



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA



GORDON INSTITUTE  
OF BUSINESS SCIENCE

University of Pretoria

***THE RELATIONSHIP BETWEEN  
FINANCIAL LITERACY, ECONOMIC  
MEASURES AND DELAYED  
GRATIFICATION IN SOUTH AFRICAN  
HIGH SCHOOL LEARNERS***

Research Project

*Submitted by*

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of

**MASTER OF BUSINESS ADMINISTRATION  
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## ***Abstract***

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This study's primary aim was to quantitatively measure financial literacy levels in South African (SA) high school learners, an exercise which had not been done before. Differences in literacy levels were identified for different demographic and psychographic profiles and between four categories (General Finance Knowledge, Saving, Spending, and Debt). Another aim was to compare SA and US financial literacy levels, based on the 2006 Jump\$tart Coalition's Personal Financial Survey of High School Seniors. Finally, the study aimed to determine if financial literacy and the ability to delay gratification are related.

A quantitative survey was conducted amongst 12<sup>th</sup> grade learners consisting of different population groups and genders in seven public or private, rural or urban schools in South Africa. The sample comprised 536 respondents, of which 508 submitted useable responses.

The results indicate significant differences in financial literacy levels of 12<sup>th</sup> graders from different schools, population groups, and public vs. private schools, but not across different genders. Significant differences exist between different psychographics, and between financial literacy categories. An unclear relationship exists between financial literacy and propensities for debt, saving and spending, suggesting the need for further research. As expected, SA financial literacy levels are poor and lower than for US youth. Finally, financial literacy and ability to delay gratification are unrelated. A model is proposed relating SA financial literacy to the major conclusions from the tested null hypotheses.

The results should enable SA business, educational settings and government to understand the impact of demographic, psychographic and educational differences on financial literacy and the need for improvement in financial literacy.



## *Declaration*

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I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University.

**NAME:** Colette Delene Symanowitz

**SIGNATURE:** \_\_\_\_\_

Signed on the \_\_\_\_\_ day of November 2006

## *Acknowledgements*



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*List of Abbreviations*

<b><u>Abbreviation</u></b>	<b><u>Full word or phrase</u></b>
ANOVA	One-way Analysis of Variance
ATM	Automated teller machine
BC	Bluehills College
C2005	Curriculum 2005
CCS	Crawford College Sandton
D	Debt
DG	Delayed Gratification
GFK	General Finance Knowledge
GHS	Greenside High School
GLM	Generalised linear model
H <sub>A</sub>	Alternate hypothesis
HIHS	Horizon International High School
H <sub>0</sub>	Null hypothesis
IEB	Independent Education Board
IQ	Intelligence Quotient
IPSS	Ivory Park Secondary School
ITSC	Ikwezi Technical Skill Centre
MOFLS	Mean overall financial literacy score
MCQ	Multiple-choice question
OBE	Outcomes-based education
Q	Question
RHS	Redhill High School
SVG	Saving
SA	South Africa or South African (as applicable)
SARB	South African Reserve Bank
SAT	Scholastic Aptitude Test
SP	Spending
TIMSS	Third International Mathematics and Science Study
US	United States
USA	United States of America

All abbreviations are defined in the text when used for the first time. For readability, non-standard abbreviations are also defined when used for the first time in each chapter.

# *1. Chapter One -*



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# *1 Problem*

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In this chapter, the researcher introduces the background to the topic and defines the research problem that will be examined. The chapter then concludes with a statement of the aims of the research, which will be accomplished in subsequent chapters. Note that a list of abbreviations has been provided on page x preceding Chapter 1.

## *1.1 Background*

Personal financial literacy encompasses the ability to manage personal financial conditions that influence material well-being, to plan for the future, and to react competently to life events that affect daily financial decisions, including events in the broader economy (Vitt, Anderson, Kent, Lyter, Siegenthaler and Ward, 2000). It would therefore seem to involve understanding of the need to save more, spend less and incur less debt.

In South Africa and the United States of America (USA), savings rates are low, while spending and debt levels are high, all of which may imply low levels of financial literacy, and could negatively affect the economy and one's personal financial position. In South Africa, household savings levels lie at a dismal 0.15% of disposable income (Fin24, 2006a), while United States (US) savings are even lower at negative levels (MSNBC, 2006). Increased domestic spending in South Africa and the US is resulting in faster economic growth, but this growth goes hand in hand with higher debt levels. Household debt as a proportion of disposable income rose to record levels in 2005 both in South Africa (Fin24, 2006b; Laubscher, 2006) and in the US (Gassman, 2006). The US is experiencing a rise in spending levels greater than the rise in income (MSNBC, 2006). Many individuals in the US



carry this burden of expenditure or savings (McGinn, Bryant, Naughton, Peraino, Check, Raymond, Pierce, Spencer, Perrucci, Braiker and Cooper, 2001).

Financial literacy, financial education and savings levels seem to be directly related (Bernheim, Garrett and Maki, 2001; US Treasury Department, 2002; Bernheim and Garrett, 2003; Mandell, 2005b). Studies indicate that financially educated people have a significantly higher savings rate and can make better-informed financial decisions than those without such an education (US Treasury Department, 2002).

Thus, it seems likely that low levels of personal financial literacy are likely to negatively affect one's personal financial position and the economy in terms of high debt levels, low savings and increased spending. By contrast, high levels of personal financial literacy, lower debt, increased saving and lower spending should positively affect the economy and one's personal financial position. Hence, among other things, this research aimed to test the relationship between financial literacy and propensities for debt, saving and spending.

A related concept is that of delayed gratification i.e. the extent to which individuals are able to satisfy their immediate desires later rather than immediately, in order to qualify for a greater, more valued future benefit (Mischel and Gilligan, 1964; Mischel and Ebbesen, 1970). Lack of discipline (i.e. poor ability to delay gratification) about saving and spending is stimulating growing ambivalence about debt (McGinn *et al.*, 2001). This observation would seem to indicate that there is a relationship between poor ability to delay gratification, and high levels of spending and debt, and low savings levels, all of which are likely to negatively affect the economy and one's personal financial position. Furthermore, a



trend towards decrease levels of spending, has been observed since the 1980s (Oberhofer, 1989), tying in approximately with the introduction of immediate-gratification technologies such as the Internet and email. Hence, among other things, this research aimed to test whether individuals who can postpone gratification are likely to be more financially literate (which seems to imply that they have a lower propensity to spend and to incur debt, and a greater propensity to save), and vice versa.

In addition, man is environmentally and genetically predisposed towards instant gratification, making it all the more difficult to delay gratification (McClure, Laibson, Loewenstein and Cohen, 2004; Atkinson, 2006). Also, studies have found self-discipline and impulse control to be directly related to lifelong academic, emotional and social success (Mischel, 1961a; Mischel, 1961b; Mischel, 1961c; Mischel and Metzner, 1962; Shoda, Mischel and Peake, 1990; Gibbs, 1995; Kagan, 2001; Colorado Department of Education, 2006; Money Savvy Generation, 2006). Children who delayed gratification, developed into adults who were, among other things, capable of postponing gratification in pursuit of aspirations. Thus, this research aimed to test the relationship between delayed gratification and financial literacy.

The latest studies and surveys indicate that poor financial literacy is a serious issue in the US and other countries, and efforts are needed to address this problem (US Treasury Department, 2002; Breitbart, 2003; Mandell, 2005a; Jump\$Start Coalition, 2006a; Jump\$Start Coalition, 2006b; Jump\$Start Coalition, 2006d; Kiyosaki, 2006). Financial literacy, financial education and savings levels seem to be directly related (Bernheim *et al*, 2001; US Treasury Department, 2002; Bernheim and Garrett, 2003; Mandell, 2005b). In the US, there has been



increased focus on financial literacy. Financial literacy levels in the US and other developed countries have been measured and found to be poor (US Treasury Department, 2002; Jump\$start Coalition, 2004a; Jump\$start Coalition, 2006a). In South Africa, the national FinScope survey assesses financial literacy qualitatively (FinMark Trust, 2005). However, from a comprehensive review of the literature, it would seem that South African financial literacy levels have not been measured quantitatively. These levels are likely to be lower than US levels, largely because of South Africa's developing status and lower educational levels than the US (May and Wilkins, 1998; Mullis, Martin, Beaton, Gonzalez, Kelly and Smith, 1998; Rule and Drimie, 2006). Other reasons are outlined in the literature review (Department of Education, 2006; Jump\$start Coalition, 2006b).

### *1.2 The Research Problem*

In South Africa, the national FinScope survey assesses financial literacy qualitatively (FinMark Trust, 2005). However, from a comprehensive review of the literature, it seems that South African (SA) financial literacy levels have not been measured quantitatively. These are likely to be lower than US levels. Thus, the key objectives of this research were to quantitatively measure levels of financial literacy in South Africa and compare them to US levels, and to determine what differences in financial literacy levels, if any, exist between different demographic and psychographic profiles and different categories (namely General Finance Knowledge (GFK), Saving (SVG), Spending (SP), and Debt (D)). It was anticipated that, with these insights, South Africa's businesses, educational settings and government should be able to identify where further financial literacy education is required. They can then team up to fill these gaps and improve poor financial literacy levels and reduce any impact they might have on the economy (Jump\$start Coalition, 2006b).



According to prominent financial literacy researchers, it is essential to teach life skills and financial management to the youth, as these aptitudes are vital for entrepreneurship, especially in South Africa today with its high unemployment rate (Fin24, 2006c).

The 2006 US financial literacy survey is regarded as one of the most important barometers of personal financial and economic independence for future generations of Americans (JumpStart Coalition, 2006b). This survey, and the data it supplies, provide a valuable assessment tool for educators, policymakers and parents (JumpStart Coalition, 2005). It is hoped that the 2006 South African survey provided by this research will become just as significant for South African parents, youth, educators and government, and will serve as a springboard for future financial literacy policies, educational initiatives and research.

### *1.3 Research Aims*

In summary, this research study incorporated the following aims:

1. To identify a relationship, if any, between financial literacy and propensity for debt, propensity to save and propensity to spend;
2. To identify a relationship, if any, between financial literacy and delayed gratification;
3. To measure and compare the levels of financial literacy (i.e. knowledge of personal finance) of a sample of South African 12<sup>th</sup> grade high school learners, to US levels;
4. To identify the categories in which individuals are particularly weak or strong in terms of financial literacy (the categories are GFK, SVG, SP and D);
5. To identify differences in financial literacy levels according to demographic and psychographic variations such as educational institution, public vs. private school, population group, gender, parental influence, and other variables.

## 2. Chapter Two -



To provide a theoretical backdrop to this study, this chapter includes the following discussion topics:

- a review of financial literacy,
- its consequences, status and economic impact in South Africa and the US,
- the JumpStart US Personal Financial Survey,
- financial literacy education, and,
- the relationship between delayed gratification and financial literacy, and the impact of this relationship on the economy.

The chapter culminates with the development of a rationale for this research.

### 2.1 What is Financial Literacy?

Financial literacy involves the ability to manage personal financial conditions that influence material well-being, to plan for the future, and to react competently to life events affecting daily financial decisions, including events in the broader economy (Vitt *et al*, 2000). It thus seems to involve an understanding of the need to save more, spend less and incur less debt.

### 2.2 Consequences of High and Low Levels of Financial Literacy

Low levels of financial literacy can have devastating negative consequences. Poor financial literacy is thought to stimulate high consumer debt levels, dismal savings rates and alarming rates of bankruptcies. The worrying levels of these economic measures (discussed under Section 2.3 below) have contributed to the sense of urgency surrounding financial literacy (Braunstein and Welch, 2002; Fox, Bartholomae and Lee, 2005). Understanding of personal





finance acts as a consumer in financial transactions (US Treasury Department, 2002) e.g. predatory lending at very high interest rates. Ineffective financial management may also lead to behaviours that expose consumers to serious financial crises (Braunstein and Welch, 2002). Consumers without financial know-how lack the tools needed to make effective decisions beneficial to their economic health (Braunstein and Welch, 2002). Such financial literacy deficiencies can affect an individual's or family's daily money management and ability to save for long-term goals e.g. funding a home or retirement, or obtaining higher education (Braunstein and Welch, 2002). More broadly, individuals' inability to make effective financial decisions negatively affects the financial health of lending institutions that face higher-than-expected losses due to individual delinquencies and bankruptcies (McGinn *et al*, 2001; US Treasury Department, 2002). Also, those in financial trouble can suffer trauma, stress and humiliation, often with associated medical conditions such as heart disease (US Treasury Department, 2002).

According to Braunstein and Welch (2002), other critical demographic and market trends adding to concerns about financial literacy include:

- greater population diversity (leading to family units that may face language, cultural or other obstacles to starting a banking relationship); and
- greater employee responsibility for managing their own investments in employer-sponsored retirement and pension plans (which occurs in some countries e.g. the US).

This greater responsibility despite poor financial know-how (implied by higher spending and debt levels and lower savings rates) could result in poor management by individuals of their retirement and pension plans.



Furthermore, youth with  ly vulnerable to exploitation.

The trend towards increased access to credit and credit cards for younger populations can expose such groups to the risk of greater spending and debt, without the financial know-how to control these elements (Braunstein and Welch, 2002). Also, today's sophisticated marketing strategies are designed to raise youth spending, and improved financial literacy is needed to help parents and children defend themselves against this barrage of marketing.

Economically speaking, market operations and competitive forces are negatively affected when consumers lack the skills to effectively manage their finances. Knowledgeable participants help to produce a more competitive, efficient market environment. When informed consumers demand products and services that satisfy their short-term and long-term financial requirements, suppliers compete to produce products and services with the attributes that best meet those demands (Braunstein and Welch, 2002).

In contrast, high levels of financial literacy can have positive outcomes, and financial literacy, financial education and savings levels seem to be directly related. Learners who are saving and learning financial concepts and increasing their personal financial literacy, and who know that there are funds available for their current or further education, are likely to participate more fully in their studies, and this in turn is likely to contribute to higher academic achievement (Gonzales-Rubio, 2005). Studies indicate that individuals who have received financial education have a significantly higher savings rate and can make better-informed financial decisions than those who have not received such an education (US Treasury Department, 2002). Although there seems to be a poor association between financial literacy and propensity to save among high school learners, students who become

financially educated who save in their middle age when they have more income to save. Thus, financial education stimulates savings in the long-term but not necessarily in the short-term (Bernheim and Garrett, 2003; Mandell, 2005b).

It seems likely then, that poor financial literacy can exert a negative impact on the economy and one's personal financial position in terms of high debt levels, low levels of saving and increased spending, and poor ability of individuals to support themselves in retirement, which would place an excessive burden on the family and the state.

