISCUSSION AND IMPLICATIONS OF THE RESEARCH FINDINGS

This section discusses the research findings. The results of the tested hypotheses are discussed in detail, vis-à-vis the corresponding null hypotheses as well as the findings from existing studies covered in the literature review.

### Hypothesis Five

The fifth hypothesis, and its corresponding null hypothesis considered the professional skills of accounting students in universities within KwaZulu-Natal. The hypothesis for testing was:

*H5: Accounting students at universities in KwaZulu-Natal are professionally skilled.*

*H5<sub>0</sub>: Accounting students at universities in KwaZulu-Natal are not professionally skilled.*

To determine this hypothesis, the relevant collected data was analysed in line with the corresponding research objective and research question and the results were compared with the relevant literature.

**Research Objective Five:** This research objective sought to establish the levels of professional skills (Lifelong Learning, Communication Skills and Professional Judgement, Information Technology Skills, Critical Thinking Skills and Problem-Solving Skills) among accounting students at universities in KwaZulu-Natal.

**Research Question Five:** *What are the levels of professional skills (Lifelong Learning, Communication Skills and Professional Judgement, Information Technology Skills, Critical Thinking Skills and Problem-Solving Skills) among accounting students at universities in KwaZulu-Natal – in aggregate and component terms?*

#### Assessment of respondents' professional skills

The descriptive analysis conducted on each of the five items suggested that most of the respondents have good professional skills, with 72.1%, 90.5%, 92.4%, 93.9%, and 93.2%, respectively. In addition, with  $M = 5.57$  and  $SD = 0.966$ , the overall analysis conducted on all five items of professional skills revealed that most of the respondents ( $n = 1506$ ; 95.2%) have good professional skills as opposed to the ( $n = 76$ ; 4.8%) of the respondents who have poor professional skills.

The findings of this study are similar to those of previous studies (Brooks et al., 2016; Barac and Du Plessis, 2014; Sithole, 2015; Thompson and Washington, 2015). Smith and Szymanski (2013) argue that poor thinking skills can be traced back to high school level where students are often encouraged to memorise. Adler and Milne (1997) concluded that oral communication skills are enhanced by teamwork, while Maelah et al. (2012) concurred, but added that group work, which requires teamwork, also enhances oral communication. Van der Merwe (2013) also noted that teamwork improves verbal and written communication skills.

Brooks et al. (2016) found that students had a strong positive orientation towards the use of technological devices. The study also found that female and first-generation students showed higher levels of engagement, enrichment and efficacy.

Although, Tempone et al. (2012) did not survey accounting students, their results are relevant as they emphasise the importance of communication skills. This survey of Australian employers and accounting professional bodies found that communication, teamwork and self-managed skills remain relevant. Tan and Laswad (2016) agreed with previous studies that found that teamwork enhances communication skills, which will immensely benefit potential employers. Milliron (2012) concluded that communication and analytical skills are more important than technical skills, which are often taught at universities/colleges.

Barac and Du Plessis (2014) found that the ICT skills of auditing students have improved due to the use of Computer Assisted Audit Techniques (CAATS) in their technical training. Sithole (2015) claimed that university students are technologically ready. The study surveyed 100 students from the University of Swaziland, who had registered for an internship. It concluded that accounting students are ready to cope with technological knowledge and able to demonstrate it in the corporate world.

Jones (2011) found that, when students answered structured questions, there was a significant difference in their problem-solving skills compared to when they responded to non-structured questions. Thompson and Washington (2015) analysed CPA exam results from 2012 to 2013, and concluded that the improvement in the results was due to improved problem-solving skills. Birgili (2015) used Problem Based Learning (PBL) to test students' problem-solving skills and that they were able to solve problems, especially when a PBL model is used.

However, the findings of some studies differ from those of the current study (Kgapola, 2015; Spraakman et al., 2015; Kunz, 2016; Ramachandran Rackliffe and Ragland, 2016; Odendaal, 2015a).

Kgapola (2015) conducted a study among 146 accounting professionals in South Africa and found that ICT skills remain a concern as the mean score was 2.80 compared to other skills where the mean score was 4.74. These results were confirmed by Kunz (2016), whose study among first-year accounting trainees suggested that IT skills levels remain very low. This study examined the expectations of potential employers, and what the trainees perceived their knowledge to be. A gap of 25.4% was identified. Spraakman et al. (2015) surveyed Chief Financial Officers and their subordinates in large firms and found that there is an intermediate level of proficiency in the use of ICT such as Microsoft tools; this confirms the results of previous studies that highlighted a lack of/poor ICT skills. Ramachandran Rackliffe and Ragland (2016) agreed with Spraakman et al. (2015) that the use of Microsoft tools like Microsoft excel remains a challenge. Odendaal (2015b) found that 70% of the students surveyed had the ability to solve accounting problems relating to a conceptual framework, especially if the students were familiar with the problem. This could suggest that accounting students are unable to solve problems if they are not familiar with them.

### **Hypothesis Six**

The sixth hypothesis and its corresponding null hypothesis considered several factors that influence the professional skills of accounting students in universities within KwaZulu-Natal. The hypothesis for testing was:

*H6: The professional skills of accounting students at universities in KwaZulu-Natal are influenced by several factors.*

*H6<sub>0</sub>: The professional skills of accounting students at universities in KwaZulu-Natal are not influenced by several factors.*

To determine this hypothesis, the relevant collected data was analysed in line with the corresponding research objective and research question. The results were also compared with the relevant literature.

**Research Objective Six:** This research objective sought to determine the factors that influence professional skills among accounting students at universities in KwaZulu-Natal.

**Research Question Six:** *What factors influence the professional skills of accounting students at universities in KwaZulu-Natal?*

*Assessment of respondents' professional skills vs Socio-demographic factors*

This indicated a strong association between the students' educational level, race, year of study and age group, and lifelong learning, as determined by the Pearson Chi - square test and the likelihood test ( $X^2 = 31.653$ ,  $p = 0.000$ ,  $X^2 = 42.032$ ,  $p = 0.000$ ,  $X^2 = 33.857$ ,  $p = 0.000$ ,  $X^2 = 26.751$ ,  $p = 0.000$ ; likelihood ratio =  $31.317$ ,  $p = 0.000$ ,  $46.371$ ,  $p = 0.000$ ,  $33.317$ ,  $p = 0.000$  and  $26.534$ ,  $p = 0.000$ ), respectively, all with a p-value set at  $< 0.05$ .

Müller et al. (2015) found that students confront challenges in accessing lifelong learning.

The Pearson Chi-square test and the likelihood test indicated a strong association between students' educational level and year of study, and communication skills ( $X^2 = 17.186$ ,  $p = 0.001$  and  $X^2 = 18.298$ ,  $p = 0.000$ ; likelihood ratio =  $17.491$ ,  $p = 0.001$  and  $19.319$ ,  $p = 0.000$ ), respectively, all with a p-value set at  $< 0.05$ .

This research study also indicated a strong association between the educational levels of students and year of study, and ICT skills as determined by the Pearson Chi-square test and the likelihood test ( $X^2 = 18.359$ ,  $p = 0.000$ ; likelihood ratio =  $17.769$ ,  $p = 0.000$ ) and the p-value set at  $< 0.05$ .

Spraakman et al. (2015) survey of Chief Financial Officers and their subordinates in large firms found that there is an intermediate level of proficiency in the use of ICT such as Microsoft tools; this confirms the results of previous studies that highlighted a lack of/poor ICT skills. Ramachandran Rackliffe and Ragland (2016) agreed with Spraaakman et al. (2015) that the use of Microsoft tools like Microsoft excel remains a challenge. However, Sithole (2015) findings disagreed with those of previous studies.

His survey of 100 students from the University of Swaziland registered for an internship concluded that accounting students are ready to cope with technological knowledge and able to demonstrate it.

Barac and Du Plessis (2014) found that the ICT skills of auditing students have improved due to the use of Computer Assisted Audit Technique (CAATS). Of note is that some studies have reported that female students have significantly better ICT skills than their male counterparts (Ainley et al., 2016).

The current research study further indicated a strong association between students' educational levels and critical thinking, as determined by the Pearson Chi-square test and the likelihood test ( $X^2 = 11.009$ ,  $p = 0.012$ ; likelihood ratio = 10.590,  $p = 0.014$ ) and a p-value set at  $< 0.05$ . However, there is no strong association between year of study and critical thinking skills with a p-value set at  $> 0.05$ .

This finding is consistent with Sargent and Borthick (2013), who surveyed students with critical thinking skills and concluded that their performance in subsequent courses increased their grade point average (GPA). However, Azizi-Fini et al. (2015) found that first-year and final-year students have low levels of critical thinking skills. This conclusion was reached after analysing the results of 150 students from the University of Medical Science in Kashan. Azizi-Fini et al. (2015) also confirmed that there is no statistical significance between critical thinking skills and demographic characteristics.

Roksa et al. (2017) used data from the Wabash National Study of Liberal Arts Education to investigate racial inequalities between African American and white students in terms of critical thinking skills and found that there are racial differences.

Fuad et al. (2017) examined the critical thinking skills of junior high school students and concluded that:

- That students' critical thinking skills were at a very low level,
- While their skills levels were low, female students performed better than their male counterpart in critical thinking.

## **Hypothesis Seven**

The seventh hypothesis, and its corresponding null hypothesis considered if there are differences in professional skills between SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT) within KwaZulu-Natal. The hypothesis for testing was:

*H7: There are differences between the professional skills of accounting students in SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT).*

*H7<sub>0</sub>: There are no differences between the professional skills of accounting students in SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT).*

To determine this hypothesis, the relevant collected data was analysed in line with the corresponding research objective and research question and the results were compared with the relevant literature.

**Research Objective Seven:** This research objective sought to analyse the difference in professional skills between SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT) in KwaZulu-Natal.

**Research Question Seven:** *What are the differences in professional skills between SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT) in KwaZulu-Natal?*

### *Assessment of respondents' professional skills vs SAICA accreditation*

The p-value here means that the regression model used to determine the impact of SAICA accreditation on professional skills was significantly fitting for the analysis. Hence, there is a statistically significant relationship between the predicting variables (SAICA accreditation) and the outcome variable (professional skills).

In estimating the degree of difference between the respondents' institutions (SAICA accreditation) and professional skills, the results indicated that the coefficients from DUT respondents were statistically significant. With a  $p = 0.005$ , the (B) coefficient for "good professional skills" was  $-0.764$ , suggesting that students in DUT are 0.764 times less likely to have good professional skills as compared to students from UKZN. However, it was found that in terms of good professional skills for MUT students, the coefficients were not statistically significant. Therefore, with a significance value of  $p = >0.05$ , the results suggest that concerning the outcome (professional skills), there is no statistically significant difference between SAICA accredited institutions and non-SAICA accredited institutions.

Happe (2015) asserts that the main aim of accreditation is to ensure that the education provided by institutions of higher education meets acceptable levels of quality. This is in consonance with Matsebetlela (2015) finding that the audit performed by SAICA had a positive influence on how institutions approached teaching and learning outcomes. Areas of improvement included infrastructure for teaching and learning, contracting well experienced postgraduate supervisors from other universities to help supervise postgraduate students and mentor novice supervisors, and the use of technology to enhance the teaching of large classes. Steenkamp and Smit (2015) confirm the importance of the competence framework for maintaining the CA designation in a changing professional world, hence highlighting the importance of accreditation of universities as a prerequisite for professionalisation of the accounting profession in South Africa.

#### **Hypothesis Four**

The fourth hypothesis and its corresponding null hypothesis considered whether professional accreditation will influence the financial capability of accounting students in universities within KwaZulu-Natal. Hence, the hypothesis for testing was:

*H4 Professional accreditation will significantly influence students' financial capability.*

*H4<sub>0</sub>: Professional accreditation will not significantly influence students' financial capability.*

To determine this hypothesis, the relevant collected data was analysed in line with the corresponding research objective and research question and the results were compared with the relevant literature.

**Research Objective Four:** This research objective sought to establish whether professional accreditation will influence the financial capability of accounting students in universities within KwaZulu-Natal.

**Research Question Four:** *Does professional accreditation influence the financial capability of accounting students in universities within KwaZulu-Natal?*

#### *Assessment of respondents' professional skills vs financial capability*

The p-value here means that the regression model used to determine the impact of SAICA accreditation on financial capability was significantly fitting for the analysis. Hence, there is a statistically significant relationship between the predicting variables (SAICA accreditation) and the outcome variable (financial capability).

Furthermore, in estimating the degree of difference between the respondents' institutions (SAICA accreditation) and financial capability, the findings revealed that in terms of high financial capability and moderate financial capability, the coefficients were not statistically significant. Therefore, with a significance value of  $p = >0.05$ , the results suggest that regarding the outcome (financial capability), there is no statistically significant difference between SAICA accredited institutions and non-SAICA accredited institutions.

Wells et al. (2009) study showed that being professionally skilled as an accountant improves professional capability in other practical areas of life as well as practices as an accountant in business. Amongst the highlighted impacts were improvements in analytical proficiencies relating to financial matters. Other studies have found that improvement in technical professional knowledge is positively correlated with being financially capable (Brown et al., 2014; Drever et al., 2015; Xiao and O'Neill, 2016; Xiao and Porto, 2017).

## **5.21 Chapter Summary**

This chapter considered the professional skills of accounting students in KwaZulu-Natal. It commenced with an introduction that conceptualised the phenomenon based on several perspectives, definitions and frameworks. Thereafter, the theoretical framework for this chapter was discussed via a discussion on Robert Katz's skills approach theory, its origins, perspectives and applications in the context of developing the professional skills of accountants. This was followed by a review of the relevant empirical literature across the broad dimensions of the professionalisation of the accounting profession in South Africa, the development of the SAICA competency framework, the mediating role of universities in skills development, the notion of accreditation and the South African accreditation process. Finally, the data collected for this study was analysed thematically and the results were interpreted. The chapter concluded with a discussion on the findings and their implications.

## **CHAPTER SIX**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **6.1 Introduction**

The primary aim of this study was to provide meaningful insight into the Financial Capability, Financial Socialisation and Professional Skills of university students. More specifically, it assessed the Financial Capability, Financial Socialisation and Professional Skills and the socio-demographic characteristics of accounting students studying at universities in KwaZulu-Natal.

This chapter provides a summary of the findings and a summary of the chapters as well as the study's limitations and an overall conclusion. It also discusses the key findings and their implications, the study's contributions to the literature and recommendations based on each objective, as well as suggestions for future research.

#### **6.2 Summary of the findings**

The core aim of this study was to assess the financial capability, financial socialisation and professional skills of accounting students studying at universities in KwaZulu-Natal vis-à-vis selected socio-demographic variables. The socio-demographic variables included the students' gender, age, education, income, race, parents' income, level of study, institution, place of residence, and parents' education. The relationships among financial capability, financial socialisation and professional skills were also assessed. To achieve this core aim, a carefully constructed questionnaire was utilised to evaluate and assess the levels of financial capability, financial socialisation and professional skills of the accounting students. The data was collected via field surveys of 1 582 accounting students registered for the 2018 academic year at three universities (UKZN, MUT and DUT) within KwaZulu-Natal province, South Africa. The data were subsequently analysed descriptively and inferentially for statistical significance using the statistical tools of the

SPSS software version 25 and SPSS Amos. The statistical tools included cross-tabulations, analysis of variance (ANOVA), Chi-square tests, t-tests, Structural Equation Modelling (SEM) - factor analysis, and logistic regressions, to determine the relationship among the variables.

Among the study's main findings were that accounting students are generally highly financially capable with a percentage financial capability score of 89.5%. It was also found that the majority of the students' financial decisions are not influenced by financial socialisation agents such as family, friends and social media. This was based on the overall analysis which revealed that 56.6% of the students are not influenced by financial socialisation agents. Moreover, the overall percentage mean score depicted that accounting students are generally highly professionally skilled with a percentage professional skill score of 95.2%. The research study found that there is a statistically significant relationship between SAICA accreditation and students' professional skills and that certain socio-demographic variables influence the financial capability, financial socialisation and professional skills of accounting students. Likewise, statistically significant relationships were established between the financial socialisation of accounting students and their professional skills, as well as between SAICA accreditation and financial capability. However, no statistical significance was established between the financial socialisation of accounting students and their financial capability.

### **6.3 Summary of each chapter**

#### *Chapter 1 – Introduction and overview*

This chapter provided an introduction and overview of the research inquiry. The chapter began by critically discussing the concepts of financial literacy, financial capability, financial socialisation and professional skills from both a general and South African perspective. The gaps in the existing literature were identified and the problem statement was presented, as well as the research objectives, questions and hypotheses. The scope of the study was outlined and the methodology employed was briefly discussed. The chapter concluded with the structure of the thesis.

## Chapter 2 – *Research Methodology*

This chapter presented an in-depth discussion on the methodology employed to conduct this study and the rationale for the choice of methodology. It discussed the study population and sample, the data collection method and instrument, data analysis, and validity and reliability. The chapter also highlighted the ethical considerations taken into account in conducting this study.

## Chapter 3 - *Financial capability of accounting students*

This chapter considered the financial capability of accounting students in KwaZulu-Natal. It commenced with an introduction that conceptualised this phenomenon based on several perspectives and definitions. This was followed by the theoretical framework of this chapter that was built via a clinical inquiry on the capability approach, its origins, evolution and work in the context of financial capability and decision making. The local and international empirical literature across the broad dimensions of financial knowledge, attitude, behaviour, and numeracy, as well as socio-demographic factors, was reviewed. Thereafter, the data gathered on the financial capability of accounting students at universities in KwaZulu-Natal was presented and analysed and the hypotheses formulated in relation to the financial capability of these accounting students were tested. Finally, the findings and their implications were discussed.

## Chapter 4 - *Financial socialisation of accounting students*

This chapter considered the financial socialisation of accounting students in KwaZulu-Natal. The chapter commenced with an introduction that conceptualised this phenomenon based on several perspectives and definitions. This was followed by a discussion on the theoretical framework of this chapter that was built via a critical inquiry on the social learning theory and social cognitive theory, their origins, evolution and work in the context of financial socialisation and cognitive decision-making. The empirical literature across the broad dimensions of general assessments of financial socialisation, categorical assessments of financial socialisation and socio-demographic factors was reviewed.

Thereafter, the data gathered on the financial socialisation of accounting students at universities in KwaZulu-Natal was presented and analysed and the hypotheses formulated in relation to the financial socialisation of these accounting students were tested. Finally, the findings and their implications were discussed.

#### *Chapter 5 - Professional skills of Accounting students*

This chapter considered the professional skills of accounting students in KwaZulu-Natal. It commenced with an introduction that conceptualised the phenomenon based on several perspectives, definitions and frameworks. Thereafter, the theoretical framework for this chapter was discussed via a discussion on Robert Katz's skills approach theory, its origins, perspectives and applications in the context of developing the professional skills of accountants. The empirical literature across the broad dimensions of professionalisation of the accounting profession in South Africa, the development of the SAICA competency framework, the mediating role of universities in skills development, the notion of accreditation and the South African accreditation process was reviewed. Thereafter, the data gathered on the professional skills of accounting students in KwaZulu-Natal was presented and analysed and the hypotheses formulated in relation to the professional skills of these accounting students were tested. Finally, the findings and their implications were discussed.

#### *Chapter 6 - Summary, conclusion and recommendations*

This chapter presents a summary of the findings, an outline of each chapter, an overall conclusion and recommendations. It also highlights the study's limitations and offers suggestions for future research.

### **6.4 Limitations of the study**

A particular limitation of this study relates to the target population, which is not representative of the country as a whole. Given that the study only considered accounting students at universities within KwaZulu-Natal, its results cannot be generalised. Moreover, the accounting students selected for this study were registered in 2018 for first-year accounting (mainstream), first-year accounting (non-mainstream), second-year

accounting and third-year accounting at UKZN, DUT, and MUT. Due to challenges relating to accessibility, accounting students at the University of Zululand were not included. Finally, the study did not consider other finance-related and/or non-finance related students within the School of Accounting, Economics and Finance. These limitations were due to scope of the study as well as to time constraints.

## **6.5 Conclusion**

The core objective of this study was to assess the financial capability, financial socialisation and professional skills of accounting students at universities in KwaZulu-Natal vis-à-vis their socio-demographic characteristics. Thus, it was necessary to first assess the accounting students' financial capability, financial socialisation, and professional skills in aggregate as well as their componential drivers, prior to assessing the impact of socio-demographic factors, and subsequently the relationships among financial capability, financial socialisation and professional skills.

The study found that accounting students within KwaZulu-Natal are generally highly financially capable with a percentage financial capability mean score of 89.5%. The results from cross-tabulations between the students' universities and their financial capability, further highlight that students from UKZN are the most financially capable with 91.9% of the total sample being highly financially capable. This was followed by students from MUT, then DUT. These findings were based on the tests performed on the study's hypotheses. Amongst the determinants of financial capability, the majority of the students exhibited good financial attitude, financial behaviour, and numerical skills, but a moderate level of financial knowledge.

In terms of financial socialisation, the findings of this study suggest that accounting students within KwaZulu-Natal are generally not influenced by financial socialisation agents such as family, friends and social media. Based on an in-depth analysis of responses to the questions on financial socialisation, it was concluded that family, peer relationships and social media can influence students' financial responsibilities, buying decisions and materialistic values, respectively.

However, in determining the factors that drive the students' financial socialisation, it can be statistically concluded that only family relationships play a crucial role.

On professional skills, the findings of this study revealed that accounting students within KwaZulu-Natal are generally highly professionally skilled with a percentage professional skill score of 95.2%. This was concluded based on the percentage mean scores of the students' Lifelong Learning, Communication Skills and Professional Judgement, Information Technology Skills, Critical Thinking Skills and Problem-Solving Skills. The majority of the students exhibited excellent professional skills across all componential aspects of financial socialisation with the highest performance in critical thinking skills and the lowest in lifelong learning. Furthermore, it was statistically conclusive that there is a positive relationship between SAICA accreditation and students' professional skills, with further evidence confirming that students from UKZN are the most professionally skilled.

Turning to the impact of socio-demographic factors, social variables such as level of study (level of study, current qualification, and year of study), race and education were found to influence the financial capability of accounting students. Social variables such as parental educational level, students' place of residence and students' institutions were found to influence the accounting students' financial socialisation. Finally, social variables such as students' educational level, racial identity, year of study and age group were found to influence their professional skills.

In examining the relationship among financial capability, financial socialisation and professional skills, the study concluded that there is no statistical significance between the financial socialisation of accounting students and their financial capability. However, a significant relationship was found between professional skills and financial capability. Likewise, strong statistical significance was established between the financial socialisation of accounting students and their professional skills.

## **6.6 Key findings, Implications, contribution to the literature and recommendations**

Based on the aim of this study, the research study sought to achieve the following objectives:

1. To establish the levels of financial capability (financial knowledge, financial attitudes, financial behaviour and numeracy skills) among accounting students at universities in KwaZulu-Natal.
2. To determine the factors that influence financial capability among accounting students at universities in KwaZulu-Natal.
3. To establish the level of financial socialisation among accounting students at universities in KwaZulu-Natal.
4. To determine the factors that influence financial socialisation among accounting students at universities in KwaZulu-Natal.
5. To establish the level of professional skills among accounting students at universities in KwaZulu-Natal.
6. To determine the factors that influence professional skills among accounting students at universities in KwaZulu-Natal.
7. To evaluate the differences in professional skills between SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT).
8. To evaluate the impact of socio-economic factors on financial capability, financial socialisation and professional skills.
9. To examine the relationships among financial capability, financial socialisation and professional skills.

The following section provides a summary of the key findings, their implications, the study's contribution to the academic literature and its recommendations.

### **6.6.1 First objective**

The first research objective was to establish the levels of financial capability among accounting students at universities in KwaZulu-Natal. This was done via considering the students' financial knowledge, financial attitude, financial behaviour and numerical skills using relevant and statistically reliable research instruments for measurement.

On aggregate, the overall percentage mean score depicts that accounting students are generally highly financially capable with a percentage financial capability score of 89.5%. This was measured using a set of questions which sought to test how financially capable the accounting students are. The questions tested the students' financial knowledge, numeracy skills, financial attitude, and financial behaviour in order to establish the level of their financial capability. The capability levels were ranked into "Low Financial Capability" = ( $\leq 49\%$ ); "Moderate Financial Capability" = (50% – 64%); and "High Financial Capability" = ( $\geq 65\%$ ). While this percentage score is high, the analysis also records that about (n=136; 8.9%) of the respondents have Moderate Financial Capability, whereas only (n=30; 1.9%) have Low Financial Capability. This indicates that there is a need to improve the financial capability of a fair number of the students. Furthermore, the results from cross-tabulations between the respondents' institutions and their financial capability, found that students at UKZN had the highest level of financial capability (91.9%), followed by DUT (83.7%) and MUT (90.4%).

### **6.6.2 Second Objective**

This research objective sought to determine the factors that influence financial capability among accounting students at universities in KwaZulu-Natal.

On **financial knowledge**, the analysis found that the majority of the accounting students (63.1%) are moderately financially knowledgeable. While it was found that a fractional number (14.5%) of the students are highly financially knowledgeable, 22.4% are less financially knowledgeable.

Further analysis of the intra-components of financial knowledge found the following:

From the perspective of **savings and investment literacy**, it was found that the majority of the students (80.3%) can save and invest as compared to the few (19.7%), who are unable to save and invest. From the perspective of **spending and credit literacy**, the analysis revealed that most of the students (55.4%) are unable to manage their spending and credit as opposed to the 44.6% who can manage their spending and credit. It was also found that 54.1% of the students exhibited **good proficiency in managing their income**, compared to 45.9% who displayed poor proficiency in managing their income. With regard to **money management literacy**, the analysis suggested that the majority of the students (68.3%) can manage their money as opposed to 31.7% who are unable to manage their money.

The findings on the assessment of **financial behaviour** in relation to financial capability note that on all 10 items of financial behaviour, most of the students (81.3%) have good financial behaviour as opposed to 18.7% with poor financial behaviour. Thereafter, the researcher sought to establish if there is a relationship between financial knowledge and financial behaviour. It was found that, of the 229 students that are highly financially knowledgeable, most show good financial behaviour, with (n=194; 84.7%). Most of the students (n=813; 81.4%) with moderate financial knowledge also demonstrate good financial behaviour. Interestingly, it was discovered that most of the students with less financial knowledge have good financial behaviour. This suggests that, although there is a positive relationship between students' financial knowledge and financial behavior, having good financial behaviour is not necessarily an indication of being financially knowledgeable.

The findings on the assessment of **financial attitudes** in relation to financial capability note that on all 13 items of financial attitude, most of the students (n=1513; 95.6%) have a positive financial attitude compared to the (n=69; 4.4%) of the students who have a negative financial attitude.

The assessment of **numeracy skills** in relation to financial capability revealed that on all six items that tested numeracy skills, most of the students (n=1486, (93.9%) are numerically skilled. On the other hand, about (n=96; 6.1%) of the students are less numerically skilled.

This research objective also sought to determine the intra-component drivers of financial capability among accounting students at universities in KwaZulu-Natal. The findings suggest that three main factors influence accounting students' financial capability, namely, *Financial Attitude*; *Financial Behavior*; and *Numeracy Skills*. All these factors are significantly influential, with a p-value of <0.05. It has been said that financial capability can improve both financial decision making as well as access to suitable financial products and services, which are the two defining elements of financial inclusion (Mitton, 2008). This view is in consonance with the combined capability approach, which posits that both internal capacity and external conditions are necessary to affect the capability of individuals (Nussbaum, 2000).

### **6.6.3 Third Objective**

This research objective sought to establish the level of financial socialisation among accounting students at universities in KwaZulu-Natal.

This study revealed that most of the students' financial decisions are not influenced by financial socialisation agents such as family, friends and social media. This was based on the overall analysis conducted on all seven items of financial socialisation, which revealed that most of the students (n=895; 56.6%) are not influenced by financial socialisation agents as opposed to the (n=687; 43.4%) of the students who are influenced by financial socialisation agents.

Further analysis revealed the following:

- ✓ The majority of the students agreed that having family responsibilities affected their financial decisions. Hence, it can be assumed that students' financial socialisation stems from having a fair share in the financial responsibilities within the family.
- ✓ Social media platforms play an influential role in how students are financially socialised. The majority of the students confirmed that social media groups such as Facebook, Instagram, Snapchat, Twitter and WhatsApp easily influence their financial choices. This could inculcate materialistic values, crowd mentality, peer pressure and a sense of belonging.
- ✓ Peer relationships and their associated pressure tend to influence the mentality and financial socialisation of students. The majority of the students agree that their buying decisions are influenced by their friends. A plausible reason could be peer pressure and the need to belong ("trying to fit in") that is common among students and young adults.
- ✓ The majority of the students' parents allow them to make their own financial decisions. This further explicates the role of family financial socialisation as a contributor to the development of financial independence among students and young adults in South Africa.

#### **6.6.4 Fourth Objective**

This research objective sought to determine the factors that influence financial socialisation among accounting students at universities in KwaZulu-Natal.

On ***Family influence***, it was found that the majority of the accounting students are financially socialised by their immediate family members. The analysis suggested that majority of the students (n=1268; 80.2%) felt that the family influenced their financial socialisation as opposed to the (n=314; 19.8%) that felt that this was not the case.

On ***Friends' influence***, the study found that the majority (n=825; 52.1%) of the accounting students are not financially socialised by their friends and peers, while (n=757; 47.9%) felt that their friends were influential in their financial socialisation. Of note is that there is only a marginal difference between the two sides of the argument.

On ***Social Media Influence***, this research study found that the majority (n=1149; 72.6%) of the accounting students argued that they are not influenced by social media in terms of financial socialisation, compared to the (n=433; 27.4%) who agreed that social media is an influential factor with regard to financial socialisation.

### **6.6.5 Fifth Objective**

This research objective sought to establish the level of professional skills among accounting students at universities in KwaZulu-Natal. This was done via considering the students' Lifelong Learning, Communication Skills and Professional Judgement, Information Technology Skills, Critical Thinking Skills and Problem-Solving Skills using relevant and statistically reliable research instruments for measurement.

On aggregate, the overall percentage mean score depicts that accounting students are generally highly professionally skilled with a percentage professional skill score of 95.2%. This was measured using a set of questions that tested the students' Lifelong Learning, Communication Skills and Professional Judgement, Information Technology Skills, Critical Thinking Skills and Problem-Solving Skills. The collated data from the professional skills questions were further transformed into a binary variable in order to easily quantify the means scores into two categories.