### 2.3 The Economic Impact of Financial Literacy in the US and South Africa

Poor financial literacy levels may be coupled with high debt levels, dismal savings levels and alarming rates of bankruptcies (Fox *et al*, 2005). Many Americans carry the burden of too much debt, excessive spending and poor savings (McGinn *et al*, 2001), which may imply that their financial literacy levels are low. Some statistics of concern are as follows:

- In 2005, according to Alan Greenspan, former chairman of the US Federal Reserve, considerable gains in consumer spending of recent years have been accompanied by a drop in personal savings to an average of only 1% over 2004 - a very low figure relative to the nearly 7% rate averaged over the previous three decades (US Politics, 2005);
- The 2005 US savings rate dropped even lower to minus 0.5%, the lowest rate since 1933. This means that Americans were spending 100.5% of their income (MSNBC, 2006)! This negative savings level implies that Americans spent all their disposable income and used past savings or borrowed more to finance purchases. Also, US consumers are exhausting savings to buy costly items such as cars, even though many are already shouldering heavy debt loads (MSNBC, 2006);



- The worrying downward trend in US debt levels, respectively, are illustrated in Figures 2.3.1 and 2.3.2 below (Gassman, 2006; US Department of Commerce (Bureau of Economic Analysis), 2006);
- The drop in US savings rates was coupled with increased spending levels exceeding the rise in incomes (MSNBC, 2006), with roughly 40% of the US nation estimated to live beyond their means (Breitbard, 2003). The US has become a country of shoppers with a heavy reliance on credit and debt to fund their increased spending habits (McGinn *et al*, 2001). Indeed, the consumer debt burden rose to a record high in 2005 (Gassman, 2006);
- More and more, US homeowners were tending to borrow against their properties' increasing value to fuel discretionary spending. Indeed, many were using home equity to pay credit-card debt without adjusting spending behaviour (McGinn *et al*, 2001);
- More and more Americans seem to be filing for bankruptcy (McGinn *et al*, 2001);
- Lack of discipline about saving and spending, especially credit-card spending, is stimulating growing ambivalence about debt, and people seem to be becoming more comfortable with personal debt and high levels of spending (McGinn *et al*, 2001);
- Funds can be accessed easily via multiple channels such as Automated Teller Machines (ATMs), the Internet, credit cards, bank branches and cell-phone banking, making it easier to spend what one does not have and incur debt;
- Consumers are tending to “buy now and pay later” which can raise debt and spending levels. This relates largely to credit card usage. In the 1980s, most cardholders had only one credit card. Today, most consumers carry multiple credit cards – indeed, one in three 18 and 19-year old Americans had one in 2003 (Breitbard, 2003) - and credit-card debt levels have risen alarmingly. Between 1989 and 2001, US credit card debt virtually tripled from \$238 billion to \$692 billion (Federal Reserve Bank, 2005). Mean credit



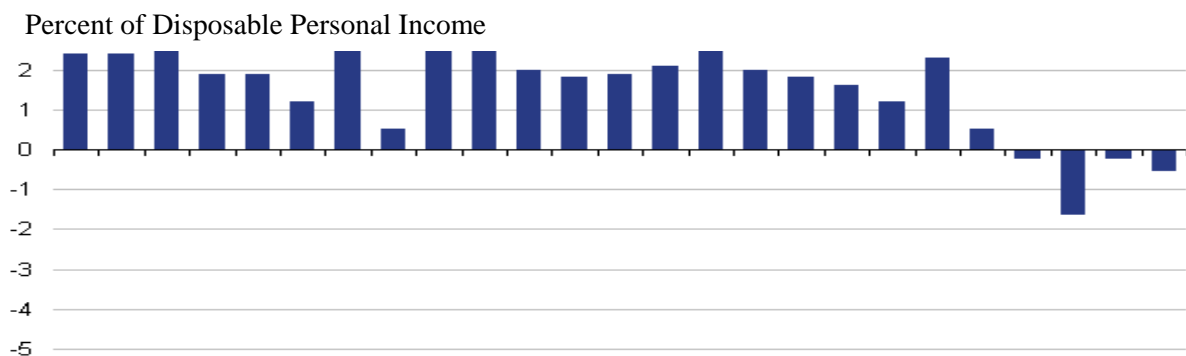
card debt per Amer in 1990 to \$8,562 in 2002, amounting roughly to a 400% increase (Breitbard, 2003). In 2001, the average US cardholder carried \$8,123 in credit-card debt (McGinn *et al*, 2001);

- Increased access to credit and credit cards for the youth is dangerous when combined with poor financial literacy in this population sector, as they are exposed to the risk of increased spending and debt without the financial knowledge to manage these elements;
- For many US consumers, credit card usage has replaced budgeting: they tend to run out of money, but start spending again with the next income payment (McGinn *et al*, 2001).

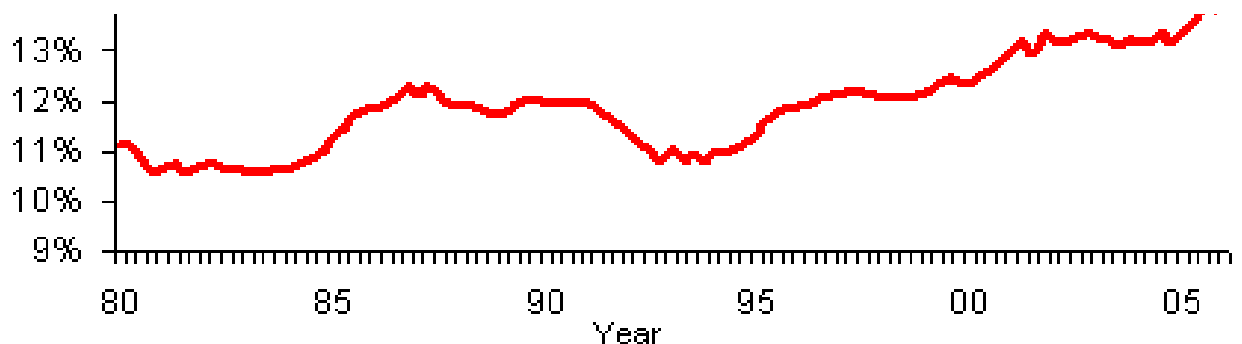
These statistics paint a bleak picture of consumer behaviour and economic health in the US.

*Figure 2.3.1: (US) Personal Saving Rate as a Percentage of Disposable Personal Income*

(US Department of Commerce (Bureau of Economic Analysis), 2006)



*Figure 2.3.2: (US) Consumer Debt Burden 1980 - 2006: Mortgage and Consumer Debt as a Percentage of Household Net Worth* (Gassman, 2006)

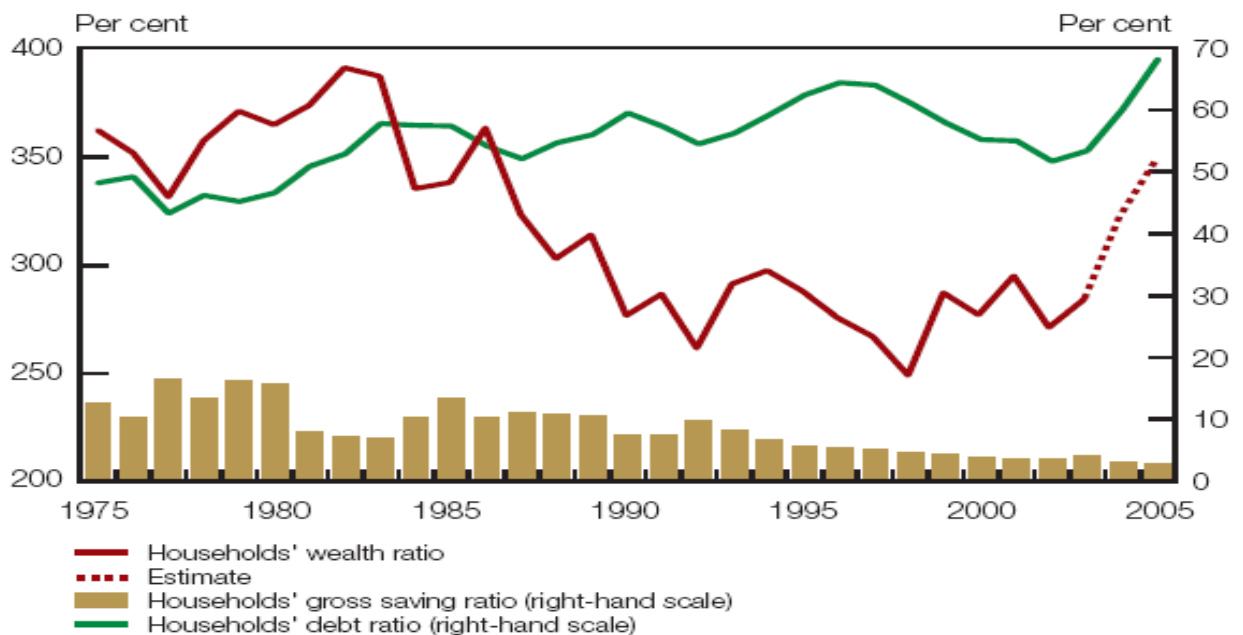




In South Africa, the economic situation is characterized by low savings levels and high spending and debt levels (South African Reserve Bank (SARB), 2006), all of which could imply low levels of financial literacy and could negatively affect the economy and one's personal financial position. Household savings for 2005 dropped to a dismal 0.15-0.2% of disposable income, their lowest level since 1952 (Fin24, 2006a; Laubscher, 2006). In other words, South Africans are spending 99.8 - 99.85% of their income.

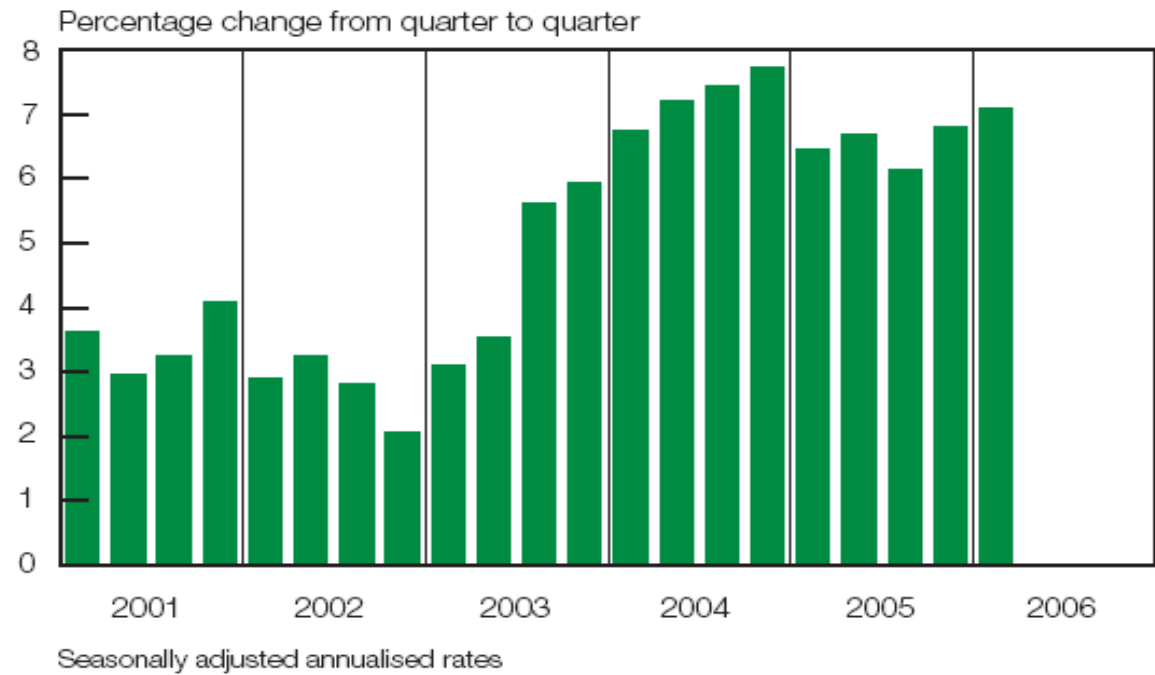
Although increased domestic spending is resulting in faster economic growth (driven by the lowest interest rates in over twenty years, low inflation and an emerging black middle class that tends to spend more than save), it goes hand in hand with higher levels of debt. Household debt as a percentage of disposable income climbed to a record high of 63.4% in 2005 (Fin24, 2006b; Laubscher, 2006)!

*Figure 2.3.3: (SA) Households' Saving, Debt and Net Wealth as a Percentage of Personal Disposable Income* (SARB, 2006)





*Figure 2.3.4: (SA) Real Final Consumption Expenditure by Households (SARB, 2006)*



*Figure 2.3.5: (SA) Household Debt as a Percentage of Disposable Income (SARB, 2006)*





Financial literacy seems to need to save more, spend less and incur less debt (Vitt *et al*, 2000). It seems likely then that low financial literacy levels can negatively affect the economy and one's personal financial position in terms of high debt levels, low levels of saving and increased spending. Hence, among other things, this research study aimed to test the relationship between financial literacy and propensities for debt, saving and spending.

#### 2.4 Financial Literacy outside South Africa, especially in the US

The latest studies and surveys indicate that poor financial literacy is a serious issue in the US and other countries (the situation in South Africa is discussed in Section 2.5 below):

- Financial literacy is unacceptably low and seems to be showing little improvement among consumers of various ages in many countries (Mandell, 2005a);
- Many adults in the US lack the skills or know-how to make effective financial decisions, having inadequate knowledge of personal finance (US Treasury Department, 2002);
- In 1998 over half of US workers aged 45-54 lacked retirement accounts (Breitbard, 2003);
- The average US student graduating from high school lacks fundamental skills in the management of personal financial affairs (Jump\$tart Coalition, 2006a). In the 2006 US Personal Financial Survey of High School Seniors, 62.2% of participating high school students failed (compared to 65.5% in 2004), although mean financial literacy scores rose marginally compared to 2004 (Jump\$tart Coalition, 2006d);
- According to Robert Kiyosaki (2006), best-selling author of "Rich Dad, Poor Dad", school systems globally teach the youth extremely little about money and financial literacy;





- American youth do not have the insight necessary to make important financial decisions in their own interests (JumpStart Coalition, 2006b);
- Although they are estimated to spend \$150 billion per annum, America's youth lack the insight and skills to properly exercise this tremendous spending power (US Treasury Department, 2002).