While the first category represents "Poor Professional Skill" = (1 Strongly disagree + 2 Disagree), the second category was captioned "Good Professional Skill" = (3 Agree + 4 Strongly Agree). The overall analysis conducted on all five items of professional skills found that most of the respondents (n=1506; 95.2%) have good professional skills as opposed to the (n=76; 4.8%) of the respondents who have poor professional skills.

### **6.6.6 Sixth Objective**

This research objective sought to determine the factors that influence professional skills among accounting students at universities in KwaZulu-Natal. On Lifelong Learning, the analysis found that the majority of the accounting students (72.1%) indicated their commitment to lifelong learning compared to a fractional proportion (27.9%) who exhibited poor professional skills by indicating otherwise.

In terms of Communication Skills and Professional Judgement, the analysis found that the majority of the accounting students (90.5%) indicated the necessity of communication skills and professional judgement compared to a fractional proportion (9.5%) who exhibited poor communication skills by indicating otherwise.

On Information Technology Skills, the majority of the accounting students (92.4%) indicated the necessity of information technology skills compared to a fractional proportion (7.6%) who exhibited poor information technology skills by indicating otherwise.

On Critical Thinking Skills, the analysis found that the majority of the accounting students (93.9%) indicated the necessity of critical thinking skills compared to a fractional proportion (6.1%) who exhibited poor critical thinking skills by indicating otherwise.

On Problem Solving Skills, the majority of the accounting students (93.2%) indicated the necessity of critical thinking skills compared to a fractional proportion (6.8%) who exhibited poor problem-solving skills by indicating otherwise.

### **6.6.7 Seventh Objective**

This research objective sought to analyse the difference in professional skills between SAICA accredited institutions (UKZN) and non-SAICA accredited institutions (DUT and MUT) in KwaZulu-Natal.

### Assessment of respondents' professional skills vs SAICA accreditation

The study found that there is a statistically significant relationship between SAICA accreditation and students' professional skills. This was based on the p-value of the regression model that was used to determine the impact of SAICA accreditation on professional skills. A positive statistically significant relationship was found between SAICA accreditation and the professional skills of the accounting students.

Furthermore, an analysis of SAICA accreditation per students' institution under review via estimation of the degree of difference between respondents' institutions (SAICA accreditation) and professional skills, revealed that the coefficients from DUT students were statistically significant. With a  $p = 0.005$ , the (B) coefficient for "good professional skills" was  $-0.764$ , suggesting that students at DUT are 0.764 times less likely to have good professional skills compared to students from UKZN. However, it was found that in terms of good professional skills for MUT students, the coefficients were not statistically significant. Therefore, with a significance value of  $p > 0.05$ , the results suggest that concerning the outcome (professional skills), there is no statistically significant difference between SAICA accredited institutions and non-SAICA accredited institutions.

### **6.6.8 Eighth Objective**

This research objective sought to evaluate the impact of socio-economic factors on financial capability, financial socialisation and professional skills among accounting students at universities in KwaZulu-Natal. The findings are discussed thematically as follows:

#### Impact of socio-economic factors on financial capability

This research objective sought to ascertain whether the level of study and other socio-demographic variables influence financial capability levels among accounting students at universities in KwaZulu-Natal.

In examining financial capability according to students' level of study, the analysis found that most of the students from each class have high financial capability. While it was deemed necessary to first establish the financial capability per level of study, it is interesting to note if there is progression in financial capability from the first year to the third year. This could be an indicator that the level of study correlates with financial capability.

The study found that of the 180 students from First Year non-accounting specialisation 83.9% have high financial capability. Similarly, 91.2% of the 579 students from First Year mainstream accounting have high financial capability. Moreover, of the 470 students from Second Year, most have high financial capability, with n=428; 91.1%. Of the 353 students from Third Year, the results also suggest that most have high financial capability, with 87.5%.

The findings further suggest that academic progression does not translate to financial capability progression as it was found that First Year mainstream accounting has the highest percentage of financially capable students across all levels.

While a positive (statistically significant) relationship was found between the students' level of study (level of study, current qualification, and year of study) and their financial capability, other socio-demographic variables also show a statistically significant relationship with financial capability. These include race and education. The relationships between other socio-economic factors and financial capability are discussed below:

#### *Socio-economic factors vs financial capability*

- Based on the results from the regression model, it was found that **Gender** is not statistically significant in determining accounting students' financial capability.
- Based on the results from the regression model, it was found that **Age** is not statistically significant in determining accounting students' financial capability.
- Based on the results from the regression model, it was found that **Education** is statistically significant in determining accounting students' financial capability.

- Based on the results from the regression model, it was found that **Income** is not statistically significant in determining accounting students' financial capability.
- Based on the results from the regression model, it was found that **Race** is statistically significant in determining accounting students' financial capability.
- Based on the results from the regression model, it was found that **Parents' income** is not statistically significant in determining accounting students' financial capability.
- Based on the results from the regression model, it was found that **Parents' education** is not statistically significant in determining accounting students' financial capability.

The study also examined the impact of socio-economic factors on financial socialisation.

#### *Socio-economic factors vs financial socialisation*

Of note is that strong statistical significance was found between students' institutions and the financial socialisation of accounting students as determined by the Pearson Chi-square test and Likelihood ratio test. This infers that students' campuses influence their financial socialisation.

The study also found that there is strong statistical significance between students' place of residence and financial socialisation, This suggests that students' place of residence has an impact on their financial socialisation.

It was further found that there is a strong relationship between students' parents' educational level and the financial socialisation of accounting students. This relationship was further determined by one-way ANOVA, which reiterated that there is strong statistical significance between students' parents' educational level and the financial socialisation of accounting students. Hence, students' parents' educational level impacts on their financial socialisation.

Thus, the findings are:

- Based on the results from the regression model, it was found that **Students' institution** is statistically significant in determining accounting students' financial socialisation.
- Based on the results from the regression model, it was found that **Place of residence** is statistically significant in determining accounting students' financial socialisation.
- Based on the results from the regression model, it was found that **Parents' education** is statistically significant in determining accounting students' financial socialisation.
- Based on the results from the regression model, it was found that **Gender** is not statistically significant in determining accounting students' financial socialisation.
- Based on the results from the regression model, it was found that **Age** is not statistically significant in determining accounting students' financial socialisation.
- Based on the results from the regression model, it was found that **Education** is not statistically significant in determining accounting students' financial socialisation.
- Based on the results from the regression model, it was found that **Income** is not statistically significant in determining accounting students' financial socialisation.
- Based on the results from the regression model, it was found that **Race** is not statistically significant in determining accounting students' financial socialisation.
- Based on the results from the regression model, it was found that **Parents' income** is not statistically significant in determining accounting students' financial socialisation.

Furthermore, this research study examined the impact of socio-economic factors on professional skills.

### Socio-economic factors vs professional skills

The study found a strong association between the educational levels of students, racial identity, year of study and age group, and professional skills (lifelong learning) as determined by the Pearson Chi-square test and the likelihood test.

Likewise, a strong association was found between the educational levels of students and year of study, and professional skills (communication skills) as determined by the Pearson Chi-square test and the likelihood test.

Similarly, the study found a strong association between the educational levels of students and year of study, and professional skills (ICT skills) as determined by the Pearson Chi-square test and the likelihood test.

Likewise, the study further found a strong association between the educational levels of students and professional skills (critical thinking) as determined by the Pearson Chi-square test and the likelihood test.

Hence, the findings are:

- Based on the results from the regression model, it was found that **Education** is statistically significant in determining accounting students' professional skills.
- Based on the results from the regression model, it was found that the **Level of study** is statistically significant in determining accounting students' professional skills.
- Based on the results from the regression model, it was found that **Students' institution** is not statistically significant in determining accounting students' professional skills.
- Based on the results from the regression model, it was found that **Place of residence** is not statistically significant in determining accounting students' professional skills.

- Based on the results from the regression model, it was found that **Parent education** is not statistically significant in determining accounting students' professional skills.
- Based on the results from the regression model, it was found that **Gender** is not statistically significant in determining accounting students' professional skills.
- Based on the results from the regression model, it was found that **Age** is statistically significant in determining accounting students' professional skills.
- Based on the results from the regression model, it was found that **Income** is not statistically significant in determining accounting students' professional skills.
- Based on the results from the regression model, it was found that **Race** is statistically significant in determining accounting students' professional skills.
- Based on the results from the regression model, it was found that **Parents' income** is not statistically significant in determining accounting students' professional skills.

#### **6.6.9 Ninth Objective**

This research objective sought to understand the relationships among financial capability, financial socialisation and professional skills among the accounting students at universities in KwaZulu-Natal. The findings are discussed thematically as follows:

##### *Financial socialisation vs financial capability*

This research study found that there is no statistical significance between the financial socialisation of accounting students and their financial capability as determined by the Pearson Chi-square test and Likelihood ratio. This infers that financial socialisation does not impact on the financial capability of accounting students.

### Financial socialisation vs professional skills

The study found that there is strong statistical significance between the financial socialisation of accounting students and their professional skills as determined by the Pearson Chi-square test and Likelihood ratio test. This relationship was established via a correlation analysis and was further confirmed by a one-way ANOVA. It infers that financial socialisation impacts on professional skills.

### Professional skills vs financial capability

A statistically significant relationship was established between SAICA accreditation and financial capability. Moreover, the p-value reveals that the regression model used to determine the impact of SAICA accreditation on financial capability was significantly fitting for the analysis.

Furthermore, an estimation of the degree of difference between respondents' institutions (SAICA accreditation) and financial capability, depicts that there is no statistical significance in terms of high financial capability and moderate financial capability; hence, the coefficients were not statistically significant. With a significance value of  $p > 0.05$ , the findings reveal that regarding the outcome (financial capability), there is no statistically significant difference between SAICA accredited institutions and non-SAICA accredited institutions.

## **6.7 Contribution of the study**

The findings of this research study contribute novel empirical knowledge to the existing body of knowledge on financial capability, financial socialisation and the professional skills of university students and young adults in South Africa.

Given that the study focused on university students and young adults, its findings are crucial in better understanding this group of people in terms of their financial decision-making capacities as well as influences. This is necessary for policy making by all stakeholders who are responsible for ensuring financial stability in South Africa.

As a research study that was conducted among university students, the findings are also relevant for future curriculum development, as it provides scientific evidence on areas where financial capability, financial socialisation and the professional skills of accounting students can be further improved. The other distinctive characteristic of this research is that the professional skills of accounting students have never been assessed. The quantitative evidence presented in this thesis is unique as the majority of the literature reviewed focused on learners and teachers' understanding and application of skills at educational institutions, but did not examine students' capacity to demonstrate the required abilities.

The study also examined the professional skills of students studying at SAICA accredited and non-SAICA accredited institutions. Its results disprove studies that suggest that accreditation plays no significant role in students' ability. Finally, the study contributes knowledge that is pertinent to a developing country. Most existing financial literacy and capability studies were conducted in developed countries such as the United Kingdom, the US and The Netherlands (see, for example, Atkinson, McKay, Collard, & Kempson, 2007; Lusardi, 2008; Alessie, van Rooij, & Lusardi, 2011).

## **6.8 Suggestions for future research**

This research study evaluated financial capability, financial socialisation and professional skills across socio-demographic categories of students studying towards accounting degrees at universities within KwaZulu-Natal. As a fresh academic inquiry within South Africa, it lays the foundation for further academic inquiries within this research area.

Future studies could focus on students studying for finance related degrees and/or non-finance related degrees to determine the financial capability, financial socialisation and professional skills of other students vis-à-vis their socio-demographic characteristics.

Furthermore, in order to provide a more representative sample, the study could be extended to accounting students studying in other South African provinces. This would enable comparative analysis. Future research could also evaluate the financial capability, financial socialisation and professional skills of practicing accountants as well as other professionals in South Africa vis-à-vis their socio-demographic characteristics. Finally, improvements and revisions could be made to the research instruments to further assess financial capability, financial socialisation and the professional skills of South Africans across all socio-demographic categories.

## REFERENCES

- Abayadeera N and Watty K. (2016) Generic skills in accounting education in a developing country: exploratory evidence from Sri Lanka. *Asian Review of Accounting* 24: 149-170.
- Aboluwodi D. (2018) Investment literacy of business students and their behavioural attitudes toward ponzi schemes.: University of KwaZulu Natal.
- Adler RW and Milne MJ. (1997) Improving the quality of accounting students' learning through action-oriented learning tasks. *Accounting education* 6: 191-215.
- Agarwalla SK, Barua SK, Jacob J, et al. (2015) Financial literacy among working young in urban India. *World Development* 67: 101-109.
- Agnew S. (2018) Empirical measurement of the financial socialisation of children by parents. *Young Consumers* 19: 421-431.
- Agnew S and Harrison N. (2015) Financial literacy and student attitudes to debt: A cross national study examining the influence of gender on personal finance concepts. *Journal of Retailing and Consumer Services* 25: 122-129.
- Ahadiat N and Martin RM. (2016) Necessary Attributes, Preparations, and Skills for the Selection and Promotion of Accounting Professionals. *Journal of Accounting & Finance (2158-3625)* 16.
- Ahern A, O'Connor T, McRuairc G, et al. (2012) Critical thinking in the university curriculum—the impact on engineering education. *European Journal of Engineering Education* 37: 125-132.
- Ahmad FA, White AJ, Hiller KM, et al. (2017) An assessment of residents' and fellows' personal finance literacy: an unmet medical education need. *International journal of medical education* 8: 192.
- Ainley J, Schulz W and Fraillon J. (2016) A global measure of digital and ICT literacy skills.
- Akben-Selcuk E. (2015) Factors influencing college students' financial behaviors in Turkey: Evidence from a national survey. *International Journal of Economics and Finance* 7: 87.
- Albeerdly MI and Gharleghi B. (2015a) Determinants of the financial literacy among college students in Malaysia. *International Journal of Business Administration* 6.
- Albeerdly MI and Gharleghi B. (2015b) Determinants of the financial literacy among college students in Malaysia. *International Journal of Business Administration* 6: 15.
- Albrecht WS and Sack RJ. (2000) *Accounting education: Charting the course through a perilous future*: American Accounting Association Sarasota, FL.
- Ali IM, Kamarudin K, Suriani NA, et al. (2016) Perception of Employers and Educators in Accounting Education. *Procedia Economics and Finance* 35: 54-63.
- Allgood S and Walstad WB. (2016) The effects of perceived and actual financial literacy on financial behaviors. *Economic inquiry* 54: 675-697.
- Allmark P and Machaczek K. (2015) Financial capability, health and disability. *BMC public health* 15: 243.
- Almenberg J and Widmark O. (2011) Numeracy, financial literacy and participation in asset markets.
- Alwi S, Amir Hashim I and Ali MS. (2015) Factors Affecting Savings Habits within Millennials in Malaysia: Case Study on Students of Taylor's University. *Proceedings of the Fourth Asia-Pacific Conference on Global Business, Economics, Finance and Social Sciences*. 1-10.