Other financial statistics of concern have been outlined in Section 2.3. Clearly, efforts are needed to address poor financial literacy levels.

#### *2.4.1 JumpStart's US Personal Financial Survey of High School Seniors*

The JumpStart Coalition for Personal Financial Literacy is a non-profit partner of the US Federal Reserve Board. It conducts financial literacy initiatives for the youth in America and is committed to increasing the levels of financial knowledge throughout the USA (JumpStart Coalition, 2006a). According to the JumpStart Coalition (2006a), the average (American) student graduating from high school lacks basic skills in management of personal financial affairs. Many cannot balance a chequebook and most lack understanding of the basic survival principles inherent in earning, spending, saving and investing. Many young people fail in the management of their first consumer credit experience, establish poor financial management habits, and learn by trial and error.

The Personal Financial Survey of High School Seniors, conducted biannually across the USA by the JumpStart Coalition for Personal Financial Literacy (JumpStart Coalition, 2006b), is widely regarded as the benchmark for financial literacy surveys in the US. According to the JumpStart Coalition (2006b), the 2006 US survey was conducted in Dec-2005/Jan-2006 by means of a written examination. A total of 5,775 high school students



were surveyed in 305 U.S. middle schools, measuring 12<sup>th</sup> graders' knowledge level of personal finance fundamentals, and comparing results to similar surveys carried out in 2004, 2002, 2000 and 1997. The surveys were conducted on classes that did not focus on finance or money management - predominantly English or Social Studies classes - because general financial literacy was being assessed, and not learners' recollections from a previous finance course (Jump\$tart Coalition, 2006b).

For their financial literacy surveys, Jump\$tart classifies a financial literacy score below 60% as a failing grade, and uses the same scale as US schools, namely, A: 90% and above, B: 80% -89%, C: 70% - 79%, D: 60% -69%, F: 50% - 59% (Hines, 2006). In the 2006 US survey, 62.0% of participating high school students failed (compared to 65.5% in 2004) (Jump\$tart Coalition, 2006d).

Of the 30 questions with a right or wrong answer, students in the 2006 survey answered 52.4% of questions correctly, compared to 52.3% in 2004, 50.2% in 2002, 51.9% in 2000 and 57.3% in 1997 (Jump\$tart Coalition, 2004b; Jump\$tart Coalition, 2006d). Thus, from year to year, mean scores have consistently fallen in the failing grade, i.e. below 60%. One explanation for this poor showing is that students do not pay much attention to financial literacy and do not retain what they have learned because they do not consider it relevant to their lives and are not motivated to increase their financial literacy (Jump\$tart Coalition, 2006b; Jump\$tart Coalition, 2006d).

The 2006 survey showed an unexpected trend towards lower financial literacy scores for learners with greater levels of financial education. In the 2006 survey, those students who



attended an entire money course attained a lower mean financial literacy score (51.6%) than the overall average score (52.4%) (JumpStart Coalition, 2006b). This finding is surprising, as one would expect more financial education to correlate positively with higher financial literacy levels. In the 2004 survey, as expected, financial literacy scores were higher for students with more financial education (JumpStart Coalition, 2004a). The average financial literacy scores have remained in the mid-50% range from 2004 onwards, despite increased attention being paid to poor financial literacy in the US through increased or improved financial education at school level (JumpStart Coalition, 2006b). This result would seem to indicate that greater levels of financial education are not directly correlated with higher financial literacy scores, which the 2006 survey does support. One explanation is that of poor motivation to increase their financial literacy, as discussed earlier (JumpStart Coalition, 2006b; JumpStart Coalition, 2006d). Secondly, economists in US school systems may not be teaching personal financial decision-making, and personal finance teachers may not be teaching the economic and institutional context that students require to make informed choices (JumpStart Coalition, 2006d). Thirdly, higher financial literacy scores were obtained by 2006 US learners who played a stock market game, compared to those who took full courses in money management or personal finance. This finding indicates that real-life lessons can best be taught in an interactive, real-time setting through simulations, games and research projects, which are usually not possible in many US schools today (JumpStart Coalition, 2006d).

The 2006 US survey questions fell into five categories: Income, Money Management, Saving, Spending and Debt (Hines, 2006). In the 2004 survey, students answered questions on Income (answering 62.9% of these correctly) and Spending (55.4%) more capably than

those on Money Manag



while scores for debt were not

reported (JumpStart Coalition, 2004a). In the 2006 survey, students responded to questions on Income (answering 59.2% of these correctly) and Spending (56.9%) and Debt (51.8%) better than those on Money Management (46.4%) and Saving (42.6%) (Hines, 2006).

In the 2006 US survey, differences in financial literacy scores were found for different demographic profiles (Hines, 2006; JumpStart Coalition, 2006b). In terms of population group, White students scored higher than African Americans and Hispanics. Regarding family income, financial literacy scores rose after 2002 for learners from highest-income families, with students from the highest income families obtaining the highest financial literacy scores. As for gender, scores were very similar for males and females, with males scoring 52.6% and females scoring 52.3% (Hines, 2006). Q32 (i.e. Question 32), "Does your family rent or own your home?", was asked in the 2006 US survey because, according to some economists, home-ownership gives people a stake in society which may alter their economic behaviour, and perhaps their financial literacy level (Hines, 2006). Learners from those families renting homes, scored 48.5%, while those from home-owning families scored 53.1% (JumpStart Coalition, 2006c). However, whether the difference between these 2006 scores is significant does not seem to have been reported (JumpStart Coalition, 2006b).

Because the JumpStart Coalition's Personal Financial Survey of High School Seniors is considered the benchmark for financial literacy surveys in the US, it seemed appropriate to adapt this research instrument for South Africa, in order to measure and compare financial literacy levels of 12<sup>th</sup> grade learners in South Africa to the levels of 12<sup>th</sup> grade learners in the US. It should be noted that Lucey (2005) challenges the JumpStart survey's reliability

(internal consistency) at   sed further under Section 4.9 (Limitations) in Chapter Four.

### 2.5 *Financial Literacy in South Africa*

The challenges facing the realisation of financial literacy in South Africa are substantial. These involve rectifying the inequalities of South Africa's past and repairing the unintended consequences of existing policies (Rule and Drimie, 2006). A considerable division of wealth along racial lines is still very apparent in South Africa (FinMark Trust, 2005). Access and lack of understanding remain an issue among the lower-income segments (FinMark Trust, 2005).

Manuel (2004) has seen an improvement in the way that South African households are generally managing debt and general finances. However, this progress does not seem to have been quantified.

In terms of a qualitative assessment of financial literacy, the FinScope national survey of financial usage and behaviour in South Africa was launched in 2003 by the FinMark Trust (FinMark Trust, 2005). The 2005 survey was carried out nationally and concentrated on the financial literacy of the population, especially regarding saving large amounts of money (Rule and Drimie, 2006). The survey attempted to create credible benchmarks for use of and access to financial services in South Africa, and was intended to highlight opportunities for innovation in products and delivery (FinMark Trust, 2005). The sample of 2,417 adults aged 16 and above was nationally representative (Rule and Drimie, 2006). The study posed qualitative questions to interviewees about financial literacy, but did not seem to

quantitatively measure S



acy. However, the survey did

reveal financial literacy information on a range of subjects, from banking, savings and investment, debt and housing (FinMark Trust, 2005).

From a comprehensive review of the literature, it appears that South African financial literacy levels have not been measured quantitatively. These levels are likely to be lower in South Africa than in the USA, for the following reasons:

- Financial literacy education has only recently been introduced into the educational curricula of South African schools (Department of Education, 2006);
- South Africa is a developing country (compared with the US, which is a developed nation);
- The average per-capita income in South Africa is lower than in the US, and weaker financial literacy may be expected from those earning less, a finding which seems to be supported by the results of the 2006 US financial literacy survey (Jump\$start Coalition, 2006b);
- Educational levels seem to be lower in South Africa than in the US, and weaker financial literacy may be expected from those with lower education levels (Rule and Drimie, 2006). In South Africa, only 6% of the estimated 5.3 million adults who lack formal schooling and thus literacy skills have access to adult basic education and training, and serious deficiencies exist in quality and distribution of teachers (May and Wilkins, 1998). Also, in 1994-95 South African high school students performed markedly poorer than comparable US students and the international average in the Third International Mathematics and Science Study (TIMSS) general knowledge assessments in science and maths (Mullis *et al*, 1998).The following educational statistics for South

African adults (ages 18-64) : survey are cause for concern (Rule and Drimie, 2006):



- Only 12% of have some form of post-secondary education;
- Barely over 20% had matriculated but had no further education, while 43% had some high school education without matric;
- Just over 11% had only completed primary school, while 8% had some primary education without finishing primary school;
- Just over 6% lacked any formal education.

Low levels of financial literacy in South Africa could translate into the negative consequences described previously. Also, the introduction of the National Credit Bill aims to protect unwary consumers in the credit-lending environment. This legislation became necessary because of exploitation of financially unsophisticated individuals by unscrupulous lenders. Together with this Bill, improved levels of consumer financial literacy, which the South African government strives to achieve, would help protect consumers against reckless lending (Manuel, 2004). Thus, there is a strong need for measurement of financial literacy levels in South African learners, as a financial literacy problem in South Africa can only be addressed if it has been measured. By measuring learners' basic financial knowledge and determining any differences in financial literacy levels between different demographic and psychographic profiles and different categories (namely General Finance Knowledge (GFK), Saving (SVG), Spending (SP) and Debt (D)), South Africa's businesses, educational settings and government can identify where further financial literacy education is required. They can then team up to fill these gaps and improve poor financial literacy levels and reduce any impact they might have on the economy (Jump\$start Coalition, 2006b). If South

Africa's financial literacy



serve as motivation for the

enhancement of financial literacy education in curricula of South African schools, and help learners improve their knowledge of personal finance.

On a macro-economic level, through financial literacy education, South Africa's financial literacy levels can potentially be improved, which in turn may positively affect the quality of people's lives and the economy. By raising financial literacy levels, the national economy's measures of saving, spending and debt are likely to be improved. Globally, there is a trend towards improving financial literacy levels through increased financial education and awareness of the problem. It is likely that South Africa will follow this global trend and that demand for financial literacy education will rise.

### *2.6 The Case for Financial Literacy Education*

With the financial world becoming increasingly complex and difficult to negotiate, people more than ever require training to enable them to cope with debt, saving, retirement planning and similar financial concerns (Breitbard, 2003). However, the lack of education to assist consumers is cause for concern (Breitbard, 2003). Youth financial education should be the basis for helping people understand personal finance, and the best place to reach the youth is via the schools (US Treasury Department, 2002; Jump\$start Coalition, 2006a). Because saving and spending habits are acquired early in life, the best way to help people address their financial problems preventatively seems to be with education commencing as early as nursery school and continuing up to and including the 12<sup>th</sup> grade (Breitbard, 2003). In some states in the US, it is mandatory for high school learners to be taught subjects related to household financial decision-making. These educational mandates substantially





improve exposure to financial literacy education to increase the rates at which individuals save and build up wealth and assets during their adult lives (Bernheim *et al*, 2001). Studies indicate that financially educated individuals have a significantly higher savings rate and can make better-informed financial decisions than those without such an education (US Treasury Department, 2002). Thus, education seems to be a powerful instrument for stimulating personal saving and financial literacy (Bernheim *et al*, 2001).


Furthermore, youth with low financial literacy levels are particularly vulnerable to marketing exploitation. Today's sophisticated marketing strategies are designed to increase youth spending, and increased financial literacy education is needed to help parents and children defend themselves against this marketing onslaught.

However, it is difficult to assess how effective financial education programmes are in improving learners' financial literacy levels, as such programmes often exclude an evaluation element in their design (Fox *et al*, 2005). Thus, measurement of success should be included in these programmes.

### 2.7 Financial Literacy Education in South Africa

During recent years, many departments of education around the world have tried to introduce finance- and business-orientated subjects into their curricula with varying success. Financial literacy education has only recently been introduced into the educational curricula of South African schools (Department of Education, 2006). In addition to the new "learning areas" "Economic and Management Science" and "Life Orientation" which are directly associated with skills required in the business world (Ka-Ching, 2006), the learning

area/subject “Mathemat



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f the OBE (Outcomes-based education) Curriculum 2005 (C2005) for 12<sup>th</sup> grade learners in South African high schools. Within this subject, according to the Thutong South African Education Portal (Department of Education, 2006), Outcome M.LLO1 (FET) uses knowledge of numbers and their relationships to investigate different contexts including financial aspects of personal, business and national issues and “Sub-Outcome” AS12.1.3 entails analysis and critical interpretation of a broad range of financial scenarios mathematically, including:

- personal and business finances;
- the impacts of taxation, inflation and changing interest rates on personal credit, investment and growth options;
- financial and other indicators;
- the effects of currency fluctuations.

However, details of what “Mathematical Literacy” entails and how it should be taught seem to be unavailable, and there seems to be minimal guidance available for teachers. In addition, the impact of this form of financial education on financial literacy levels of school learners does not seem to have been assessed. Also, the benefit of these programmes depends largely on the enthusiasm, interpretation and knowledge of the facilitator concerned and is not very practically orientated (Ka-Ching, 2006).

Since 1999, Standard Bank has run a Financial Literacy Project in high schools around South Africa, giving fundamental but expert advice on economics, personal finance, savings and investments, banking products and services and business finance (Standard Bank, 2004). This project aims to reach all South African schools by 2009 (Standard Bank, 2004).



## 2.8 *The Relationship between Delayed Gratification and Financial Literacy, and the Impact of this Relationship on the Economy*

Delayed gratification is the extent to which individuals are able to satisfy their immediate desires later rather than immediately, in order to qualify for a greater, more valued future benefit (Mischel and Gilligan, 1964; Mischel and Ebbesen, 1970). Lack of discipline (i.e. poor ability to delay gratification) about saving and spending is stimulating growing ambivalence towards debt (McGinn *et al*, 2001). This observation seems to show that there is a relationship between poor ability to delay gratification, and high levels of spending and debt, and low savings rates. This research aimed to test if such a relationship exists.

Man is environmentally and genetically predisposed towards instant gratification, making it all the more difficult to delay gratification (McClure *et al*, 2004; Atkinson, 2006). Instant gratification seems in-built in primates, and thus in man, who has evolved from primates – if given the choice, many primates would prefer a small, instant reward than a larger future one (Atkinson, 2006). This idea supports Darwin’s theory of “Survival of the fittest”: an animal that waits too long, risks losing its reward entirely, e.g. to a competitor or in unfavourable environmental conditions. Also, separate neural systems in the brain value instant and delayed rewards: the limbic/midbrain dopamine system values immediate rewards, while the lateral prefrontal cortex and posterior parietal cortex value long-term compensation, and the fronto-parietal system inhibits the impulse to select more instant rewards and may project future benefits (McClure *et al*, 2004). Thus, consistent with the typical pattern of brain development, it is likely that the more one satisfies the need for

instant gratification, the reinforcing this behaviour. controlling this becomes, thus



Also, today's environmental influences, specifically technological developments such as the Internet, email and television, increase exposure to and the need for instant gratification. Nowadays, information is immediately accessible, and consumer products, such as ready-made meals, fast-food drive-throughs and instant on-line purchases, also appeal to one's need for convenience. Because this instant appeasement has become commonplace, one is likely become impatient when required to wait e.g. in traffic jams, and conditions such as road rage tend to result.

Delaying gratification has many positive effects, whereas instant gratification has negative outcomes. Children who postpone gratification longer, so as to attain delayed but more valued outcomes, tend to develop into cognitively and socially competent adolescents, dealing more effectively with frustration and stress (Mischel, Shoda and Peake, 1988; Mischel, Shoda and Rodriguez, 1989). Duckworth and Seligman (2005) found that self-discipline surpasses IQ (Intelligence Quotient) as a predictor of academic performance of adolescents: failure to apply self-discipline emerged as a key reason for students not achieving their intellectual potential. Studies in the 1960s found self-discipline and impulse control to be directly related to lifelong academic, emotional and social success (Mischel, 1961a; Mischel, 1961b; Mischel, 1961c; Mischel and Metzner, 1962; Shoda *et al*, 1990; Gibbs, 1995; Kagan, 2001; Colorado Department of Education, 2006; Money Savvy Generation, 2006). Children who delayed gratification developed into adults who were more socially competent, more personally effective and self-assertive, better able to deal with



frustrations, more trustv c achievers with higher SAT (Scholastic Aptitude Test) scores, more positive, self-motivating, persistent when faced with obstacles, and capable of postponing gratification in pursuit of aspirations. They enjoyed more successful marriages, larger incomes, greater career satisfaction, better health and more fulfilling lives than most of the population. Those children who were unable to resist instant rewards grew into adults who were more troubled, obstinate, over-reactive and indecisive, and could not delay gratification. They tended to be more jealous, envious and frustrated, with lower self-esteem. They had difficulty resisting instant impulses in order to achieve long-term goals. They also attained lower SAT scores, possibly because they tended to be distracted by instantly gratifying activities instead of studying for SATs. They tended towards unsuccessful marriages, poor job satisfaction and income, and poor health. Other negative outcomes linked with instant gratification and a short-term outlook are as follows: lower productivity (as concern for self-fulfilment among staff rises), inflation, unemployment, less research and development, and the rise of the “me-generation” (*my life, my career*); also, self-discipline and self-control give way to self-fulfilment and entitlement (Cavanagh, 1982; Sachs, 2003).

Interestingly, studies have shown that females are generally better able to postpone gratification than males (Silverman, 2003).

Lack of discipline (i.e. poor ability to delay gratification) about saving and spending, particularly credit-card spending, is stimulating growing ambivalence towards debt, and individuals are becoming increasingly comfortable with personal debt and high levels of spending (McGinn *et al*, 2001), so as to satisfy their need for instant appeasement. To make

matters worse, money (



channels such as ATMs, the

Internet, credit cards, bank branches and cell phone banking, making it easier to spend what one does not have and incur debt.

There is an increasing trend for consumers to “buy now and pay later”, a form of instant gratification whereby individuals buy what they often cannot afford, and which can elevate debt and spending levels. This is largely related to credit card usage (McGinn *et al*, 2001). In the 1980s most cardholders possessed only a single credit card. Nowadays many have multiple credit cards. As a result, credit-card debt levels have risen alarmingly, such that, in 2001, the average US cardholder carried \$8,123 in credit-card debt (McGinn *et al*, 2001).

In summary, it would seem that man is environmentally and genetically predisposed towards instant gratification, making it all the more difficult to delay gratification (McClure *et al*, 2004; Atkinson, 2006). A trend towards decreased savings rates and increased levels of spending, has been observed since the 1980s (Oberhofer, 1989), tying in roughly with the introduction of immediate-gratification technologies such as the Internet and email. Individuals who have difficulty delaying gratification are likely to be less financially literate (which seems to imply that they have a greater tendency to spend and incur debt, and less of a tendency to save). Conversely, individuals who can postpone gratification are likely to be more financially literate (which seems to imply that they have a lower propensity to spend and to incur debt, and a greater propensity to save, all of which are likely to positively affect the economy and one’s personal financial position). Thus, among other things, this research aimed to test if a relationship exists between delayed gratification and financial literacy.

## 2.9 *Conclusion and Ne*



In conclusion, this research is needed to fill the following apparent gaps in the current body of knowledge in South Africa:

- To identify a relationship, if any, between financial literacy and propensities for debt, saving, and spending. If greater financial literacy is related to increased propensity for saving, and decreased propensities for spending and debt (all of which indicate a healthier personal financial position and economy), this result could provide support for enhancement of financial literacy education;
- to identify a relationship, if any, between financial literacy and delayed gratification. If such a relationship exists, this could help motivate parents and teachers to teach their children and learners to delay gratification, in order for them to improve their financial literacy and money management skills. It could also help encourage parents and teachers to develop their children's and learners' financial literacy levels in order to gain the delayed gratification benefits of greater lifelong academic, emotional and social success. It could also help educators and parents to comprehend the economic importance, in terms of national financial literacy and increased saving, reduced spending and debt, of teaching their learners and children to delay gratification;
- To measure financial literacy levels in South African learners, as these do not seem to have been assessed, and a financial literacy problem in South Africa can only be addressed if it has been measured. If these are low as predicted, this could serve as motivation for enhancement of financial literacy education in the educational curricula of South African schools, and to help learners improve their knowledge of personal finance;



- To compare levels of financial literacy in South Africa to those in the USA, so as to determine how South Africa as a developing country fares against a developed country;
- To identify the categories in which learners are particularly weak or strong in terms of financial literacy (the categories are GFK, SVG, SP, and D). This should help educators to focus their efforts more strongly on the areas where learners are weaker;
- To identify differences in financial literacy levels according to demographic and psychographic variations such as gender, population group, public vs. independent school, etc. With this information, South African government and educators can better understand the impact of demographic, psychographic and educational differences on financial literacy.

The 2006 US financial literacy survey is regarded as one of the most important barometers of personal financial and economic independence for future generations of Americans (Jump\$tart Coalition, 2006b). This survey and the data it supplies provide a valuable assessment tool for educators, policymakers and parents (Jump\$tart Coalition, 2005). It is hoped that the 2006 South African survey provided by this research will become just as significant for South African parents, youth, educators and government, and will serve as a springboard for future financial literacy policies, educational initiatives and research.



### 3. Chapter Three



This chapter delineates the specific hypotheses under investigation.

Because the variables under examination were quantitative, statistical analysis by hypothesis testing was considered appropriate. The specific hypotheses investigated were as follows (where  $H_0$  denotes a null hypothesis and  $H_A$  denotes an alternate hypothesis):

1.  **$H_A$ :** *For South African 12<sup>th</sup> grade high school learners, decreased levels of financial literacy are related to increased propensity for debt, decreased propensity to save and increased propensity to spend;*
  - **$H_0$ :** For South African 12<sup>th</sup> grade high school learners, decreased levels of financial literacy are not related to increased propensity for debt, decreased propensity to save and increased propensity to spend;
  
2.  **$H_A$ :** *Decreased levels of financial literacy are related to a decreased ability to delay gratification in South African 12<sup>th</sup> grade high school learners;*
  - **$H_0$ :** Decreased levels of financial literacy are not related to a decreased ability to delay gratification in South African 12<sup>th</sup> grade high school learners;
  
3.  **$H_A$ :** *Financial literacy levels of South African 12<sup>th</sup> grade high school learners are lower than financial literacy levels of US 12<sup>th</sup> grade high school learners;*
  - **$H_0$ :** Financial literacy levels of South African 12<sup>th</sup> grade high school learners are the same as financial literacy levels of US 12<sup>th</sup> grade high school learners;

4. **H<sub>A</sub>**: South African 12<sup>th</sup> grade high school learners have higher financial literacy scores in certain categories of financial literacy than others (the categories are General Finance Knowledge (GFK), Saving (SVG), Spending (SP) and Debt (D));
- **H<sub>0</sub>**: South African 12<sup>th</sup> grade high school learners have the same financial literacy scores in all categories of financial literacy (the categories are GFK, SVG, SP and D);
5. **H<sub>A</sub>**: South African 12<sup>th</sup> grade high school learners' financial literacy levels are significantly different for different demographic and psychographic profiles such as educational institution, public vs. private school, population group, gender, parental influence, and other variables;
- **H<sub>0</sub>**: South African 12<sup>th</sup> grade high school learners' financial literacy levels are the same for different demographic and psychographic profiles such as educational institution, public vs. private school, population group, gender, parental influence, and other variables.

Results from the testing of these hypotheses are presented and discussed in Chapters Five and Six.

## 4. Chapter Four -



This chapter describes the research methodology, the unit of analysis and population, the sample, sampling method and sample size, the data collection and data cleaning processes, design and implementation of the research instrument, the method of data analysis and variables, and the research limitations.

### 4.1 Research Methodology

This statistical, cross-sectional, explanatory, formal research study was conducted by quantitative survey via direct group contact (Welman and Kruger, 2005; Penman, 2006).

The quantitative survey method was chosen for the following reasons:

- The 2006 US Personal Financial Survey (in Appendix 1) (Jump\$tart Coalition, 2006c) upon which the South African (SA) personal financial literacy survey is based, was conducted via the quantitative survey method;
- Surveying is the most apt and practical research method for this type of research where respondents' opinions, beliefs, convictions, attitudes and biographical details are sought (Welman and Kruger, 2005);
- Typical of quantitative research, fairly large numbers of respondents were recruited (i.e. over 30 per school), so as to yield results that were more representative of and that could be extrapolated to the broader population (Welman and Kruger, 2005; Penman, 2006).

### 4.2 Unit of Analysis

The unit of analysis consisted of 12<sup>th</sup> grade learners in South Africa in 2006.



### 4.3 Population

The population, from which the sample was drawn, comprised all 12<sup>th</sup> grade learners in South Africa in 2006, all population groups, and both male and female in gender.

### 4.4 Sample, Sampling Method and Sample Size

The sample comprised 508 useable survey forms from 536 12<sup>th</sup> grade learners of different population groups and genders in seven public or private (Independent Education Board or IEB) schools in rural and urban areas around South Africa in 2006. Various schools were approached, representing a mix of public and IEB, rural and urban schools, so as to provide results which could represent the broader 12<sup>th</sup> grade learner population in South Africa in 2006. The overall sample was based on responses from seven schools, as per Table 4.1 below. This consisted of different population groups, but some schools' respondents comprised only one population group e.g. IPSS (Ivory Park Secondary School). The term "South African 12<sup>th</sup> grade learners" should be taken to mean "12<sup>th</sup> grade learners in South African schools", and not necessarily of South African nationality.

Convenience sampling is a form of non-probability (non-random) sampling defined as the most convenient selection of population members which are near and readily accessible, so as to obtain an approximation of the results without incurring the cost or time needed to choose a random sample (Welman and Kruger, 2005). The study sampled 12<sup>th</sup> grade learners in schools located fairly close to the researcher, and/or to which access was granted for the survey. Thus, the overall sampling method was a convenience sample chosen due to limited time and for geographical convenience, accessibility and reduced cost. Even so, a broad mix of urban vs. rural locations, and public vs. private schools, etc. was obtained.



*Table 4.1: Characteristics of Schools Inclu*

<i>No.</i>	<i>Name</i>	<i>Urban / rural / semi-urban</i>	<i>Public / private #</i>	<i>Learner gender</i>	<i>Instruction medium</i>	<i>Location</i>	<i>Number of respondents</i>	<i>Number of valid respondents</i>
1	Greenside High School (GHS)	Urban	Public	Mixed	English	Johannesburg	80	68
2	Bluehills College (BC)	Semi-urban	Private	Mixed	English	Bluehills (between Pretoria and Johannesburg)	57	56
3	Ivory Park Secondary School (IPSS)	Urban	Public	Mixed	English	Ivory Park (township between Pretoria and Johannesburg)	29	24
4	Horizon International High School (HIHS)	Urban	Private	Boys only	English	Turffontein, Johannesburg	10	10
5	Ikwezi Technical Skill Centre (ITSC)	Rural	Public	Mixed	English	Umtata (Eastern Cape)	196	187
6	Redhill High School (RHS)	Urban	Private	Mixed	English	Sandton	54	53
7	Crawford College Sandton (CCS)	Urban	Private	Mixed	English	Sandton	110	110
	<b>Totals</b>		<b>231 Private 305 Public</b>				<b>536</b>	<b>508</b>

# *Public* = government school (subsidised); *Private* = Independent Education Board (IEB) (i.e. fully private, not subsidised)



For each school survey were selected. However, for practical reasons, at least one class exceeding 30, was decided upon by the school. A statistically valid sample exceeding 30 was obtained in total for all schools surveyed and per school (except for IPSS and HIHS (Horizon International High School), where limited samples under 30 were available), so that the Central Limit Theorem could be applied.

Like the US surveys (Jump\$start Coalition, 2006b), as far as possible the SA (South African) surveys were conducted on classes that did not focus on finance, mathematical literacy, economics or money management because general financial literacy was being assessed, and not learners' recollections from a previous finance course. In this way, the presence of an external event leading to bias was reduced (Penman, 2006). Interestingly, in Question 51 (Q51) of the 2006 US survey ("Which of the following classes have you had in high school (circle all that apply)?"), there was no option for "no finance classes taken", even though Jump\$start targeted students in classes other than finance and money management. This factor was brought to Jump\$start's attention by this researcher, as it had been overlooked previously, and the stated option is likely to be included in subsequent Jump\$start surveys (Hines, 2006). In the South African survey's Q13 (analogous to the US survey's Q51), respondents who had not taken finance classes marked option "g: none".

#### 4.5 Data Collection Process

Data were gathered by quantitative survey of 12<sup>th</sup> grade learners of different genders and population groups from various high schools around South Africa. Data collection took approximately two months (from the end of May to the end of July 2006). The data obtained were nominal, according to the classification of Welman and Kruger (2005).