- Amari M and Jarboui A. (2015) Financial literacy and economics education among young adults: An observation from Tunisia. *Journal of Business & Finance Librarianship* 20: 209-219.
- Ambarkhane D, Venkataramani B and Singh AS. (2015) Financial Literacy Index for College Students. *Annual Research Journal of Symbiosis Centre For Management Studies* 3: 1-25.
- Anderson-Gough F. (2018) *Making up accountants: The organizational and professional socialization of trainee chartered accountants*: Routledge.
- Anderson C and Card K. (2015) Effective practices of financial education for college students: students' perceptions of credit card use and financial responsibility. *College Student Journal* 49: 271-279.
- Anderson DM, Conzelmann JG and Lacy TA. (2018) The state of financial knowledge in college: New evidence from a national survey.
- Andreou PC and Philip D. (2018) Financial knowledge among university students and implications for personal debt and fraudulent investments. *Cyprus Economic Policy Review*, *Forthcoming*.
- Andresen L, Boud D and Cohen R. (2000) Experience-based learning. *Understanding adult education and training* 2: 225-239.
- Angulo-Ruiz F and Pergelova A. (2015) An empowerment model of youth financial behavior. *Journal of Consumer Affairs* 49: 550-575.
- Angus R. (2018) A Case Study of Why it is Important to Provide Financial Counselling for Vulnerable Students at University. *JANZSSA-Journal of the Australian and New Zealand Student Services Association* 26: 3782.
- Ansong A and Gyensare MA. (2012) Determinants of university working-students' financial literacy at the University of Cape Coast, Ghana. *International Journal of Business and Management* 7: 126.
- Arellano A, Cámara N and Tuesta D. (2014) The effect of self-confidence on financial literacy. *BBVA Research WP* 14: 28.
- Arquero JL, Fernández-Polvillo C, Hassall T, et al. (2017) Relationships between communication apprehension, ambiguity tolerance and learning styles in accounting students. *Revista de Contabilidad* 20: 13-24.
- Asonitou S. (2015) Employability skills in higher education and the case of Greece. *Procedia-Social and Behavioral Sciences* 175: 283-290.
- Atkinson A, McKay S, Collard S, et al. (2007) Levels of financial capability in the UK. *Public Money and Management* 27: 29-36.
- Atkinson A and Messy F-A. (2012) Measuring financial literacy.
- Awayiga JY, Onumah JM and Tsamenyi M. (2010) Knowledge and skills development of accounting graduates: The perceptions of graduates and employers in Ghana. *Accounting Education: an international journal* 19: 139-158.
- Azizi-Fini I, Hajibagheri A and Adib-Hajbaghery M. (2015) Critical thinking skills in nursing students: a comparison between freshmen and senior students. *Nursing and midwifery studies* 4.
- Bagwell S, Hestbaek C, Harries E, et al. (2014) Financial capability outcome frameworks. NPC [url] <http://www.thinknpc.org/publications/financial-capabilityoutcome-frameworks>.
- Bahovec V, Barbić D and Palić I. (2015) Testing the effects of financial literacy on debt behavior of financial consumers using multivariate analysis methods. *Croatian Operational Research Review* 6: 361-371.

- Baker P. (2016) A Comparison of Student, Faculty, and Administrator Impressions of the Efficacy of Online Versus Face-to-Face Classes in Accounting. *Journal of Higher Education Theory and Practice* 16: 116.
- Bamforth J, Jebarajakirthy C and Geursen G. (2018) Understanding undergraduates' money management behaviour: a study beyond financial literacy. *International Journal of Bank Marketing* 36: 1285-1310.
- Bandura A. (1969) Social-learning theory of identificatory processes. *Handbook of socialization theory and research* 213: 262.
- Bandura A. (1977) Self-efficacy: toward a unifying theory of behavioral change. *Psychological review* 84: 191.
- Bandura A. (1986) Social foundations of thought and action. *Englewood Cliffs, NJ* 1986.
- Bandura A. (2001) Social cognitive theory: An agentic perspective. *Annual review of psychology* 52: 1-26.
- Bandura A. (2009) Social cognitive theory of mass communication. *Media effects*. Routledge, 110-140.
- Bandura A and Walters RH. (1977) *Social learning theory*: Prentice-hall Englewood Cliffs, NJ.
- Banerjee MM, Friedline T and Phipps BJ. (2017) Financial capability of parents of kindergarteners. *Children and Youth Services Review* 81: 178-187.
- Bank TW. (2013) Making Sense of Financial Capability Surveys around the World.
- Barac K. (2009) South African training officers' perceptions of the knowledge and skills requirements of entry-level trainee accountants. *Meditari Accountancy Research* 17: 19-46.
- Barac K. (2014) A reflection on accounting within Sout Africa's higher education landscape.
- Barac K and Du Plessis L. (2014) Teaching pervasive skills to South African accounting students. *Southern African Business Review* 18: 53-79.
- Barbera M. (1996) *Management Accounting Futures: A Delphi Study: the Changing Tasks and Competencies of Management Accountants and Their Impact on Management Accounting Education*: Australian Society of Certified Practising Accountants.
- Batty M, Collins JM and Odders-White E. (2015) Experimental evidence on the effects of financial education on elementary school students' knowledge, behavior, and attitudes. *Journal of Consumer Affairs* 49: 69-96.
- Becker. (2016) How Listening Can Help Improve Client Relationships in Accounting.
- Becker LL. (2013) Self-regulated learning interventions in the introductory accounting course: An empirical study. *Issues in Accounting Education* 28: 435-460.
- Behn B. (2012) Commission on Accounting Higher Education. 2012. *Pathways to a Profession: Charting a National Strategy for the Next Generation of Accountants*. Sarasota, FL: AAA and AICPA.
- Behrman JR, Mitchell OS, Soo C, et al. (2010) Financial literacy, schooling, and wealth accumulation. National Bureau of Economic Research.
- Bell E, Bryman A and Harley B. (2018) *Business research methods*: Oxford university press.
- Berger Paul D, Pooja M, Black Jennifer E, et al. (2012) The impact of social media usage on consumer buying behavior. *Advances in management*.
- Beutler I and Dickson L. (2008) Consumer economic socialization. *Handbook of consumer finance research*: 83-102.
- Birgili B. (2015) Creative and critical thinking skills in problem-based learning environments. *Online Submission* 2: 71-80.

- Black K and Eldredge D. (2001) *Business and Economic Statistics Using Microsoft Excel with Cdrom*: South-Western College Publishing.
- Bless CH-S, P; Sithole SL (2015) Fundamentals of Social Research Methods: An African Perspective. *Juta*.
- Boisclair D, Lusardi A and Michaud P-C. (2017) Financial literacy and retirement planning in Canada. *Journal of Pension Economics & Finance* 16: 277-296.
- Bongini P, Trivellato P and Zenga M. (2012) Measuring financial literacy among students: An application of Rasch analysis. *Electronic Journal of Applied Statistical Analysis* 5: 425-430.
- Boritz J. (1999) The accounting curriculum and IT. *University of Waterloo, Canada*.
- Boritz JE and Stoner GN. (2014) Technology in accounting education. *The Routledge companion to accounting education*. Routledge, 385-413.
- Botha M. (2013) A comparative analysis of the financial literacy of final year diploma students in different fields of study at the University of Johannesburg. University of Johannesburg.
- Boud D and Falchikov N. (2006) Aligning assessment with long-term learning. *Assessment & Evaluation in Higher Education* 31: 399-413.
- Boulianne E. (2016) How should information technology be covered in the accounting program? *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration* 33: 304-317.
- Bowen CF. (2002) Financial knowledge of teens and their parents. *Financial counseling and planning* 13: 93-102.
- Braun Santos D, Mendes-Da-Silva W, Flores E, et al. (2016) Predictors of credit card use and perceived financial well-being in female college students: a Brazilian-US comparative study. *International Journal of Consumer Studies* 40: 133-142.
- Brennan R and Vos L. (2013) Effects of participation in a simulation game on marketing students' numeracy and financial skills. *Journal of Marketing Education* 35: 259-270.
- Brooks C and Wheeler B. (2018) Establishing the Effect of Financial Knowledge, Financial Well-being, Self-Esteem, and Locus of Control on Financial Distress among University Students.
- Brooks DC, Pomerantz J and Pomerantz J. (2016) ECAR study of undergraduate students and information technology. 2016.
- Brooks ME and Pui SY. (2010) Are individual differences in numeracy unique from general mental ability? A closer look at a common measure of numeracy. *Individual Differences Research*.
- Brown A, Collins JM, Schmeiser M, et al. (2014) State mandated financial education and the credit behavior of young adults.
- Brown M, Grigsby J, van der Klaauw W, et al. (2016) Financial education and the debt behavior of the young. *The Review of Financial Studies* 29: 2490-2522.
- Brüggen EC, Hogreve J, Holmlund M, et al. (2017) Financial well-being: A conceptualization and research agenda. *Journal of Business Research* 79: 228-237.
- Bryman A and Cramer D. (2012) *Quantitative data analysis with IBM SPSS 17, 18 & 19: A guide for social scientists*: Routledge.
- Bucher-Koenen T, Lusardi A, Alessie R, et al. (2017) How financially literate are women? An overview and new insights. *Journal of Consumer Affairs* 51: 255-283.
- Bui B and Porter B. (2010) The expectation-performance gap in accounting education: An exploratory study. *Accounting Education: an international journal* 19: 23-50.
- Butrica BA, Harris BH, Perun P, et al. (2014) Flattening Tax Incentives for Retirement Saving.

- Campbell A. (1976) PE Converse, and W. WL Rogers:., *The Quality of american life*.
- Chandra A, Cheh JJ and Kim I-W. (2006) Do we teach enough it skills in management accounting courses? A survey of accounting educators that explores the current use of Information technology content in management accounting Education shows that accounting students are not being taught the it skills They will need in the business world. *Management Accounting Quarterly* 8: 49-49.
- Chen H and Volpe RP. (1998) An analysis of personal financial literacy among college students. *Financial Services Review* 7: 107-128.
- Chen Z and Garand JC. (2018) On the Gender Gap in Financial Knowledge: Decomposing the Effects of Don't Know and Incorrect Responses. *Social Science Quarterly* 99: 1551-1571.
- Chiang VC, Leung SS, Chui CY, et al. (2013) Building life-long learning capacity in undergraduate nursing freshmen within an integrative and small group learning context. *Nurse education today* 33: 1184-1191.
- Chmelíková B. (2016) Financial Decision-Making among Finance Students: An Empirical Study from the Czech Republic. *Self* 498: 084.
- Christensen D, Barnes J, Rees D, et al. (2005) Improving the oral presentation skills of accounting students: An experiment. *Journal of College Teaching and Learning* 2: 17-26.
- Clanchy J and Ballard B. (1995) Generic skills in the context of higher education. *Higher Education Research and Development* 14: 155-166.
- Coetzee S and Oberholzer R. (2009) The tax knowledge of South African trainee accountants: A survey of the perceptions of training officers in public practice. *Accounting Education: an international journal* 18: 421-441.
- Cole S, Shapiro J and Shastry GK. (2010) Financial Literacy and Mineworkers: Using a randomized control trial to determine the impact of financial education on mineworkers: Findings from the baseline survey. *Financia Educa ion Fund, diciembre*.
- Commission TP. (2012) Pathways\_Commission\_Final\_Report\_Complete 2012.pdf.
- Coombs SJ. (2000) The psychology of user-friendliness: The use of Information Technology as a reflective learning medium. *Korean Journal of Thinking and Problem Solving* 10: 19-32.
- Copur Z. (2015) *Handbook of Research on Behavioral Finance and Investment Strategies: Decision Making in the Financial Industry: Decision Making in the Financial Industry*: IGI Global.
- Cory SN and Pruske KA. (2012) Necessary skills for Accounting Graduates: An exploratory study to determine what the profession wants. *ASBBS Proceedings* 19: 208.
- Cranmer S. (2006) Enhancing graduate employability: best intentions and mixed outcomes. *Studies in Higher Education* 31: 169-184.
- Crawford L, Helliard C and Monk EA. (2011) Generic skills in audit education. *Accounting Education: an international journal* 20: 115-131.
- Creswell JW. (2014) *A concise introduction to mixed methods research*: Sage Publications.
- Creswell JW and Creswell JD. (2017) *Research design: Qualitative, quantitative, and mixed methods approaches*: Sage publications.
- Cude B, Lawrence F, Lyons A, et al. (2006) College students and financial literacy: What they know and what we need to learn. *Proceedings of the Eastern Family Economics and Resource Management Association* 102: 106-109.
- Curran MA, Parrott E, Ahn SY, et al. (2018) Young adults' life outcomes and well-being: Perceived financial socialization from parents, the romantic partner, and young adults' own financial behaviors. *Journal of Family and Economic Issues* 39: 445-456.

- Daff L. (2013) Accounting students' reflections on a course to enhance their interpersonal skills. *Accounting education* 22: 563-581.
- Daff L and Jack L. (2018) Accountants' proactivity in intra-organisational networks: a strong structuration perspective. *Accounting, Auditing & Accountability Journal* 31: 1691-1719.
- Dall'Oglio I, Nicolò R, Di Ciommo V, et al. (2015) A systematic review of hospital foodservice patient satisfaction studies. *Journal of the Academy of Nutrition and Dietetics* 115: 567-584.
- Danes SM. (1994) Parental perceptions of children's financial socialization. *Financial counseling and planning* 5: 27-146.
- Danes SM and Yang Y. (2014) Assessment of the use of theories within the Journal of Financial Counseling and Planning and the contribution of the family financial socialization conceptual model. *Journal of Financial Counseling and Planning* 25.
- de Bassa Scheresberg C. (2013) Financial literacy and financial behavior among young adults: Evidence and implications. *Numeracy* 6: 5.
- De Clercq B and Venter J. (2009) Factors influencing a prospective chartered accountant's level of financial literacy: an exploratory study. *Meditari Accountancy Research* 17: 47-60.
- de Villiers C and Venter E. (2010) The influence of the accounting profession on the academy: A cautionary case study. *Meditari Accountancy Research* 26: 1246-1278.
- De Villiers R. (2010) The incorporation of soft skills into accounting curricula: preparing accounting graduates for their unpredictable futures. *Meditari Accountancy Research* 18: 1-22.
- Deacon RE and Firebaugh FM. (1988) *Family resource management: Principles and applications*: Allyn & Bacon.
- Demirel Ö. (1997) *Kuramdan uygulamaya eğitimde program geliştirme*: Kardeş Kitap ve Yayınevi.
- Demirel Ö. (2017) Eğitimde program geliştirme kuramdan uygulamaya. *Pegem Atıf İndeksi*: 1-398.
- Demirguc-Kunt A, Martinez-Peria MS and Tressel T. (2015) *The Impact of the Global Financial Crisis on Firms Capital Structure*: The World Bank.
- Despard MR and Chowa GA. (2014) Testing a measurement model of financial capability among youth in Ghana. *Journal of Consumer Affairs* 48: 301-322.
- Dewey J. (1938) Experience and education. *Experience and education*.
- Drever AI, Odders-White E, Kalish CW, et al. (2015) Foundations of financial well-being: Insights into the role of executive function, financial socialization, and experience-based learning in childhood and youth. *Journal of Consumer Affairs* 49: 13-38.
- Dyer L. (2011) *Critical thinking for business students*: Captus Press.
- Eichelberger B, Mattioli H and Foxhoven R. (2017) Uncovering Barriers to Financial Capability: Underrepresented Students' Access to Financial Resources. *Journal of Student Financial Aid* 47: 5.
- Engelbrecht L. (2008) The scope of financial literacy education: A poverty alleviation tool in social work? *Social Work/Maatskaplike Werk* 44.
- Er F, Özdemir A, Okur MR, et al. (2017) Financial Literacy among University Students: A Case Study for Open Education Students in Anadolu University, Turkey.
- Ergün K. (2018) Financial literacy among university students: A study in eight European countries. *International Journal of Consumer Studies* 42: 2-15.
- Falahati L and Sabri MF. (2015) An exploratory study of personal financial wellbeing determinants: examining the moderating effect of gender. *Asian Social Science* 11: 33.