Surveys were completed via direct group contact between school learners and the researcher (or a 3<sup>rd</sup> party school staff member, e.g. a teacher in charge of a 12<sup>th</sup> grade class). Direct contact was chosen for the following advantages (Daft, 1983; Welman and Kruger, 2005):

- Direct contact supplies the intellectual raw material for constructive theory;
- The cost per survey is considerably less than that of personal interviews;
- Standardisation of survey completion instructions (and thus less interviewer bias) is more effectively achieved, as groups of respondents are surveyed altogether all at once;
- Collection of large numbers of completed surveys takes less time than personal interviews, because groups of respondents are surveyed altogether simultaneously;
- The response rate is typically very high for direct contact, which was indeed the case here. Once the participating schools granted access, all respondents in a school were required by their school to complete the survey. Participation was intended to be voluntary, however staff facilitating the survey at their schools made it compulsory for their learners to complete the survey (response rates are discussed in Chapter Five).

For all the schools surveyed, English was the medium of instruction. For ITSC (Ikwezi Technical Skill Centre), the learners' first language was Xhosa (and their second language was English). Thus, the multilingual staff member involved explained the survey and gave instructions verbally in Xhosa to her learners, and they completed it in English. She had asked that the survey not be translated, as the Xhosa language does not seem to lend itself to translation of financial terms. Hence, translation of the survey into non-English languages was not necessary for any of the schools surveyed.



As suggested by Penma respondents were required to circle their answers directly on the survey forms, and not on separate answer cards. Standardisation in the data-gathering process and the resulting data obtained, was ensured by conducting the same quantitative survey, with the same MCQs (multiple-choice-questions) and answer options in the same way for all respondents, as suggested by Penman (2006). They were requested not to seek assistance in answering questions. The survey administrator gave them an outline of the survey's purpose, plus the following instructions:

**On this survey form, please circle the correct or most appropriate answer for each question. Please choose only ONE answer for each question (except for Question 13 where you should circle ALL answers that apply).**

Due to the geographical nature of the surveys, it was not possible for the same person to administer surveys to all respondents and schools. Thus, an instruction sheet was prepared with standard instructions for all persons who administered the surveys, so as to standardise instructions given to respondents as far as possible. Please see the attached survey form in Appendix 2 for a summary of completion instructions and information for respondents.

Respondents were informed that:

- their identities would be kept anonymous (respondents' names were not requested),
- the aim of the survey was not to rate any one learner as strong or weak, but instead to determine the average financial literacy score for SA matriculants as a whole and,
- the survey would take roughly 45 minutes to complete.

The school staff involved were informed that they would be given feedback about the overall survey results once the research was complete.



#### 4.6 Data Cleaning P



The data cleaning process and the criteria used to exclude invalid data, are discussed in Chapter Five under Section 5.3 (Response Rate and Validity of Data).

#### 4.7 Research Instrument

The Jump\$tart Coalition's Personal Financial Survey of High School Seniors is regarded as the benchmark for financial literacy surveys in the US. Thus, it seemed appropriate to adapt the 2006 version for South Africa, so as to measure and compare financial literacy levels of 12<sup>th</sup> grade learners in South Africa vs. the US in 2006. The 2006 US survey (in Appendix 1, Jump\$tart Coalition, 2006c) consisted of 51 MCQs in five categories: Income, Money Management, Saving, Spending and Debt (Hines, 2006). To create the SA survey, some of the US survey's questions were removed (as they did not apply to South Africa) and remaining questions were rephrased to be more locally relevant and easier to understand. Some questions were also added that were unique to the SA survey. The order of correct answers in consecutive questions was changed to eliminate patterns e.g. abcabc, or too many answers of the same letter, thus reducing predictability and potential answer-guessing by respondents. The resulting SA survey (in Appendix 2) comprised 49 closed-ended MCQs (except for part (b)(i) of Q36, which was open-ended). These were logically organised in financial literacy categories for GFK (General Finance Knowledge), SVG (Saving), SP (Spending) and D (Debt), plus demographic and psychographic questions, and questions on Delayed Gratification (DG). A question's content determined its category.

As suggested by Penman (2006), the survey Version 5A: 19-May-2006 was pre-tested on 12<sup>th</sup> grade learners (who were excluded from the sample), and was found to be easy to

follow and understand, :



nplete. Hence, it seemed that

no changes were needed to this version for it to be suitable for actual data collection.

#### 4.8 Method of Data Analysis and Variables

Of the total of 49 questions, the 2006 SA survey contained 20 test questions with a right or wrong answer, each test question falling into one of the four categories of GFK, SVG, SP and D (i.e. nine questions relating to GFK, four questions relating to SVG, four questions relating to SP, and three questions relating to D). For each respondent, the percentage of test questions answered correctly was determined and analysed, thus giving an overall financial literacy score or percentage, as well as scores for each of the four categories. This enabled a mean financial literacy score for the SA survey to be calculated i.e. the percentage of time that all respondents obtained the correct answer for a particular item.

The remaining 29 questions in the 2006 SA survey related to respondents' demographics (e.g. gender), various psychographics (e.g. those relating to future plans, parental influence or attitudes) and other variables of interest (e.g. whether or not they had a bank account). Responses to these questions were analysed against the respective financial literacy scores to identify the existence of a relationship, if any, between the levels of the variable being analysed and financial literacy levels. To test the stated hypotheses, the results of suitably chosen variables were analysed.

All 49 MCQs were closed-ended, except for part (b)(i) of Q36. However, this sub-question was excluded from the analysis due to problems in its interpretation by the respondents – see Section 4.9 for a more detailed discussion.

To statistically test for a relationship between the levels of a given variable and financial literacy scores, a One-way Analysis of Variance (ANOVA) was conducted, using the Generalised Linear Model (GLM) procedure in the SAS statistical computer package. In all cases, a statistical significance level of 5% was used. Where the null hypothesis of equal effects was rejected, t-tests were conducted on all possible pairs of levels of the variable in question, to determine which levels of the variable were associated with significant differences in financial literacy scores. A suitable Bonferroni adjustment was made in these tests, to adjust for the effect of multiple tests on the overall significance level.

Hypothesis 3 states that financial literacy levels of SA 12<sup>th</sup> grade high school learners are lower than financial literacy levels of US 12<sup>th</sup> grade high school learners. For Hypothesis 3, for overall financial literacy and by category, answers to questions and the percentages answered correctly (i.e. mean financial literacy scores) in the SA survey were compared to the answers and mean scores for similar questions in the US survey. In the 2006 US survey, there were 30 questions with a right or wrong answer. The 2006 SA survey contained 20 test questions with a right or wrong answer, of which Q17, 21 and 28 do not correspond to a question in the US survey. This left 17 questions in the SA survey that had analogous questions in the US survey (i.e. for questions with a right or wrong answer, Q1-9,14-16,18-20,26-27 in the SA survey corresponded to Q19,12,29,22,26,5,11,28,17,13,20,10,7,2,6,8,15 respectively, in the US survey). Differences between the mean scores were identified using a two-sample t-test, in order to determine statistically significant differences in financial literacy levels between respondents in the two countries.




The analysis complied with internal validity, reliability and objectivity, as suggested by Penman (2006). The SA survey's validity and reliability were enhanced by pre-testing the tool, adapting it to the South African context, having a multilingual facilitator to instruct and explain at non-English schools e.g. ITSC, and giving standardised instructions. Reliability and validity measures are discussed in Section 4.9.

#### 4.9 Limitations

The limitations of this research were as follows:

- Time- and financial constraints made it impossible to conduct surveys around the entire country. Surveys were conducted in Gauteng and the Eastern Cape only, using a non-probability convenience sample chosen because time was limited, as well as for geographical convenience, accessibility and reduced cost. In order to obtain as broad, representative and unbiased a sample as possible and to overcome possible weaknesses associated with geographical concentration, a mix of rural and urban settings, and independent and public schools that together comprised learners of diverse population groups and genders were surveyed. However, in order to ensure that the results are truly representative of the broader population, a considerably greater number of schools and larger sample size would be recommended for further research;
- Due to time- and financial constraints, it was not feasible to survey 5,775 learners as in the US survey. However, as far as possible a statistically valid sample exceeding 30 was obtained for each school surveyed (except for HIHS and IPSS). The total sample comprised 536 respondents, out of which 508 submitted useable questionnaires;
- Part (b)(i) of Q36 asked for a numerical answer, which should in theory have enabled a discount rate to be calculated, so as to see if this variable (discount rate) was related to



financial literacy (in  subjective interest rate used to calculate the present value of a future amount of money (Firer, Ross, Westerfield and Jordan, 2004)). However, it became clear that those respondents who answered part (b)(i) did not understand it properly, hence it was excluded from the data analysis. Unfortunately, this issue was not identified during the pre-test;

- Some of the SA survey's questions could possibly have evoked socially desirable answers e.g. Q41: "Estimate what your parents' combined total income was ....." Social desirability bias is the tendency to present oneself in a way that will be perceived favourably by others (Rosnow and Rosenthal, 1996). To reduce their inclination to answer such questions in a socially desirable way, before answering the survey, respondents were informed that their identities would be kept anonymous and that the aim of the survey was not to rate learners as strong or weak, but instead to determine the average financial literacy score for South African matriculants as a whole;
- Due to the geographical nature of the surveys, it was not possible for the same person to administer surveys to all respondents and schools. To overcome this limitation, an instruction sheet was prepared with standard instructions for all survey administrators, so as to standardise instructions given to respondents as far as possible;
- Lucey (2005) challenges the (US) Jump\$tart 1997 and 2000 surveys' reliability (internal consistency) and validity. These surveys were reported to have moderately high internal consistency overall and some face and content validity. However, they had limited construct, congruent and predictive validity, and showed social bias. Low to moderate internal consistencies were found among subscales. There were also significant response differences to one quarter of comparable items between surveys. Caution should be exercised when extrapolating the validity and reliability results from the 1997 and 2000



US surveys to the use these statistics were not determined for the 2004 and 2006 surveys at all. Inconsistency was also found for some questions in the SA 2006 survey, e.g. learners with similar financial education seemed to interpret and answer Q13 differently. To overcome this issue, Lucey (2005) suggests that further research be conducted into measures of financial literacy. Also, future survey questionnaires should be pre-tested on a greater number of people, to uncover and correct for interpretation differences before actual surveys are conducted;

- All respondents completed the survey Version 5A: 19-May-2006 (Appendix 2), except for those at IPSS. Unfortunately, these learners completed an earlier draft (Version 2: 03-Apr-2006), which had been faxed to the principal with a letter explaining that it was a draft for review, so as to request permission for the survey to be conducted at IPSS. Instead of the 49 questions in Version 5A, this draft Version 2 comprised 46 questions i.e. it omitted Q10 and Q29 (both attitudinal/circumstantial/demographic questions with no right or wrong answers) and Q19 (a non-demographic question with a right or wrong answer). Thus, financial literacy scores for IPSS were calculated as a percentage out of 19 MCQs (i.e. excluding Q19), and not out of 20 MCQs as for other schools.

Should further research be conducted on this topic, it is suggested that the researcher create a long-term partnership with a prominent academic institute, which may overcome some of these limitations and enhance the validity and credibility of the research (Hines, 2006). Indeed, Jump\$Start did collaborate with Prof. Lewis Mandell, professor of finance and managerial economics at SUNY Buffalo School of Management, who conducted the Jump\$Start survey (Jump\$Start, 2006b).

## 5. Chapter Five -



In this chapter, results are reported for financial literacy surveys conducted on 12<sup>th</sup> grade learners at various high schools in South Africa. The question numbers below apply to the South African survey Version 5A: 19-May-2006 (Appendix 2). The categories of financial literacy mentioned throughout are GFK (General Finance Knowledge), SVG (Saving), SP (Spending) and D (Debt). Please see the List of Abbreviations on page x for abbreviations.

### 5.1 Presentation of Results

The actual data results are given in Appendix 2 and contain the proportions of respondents who chose specific answers for each question in the survey, and their financial literacy scores overall and by category (GFK, SVG, SP, and D).

As noted in the Results' Key of the SA (South African) survey in Appendix 2, per question, below each answer-option are percentages as follows (to be read from left to right):

- ❖ *in italics*: the proportion (%) of respondents who chose that answer-option e.g. a,b, etc.;
- ❖ **in bold**: their mean overall financial literacy score (MOFLS) (%);
- ❖ [in non-bold, non-italics, in square brackets]: the mean financial literacy score (%) for each of the categories (i.e. GFK, SVG, SP, D], respectively.

For example, for Q2 (Question 2),

2. Which of the following is true about VAT?
  - a. the government will deduct it from your paycheque

*17.9%*, **47.9%** [43.5%, 54.0%, 41.2%, 62.1%]



This should be interpreted as those who chose answer “a” for Q2, and they attained a MOFLS of 47.9%. Their mean financial literacy score per category was:

GFK=43.5%

SVG=54.0%

SP=41.2%

D=62.1%

For survey questions with a right or wrong answer, an asterisk (\*) denotes the right answer.

The sum of proportions for all options for a certain question does not necessarily add up to exactly 100%, since some respondents’ data were discarded as invalid. For Q13 the sum of proportions exceeds 100%, as learners were instructed to circle all applicable options.

Those results not corresponding to a specific question (i.e. mean financial literacy scores overall and by category, for each school and for private vs. public schools) are shown in the two tables on page 3 of the survey form in Appendix 2, before the actual survey questions.

Cultural sensitivity issues make it difficult for Jump\$start to compare the different ethnic groups taking the US survey (Hines, 2006). Jump\$start does report how the various ethnic groups performed overall but does not break that down further due to culture, family issues, social pressures, and so forth. This same issue may have existed for the SA survey, making the US and South African data relatively comparable. Caution and sensitivity should be exercised when discussing any demographic differences in financial literacy in South Africa, e.g. population group differences.

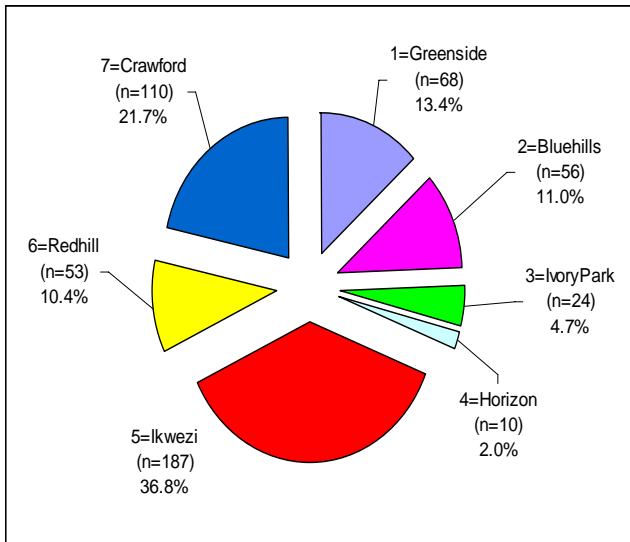


5.2 *Some Broad Results*

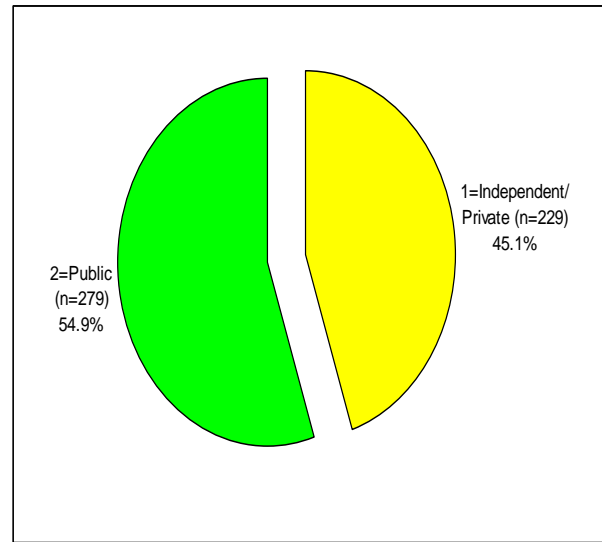
5.2.1 *Demographic Profile of Respondents*

The population from which the sample was drawn comprised all 12<sup>th</sup> grade learners in South Africa in 2006. The total sample of 536 respondents (of which 508 were valid), comprised a broad mix representing all population groups, public and private schools, and male and female learners in urban and rural areas in South Africa, as shown in Figures 5.1 to 5.4.

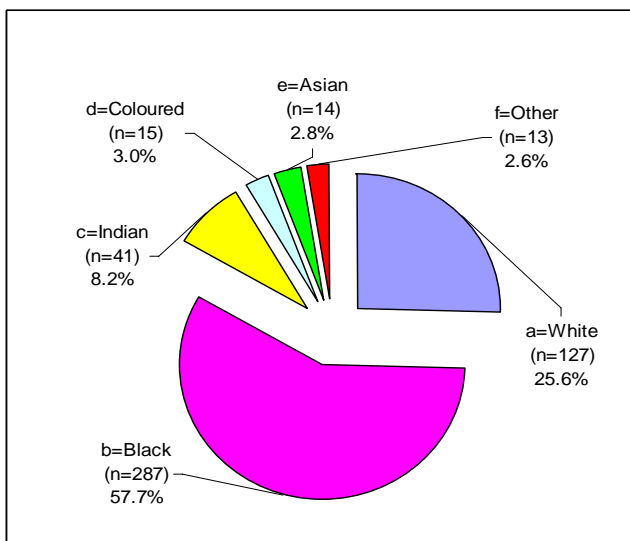
*Figure 5.1: Response Rate by School*



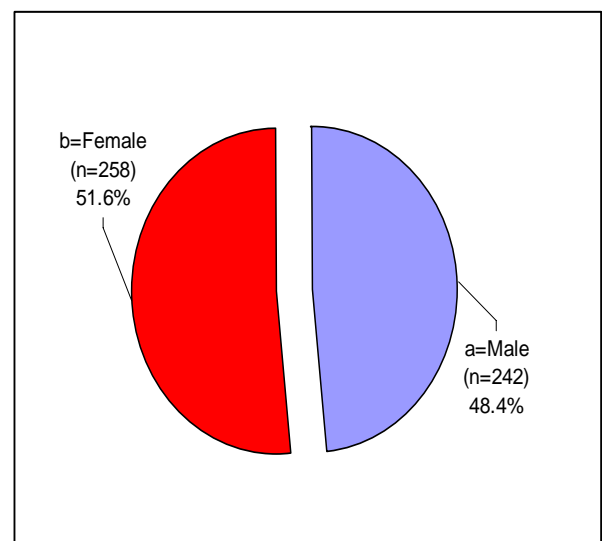
*Figure 5.2: Response Rate by School Status*



*Figure 5.3: Response Rate by Population Group*



*Figure 5.4: Response Rate by Gender*



### 5.2.2 *Financia*



The 2006 SA survey contained 20 test questions with a right or wrong answer, for which the MOFLS was found to be 52.1%.

Of these 20 test questions, for those 17 test questions in the SA survey that had analogous test questions in the US survey, the average SA financial literacy score was 51.4%, while that of the US sample was 57.1% (Jump\$tart Coalition, 2006c). South African respondents scored highest in the category of GFK (53.7%), followed closely by SVG (53.5%), then D (49.8%) and lowest on SP (43.6%). In contrast, the US scored highest on SP (72.3%), followed by D (64.4%), then SVG (56.5%), and lowest on GFK (50.7%).

In the South African sample, the highest overall score was 90% (obtained by four learners at CCS (Crawford College Sandton)), while the lowest overall score was 5% (obtained by one respondent at GHS (Greenside High School) and one at ITSC (Ikwezi Technical Skill Centre)). The standard deviation of the overall scores was 16.8%, which shows a fair degree of variation.

### 5.3 *Response Rate and Validity of Data*

All SA survey forms handed out per school were completed (i.e. 100%), which is very high as expected for the direct contact method (Welman and Kruger, 2005). An SA survey form was deemed invalid when 39 or fewer of the 49 questions were completed. Based on this convention, of the 536 survey forms completed by students, 508 were deemed valid and 28 were considered invalid. This gave an overall response rate of 95%.



In order to the clean th ita point or question (or sub-question) was excluded from the analysis if any of the following applied:

- a data point or question was not answered;
- multiple answers were given where only one was required;
- an anomaly was present e.g. if a question had answer-options “a-f” and an erroneous entry was made during data-entry such as “g”;
- one could not tell during data-entry which answer-option had been selected e.g. due to ambiguous circling of a MCQ by a respondent on their completed questionnaire; or
- it could not be interpreted e.g. part (b)(i) of Q36.

Because some respondents’ data were discarded as invalid for these reasons, the sum of the proportions for all answer-options for a certain question do not necessarily add up to exactly 100%. The numbers and results presented in Chapters 5-7 represent those that were valid.

Caution should be exercised when comparing survey results for SA and US 12<sup>th</sup> graders, due to the way in which the surveys were administered (Hines, 2006). Jump\$tart’s researchers use control methods which allow them to compare results of prior surveys. While 5,775 students successfully completed the 2006 US survey, many did not complete it as directed and so were excluded from the final results. Similarly, in the South African sample, some learners completed all or part of the survey incorrectly, invalidating their data according to the criteria for invalid data discussed above. In this way, the US and South African data were fairly comparable.

## 6. Chapter Six



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This chapter comprises an analysis and discussion of the results presented in Chapter Five. The categories of financial literacy mentioned throughout are GFK (General Finance Knowledge), SVG (Saving), SP (Spending) and D (Debt). Please refer to the List of Abbreviations on page x for all abbreviations.

As mentioned in Chapter Five, the actual data results are given in Appendix 2 and contain the proportions of respondents who chose specific answers for each question in the survey, as well as their financial literacy scores overall and by category (GFK, SVG, SP, and D).

### 6.1 *Hypothesis Testing*

#### 6.1.1 *Hypothesis 1*

For Hypothesis 1, the null hypothesis states that, for South African (SA) 12<sup>th</sup> grade high school learners, decreased levels of financial literacy are not related to increased propensity for debt, decreased propensity to save and increased propensity to spend. It was tested by means of Question 24 (Q24) (attitudes to pocket money management), as this question encompassed debt, saving and spending behaviour, and by means of Q33 (save vs. spend), since this question included saving and spending behaviour (although it omitted debt behaviour). For these questions, behaviour and attitudes of respondents to pocket money management, saving and spending, were assumed to be indicative of their overall money management behaviour and attitudes.



In terms of attitudes about saving vs. spending (Q33), almost half reported that they save whenever they can. If this is true (and not simply a socially desirable answer), it bodes well for reversing South Africa's low savings rates (SARB, 2006). Those who said they spend a lot and never save (i.e. spend whenever they could) scored significantly lower overall (44.7%) than those who said they spend often and seldom save (58.2%). This finding is expected if a greater tendency to spend and a lower propensity to save implies lower financial literacy. Surprisingly, those who said they spend often and seldom save, also scored significantly higher overall (58.2%) than those who said they neither save nor spend (49.3%), and those who stated they save whenever they can (50.9%). This is interesting as one would expect those who spend often (and seldom save) to be less financially literate than those who

gnificant differences in mean overall financial literacy scores (MOFLS's) existed ( $p < 0.0001$ ) between all respondent groups (i.e. those who reported saving some or all of it, those who stated that they spend all of it, those who said they spend all of it and need to borrow more, and those who did not receive pocket money). These differences were also observed in the categories (D, GFK and SVG) with the exception of SP. Thus, from Q24, it seems that decreased financial literacy is related to increased propensity for debt and spending, and decreased propensity for saving.

Respondents seem to have interpreted pocket money as money received from parents, regularly or irregularly. This explains why those 1.8% who said they did not get pocket money for Q24 and Q25, fell into the 42.9% who answered "a: I don't get regular pocket money..." for Q32.

For attitudes about saving vs. spending (Q33), almost half reported that they save whenever they can. If this is true (and not simply a socially desirable answer), it bodes well for reversing South Africa's low savings rates (SARB, 2006). Those who said they spend a lot and never save (i.e. spend whenever they could) scored significantly lower overall (44.7%) than those who said they spend often and seldom save (58.2%). This finding is expected if a greater tendency to spend and a lower propensity to save implies lower financial literacy. Surprisingly, those who said they spend often and seldom save, also scored significantly higher overall (58.2%) than those who said they neither save nor spend (49.3%), and those who stated they save whenever they can (50.9%). This is interesting as one would expect those who spend often (and seldom save) to be less financially literate than those who

always save (and hardly



a relationship between greater

propensity to save and lower propensity to spend, and higher financial literacy.

Analysis of the results for the categories, however, reveals that, by and large, there are no significant differences in financial literacy levels based on saving and spending behaviour.

Thus, from Q24, it seems that the null hypothesis is rejected because, for financial literacy overall and for the categories of GFK, SVG, D (but not for SP), there was evidence to suggest that a relationship exists between decreased financial literacy and increased propensity for debt, decreased propensity to save and increased propensity to spend. This supports the view of Fox *et al* (2005) that poor financial literacy levels are thought to be coupled with high debt levels, dismal savings levels and alarming rates of bankruptcies. This is not supported, however, by results from Q33.

In fact, some other questions (related to other hypotheses) also give conflicting evidence as follows:

- From Q47 (discussed in Section 6.1.5.3) and Q34 (discussed in Section 6.1.5.5), it was found that financial literacy levels are not related to increased propensity to save;
- From Q22 (discussed in Section 6.1.5.6), it was concluded that increased financial literacy implies lower propensity for spending.

These findings suggest that further investigation may be necessary in order to determine whether the null hypothesis for Hypothesis 1 should be rejected or not.

### 6.1.2 Hypothes



The null hypothesis for Hypothesis 2 states that decreased levels of financial literacy are not related to a decreased ability to delay gratification in SA 12<sup>th</sup> grade high school learners. To test this hypothesis, questions relating to attitudes under the delayed gratification (DG) theme (i.e. Q32, 35-37) were analysed separately, as well as in combination in a regression model. The results of the analysis of the individual questions are discussed first.

Regarding attitudes about pocket money (Q32), as many as 42.9% did not get an allowance regularly (they were given money when needed). The MOFLS of those who received pocket money regularly if chores were done (47.2%), was significantly lower than those who did not get regular pocket money (52.5%) or those who received it regularly without doing chores (55.1%). Surprisingly, this result shows that working for income does not necessarily teach financial literacy. A similar observation was made for Q46 in Section 6.1.5.4, in that having a regular job does not necessarily teach financial literacy.

For attitudes about time-preference of money (Q35), the MOFLS of those who reported that they would prefer R1000 in a year's time (49.5%) was no different than those who would choose R500 now (51.4%) and only slightly lower than those who would pick R2000 in two years' time (55.2%). This finding thus provides little evidence of a link between delayed gratification and financial literacy, and provides support for the null hypothesis.

As for attitudes about buying now or waiting for a discount of R100 (Q36), 33.5% reported that they would buy now and 66.5% stated that they would wait for the discount. However, the MOFLS's of these groups were not significantly different ( $p = 0.6435$ ).



Regarding attitudes to s ot significantly different ( $p = 0.0500$ ) for those that stated that they leave this until the last minute, those that said they start studying or doing homework at the latest possible time to still finish studying all the work, and those that indicated that they start studying well in advance.

Thus, when they are considered individually, the questions relating to DG support the contention that financial literacy is not related to DG.

Even though the individual questions seem to indicate that DG does not significantly affect financial literacy, it may be that an analysis of the combination of them does show such a relationship. Hence, a regression model was used to conduct an analysis of the combined effect of the individual variables. This was carried out as follows:

- ❖ For each of the questions on DG, a scoring scale was used for the answer options. Specifically, +20 was allocated to an option that indicated a high ability to delay gratification, +10 for a moderate ability, 0 for a neutral ability, -10 for a poor ability, and -20 for a very poor ability. Thus, for example for Q33, “a: save money whenever I can” was given +20, “b: often save...” was given +10, “c: neither save nor spend” was allocated 0, “d: spend often...” was given -10, and “e: spend a lot...” was allocated -20;
- ❖ A linear multiple regression analysis was then applied to model the relationship between variables related to DG and each category (GFK, D, SVG, SP) or MOFLS.

The resulting model was found to be very weak in explaining the observed financial literacy scores.





Thus, the null hypothesis is the absence of a relationship between decreased financial literacy and a decreased ability to delay gratification.

One explanation of this finding is that education does not necessarily change behaviour. For example, even if individuals know that it is not financially wise to buy now rather than wait for a discount, they are likely to still do so because their desire to have the item now may be too strong to resist. Furthermore, man is environmentally and genetically predisposed towards instant gratification (McClure *et al*, 2004; Atkinson, 2006), and decreased saving and increased spending has been observed since the 1980s (Oberhofer, 1989). Hence, even those who are financially literate may still be predisposed to instant gratification.