- Fan L and Chatterjee S. (2018) Financial Socialization, Financial Education, and Student Loan Debt. *Journal of Family and Economic Issues*: 1-12.
- Farrell L, Fry TR and Risse L. (2016) The significance of financial self-efficacy in explaining women's personal finance behaviour. *Journal of Economic Psychology* 54: 85-99.
- Fatoki O. (2014a) The financial literacy of micro entrepreneurs in South Africa. *Journal of Social Sciences* 40: 151-158.
- Fatoki O. (2014b) The Financial literacy of non-business university students in South Africa. *International Journal of Educational Sciences* 7: 261-267.
- Fernandes D, Lynch Jr JG and Netemeyer RG. (2014) Financial literacy, financial education, and downstream financial behaviors. *Management Science* 60: 1861-1883.
- Fessler P, Schürz M, Wagner K, et al. (2007) Financial capability of Austrian households. *Monetary Policy & the Economy Q* 3: 50-67.
- Finke MS, Howe JS and Huston SJ. (2016) Old age and the decline in financial literacy. *Management Science* 63: 213-230.
- Forbes LP. (2013) Does social media influence consumer buying behavior? An investigation of recommendations and purchases. *Journal of Business & Economics Research (Online)* 11: 107.
- Fornero E and Monticone C. (2011) Financial literacy and pension plan participation in Italy. *Journal of Pension Economics & Finance* 10: 547-564.
- Fouché JP. (2013) A renewed call for change in accounting education practices. *International journal of educational sciences* 5: 137-150.
- French D and McKillop D. (2016) Financial literacy and over-indebtedness in low-income households. *International Review of Financial Analysis* 48: 1-11.
- Friedline T and West S. (2016) Financial education is not enough: Millennials may need financial capability to demonstrate healthier financial behaviors. *Journal of Family and Economic Issues* 37: 649-671.
- Friedline T, West S, Rosell N, et al. (2017) Do community characteristics relate to young adult college students' credit card debt? The hypothesized role of collective institutional efficacy. *American journal of community psychology* 59: 80-93.
- Friedman HH, FRIEDMAN LW, FRANKEL MR, et al. (2016) Enhancing Critical and Ethical Thinking with Scenarios. *Human Resource Management* 7: 7-29.
- Fuad NM, Zubaidah S, Mahanal S, et al. (2017) Improving Junior High Schools' Critical Thinking Skills Based on Test Three Different Models of Learning. *International Journal of Instruction* 10: 101-116.
- Fulghum R. (1993) *Uh-oh*: Random House Digital, Inc.
- Furnham A and Milner R. (2017) Parent's Beliefs and Behaviours about the Economic Socialisation, through Allowances/Pocket Money, of Their Children. *Psychology* 8: 1216.
- Gale WG and Levine R. (2010) Financial literacy: What works? How could it be more effective? *How could it be more effective*.
- Gao T. (2017) Numeracy, Financial Literacy, and Investment Behaviors. The Ohio State University.
- Geiger MA, Raghunandan K and Riccardi W. (2013) The global financial crisis: US bankruptcies and going-concern audit opinions. *Accounting Horizons* 28: 59-75.
- Gentry JW, Commuri S, Burns AC, et al. (1998) The second component to experiential learning: A look back at how ABSEL has handled the conceptual and operational definitions of learning. *Developments in Business Simulation and Experiential Learning: Proceedings of the Annual ABSEL conference*.

- Ghazal S, Cokely ET and Garcia-Retamero R. (2014) Predicting biases in very highly educated samples: Numeracy and metacognition. *Judgment and decision making*.
- Gibson P, Scott J and Cheng Y. (2017) The Value of Financial Education—When and How?
- Goldsmith EB. (2005) *Resource management for individuals and families*: Cengage Learning.
- Govindarajan S. (2016) Effects of Numeracy and Financial Literacy on Undesirable Financial and Related Academic Outcomes in College Students.
- Gray DE. (2013) *Doing research in the real world*: Sage.
- Group WB. (2013) *Global financial development report 2014: Financial inclusion*: World Bank Publications.
- Grusec JE and Hastings PD. (2014) *Handbook of socialization: Theory and research*: Guilford Publications.
- Gudmunson CG and Danes SM. (2011) Family financial socialization: Theory and critical review. *Journal of Family and Economic Issues* 32: 644-667.
- Gudmunson CG, Ray SK and Xiao JJ. (2016) Financial socialization. *Handbook of consumer finance research*. Springer, 61-72.
- Halcomb EJ and Hickman L. (2015) Mixed methods research.
- Hall M. (2018) Service Learning in Information Systems Education: Pedagogical Approaches to Support Experiential Learning and Higher-level Thinking.
- Hancock P, Howieson B, Kavanagh M, et al. (2009) Accounting for the future: more than numbers. *Australian Teaching and Learning Council*: 11-80.
- Handoyo S and Anas S. (2019) Accounting Education Challenges in the New Millennium Era: Impact of Advanced of Technology and Dynamic Business Environment. *Journal of Accounting Auditing and Business* 2: 25-33.
- Hannon S, McBride H and Burns B. (2004) Developing creative and critical thinking abilities in business graduates: The value of experiential learning techniques. *Industry and Higher Education* 18: 95-100.
- Happe. (2015) The Importance of Accreditation by Happe 2015.pdf.
- Harrington C, Smith W and Bauer R. (2017) Influencing business student intent to use a personal budget. *The Accounting Educators' Journal* 26.
- Harrison N, Chudry F, Waller R, et al. (2015) Towards a typology of debt attitudes among contemporary young UK undergraduates. *Journal of Further and Higher Education* 39: 85-107.
- Hassan M, Hamdan Z and Al-Sadi J. (2012) A NEW MOBILE LEARNING CONTENT DESIGN PROCESS. *International Journal of Academic Research* 4.
- Hastings JS, Madrian BC and Skimmyhorn WL. (2013) Financial literacy, financial education, and economic outcomes. *Annu. Rev. Econ.* 5: 347-373.
- Hayhoe C, Leach LJ, Allen M, et al. (2005) Credit cards held by college students.
- Hegazy S, Sangster A and Kotb A. (2017) Mapping forensic accounting in the UK. *Journal of International Accounting, Auditing and Taxation* 28: 43-56.
- Helman R, Copeland C and VanDerhei J. (2015) The 2015 retirement confidence survey: Having a retirement savings plan a key factor in Americans' retirement confidence.
- Henager R and Cude BJ. (2016) Financial literacy and long-and short-term financial behavior in different age groups. *Journal of Financial Counseling and Planning* 27: 3-19.
- Herawati NT, Candiasa IM, Yadnyana IK, et al. (2018) Factors That Influence Financial Behavior Among Accounting Students in Bali. *International Journal of Business Administration* 9: 30.

- Herdjiono I and Damanik LA. (2016) Pengaruh Financial Attitude, Financial Knowledge, Parental Income Terhadap Financial Management Behavior. *Jurnal Manajemen Teori dan Terapan| Journal of Theory and Applied Management* 9.
- Hesketh J. (2011) Accounting academics' multiple challenges: Issues-driven learning offers a way forward. *South African Journal of Accounting Research* 25: 1-34.
- Hira TK, Sabri MF and Loibl C. (2013) Financial socialization's impact on investment orientation and household net worth. *International Journal of Consumer Studies* 37: 29-35.
- Honohan P and King M. (2009) Cause and Effect of Financial Access: Cross-country Evidence from the Finscope Surveys. Conference Paper for the Conference "Measurement, Promotion, and Impact of Access to Financial Services".
- Howard LW, Tang TL-P and Austin MJ. (2015) Teaching critical thinking skills: Ability, motivation, intervention, and the Pygmalion effect. *Journal of Business Ethics* 128: 133-147.
- Huang FL. (2017) Conducting multilevel confirmatory factor analysis using R.
- Hudson C, Young J, Anong S, et al. (2017) African American financial socialization. *The Review of Black Political Economy* 44: 285-302.
- Hussein. (2017) Importance of Generic Skills in Accounting Education: Evidence from Egypt.
- Hussein K, Mohieldin M and Rostom A. (2017) *Savings, financial development and economic growth in the Arab republic of Egypt revisited*: The World Bank.
- Huston SJ. (2010) Measuring financial literacy. *Journal of Consumer Affairs* 44: 296-316.
- Hutcheson GD and Sofroniou N. (1999) *The multivariate social scientist: Introductory statistics using generalized linear models*: Sage.
- Idris FH, Krishnan KSD and Azmi N. (2017) Relationship between financial literacy and financial distress among youths in Malaysia-An empirical study. *Geografia-Malaysian Journal of Society and Space* 9.
- IFAC. (2014) Initial Professional Development – Professional Skills.
- Isomidinova G and Singh JSK. (2017) Determinants of financial literacy: a quantitative study among young students in Tashkent, Uzbekistan. *Electronic Journal of Business & Management* 2: 61-75.
- Jackling B and De Lange P. (2009) Do accounting graduates' skills meet the expectations of employers? A matter of convergence or divergence. *Accounting Education: an international journal* 18: 369-385.
- Jagadeesh D. (2015) The impact of savings in economic growth: an empirical study based on Botswana. *International Journal of Research* 10.
- Jamal AAA, Ramlan WK, Karim MA, et al. (2015a) The effects of social influence and financial literacy on savings behavior: A study on students of higher learning institutions in Kota Kinabalu, Sabah. *International Journal of Business and Social Science* 6: 110-119.
- Jamal AAA, Ramlan WK, Karim MA, et al. (2015b) The effects of social influence and financial literacy on savings behavior: A study on students of higher learning institutions in Kota Kinabalu, Sabah. *International Journal of Business and Social Science* 6: 1.
- Jayakumar KL, Larkin DJ, Ginzberg S, et al. (2017) Personal financial literacy among US medical students. *MedEdPublish* 6.
- Jayaraman J, Jambunathan S and Counselman K. (2018) The Connection between Financial Literacy and Numeracy: A Case Study from India. *Numeracy* 11: 5.
- John DR. (1999) Consumer socialization of children: A retrospective look at twenty-five years of research. *Journal of consumer research* 26: 183-213.

- John DR. (2001) Consumer socialization of children: a retrospective look at twenty-five years of research. *Recherche et Applications en Marketing* 16: 141.
- Johnson E and Sherraden MS. (2007) From Financial Literacy to Financial Capability among Youth. *J. Soc. & Soc. Welfare* 34: 119.
- Jones A. (2010) Generic attributes in accounting: the significance of the disciplinary context. *Accounting Education: an international journal* 19: 5-21.
- Jones CG. (2011) Written and computer-mediated accounting communication skills: An employer perspective. *Business Communication Quarterly* 74: 247-271.
- Jorgensen BL, Rappleyea DL, Schweichler JT, et al. (2017) The financial behavior of emerging adults: A family financial socialization approach. *Journal of Family and Economic Issues* 38: 57-69.
- Jorgensen BL and Savla J. (2010) Financial literacy of young adults: The importance of parental socialization. *Family relations* 59: 465-478.
- Kadoya Y and Khan M. (2017) Explaining Financial Literacy in Japan: New Evidence Using Financial Knowledge, Behavior, and Attitude.
- Kadoya Y and Khan MSR. (2018) Can financial literacy reduce anxiety about life in old age? *Journal of Risk Research* 21: 1533-1550.
- Kagotho N, Nabunya P, Ssewamala F, et al. (2017) The role of family financial socialization and financial management skills on youth saving behavior. *Journal of Adolescence* 59: 134-138.
- Kaiser HF. (1974) An index of factorial simplicity. *Psychometrika* 39: 31-36.
- Kavanagh MH and Drennan L. (2008) What skills and attributes does an accounting graduate need? Evidence from student perceptions and employer expectations. *Accounting & Finance* 48: 279-300.
- Keevy M and Mare DJ. (2018) Pervasive skills development for aspirant chartered accountants: Academic versus training programmes. *Journal of Economic and Financial Sciences* 11: 1-9.
- Kgapola MP. (2015) Professional accountant's perspective of skills required to move into management position.
- Kharchenko O. (2011) Financial literacy in Ukraine: Determinants and implications for saving behavior. *Ukraine: Kyiv School of Economic*.
- Killen R. (2007) *Teaching strategies for outcomes-based education*: Juta and Company Ltd.
- Kim J and Chatterjee S. (2013) Childhood Financial Socialization and Young Adults' Financial Management. *Journal of Financial Counseling & Planning* 24.
- Kim KT, Anderson SG and Seay MC. (2018) Financial Knowledge and Short-Term and Long-Term Financial Behaviors of Millennials in the United States. *Journal of Family and Economic Issues*: 1-15.
- Klapper L, Lusardi A and Panos GA. (2012) *Financial literacy and the financial crisis*: The World Bank.
- Klapper L, Lusardi A and Van Oudheusden P. (2015) Financial literacy around the world. *Standard & Poor's Ratings Services Global Financial Literacy Survey*., Access mode: [http://media.mhfi.com/documents/2015-Finlit\\_paper\\_17\\_F3\\_SINGLES.pdf](http://media.mhfi.com/documents/2015-Finlit_paper_17_F3_SINGLES.pdf).
- Kojo Oseifuah E. (2010) Financial literacy and youth entrepreneurship in South Africa. *African journal of Economic and management studies* 1: 164-182.
- Kolb AY and Kolb DA. (2005) Learning styles and learning spaces: Enhancing experiential learning in higher education. *Academy of management learning & education* 4: 193-212.