### **6.1.3 Hypothesis 3**

For Hypothesis 3, the null hypothesis states that financial literacy levels of SA 12<sup>th</sup> grade high school learners are the same as financial literacy levels of US 12<sup>th</sup> grade high school learners. In the SA survey, Q1-9,14-16,18-20,26-27 were used to test Hypothesis 3.

In the 2006 US survey (Appendix 1), of the 30 test questions with a right or wrong answer, US students obtained a mean financial literacy score of 52.4% (Jump\$tart Coalition, 2006b).

The 2006 SA survey contained 20 test questions with a right or wrong answer, for which the mean financial literacy score was found to be 52.1% (as shown in the Results Key on page 2 of the actual SA survey in Appendix 2). Of these 20 questions, Q17, 21 and 28 did not correspond to a question in the US survey. This left 17 test questions in the SA survey that



had analogous question: for questions with a right or wrong answer, Q1-9,14-16,18-20,26-27 in the SA survey corresponded to Q19,12,29,22,26,5,11,28,17,13,20,10,7,2,6,8,15 respectively, in the US survey.

For these 17 questions, the average SA MOFLS was 51.4%, while that of the US sample was 57.1% (JumpStart Coalition, 2006c). This difference was significant ( $p = 0.0062$ ). This means that the null hypothesis is rejected, i.e. financial literacy levels of SA 12<sup>th</sup> grade high school learners are significantly lower than those of US 12<sup>th</sup> grade high school learners.

This result is expected (in fact, one may have expected a bigger difference than 5.7%) for the following reasons:

- Financial literacy education has only recently been introduced into the educational curricula of South African schools (Department of Education, 2006);
- South Africa is a developing country (as vs. the US, which is a developed nation);
- The average per-capita income in South Africa is lower than in the US, and weaker financial literacy may be expected from those earning less – indeed, as discussed later for Q41 in Section 6.1.5.5, this study found that respondents from families with higher income do tend to have higher financial literacy, which is consistent with the US survey (JumpStart, 2006b);
- SA educational levels seem to be lower than US levels, and weaker financial literacy may be expected from those with lower education levels (Rule and Drimie, 2006).

A more detailed analysis revealed that the higher US scores were due to significantly superior performance to South Africa in only two of the four categories – SP and D. Thus,

for the GFK and SVG c



1 hypothesis for Hypothesis 3

is not rejected, while, for the SP and D categories, it is rejected.

#### **6.1.4 Hypothesis 4**

The null hypothesis for Hypothesis 4 states that SA 12<sup>th</sup> grade high school learners have the same financial literacy scores in all categories of financial literacy (the categories are GFK, SVG, SP, D). Hypothesis 4 was tested by means of the 20 questions Q1-9,14-21,26-28.

South African respondents obtained the highest mean financial literacy score for the D category (61.2%), followed closely by GFK (53.9%) and SVG (51.8%), with the lowest mean score for SP (41.8%). Interestingly, this does not seem to mirror the South African economic trend of high levels of spending and debt, and low savings rates (SARB, 2006).

SA 12<sup>th</sup> grade high school learners have significantly higher financial literacy scores in certain categories of financial literacy than others ( $p < 0.0001$ ). Specifically, the score in the D category was significantly higher than the scores in the other categories, and the score in the SP category was significantly lower. Therefore, the null hypothesis is rejected.

In contrast, US respondents in the 2006 Jump\$start survey scored highest in the Income category (59.2%) (a category that was absent from the SA survey), followed by SP (56.9%), D (51.8%), Money Management (similar to the SA category of GFK) (46.4%), and lowest in SVG (42.6%) (Hines, 2006). This pattern approximately mirrors the current US economic

trend for high levels of financial literacy rates (McGinn *et al*, 2001; Gassman, 2006; US Department of Commerce (Bureau of Economic Analysis), 2006).



### **6.1.5 Hypothesis 5**

The null hypothesis for Hypothesis 5 states that SA 12<sup>th</sup> grade high school learners' financial literacy levels are the same for different demographic and psychographic profiles such as educational institution, public vs. private school, population group, gender, parental influence, and other variables. The SA survey's Q10-13,22-25,29-49 were used to test Hypothesis 5. The financial literacy scores for different demographic and psychographic profiles are discussed below.

#### **6.1.5.1 The Demographics of School, School Status and Population Group**

The schools that participated in the survey were specifically chosen for their differences. The sample consisted of both rural and urban schools as well as private and public schools – in order to determine whether these differences would affect levels of financial literacy. The four private schools consisted of Crawford College Sandton (CCS), Horizon International High School (HIHS), Redhill High School (RHS) and Bluehills College (BC) (with MOFLS's of 66.9%, 62.0%, 59.5% and 50.9% respectively). The public schools consisted of Greenside High School (GHS), Ikwezi Technical Skill Centre (ITSC) and Ivory Park Secondary School (IPSS) (with respective average scores of 52.1%, 44.1% and 30.3%). Not surprisingly, the MOFLS's per school were not only significantly different ( $p < 0.0001$ ), but were also significantly higher for the private schools vs. the public schools ( $p < 0.0001$ ) - the mean scores were 61.0% and 44.8% for the private and public schools respectively,



indicating an absolute c was also true across all four categories, with the biggest difference of 27.7% being observed between public and private schools for the D category. The results probably reflect the higher overall education levels at private schools as compared to public schools in South Africa, especially at those private schools with a record of high matric results, which are thus able to attract top students. One example would be CCS, whose 2005 matric group obtained 296 distinctions, and included 20 learners with at least six distinctions and a high mean of 2.6 distinctions per student (Crawford College Sandton, 2006).

In terms of population group (Q42), the broad mix of population groups obtained, represented all population groups in South Africa. “Other” included some learners who classified themselves as African, rather than as Black, White, and so forth. This may have skewed results of population group slightly. The population group of the respondents was found to have a significant effect on mean overall financial literacy scores ( $p < 0.0001$ ). In particular, Whites scored significantly higher (64.9%) than all other population groups, with the exception of Indians (59.3%), who in turn scored significantly higher than the remaining population groups. No significant differences were observed between the Asian (49.6%), Black (46.4%), Coloured (42.3%) and Other (43.1%) groups. The White and Indian groups were particularly strong in the GFK and D categories.

Since significant differences existed in the MOFLS’s and financial literacy categories’ scores for different schools, public vs. private schools and population groups, the null hypothesis is rejected for these demographic variables.




These results may possibly be a function of the educational system, despite over 10 years of democratic government rule and the associated initiatives to remove educational disparities (Rule and Drimie, 2006). Perhaps also due to apartheid, income inequalities still seem prevalent between non-White and White population groups (FinMark Trust, 2005), which may explain the disproportionately high non-White representation in the sample of less costly public schools (6.1% White and 93.9% non-White). Thus, the differing levels of financial literacy between population groups may be more a function of socio-economic effects than of true racial differences.

#### 6.1.5.2 The Demographic Variable of Gender

From Q38, male and female respondents obtained MOFLS's of 51.1% and 53.7%, respectively. As for the US survey (Hines, 2006), the difference between these scores was not significant ( $p = 0.0736$ ). Thus, for mean financial literacy overall and by category, the null hypothesis for Hypothesis 5 is not rejected for the demographic variable of gender.

#### 6.1.5.3 The Variable of Interest of Having a Bank Account

For Q47, 33.3% of respondents reported not having a bank account; 31.1% said they did have one but did not put money into it regularly, and 35.5% indicated that they had a bank account and deposited money into it regularly. The MOFLS of those without a bank account (47.8%), was significantly lower than those who had a bank account (whether they saved regularly or not) ( $p < 0.0001$ ). This suggests that having a bank account raises financial literacy, as is expected. Although those who had a bank account and did put money into it regularly, had a higher MOFLS (56.3%) than those who had one but did not put money into it regularly (52.6%), the difference between these two groups was not significant. This

seems to indicate that fir  increased propensity to save, which supports non-rejection of the saving/financial literacy aspect of the null hypothesis for Hypothesis 1 (as discussed earlier). Thus, for mean financial literacy overall, the null hypothesis for Hypothesis 5 is rejected for the variable of interest of having a bank account.

#### 6.1.5.4 Psychographics Relating to Future Plans

Future plans had a significant effect on financial literacy, as indicated by the results below.

For respondents' educational plans (Q40), the MOFLS of respondents who planned to attend university (57.1%) was significantly higher than those intending to go to a technikon (43.5%). The MOFLS of those planning to go to university was also significantly higher than those with no educational plans (34.8%), or those who were uncertain of their educational plans (50.3%). Lastly, the MOFLS of those with other educational plans/training (49.5%) was significantly higher than those with no educational plans. These findings show that the higher the educational goals of respondents, the higher their financial literacy, which is expected. However, it is possible that the observed results may be confounded by the effect of other variables, e.g. there is likely to be greater pressure on pupils attending private schools to attend university.

Regarding future work after high school (Q44), the MOFLS of those 62.0% aiming to become professional workers (doctors, lawyers, etc.) was significantly greater than for those planning to enter a skilled trade, service work or manual work ( $p < 0.0001$ ). Thus, the higher the work aspirations of respondents, the greater their financial literacy levels seem to be. Interestingly, the MOFLS of those who did not know or planned to pursue other work



was significantly higher trade, service work or manual work. One possible explanation for this finding could be that other work also includes starting one's own business, which requires good financial skills. As many as 15.1% chose the "other" option. This result could be explained by the suggestion that, in South Africa's current political climate, with Black Economic Empowerment and Employment Equity prevalent, gender and population groups that are not previously disadvantaged do not seem able to find work easily in the corporate environment and so may be increasingly turning to entrepreneurial ventures for income. However, this idea requires further research.

As for starting future salary (Q45), there were no significant differences in the MOFLS's for respondents in the different categories of estimated future salaries ( $p = 0.0500$ ), except for those planning to earn under R50,000 (47.4%) compared to those aiming for R50,000-R199,999 (55.0%).

Also, for current employment (Q46), most respondents (58.6%) did not have a proper job, which is not unexpected for matriculants. Interestingly, the MOFLS of those respondents with a regular job (46.3%) was significantly lower than those without a proper job outside the home (54.2%), or those doing odd jobs (52.7%) ( $p < 0.0001$ ). This result is surprising, as one would have expected experience in regular work to instil concepts such as income and money management skills, and hence to raise financial literacy. It is also possible that some respondents come from low-income families and thus need the regular job to supplement their family incomes. Thus, the differing financial literacy levels between the groups may be more a function of family income effects than of employment differences.





Thus, because there was a significant difference in financial literacy scores between respondents who had future plans and those who did not, the null hypothesis for Hypothesis 5 is rejected.

#### 6.1.5.5 Psychographics Relating to Parental Influence

Parental influence significantly affects financial literacy, as the results below demonstrate.

Regarding attitudes about respondents' own savings behaviour vs. their parents (Q34), the MOFLS was significantly higher (57.4%) for those whose savings behaviour was about the same as their parents, compared to those who were much more likely than their parents to save (48.1%). This seems to indicate that financial literacy levels are not related to increased propensity to save, which provides support for non-rejection of the saving/financial literacy component of the null hypothesis for Hypothesis 1 (as discussed earlier).

For homeownership vs. rental (Q39), 12.6% of respondents' families rented, while 87.4% owned homes. The MOFLS's of these two groups were significantly different ( $p = 0.0390$ ). In fact, the levels of financial literacy differed in only one category – D – but the effect here was very strong ( $p = 0.0005$ ). This finding is not surprising, as homeownership is usually associated with a home loan, which is likely to be the largest and most influential form of debt taken on by any family. One possible explanation would be that those whose families owned homes, are more aware of debt, which was reflected in higher financial literacy scores in this category. On the other hand, another potential clarification would be that some economists believe that homeownership gives people a stake in society, which may alter their economic behaviour, and perhaps their financial literacy level (Hines, 2006).

Regarding parents' income (Q41), the MOFLS of respondents whose parents earned above R350,000 was significantly higher than all those whose parents earned under R350,000. This shows that respondents from families with higher income tend to have higher financial literacy, which is consistent with the US survey (Jump\$art, 2006b).

For parental education (Q43), the MOFLS of respondents whose parents were university graduates, was significantly higher than those whose parents fell into any other education group (i.e. finished high school, did not finish high school, did not complete university, or if respondents did not know). This indicates that, in this study, parents with university degrees tended to have children with higher financial literacy, which is expected, as parents with higher education levels are likely to place more importance on their children's education.

Where parents lacked income for a long time unwillingly (Q48), the MOFLS of those who felt this made them save more and spend less (52.7%), was significantly higher than those who said that this made them spend more and save less (41.0%). This is understandable as it is likely that income loss may teach families to lower spending and make their money go further and so raise financial literacy. However, this question did not apply to nearly 25% of respondents (i.e. those whose parents were not without income for a long time unwillingly).

Where parents lost much money through gambling (Q49), the MOFLS of respondents who did not want to gamble (51.2%) was significantly higher than those who liked gambling (35.7%). This supports the view that the tendency to gamble is inversely related to financial literacy. However, nearly 40% of respondents felt this question did not apply to them.

Thus, the results indicated that there are significant differences in financial literacy for different psychographic profiles relating to parental influence, which provides support for rejection of the null hypothesis for Hypothesis 5.

#### 6.1.5.6 Psychographics Relating to Attitudes

Psychographics relating to certain attitudes had a significant effect on financial literacy, as shown by the results below.

Regarding attitudes about older people and state old age pension (Q10), the MOFLS of those respondents who felt that older people find it hard to live on pensions (even after reducing expenses) (58.5%), was significantly greater than those who felt older people manage on this by reducing expenses (44.7%). In turn, this latter MOFLS was significantly higher than those who felt old people live quite well on pensions without reducing expenses (37.9%). Thus, this finding suggests that more financially literate individuals have a better understanding of how difficult it is to live on the state old age pension.

Analysis of Q11 (attitudes about ability to manage finances), revealed a positive relationship between financial literacy scores and the respondents' confidence in managing their finances ( $p < 0.0001$ ). A notable exception, however, was the group that felt very confident (48.9%), who scored lower than those who felt somewhat confident (56.4%) and roughly the same as those not feeling confident at all (46.7%). This result implies a level of false confidence in the former group in that "they did not know what they did not know". This group is the one that seems to be in greatest need of financial literacy education.