- Kolb DA, Boyatzis RE and Mainemelis C. (2001) Experiential learning theory: Previous research and new directions. *Perspectives on thinking, learning, and cognitive styles* 1: 227-247.
- Kostov P, Arun T and Annim S. (2015) Access to financial services: The case of the 'Mzansi' account in South Africa. *Review of Development Finance* 5: 34-42.
- Kotzé L and Smit A. (2008) Personal financial literacy and personal debt management: the potential relationship with new venture creation. *The Southern African Journal of Entrepreneurship and Small Business Management* 1: 35-50.
- Kreber C. (2001) Learning experientially through case studies? A conceptual analysis. *Teaching in higher education* 6: 217-228.
- Kretschmer T and Pike A. (2010) Links between nonshared friendship experiences and adolescent siblings' differences in aspirations. *Journal of Adolescence* 33: 101-110.
- Kumar R. (2014) *Research methodology: A step-by-step guide for beginners*: Sage.
- Kumar R. (2019) *Research methodology: A step-by-step guide for beginners*: Sage Publications Limited.
- Kunz R. (2016) Accounting practitioners' perspectives of professional skills and audit capabilities of first year trainee accountants. University of Pretoria.
- Lachance MJ and Choquette-Bernier N. (2004) College students' consumer competence: a qualitative exploration. *International Journal of Consumer Studies* 28: 433-442.
- LeBaron AB, Rosa-Holyoak CM, Bryce LA, et al. (2018) Teaching children about money: Prospective parenting ideas from undergraduate students. *Journal of Financial Counseling and Planning* 29: 259-271.
- Lee JC and Mortimer JT. (2009) Family socialization, economic self-efficacy, and the attainment of financial independence in early adulthood. *Longitudinal and life course studies* 1: 45.
- Lin JT, Bumcrot C, Ulicny T, et al. (2016) Financial capability in the United States 2016. *Washington, DC: FINRA Investor Education Foundation*.
- Lin ZJ, Xiong X and Liu M. (2005) Knowledge base and skill development in accounting education: Evidence from China. *Journal of Accounting Education* 23: 149-169.
- Livingstone M and Lubbe S. (2017) Including Pervasive Skills in an Accounting Curriculum at a Rural South African University. *Alternation Journal*: 128-147.
- Loke V, Choi L and Libby M. (2015) Increasing youth financial capability: An evaluation of the MyPath savings initiative. *Journal of Consumer Affairs* 49: 97-126.
- Louw J, Fouché J and Oberholzer M. (2013) Financial literacy needs of South African third-year university students. *The International Business & Economics Research Journal (Online)* 12: 439.
- Low M, Botes V, De La Rue D, et al. (2016) Accounting employers' expectations-the ideal accounting graduates.
- Lusardi A. (2011) Americans' financial capability. National Bureau of Economic Research.
- Lusardi A. (2012) Numeracy, financial literacy, and financial decision-making. National Bureau of Economic Research.
- Lusardi A. (2013) Insights: Financial Capability. *FINRA Investor Education Foundation*.
- Lusardi A, Michaud P-C and Mitchell OS. (2017) Optimal financial knowledge and wealth inequality. *Journal of Political Economy* 125: 431-477.
- Lusardi A and Mitchell OS. (2014) The economic importance of financial literacy: Theory and evidence. *Journal of economic literature* 52: 5-44.
- Lusardi A, Mitchell OS and Curto V. (2009) Financial literacy and financial sophistication among older Americans. National Bureau of Economic Research.

- Lusardi A, Mitchell OS and Curto V. (2010) Financial literacy among the young. *Journal of Consumer Affairs* 44: 358-380.
- Lusardi A and Tufano P. (2015) Debt literacy, financial experiences, and overindebtedness. *Journal of Pension Economics & Finance* 14: 332-368.
- Lusardi A and Wallace D. (2013) Financial literacy and quantitative reasoning in the high school and college classroom. *Numeracy* 6: 1.
- Lux M, Sunega P and Kázmér L. (2018) Intergenerational financial transfers and indirect reciprocity: determinants of the reproduction of homeownership in the post-socialist Czech Republic. *Housing Studies*: 1-24.
- Lyons AC, Chang Y and Scherpf E. (2006) Translating financial education into behavior change for low-income populations. *Journal of Financial Counseling and Planning* 17.
- Maelah R, Aman A, Mohamed ZM, et al. (2012) Enhancing soft skills of accounting undergraduates through industrial training. *Procedia-Social and Behavioral Sciences* 59: 541-549.
- Maister DH. (1997) True Professionalism: The Courage to Care About Your People. *Your Clients and Your Career, Jurnal*.
- Mandell L. (1998) *Our vulnerable youth: The financial literacy of American 12th graders*: Jump \$ tart Coalition for Personal Financial Literacy.
- Mandell L and Klein L. (2009) The impact of financial literacy education on subsequent financial behavior.
- Mandell L and Klein LS. (2007) Motivation and financial literacy. *Financial services review* 16.
- Manju R. (2016) Trends in Spending and Money Management Practices among Students of Kerala. *International Journal* 39.
- Matsebetlela EM. (2015) The Influence of the HEQC's institutional audits on teaching and learning at three South African universities.
- Mehrabian A. (2017) *Nonverbal communication*: Routledge.
- Mestre J. (2007) Transfer of Learning: issues and research agenda. Report of a Workshop held at the National Science Foundation.
- Mihály N, Kovács ÉI, Madarász I, et al. (2017) Correlations between attitude to money and demographic variables on a sample of university students. *Regional'naia Ékonomika. IŪg Rossi*.
- Milliron V. (2012) CPAs explore a pre-certification pathway to excellence. *The Accounting Educators' Journal* 22: 43-71.
- Mimura Y, Koonce J, Plunkett SW, et al. (2015) Financial Information Source, Knowledge, and Practices of College Students from Diverse Backgrounds. *Journal of Financial Counseling and Planning* 26: 63-78.
- Mitchell OS, Lusardi A and Curto V. (2009) Financial literacy among the young: Evidence and implications for consumer policy. *Pension Research Council WP* 9.
- Mitchell V, Petrovici D, Schlegelmilch BB, et al. (2015) The influence of parents versus peers on Generation Y Internet ethical attitudes. *Electronic Commerce Research and Applications* 14: 95-103.
- Mitton L. (2008) *Financial inclusion in the UK: Review of policy and practice*: Joseph Rowntree Foundation York.
- Mohamed EK and Lashine SH. (2003) Accounting knowledge and skills and the challenges of a global business environment. *Managerial finance* 29: 3-16.
- Montandon A. (2014) Social influence of siblings and friends in generation Y's development of risk preferences. University of Cape Town.

- Montford W and Goldsmith RE. (2016) How gender and financial self-efficacy influence investment risk taking. *International Journal of Consumer Studies* 40: 101-106.
- Motsepe L. (2016) Exploring financial literacy amongst first year university students: a case study of Howard College, University of KwaZulu-Natal.
- Mulaik SA, James LR, Van Alstine J, et al. (1989) Evaluation of goodness-of-fit indices for structural equation models. *Psychological bulletin* 105: 430.
- Müller R, Remdisch S, Köhler K, et al. (2015) Easing access for lifelong learners: a comparison of European models for university lifelong learning. *International Journal of lifelong education* 34: 530-550.
- Nargundkar R. (2003) *Marketing research-Text & cases 2E*: Tata McGraw-Hill Education.
- Ndou AA. (2016) An analysis of personal financial literacy among adults in Vhembe District Municipality.
- Németh E, Béres D and Huzdik K. (2015) The Attitude of Young Hungarian Adults to Loans. *International Journal of Business and Social Science* 6: 63-73.
- Nga K and Yeoh K. (2015) Affective, Social and Cognitive Antecedents of Attitude towards Money among Undergraduate Students: A Malaysian Study. *Pertanika Journal of Social Sciences & Humanities* 23.
- Nguyen MC, Gabbe SG, Kemper KJ, et al. (2019) Training on mind-body skills: Feasibility and effects on physician mindfulness, compassion, and associated effects on stress, burnout, and clinical outcomes. *The Journal of Positive Psychology*: 1-14.
- Nielsen RB and Seay MC. (2014) Complex samples and regression-based inference: Considerations for consumer researchers. *Journal of Consumer Affairs* 48: 603-619.
- Norris SP. (1985) Synthesis of research on critical thinking. *Educational leadership* 42: 40-45.
- Nussbaum M. (2000) Women's capabilities and social justice. *Journal of human development* 1: 219-247.
- Nussbaum M and Sen A. (1993) *The quality of life*: Oxford University Press.
- Nussbaum MC. (1998) *Cultivating humanity*: Harvard University Press.
- Nussbaum MC. (2001) *Women and human development: The capabilities approach*: Cambridge University Press.
- Nussbaum MC. (2011) *Creating capabilities*: Harvard University Press.
- Nussbaum MC and Glover J. (1995) *Women, culture, and development: A study of human capabilities*: Clarendon Press.
- Nye P and Hillyard C. (2013) Personal financial behavior: The influence of quantitative literacy and material values. *Numeracy* 6: 3.
- Odendaal K. (2015a) Applying a framework-based approach to teach complex problem-solving to Accounting students.
- Odendaal K. (2015b) Applying a framework-based approach to teach complex problem-solving to Accounting students.
- Oseifuah E, Gyekye A and Formadi P. (2018) FINANCIAL LITERACY AMONG UNDERGRADUATE STUDENTS: EMPIRICAL EVIDENCE FROM GHANA. *Academy of Accounting and Financial Studies Journal* 22.
- Oseifuah EK and Gyekye AB. (2014) Analysis of the Level of Financial Literacy among South African Undergraduate Students. *Journal of economics and behavioral studies* 6: 242.
- Oviedo-Trespalacios O, Angarita LP, Maestre-Meyer M, et al. (2015) Building the life-long learning competence in undergraduate engineering students with a laboratory practice in learning curve. *Procedia-Social and Behavioral Sciences* 174: 2021-2026.

- Özdemir A, Temizel F, Sönmez H, et al. (2015) Financial literacy of university students: A case study for anadolu university, Turkey. *Uluslararası Yönetim İktisat ve İşletme Dergisi* 11: 97-110.
- Page G. (2005) Professional Socialisation of Valuers: What the Literature and Professional Bodies Offers. *International Education Journal* 5: 105-116.
- Paluri RA and Mehra S. (2016) Financial attitude based segmentation of women in India: an exploratory study. *International Journal of Bank Marketing* 34: 670-689.
- Pan G and Seow P-S. (2016) Preparing accounting graduates for digital revolution: A critical review of information technology competencies and skills development. *Journal of Education for Business* 91: 166-175.
- Paul R. (1988) Critical thinking in the classroom. *Teaching k-8* 18: 49-51.
- Payne SH, Yorgason JB and Dew JP. (2014) Spending today or saving for tomorrow: The influence of family financial socialization on financial preparation for retirement. *Journal of Family and Economic Issues* 35: 106-118.
- Peters E. (2012) Beyond comprehension: The role of numeracy in judgments and decisions. *Current Directions in Psychological Science* 21: 31-35.
- Potrich ACG, Vieira KM, Coronel DA, et al. (2015) Financial literacy in Southern Brazil: Modeling and invariance between genders. *Journal of Behavioral and Experimental Finance* 6: 1-12.
- Potrich ACG, Vieira KM and Kirch G. (2018) How well do women do when it comes to financial literacy? Proposition of an indicator and analysis of gender differences. *Journal of Behavioral and Experimental Finance* 17: 28-41.
- Potrich ACG, Vieira KM and Mendes-Da-Silva W. (2016) Development of a financial literacy model for university students. *Management Research Review* 39: 356-376.
- Pratama A. (2015) Bridging the Gap between Academicians and Practitioners on Accountant Competencies: An Analysis of International Education Standards (IES) Implementation on Indonesia's Accounting Education. *Procedia-Social and Behavioral Sciences* 211: 19-26.
- Rajapakse R. (2018) Measuring Financial Literacy of University Academics.
- Ramachandran Rackliffe U and Ragland L. (2016) Excel in the accounting curriculum: perceptions from accounting professors. *Accounting education* 25: 139-166.
- Rasoaisi L and Kalebe KM. (2015) Determinants of financial literacy among the National University of Lesotho Students. *Asian Economic and Financial Review* 5: 1050.
- Rawls J. (2009) *A theory of justice*: Harvard university press.
- Rice AS, Tucker SM and Nickell P. (1986) *Family life management*: Macmillan.
- Riley TJ and Simons KA. (2016) The written communication skills that matter most for accountants. *Accounting education* 25: 239-255.
- Robb CA and Sharpe DL. (2009) Effect of personal financial knowledge on college students' credit card behavior. *Journal of Financial Counseling and Planning* 20.
- Robb CA and Woodyard A. (2011) Financial knowledge and best practice behavior.
- Roberts B, Struwig J, Gordon S, et al. (2012) Financial Literacy in South Africa: Results of a baseline national survey. *Pretoria: Financial Services Board*.
- Robeyns I. (2005) The capability approach: a theoretical survey. *Journal of human development* 6: 93-117.
- Robeyns I. (2011) The capability approach. *Handbook of economics and ethics* 39.
- Robeyns I. (2016) Capabilitarianism. *Journal of Human Development and Capabilities* 17: 397-414.

- Rodzalan S and Saat M. (2018) A mixed-method analysis on students' critical thinking and problem solving skill development in Malaysian public universities. *Journal of Physics: Conference Series*. IOP Publishing, 012015.
- Roksa J, Trolan TL, Pascarella ET, et al. (2017) Racial inequality in critical thinking skills: The role of academic and diversity experiences. *Research in Higher Education* 58: 119-140.
- Rosenberg AJ. (2017) The Effects of Parental Advice and Financial Literacy on Asset Accumulation Among American Youth. Georgetown University.
- Rothwell DW and Wu S. (2017) The Impact of Financial Education Participation on Financial Knowledge and Efficacy: Evidence from the Canadian Financial Capability Survey.
- Rousseau G and Venter D. (2016) Financial insight and behaviour of household consumers in Port Elizabeth. *Southern African Business Review* 20: 236-258.
- Ruspini E. (2012) Girls, boys, money. Economic socialisation, gender, and generations in Italy. *International Review of Sociology* 22: 514-529.
- SAICA. (2014) Competency Framework Detailed Guidance for Academic Programmes: Competencies of a CA (SA) at the Point of the Initial Test of Competence (ITC)(Assessment of Core Technical Knowledge). South African Institute of Chartered Accountants Johannesburg.
- SAICA. (2019) SAICA List of accredited programmes.pdf.
- Samkin G and Stainbank L. (2016) Teaching and learning: Current and future challenges facing accounting academics, academics, and the development of an agenda for future research. *Meditari Accountancy Research* 24: 294-317.
- SAQA SAQ. (2000) *The national qualifications framework and curriculum development*: South African Qualifications Authority.
- Sarea AM and Alrawahi FE. (2014) Bridging the Gap between the Perceptions of Accounting Students and Accounting Practitioners: Evidence from Ahlia University of Bahrain= سد البحرين في الأهلية الجامعة من دليل: المحاسبة لمهنة الممارسين و الطلبة تصورات بين الفجوة. *Jordan Journal of Business Administration* 153: 1-18.
- Sargent CS and Borthick AF. (2013) Evidence for insisting on cognitive conflict tasks: Impact on accounting majors in upper-level courses. *Issues in Accounting Education* 28: 759-777.
- Sarigül H. (2014) A Survey of Financial Literacy Among University Students. *Journal of Accounting & Finance*.
- Sarpong-Danquah B, Gyimah P, Poku K, et al. (2018) Financial Literacy Assessment on Tertiary Students in Sub-Saharan Africa: A Ghanaian Perspective. *International Journal of Accounting and Financial Reporting* 8: 76-91.
- Seferoğlu S and Akbıyık C. (2006) Teaching critical thinking. *Hacettepe University Journal of Education* 30: 193-200.
- Sekaran U and Bougie R. (2010) Theoretical framework in theoretical framework and hypothesis development. *Research methods for business: A skill building approach* 80.
- Sekaran U and Bougie R. (2016) *Research methods for business: A skill building approach*: John Wiley & Sons.
- Sen A. (1987) *Gender and cooperative conflicts*: Wider Helsinki.
- Sen A. (1990) Development as capability expansion. *The community development reader*: 41-58.
- Sen A. (1993) Capability and well-being73. *The quality of life* 30.
- Sereetrakul W, Wongveeravuti S and Likitapiwat T. (2013) Gender differences in saving and spending behaviours of Thai students. *Research in Education* 90: 68-81.
- Sergeant A and Camion DM. (2016) Critical Thinking Development Through Teaching: A Sample Project in Accounting. *Business Education Innovation Journal* 8.

- Serido J, Cities T, Deenanath V, et al. (2016) The Financial Behavior of First-Year College Students: The Power of Parenting and Self-Efficacy. *Consumer Interests Annual* 62.
- Serido J and Deenanath V. (2016) Financial parenting: Promoting financial self-reliance of young consumers. *Handbook of consumer finance research*. Springer, 291-300.
- Serido J, Shim S, Mishra A, et al. (2010) Financial parenting, financial coping behaviors, and well-being of emerging adults. *Family Relations* 59: 453-464.
- Shaari NA, Hasan NA, Mohamed R, et al. (2013) Financial literacy: A study among the university students. *Interdisciplinary journal of contemporary research in business* 5: 279-299.
- Shahrabani S. (2013) Financial literacy among Israeli college students. *Journal of College Student Development* 54: 439-446.
- Sherraden MS. (2010) Financial Capability: What is it, and how can it be created?
- Sherraden MS. (2013) Building blocks of financial capability. *Financial education and capability: Research, education, policy, and practice*: 3-43.
- Sherraden MS and Grinstein-Weiss M. (2015) Creating financial capability in the next generation: An introduction to the special issue. *Journal of Consumer Affairs* 49: 1-12.
- Sherraden MS, Huang J, Frey JJ, et al. (2015) Financial capability and asset building for all. *American Academy of Social Work and Social Welfare*: 1-29.
- Shih T-Y and Ke S-C. (2014) Determinates of financial behavior: insights into consumer money attitudes and financial literacy. *Service Business* 8: 217-238.
- Shim S, Barber BL, Card NA, et al. (2010) Financial socialization of first-year college students: The roles of parents, work, and education. *Journal of youth and adolescence* 39: 1457-1470.
- Shim S, Serido J, Tang C, et al. (2015) Socialization processes and pathways to healthy financial development for emerging young adults. *Journal of Applied Developmental Psychology* 38: 29-38.
- Shim S, Xiao JJ, Barber BL, et al. (2009) Pathways to life success: A conceptual model of financial well-being for young adults. *Journal of Applied Developmental Psychology* 30: 708-723.
- Sikka P, Haslam C, Kyriacou O, et al. (2007) Professionalizing claims and the state of UK professional accounting education: some evidence. *Accounting Education: an international journal* 16: 3-21.
- Silverman D. (2016) *Qualitative research*: Sage.
- Siriwardane HP and Durden CH. (2014) The communication skills of accountants: what we know and the gaps in our knowledge. *Accounting education* 23: 119-134.
- Sithole S. (2015) Quality in accounting graduates: employer expectations of the graduate skills in the bachelor of accounting degree. *European Scientific Journal* 11: 165-180.
- Skagerlund K, Lind T, Strömbäck C, et al. (2018) Financial literacy and the role of numeracy—How individuals' attitude and affinity with numbers influence financial literacy. *Journal of behavioral and experimental economics* 74: 18-25.
- Smith K, Clegg S, Lawrence E, et al. (2007) The challenges of reflection: students learning from work placements. *Innovations in Education and teaching International* 44: 131-141.
- Smith VG and Szymanski A. (2013) Critical thinking: More than test scores. *International Journal of Educational Leadership Preparation* 8: 16-25.
- Soden R and Pithers R. (2001) Knowledge matters in vocational problem-solving: a cognitive view. *Journal of Vocational Education and Training* 53: 205-222.
- Sohn S-H, Joo S-H, Grable JE, et al. (2012) Adolescents' financial literacy: The role of financial socialization agents, financial experiences, and money attitudes in shaping financial literacy among South Korean youth. *Journal of Adolescence* 35: 969-980.

- Solheim CA, Zuiker VS and Levchenko P. (2011) Financial socialization family pathways: Reflections from college students' narratives. *Family Science Review* 16: 97-112.
- Soria KM, Weiner B and Lu EC. (2014) Financial decisions among undergraduate students from low-income and working-class social class backgrounds. *Journal of Student Financial Aid* 44: 2.
- Spraakman G, O'Grady W, Askarany D, et al. (2015) Employers' perceptions of information technology competency requirements for management accounting graduates. *Accounting education* 24: 403-422.
- Steenkamp G. (2012) Student perceptions regarding the new training programme for chartered accountants. *Journal of Economic and Financial Sciences* 5: 481-498.
- Steenkamp G and Smit S. (2015) The competencies developed in an undergraduate accounting course before SAICA's competency framework was effective: a student's perspective. *Journal of Economic and Financial Sciences* 8: 666-688.
- Steenkamp L, Baard R and Frick B. (2012) A holistic investigation into a tutor programme in first-year Financial Accounting. *Meditari Accountancy Research* 20: 68-87.
- Stefani L, Clarke J and Littlejohn AH. (2000) Developing a student-centred approach to reflective learning. *Innovations in education and training international* 37: 163-171.
- Stoner G. (2009) Accounting students' IT application skills over a 10-year period. *Accounting education* 18: 7-31.
- Strauss-Keevy M. (2014) Education programmes' responsibilities regarding pervasive skills. *Journal of Economic and Financial Sciences* 7: 415-432.
- Strauss-Keevy M and Maré D. (2014) The development of pervasive skills. *Accountancy SA* 2015: 52-54.
- Strömbäck C, Lind T, Skagerlund K, et al. (2017) Does self-control predict financial behavior and financial well-being? *Journal of Behavioral and Experimental Finance* 14: 30-38.
- Struwig J, Roberts B and Gordon S. (2013) Financial literacy in South Africa 2013 report. *Pretoria: Human Sciences Research Council*.
- Sundarasan SDD, Rahman MS, Othman NS, et al. (2016) Impact of financial literacy, financial socialization agents, and parental norms on money management. *Journal of Business Studies Quarterly* 8: 137.
- Susan M and Djajadikerta H. (2017) Understanding Financial Knowledge, Financial Attitude, and Financial Behavior of College Students in Indonesia. *Advanced Science Letters* 23: 8762-8765.
- Tan LM and Laswad F. (2016) Professional skills required of accountants: What do Australian and New Zealand job advertisements tell us?
- Tang N, Baker A and Peter PC. (2015) Investigating the disconnect between financial knowledge and behavior: The role of parental influence and psychological characteristics in responsible financial behaviors among young adults. *Journal of Consumer Affairs* 49: 376-406.
- Tang N and Peter PC. (2015) Financial knowledge acquisition among the young: The role of financial education, financial experience, and parents' financial experience. *Financial Services Review* 24: 119.
- Taylor M. (2011) Measuring financial capability and its determinants using survey data. *Social Indicators Research* 102: 297-314.
- Taylor M, Jenkins S and Sacker A. (2009) Financial capability and wellbeing: Evidence from the BHPS. *Financial Services Authority Occasional Paper* 34.

- Taylor M, Jenkins S and Sacker A. (2011a) Financial capability, income and psychological wellbeing. ISER Working paper series.
- Taylor MP, Jenkins SP and Sacker A. (2011b) Financial capability and psychological health. *Journal of economic psychology* 32: 710-723.
- Tempone I, Kavanagh M, Segal N, et al. (2012) Desirable generic attributes for accounting graduates into the twenty-first century: The views of employers. *Accounting Research Journal* 25: 41-55.
- Tett L, Bamber J, Edwards V, et al. (2007) Developing competence: Early and mid career in community learning and development.
- Thaler RH and Sunstein CR. (2008) Nudge: improving decisions about health. *Wealth, and Happiness* 6.
- Thapa BS. (2015) Financial literacy in Nepal: A survey analysis from college students. *NRB Economic Review* 27: 49-74.
- Thompson F and Washington HL. (2015) Critical thinking skills and teaching accounting: A comparative study. *Journal of Finance and Accountancy* 19: 1.
- UKZN. (2018) UKZN accounting programmes get top ratingR.pdf.
- Van Campenhout G. (2015) Revaluing the role of parents as financial socialization agents in youth financial literacy programs. *Journal of Consumer Affairs* 49: 186-222.
- Van der Merwe N. (2013) An evaluation of an integrated case study and business simulation to develop professional skills in South African accountancy students.
- Van Nieuwenhuyzen BJ. (2009) Financial literacy as core competency of South African military officers: a measurement instrument. Stellenbosch: University of Stellenbosch.
- Van Romburgh H and Van der Merwe N. (2015) A pilot study to identify skills shortages that exist in first-year trainee accountants in South Africa.
- Van Rooij M, Lusardi A and Alessie R. (2011) Financial literacy and stock market participation. *Journal of Financial Economics* 101: 449-472.
- Varcoe KP, Peterson SS, Wooten Swanson P, et al. (2010) What do teens want to know about money—a comparison of 1998 and 2008. *Family and Consumer Sciences Research Journal* 38: 360-371.
- Vieira KM, Potrich ACG and Mendes-Da-Silva W. (2019) A Financial Literacy Model for University Students. *Individual Behaviors and Technologies for Financial Innovations*. Springer, 69-95.
- Viviers H. (2016) Taking stock of South African accounting students' pervasive skills development: are we making progress? *South African Journal of Higher Education* 30: 242-263.
- Volpe RP, Chen H and Pavlicko JJ. (1996) Personal investment literacy among college students: A survey. *Financial Practice and Education* 6: 86-94.
- Von Stumm S, O'Creevy MF and Furnham A. (2013) Financial capability, money attitudes and socioeconomic status: Risks for experiencing adverse financial events. *Personality and Individual Differences* 54: 344-349.
- Wagner C, Kawulich B and Garner M. (2012) *Doing social research: A global context*: McGraw-Hill Higher Education.
- Wagner J. (2015) An analysis of the effects of financial education on financial literacy and financial behaviors.
- Wagner J and Walstad WB. (2015) The Effects of Financial Education on Short-term and Long-term Financial Behaviors. *Journal of Consumer Affairs*.

- Walczak D and Pieńkowska-Kamieniecka S. (2018) Gender differences in financial behaviours. *Inżynieria i Gospodarka Finansowa-Engineering Economics* 29: 123-132.
- Walliman N. (2017) *Research methods: The basics*: Routledge.
- Wally-Dima L. (2011) Bridging the gap between accounting education and accounting practice: The case of the University of Botswana. *IUP Journal of Accounting Research & Audit Practices* 10: 7.
- Watty K. (2014) Generic skills within the accounting curriculum. *The Routledge companion to accounting education*: 276-293.
- Webb J and Chaffer C. (2016) The expectation performance gap in accounting education: A review of generic skills development in UK accounting degrees. *Accounting education* 25: 349-367.
- Wells P, Gerbic P, Kranenburg I, et al. (2009) Professional skills and capabilities of accounting graduates: the New Zealand expectation gap? *Accounting Education: an international journal* 18: 403-420.
- Welman C, Kruger S and Mitchell B. (2005) *Research methodology* (3rd edn.). Cape Town. South Africa: Oxford University Press.
- West S and Friedline T. (2016) Coming of age on a shoestring budget: Financial capability and financial behaviors of lower-income millennials. *Social work* 61: 305-312.
- Williams AJ and Oumlil B. (2015) College student financial capability: A framework for public policy, research and managerial action for financial exclusion prevention. *International Journal of Bank Marketing* 33: 637-653.
- WorldBank. (2013) *Global financial development report 2014: Financial inclusion*: World Bank Publications.
- Xiang L, Zheng X, Lee MK, et al. (2016) Exploring consumers' impulse buying behavior on social commerce platform: The role of parasocial interaction. *International Journal of Information Management* 36: 333-347.
- Xiao JJ, Ahn SY, Serido J, et al. (2014a) Earlier financial literacy and later financial behaviour of college students. *International Journal of Consumer Studies* 38: 593-601.
- Xiao JJ, Chen C and Chen F. (2014b) Consumer financial capability and financial satisfaction. *Social indicators research* 118: 415-432.
- Xiao JJ, Chen C and Sun L. (2015) Age differences in consumer financial capability. *International Journal of Consumer Studies* 39: 387-395.
- Xiao JJ and O'Neill B. (2016) Consumer financial education and financial capability. *International Journal of Consumer Studies* 40: 712-721.
- Xiao JJ and Porto N. (2017) Financial education and financial satisfaction: Financial literacy, behavior, and capability as mediators. *International Journal of Bank Marketing* 35: 805-817.
- Xiao JJ, Tang C, Serido J, et al. (2011) Antecedents and consequences of risky credit behavior among college students: Application and extension of the theory of planned behavior. *Journal of Public Policy & Marketing* 30: 239-245.
- Xu L and Zia B. (2012) *Financial literacy around the world: an overview of the evidence with practical suggestions for the way forward*. The World Bank.
- Yew S-Y, Yong C-C, Cheong K-C, et al. (2017) Does financial education matter? education literacy among undergraduates in Malaysia. *Institutions and Economies*: 43-60.
- Yong C-C, Yew S-Y and Wee C-K. (2018) Financial Knowledge, Attitude and Behaviour of Young Working Adults in Malaysia. *Institutions and Economies* 10.

- Zakaria Z, Nor SMM and Ismail MR. (2017) Financial Literacy and Risk Tolerance towards Saving and Investment: A Case Study in Malaysia. *International Journal of Economics and Financial Issues* 7: 507-514.
- Zhu AYP. (2018a) Links Between Family Poverty and the Financial Behaviors of Adolescents: Parental Roles. *Child Indicators Research*: 1-15.
- Zhu AYP. (2018b) Parental Socialization and Financial Capability Among Chinese Adolescents in Hong Kong. *Journal of Family and Economic Issues* 39: 566-576.
- Zottel SP, Valeria; Bolaji-Adio, Adedayo. (2013) Financial capability surveys around the World : why financial capability is important and how surveys can help. *World Bank*.

## ANNEXURE 1 –QUESTIONNAIRE MATRIX

**QUESTION MATRIX AND SOURCE**

<b>Question number</b>	<b>Source</b>	<b>Indicator</b>	<b>Concept</b>
1-7	Self-Developed	Demographics	
8	Jump\$stat adjusted	Income of parent/guardian	Financial Literacy
9	Jump\$stat adjusted	Education of parents/guardian	Financial Literacy
10	Worldbank adjusted	Financial access	Financial Inclusion
11	Jump\$stat adjusted	Information source	Financial Literacy
12	Jump\$stat adjusted	Income	Financial Knowledge
13	Jump\$stat adjusted	Savings and Investments	Financial Knowledge
14	Jump\$stat adjusted	Savings and Investments	Financial Knowledge
15	Jump\$stat adjusted	Spending and Credit	Financial Knowledge
16	Jump\$stat adjusted	Income	Financial Knowledge
17	Jump\$stat adjusted	Savings and Investments	Financial Knowledge
18	Jump\$stat adjusted	Spending and Credit	Financial Knowledge
19	Jump\$stat adjusted	Savings and Investments	Financial Knowledge
20	Jump\$stat adjusted	Money Management	Financial Knowledge
21	Jump\$stat adjusted	Income	Financial Knowledge
22	Colmar Brunton adjusted	Money Management	Financial Knowledge
23	Colmar Brunton adjusted	Money Management	Financial Knowledge
24	Jump\$stat adjusted	Income	Financial Knowledge
25	Jump\$stat adjusted	Income	Financial Knowledge
26	Jump\$stat adjusted	Money Management	Financial Knowledge
27	Jump\$stat adjusted	Money Management	Financial Knowledge

28	Ohan Almenberg and Olof Widmark Adjusted	Subtraction	Numeracy Skills
29	Ohan Almenberg and Olof Widmark Adjusted	Multiplication	Numeracy Skills
30	Ohan Almenberg and Olof Widmark Adjusted	Division	Numeracy Skills
31	Ohan Almenberg and Olof Widmark Adjusted	Compound interest	Numeracy Skills
32	Ohan Almenberg and Olof Widmark Adjusted	Inflation	Numeracy Skills
33	Ohan Almenberg and Olof Widmark Adjusted	Multiplication and Division	Numeracy Skills
34(a)-(k)	Hilgert and Hogarth adjusted	Responsibility, discipline, motivation and control	Financial Attitudes
34(l) –(m)	Self-Developed	Responsibility, discipline, motivation and control	Financial Attitudes
35(a) –(j)	Hilgert and Hogarth adjusted	Organised, disciplined on investment, risk and return	Financial Behaviour
36(a)–(g)	Self-Developed	Parental, friends, social media and independent	Financial Socialisation
37(a)	Self-Developed from Yolande Reyneke	Lifelong Learning and information use	Personal Attributes & Professional Skills
36(b)	Self-Developed from Yolande Reyneke	Communication Skills and Professional Judgement	Professional Skills
36(c)	Self-Developed from Yolande Reyneke	Information Technology skills	Professional Skills
36(d)	Self-Developed from Yolande Reyneke	Critical Thinking Skills	Professional Skills
36(e)	Self-Developed from Yolande Reyneke	Problem Solving Skills	Professional Skills

Source: Constructed by the researcher

## ANNEXURE 2 – QUESTIONNAIRE

NB: You are free to withdraw at any time without any harmful or undesirable consequences to you.

### SECTION A - SOCIO-DEMOGRAPHIC DATA

1. **What is your Gender?**

(a) Male	(b) Female
----------	------------

2. **What is your Age?**

--

3. **What is your year of study?**

(a) 1 <sup>st</sup> year	(b) 2 <sup>nd</sup> year	(c) 3 <sup>rd</sup> year	(d) 4 <sup>th</sup> year
--------------------------	--------------------------	--------------------------	--------------------------

4. **What qualification are you currently doing?**

(a) B Com Accounting	(b) B Admin	(c) BSc	(d) B Com General	(e) Other (please specify)	(f) National Diploma in Accounting
----------------------	-------------	---------	-------------------	----------------------------	------------------------------------

5. **Where do you stay?**

(a) With Parents/Guardian	(b) University Residence	(c) Private Residence	(d) Other (Specify)
---------------------------	--------------------------	-----------------------	---------------------

6. **Where do you get your money?**

(a) Allowance from a parent/guardian.	(b) Part-time job/s	(c) Allowance from a sponsor/bursary.	(d) NSFAS
---------------------------------------	---------------------	---------------------------------------	-----------

7. **What is your race or ethnic background?**

(a) White	(b) Black -RSA	(c) Coloured	(d) Indian	(e) Black – Non-RSA
-----------	----------------	--------------	------------	---------------------

8. **What is your best estimate of your guardian/parents' total income last year? Consider annual income from all sources after taxes.**

(a) Less than R60,000	(b) R60,000 to R140,000	(c) R140,000 or more	(d) Don't know
-----------------------	-------------------------	----------------------	----------------

9. **What is the highest level of schooling your guardian/parents completed?**

(a) Not completed high school	(b) Completed high school	(c) University graduate or more than university	(d) Don't know
-------------------------------	---------------------------	---	----------------

10. **Do you have a bank account?**

(a) Yes	(b) No
---------	--------

11. **In what form do you hold for your savings and investments?**

(a) Savings account.	(b) 32 day call account	(c) RSA Savings bonds	(d) Investment account	(e) Other
----------------------	-------------------------	-----------------------	------------------------	-----------

## SECTION B – FINANCIAL KNOWLEDGE

12. Inflation can cause difficulty in many ways. Which group would have the most significant problem during periods of high inflation that last several years?
- Older, working couples saving for retirement.
  - Older people are living on fixed retirement income.
  - Young couples with no children who both work.
  - Young working couples with children.
13. Bomikazi has saved R12, 000 for her university expenses by working part-time. She plans 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/safe/money box at home.
  - Shares.
  - Corporate bonds.
  - A bank savings account.
14. 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 10-year bond issued by a corporation.
  - A certificate of deposit at a bank.
  - A twenty-five-year corporate bond.
  - A house financed with a fixed-rate mortgage.
15. 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.
  - When you need a week vacation/holiday.
  - When some clothes you like go on sale.
  - When the interest on the loan is lower than the interest, you get on your savings.
16. Your net pay pay from your job is less than the total amount you earn. Which of the following best describes what will be taken out of your full compensation?
- Unemployment Insurance Fund (UIF) and Medical contributions.
  - The Receiver of Revenue income tax, property tax, and Medical and UIF contributions.
  - The Receiver of Revenue income tax, UIF and Medical contributions.
  - The Receiver of Revenue income tax, VAT, and UIF contribution.
17. Jerusha and Uvash 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 | (b) Shares | (c) RSA. Govt. savings bond | (d) Savings account |
|--------------------|------------|-----------------------------|---------------------|
18. Barbara has just applied for a credit card. She is an 18-year-old high school girl with a few valuable possessions and no credit history. If Barbara is given 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 credit 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.

19. Yusuf and Shazia are the same age. At the age of 25, Shazia began saving R2, 000 a year while Yusuf saved nothing. At age 50, Yusuf realised that he needed money for retirement and started saving R4, 000 per year while Shazia kept saving her R2, 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 the same.
  - (b) Yusuf, because he saved more each year.
  - (c) Shazia, because she has put away more money.
  - (d) Shazia, because her money has grown for a longer time at compound interest.
20. Many young people receive medical aid benefits through their parents. Which of the following statements is correct 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 do not need medical aid 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.
21. Don and Bill work together in the finance department of the same company and earn equal pay. Bill spends his free time taking work-related classes to improve his computer skills; while Don spends his free time socialising 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.
22. Kiran needs to take out R50 cash for the weekend and pay for his groceries. Generally, which of the following ways would Kiran pay the least in banking fees and costs?
- (a) get out enough cash from a bank teller to pay for the groceries and the weekend
  - (b) pay using EFTPOS at the supermarket and take out money at the same time
  - (c) write a cheque for the groceries and request some cash at the grocery store
  - (d) go to the ATM to take out the cash
23. Which of the following is the best description of a budget?
- (a) An accounting spreadsheet
  - (b) Spending as little as you possibly can
  - (c) A plan for what you earn and what you spend
  - (d) Knowing where all your money goes
24. Matt has an excellent job on the production line of a factory in his hometown. During the past year or two, the country in which Matt lives has been raising taxes on its businesses to the point where they are much higher than in neighbouring countries. What effect is this likely to have on Matt's job?
- (a) Higher business taxes will cause more businesses to move into Matt's country, raising wages.
  - (b) Higher business taxes cannot have any effect on Matt's job.
  - (c) Matt's company may consider moving to a lower-tax country, threatening Matt's job.
  - (d) He is likely to get a significant raise to offset the effect of higher taxes.
25. If you went to university and earned a three/four-year degree, how much more money could you expect to make than if you only had a matric certificate?
- (a) About 10% more.
  - (b) No more, I would make about the same either way.
  - (c) Just about 20% more.
  - (d) A lot more; about 70% more.

26. Which of the following credit card users is likely to pay the **GREATEST** 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.
27. Dami must borrow R12, 000 to complete his university education. Which of the following would **NOT** be likely to reduce the finance charge rate?
- (a) If he went to a government university rather than a private university.
  - (b) If his parents co-signed the loan.
  - (c) If his parents took out an additional mortgage on their house for the loan.
  - (d) If the South African Government NSFAS insured the loan.

### SECTION C – NUMERACY SKILLS

28. You buy an Accounting textbook for R85 and pay with R100. How much change should you get?
- |         |         |         |        |
|---------|---------|---------|--------|
| (a) R25 | (b) R15 | (c) R35 | (d) R5 |
|---------|---------|---------|--------|
29. A bookshop has a sale and offers all its items at half price. All books cost R5, 000 before the sale. How much do they cost when on sale?
- |             |             |            |            |
|-------------|-------------|------------|------------|
| (a) R3, 000 | (b) R1, 500 | (c) R4,500 | (d) R2,500 |
|-------------|-------------|------------|------------|
30. Five students win a lottery and share the prize. If the award they are sharing is R 200, 000, how much does each of them get?
- |             |             |             |             |
|-------------|-------------|-------------|-------------|
| (a) R40 000 | (b) R25 000 | (c) R20 000 | (d) R15 000 |
|-------------|-------------|-------------|-------------|
31. Suppose you have R200 in a savings account. The interest is 10 per cent per year and is paid into the same account. How much will you have in your account after two years?
- |          |          |          |          |
|----------|----------|----------|----------|
| (a) R220 | (b) R240 | (c) R242 | (d) R200 |
|----------|----------|----------|----------|
32. If the chance of getting successful in business were ten percentage (10%), how many people out of 1000 would be successful?
- |         |         |         |          |
|---------|---------|---------|----------|
| (a) 100 | (b) 150 | (c) 200 | (d) 1000 |
|---------|---------|---------|----------|
33. The second car dealer, is selling a car for R99 999. If this is two-thirds of what it cost when it was first bought (new). How much did it cost when it is was purchased?
- |             |              |             |              |
|-------------|--------------|-------------|--------------|
| (a)R149 999 | (b) R 66 666 | (c) R33 333 | (d) R 45 000 |
|-------------|--------------|-------------|--------------|

### SECTION D – FINANCIAL ATTITUDES

34.

Indicate the importance of the following by indicating <b>not important (1), important (2), important (3), or very important (4).</b>	not important	slightly important	important	very important
(a) paying bills on time.				
(b) in control of my finances and sticking to the budget.				
(c) creating a budget and following the budget.				
(d) reviewing my bank balance often.				
(e) reading my bank statement regularly.				
(f) contributing to a retirement fund if you had a steady income.				
(g) saving money where you can.				
(h) shop around for the best interest rate before taking a loan.				
(i) checking of credit/loan/student balance often.				
(j) taking insurance for a valuable asset.				
(k) keep money where it can grow.				
(l) shop around for the best prices.				
(m) filing your tax return annually when working.				

### SECTION E – FINANCIAL BEHAVIOR

35.

Indicate how often you do the following by stating <b>never (1), slightly sometimes (2), very often (3), or always (4).</b>	never	sometimes	Very often	always
(a) paying expenses on time				
(b) I am responsible for my financial future				
(c) has the debit/credit card been declined for insufficient funds				
(d) reading bank account regularly				
(e) paying more than minimum amount on my credit/store card				
(f) checking your bank balance				
(g) following a budget every time I spend				
(h) checking of the outstanding balance on all cards(credit & clothing store)				
(i) keeping an emergency fund of at least one month's living expenses				
(j)shop around for the best prices				

36.

**SECTION F – FINANCIAL SOCIALISATION**

Please indicate how you agree or disagree with each statement by ticking the corresponding box, where : ( SD) = Strongly Disagree; (A) = Agree; (D) =Disagree; (SA) = Strongly Agree.		SD	D	A	SA
(a)	I always discuss with my parents before making financial decisions.				
(b)	My financial decisions are determined by my parent's budget for the month.				
(c)	I have family responsibilities that affect my financial decisions.				
(d)	Social media groups easily influence my financial choices.				
(e)	My friends and I always buy the same things.				
(f)	My friends often convince me on the best financial products to choose.				
(g)	I am allowed by my parents to make my own financial decisions individually.				

**SECTION G – PROFESSIONAL SKILLS**

Please indicate how you agree or disagree with each statement by ticking the corresponding box, where : ( SD) = Strongly Disagree; (A) = Agree; (D) =Disagree; (SA) = Strongly Agree.		SD	D	A	SA
(a)	I will be studying further even after I qualify as a Chartered Accountant/finishing my Degree/Diploma.				
(b)	I will often be required to use my judgment in assessing any professional situation and be required to communicate clearly.				
(c)	Accounting education requires the evaluation of ideas and use of information technology.				
(d)	As an accounting student, you are required to think critically.				
(e)	As an accounting student, I am expected to have better/superior problem-solving skills.				

## **ANNEXURE 3 – INFORMED CONSENT**

### **Informed Consent Document**

Date: 30 July 2018

Dear Participant

I, **Bomi Cyril Nomlala (203515450)**, am a student who is currently registered for **Doctor of Philosophy (Accounting)** research degree in the School of Accounting, Economics and Finance, Westville campus, University of KwaZulu- Natal. The topic of my study is:

#### **FINANCIAL CAPABILITY, FINANCIAL SOCIALISATION AND PROFESSIONAL SKILLS OF ACCOUNTING STUDENTS STUDYING IN KWAZULU-NATAL UNIVERSITIES**

I can be reached on 031 260 8603 or [nomlalabc@ukzn.ac.za](mailto:nomlalabc@ukzn.ac.za) for any queries related to study. My academic supervisor is Prof Mabutho Sibanda, based in the School of Accounting, Economics and Finance, Westville campus, University of KwaZulu- Natal. He can be contacted on [sibandam@ukzn.ac.za](mailto:sibandam@ukzn.ac.za) or 031 260 2160/2675 during office hours. The HSSREC Research Office can be contacted by reaching Ms Mariette Snyman on [Snymanm@ukzn.ac.za](mailto:Snymanm@ukzn.ac.za) or 031 260 8350.

The aim and purpose of this research sought to determine the financial capability of university students studying toward accounting degrees in KwaZulu-Natal Province of South Africa.

This study seeks to identify if any gaps and similarities among accounting students concerning their financial capability under broad themes of financial knowledge, numeracy skills, financial attitudes, and financial behaviour.

The study is expected to survey an estimate of 1840 accounting students from the University of KwaZulu-Natal, Durban University of Technology and Mangosuthu University of Technology. It will involve the collection of data from first years to final year accounting students from these universities. Also, a copy of the thesis will be available at the university's main library for accessibility to respondents based on their anonymity during the study.

Please note that your name will not be included in the report. The questionnaire does not require any personal information. The information will be seen only by me, my supervisor and the examiner and your anonymity and confidentiality is of utmost importance and will be maintained throughout the study.

Your participation in this study is voluntary. You have the right to withdraw at any time.

I appreciate the time and effort it would take to participate in this study. I would be very grateful for your participation, as it would enable me to complete my thesis.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number **HSS/0682/018D**).

Please complete the section below:

I .....(full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participate in the research project. I understand that I am at liberty to withdraw from the project at any time, should I so desire.

Signature of participant..... Date .....

**ANNEXURE 4 – ETHICAL CLEARANCE**

## ANNEXURE 5 – EDITORIAL LETTER

62 Ferguson Road Glenwood  
DURBAN 4001  
Tel: 072 442 7896  
Email: [deanne.collins30@gmail.com](mailto:deanne.collins30@gmail.com)  
Income tax number: 0526066204

23 June 2019

This serves to confirm that I have edited the thesis, “Financial Capability, Financial Socialisation and Professional Skills of Accounting students studying in KwaZulu-Natal Universities”, by Bomi Cyril Nomlala, student number 203515450.

**DISCLAIMER: The editor cannot be held responsible for any errors introduced due to changes being made to the document after the editing is complete.**

Yours sincerely,



(Ms) Deanne Collins (MA)

**ANNEXURE 6 – TURNITIN REPORT**