For attitudes about sources of money management education (Q12), the largest proportion (38.1%) had learnt at home from family, followed by those who had learnt from personal experience (21.0%) and those who had learnt at school in class (20.8%). This result seems to indicate that the majority of youth obtain their financial literacy education from family at home, and hence, attempts to raise financial literacy of the youth through financial literacy education should also involve the family. As many as 16.5% had learnt from the media (books, magazines, television, radio, Internet), which provides strong motivation for caregivers to be more vigilant about controlling what children are exposed to in the media, as children could be learning the wrong lessons. The MOFLS of those who had learnt at home from family was significantly higher than those who had learnt via any other avenues. This suggests that youth obtain better financial literacy education from home than elsewhere. Thus, to achieve the dual goal of reaching the youth AND successfully raising their financial literacy, financial literacy education should involve their families at home.

Although this question about sources of money management education was removed from the 2006 US survey, it was present in the 2004 version. Here, it revealed that the vast majority of US youth (58.3%) learned financial literacy at home from family, but that the MOFLS of those who learned from family at home did not seem significantly different from those who learned elsewhere (Jump\$start Coalition, 2004b). This finding indicates that most US youth learn financial literacy at home from family, like in South Africa. However, unlike SA youth, US youth do not necessarily receive better financial literacy education from home. Increased focus on youth financial education in the US at school level has not resulted in increased financial literacy in their youth (Jump\$start Coalition, 2006b), possibly

because US financial literacy is often taught to the youth via the family, where most youth in the US and South Africa seem to learn their financial lessons.

For attendance at relevant school courses (in money management or personal finance, economics, mathematical literacy or functional maths, and participation in a stock market game) (Q13), respondents were asked to circle ALL applicable options. As for the US surveys (Jump\$start Coalition, 2006b), the SA surveys were mainly conducted on classes that did not focus on finance or money management, as general financial literacy was being assessed, and not learners' recollections from a prior finance course. For Q13, there were no significant differences in financial literacy for those who had some form of financial education compared to those who had none. Like the 2006 US survey (Jump\$start Coalition, 2006b), this suggests that financial education does not necessarily improve financial literacy. This unexpected finding differs from those of Bernheim *et al* (2001) and the US Treasury Department (2002), who found that that there is a relationship between financial education and financial literacy. In both the US and SA 2006 surveys, learners who played a stock market game obtained higher financial literacy scores, compared to those who took full courses in money management or personal finance. This shows that real-life lessons can best be taught in an interactive, real-time setting through simulations, games and research projects, which are not always possible in many schools today (Jump\$start Coalition, 2006d).

Note that there seemed to be inconsistencies in the way respondents with similar financial education interpreted and answered Q13. This reveals some degree of inconsistency in the SA survey, which was discussed further in Chapter Four, under Section 4.9 (Limitations).

Regarding attitudes about methods of purchasing (Q22), most respondents (68.6%) reported that they look for bargains and compare prices before buying, which shows understanding of expense control. Interestingly, 15.2% buy the first example of that product that they come across because they like it, and 16.2% buy their favourite brand even if it costs the most. The buying behaviour of these latter two groups indicates poor spending control, which seems to imply poor financial literacy. The MOFLS of those who look for bargains (53.2%) was significantly higher than those who buy the first one they like (46.9%). This finding suggests that increased financial literacy implies a lower tendency to spend, which supports rejection of the null hypothesis for the spending/financial literacy aspect of Hypothesis 1.

In terms of attitudes about parents running out of money (Q23), those respondents whose parents ran out of money before their next paycheque, were significantly less financially literate (48.2%) than those whose parents did not run out of money (56.8%). This result supports the conclusion that financial literacy in the youth is learnt from their parents' money management behaviour. This in turn is consistent with Q12, which found that the majority of youth obtain their financial education from family at home.

For those respondents who reported to regularly run out of money between pocket money payments (Q25), the MOFLS's were not significantly different for any of the respective responses (namely: wait until next payment, receive more money from parents, receive loan from parents, or earn money from odd jobs) ( $p = 0.9704$ ). However, it should be noted that if respondents did not receive pocket money, they chose the "not applicable (I do not get pocket money)" option in Q24 and Q25.

In terms of attitudes about reasons for financial problems (Q29), the MOFLS of those blaming bad luck was significantly lower than those attributing financial problems to lack of a financial plan, too much credit or insufficient earnings, but not compared to those attributing this to insufficient savings. Those who blamed insufficient savings were significantly less financially literate than those ascribed this situation to lack of a financial plan, or too much credit. This result shows that respondents with a better understanding of the reasons for financial problems have higher financial literacy, which is expected.

Regarding attitudes about what would be a fair interest rate to be charged on a loan (Q30), those that said 10% were significantly more financially literate (58.1%) than all other groups (i.e. those that said 0%, or 5%, or 10%, or 15%, or above 15%). Those that said 5% were significantly more financially literate (53.1%) than those that said 0% (45.9%) or those that chose the “above 15%” category (42.8%). At the time that the surveys were conducted, banks offered a prime lending rate of approximately 11%, and a retail deposit rate (i.e. the interest rate that a bank would pay a customer on a savings account) of approximately 5%. Hence, the result obtained indicates that those that are more financially literate demonstrate a greater awareness of the current lending rates and retail deposit rates, either of which could be considered proxies for a fair rate to be charged on a loan. However, the prime rate is a better proxy to use, which means that, not surprisingly, those with the best grasp of the current levels of interest rates also scored the highest in financial literacy levels.

As for a fair interest rate to charge a friend on a loan (Q31), the MOFLS's were not significantly different for any of the respective responses (i.e. those that said 0%, or 5%, or 10%, or 15%, or above 15%) ( $p = 0.1945$ ).

Q30 and Q31 tested respondents' views on fair interest rates, depending on whether the loan was granted to themselves or if they were granting it to a friend. For those that thought that a fair rate for a loan granted to themselves would be 0%, 5% or 15% (representing nearly 86% of the sample), the most popular choice was for their friend's loan rate to be identical to that offered to themselves. Interestingly, the most popular choice for those that thought a fair loan rate for themselves was above 15% was for their friend's loan to be interest-free.

Therefore, there was evidence to suggest that there are significant differences in financial literacy for different psychographic profiles relating to attitudes. This provides support for rejection of the null hypothesis for Hypothesis 5.

In summary, the null hypothesis for Hypothesis 5 fails to be rejected for gender, and is rejected for the demographics of educational institution, public vs. private school, and population group, and the variable of interest of having a bank account. In other words, there are significant differences in financial literacy levels of SA 12<sup>th</sup> grade learners from different educational institutions, public vs. private schools and different population groups and having a bank account, but not for different genders. There are significant differences in financial literacy levels of SA 12<sup>th</sup> grade learners for different psychographic profiles



relating to future plans,



s. Hence, the null hypothesis

for Hypothesis 5 is rejected for these psychographic profiles.

### 6.2 General Observations Not Related to Specific Hypotheses

Interestingly, all four students who obtained the highest financial literacy score (90%), answered Q16 incorrectly by choosing “d” (earnings from savings account interest is not taxed), instead of “b” (income tax may be charged on the interest if your income is high enough). Although all these students were from the same school (Crawford College Sandton), the possibility of copying can be excluded (since their answers to other questions besides Q16 were different).

Surprisingly, those respondents who chose the incorrect answer for Q16 and Q21 actually scored a higher MOFLS, compared to those who selected the correct answer. These were the only questions for which this effect was observed. For Q21 (keeping track of cashflows), whether or not one keeps track of cashflows, had no effect on financial literacy scores.

### 6.3 Summary

Despite some support for rejection of the null hypothesis for Hypothesis 1, overall the evidence is inconclusive and warrants further investigation. Thus, it is unclear whether decreased financial literacy is related to increased propensity for debt and spending and decreased propensity to save.

The null hypothesis for Hypothesis 2 is not rejected - there was no evidence that decreased financial literacy is related to a decreased ability to delay gratification.

The null hypothesis for Hypothesis 3 is rejected for overall financial literacy. In other words, financial literacy levels of SA 12<sup>th</sup> grade high school learners are significantly lower than those of US 12<sup>th</sup> grade high school learners. By category, for GFK and SVG, the mean US score was not significantly different from that of South Africa, while for SP and D, the US score was significantly higher than that of South Africa. Thus, for the GFK and SVG categories of financial literacy, the null hypothesis for Hypothesis 3 is not rejected, while, for the SP and D categories, it is rejected.

The null hypothesis for Hypothesis 4 is rejected, as the evidence suggested that SA 12<sup>th</sup> grade high school learners demonstrate significantly higher financial literacy scores in certain categories of financial literacy than others. Specifically, the score in the D category was significantly higher than the scores in the other categories, and the score in the SP category was significantly lower.

The null hypothesis for Hypothesis 5 is not rejected for gender, and is rejected for the demographics of educational institution, public vs. private school, and population group, and the variable of interest of having a bank account. This means that significant differences exist in financial literacy levels of SA 12<sup>th</sup> grade learners from different educational institutions, public vs. private schools and different population groups and having a bank account, but not for different genders. There are significant differences in financial literacy levels of SA 12<sup>th</sup> grade learners for different psychographic profiles relating to future plans, parental influence and certain attitudes. Hence, the null hypothesis for Hypothesis 5 is rejected for these psychographic profiles.

## 7. Chapter Seven



Research conclusions are presented in this chapter, as well as a model of financial literacy. Recommendations as to how this research can be applied and be of value, and implications for further research are also discussed. The categories of financial literacy mentioned throughout are GFK (General Finance Knowledge), SVG (Saving), SP (Spending) and D (Debt). Please refer to the List of Abbreviations on page x for all abbreviations.

### 7.1 Conclusions

In South Africa and the USA, savings levels are low, while spending and debt levels are high, all of which may imply low levels of financial literacy, and could negatively affect the economy and one's personal financial position. Financial literacy, financial education and savings levels seem to be directly related (Bernheim *et al*, 2001; US Treasury Department, 2002; Bernheim and Garrett, 2003; Mandell, 2005b). Thus, it seems likely that low levels of personal financial literacy are likely to exert a negative impact on one's personal financial position and the economy in terms of high levels of debt, low levels of saving and increased levels of spending, and vice versa. In fact, this research found that an unclear relationship exists between decreased financial literacy and increased propensity for debt and spending, and decreased propensity for saving, suggesting the need for further investigation.

A related concept is that of delayed gratification. Man would appear to be environmentally and genetically predisposed towards instant gratification, making it all the more difficult to delay gratification (McClure *et al*, 2004; Atkinson, 2006). Studies have found self-discipline and impulse control to be directly related to lifelong academic, emotional and social success



(Mischel, 1961a; Mischel and Metzner, 1962; Shoda *et al*, 1990; Gibbs, 1995; Kagan, 2001; Colorado Department of Education, 2006; Money Savvy Generation, 2006). Lack of discipline (i.e. poor ability to delay gratification) about saving and spending is stimulating growing ambivalence towards debt (McGinn *et al*, 2001). This observation would seem to indicate that there is a relationship between poor ability to delay gratification, and high levels of spending and debt, and low savings levels, all of which are likely to negatively affect the economy and one's personal financial position. However, findings from this research study suggested that decreased financial literacy is not related to a decreased ability to delay gratification.

The latest studies and surveys indicate that poor financial literacy is a serious issue in the US and other countries, and efforts are needed to address this problem (US Treasury Department, 2002; Breitbard, 2003; Mandell, 2005a; Jump\$tart Coalition, 2006a; Jump\$tart Coalition, 2006b; Jump\$tart Coalition, 2006d; Kiyosaki, 2006). Financial literacy, financial education and savings levels seem to be directly related (Bernheim *et al*, 2001; US Treasury Department, 2002; Bernheim and Garrett, 2003; Mandell, 2005b). US levels of financial literacy have been measured and found to be poor; therefore, there has been increased focus on financial education in the US (US Treasury Department, 2002; Jump\$tart Coalition, 2004a; Jump\$tart Coalition, 2006a). In South Africa, the national FinScope survey assesses financial literacy qualitatively (FinMark Trust, 2005). However, from a comprehensive review of the literature, it would seem that South African (SA) financial literacy levels had not been measured quantitatively prior to this research.



Data from this study revealed that the financial literacy scores of SA 12<sup>th</sup> grade high school learners are significantly lower than those of US 12<sup>th</sup> grade high school learners. In the 2006 US survey, of the 30 test questions with a right or wrong answer, US students obtained a mean financial literacy score of 52.4%. The 2006 SA survey contained 20 test questions with a right or wrong answer, for which the mean financial literacy score was found to be 52.1%. For those 17 test questions in the SA survey that had analogous test questions in the US survey, the average SA financial literacy score overall was 51.4%, while that of the US sample was 57.1%, which is a statistically significant difference. This result is expected (in fact, one may have expected a larger difference than 5.7%), largely because of South Africa's developing status and lower educational levels than the US (May and Wilkins, 1998; Mullis *et al*, 1998; Rule and Drimie, 2006). The higher US scores were due to superior performance in only two of the four categories – SP and D.

A further finding that emerged from this study was that SA 12<sup>th</sup> grade high school learners have significantly higher financial literacy scores in certain categories of financial literacy than others. Specifically, the score in the D category was significantly higher than the scores in the other categories, and the score in the SP category was significantly lower.

In addition, it was found that there are significant differences in financial literacy levels of SA 12<sup>th</sup> grade learners from different educational institutions, public vs. private schools and different population groups, and having a bank account, but not for different genders. Specifically, the study showed that financial literacy levels are significantly higher in learners at private schools than those at public schools. Also, Whites scored significantly higher than all other population groups, with the exception of Indians, who in turn scored



significantly higher than significant differences were observed between Asian, Black, Coloured and Other groups. The differing levels of financial literacy between population groups may be more a function of socio-economic effects than of true racial differences. Furthermore, it was found that financial literacy levels are significantly different for SA 12<sup>th</sup> grade learners with different psychographic profiles relating to future plans, parental influence and certain attitudes.

Like the 2006 US Jump\$start survey (Jump\$start Coalition, 2006b), this study found that financial education does not necessarily improve financial literacy.

The SA data revealed the majority of youth obtain financial literacy education from family at home, and that they obtain better financial literacy education from home than elsewhere. Thus, to achieve the dual goal of reaching the SA youth AND successfully raising their financial literacy levels, financial literacy education should involve their families at home.

Despite the fact that most US youth learn financial literacy at home from family (like in South Africa) (Jump\$start Coalition, 2004b), the US youth do not necessarily receive better financial education from home (in contrast to SA youth) (Jump\$start Coalition, 2004b). Increased focus on youth financial education in the US at school level has not resulted in increased financial literacy in their youth (Jump\$start Coalition, 2006b), possibly because US financial literacy drives have not been reaching the youth via the family.

In both the SA and US



006d), it was found that real-

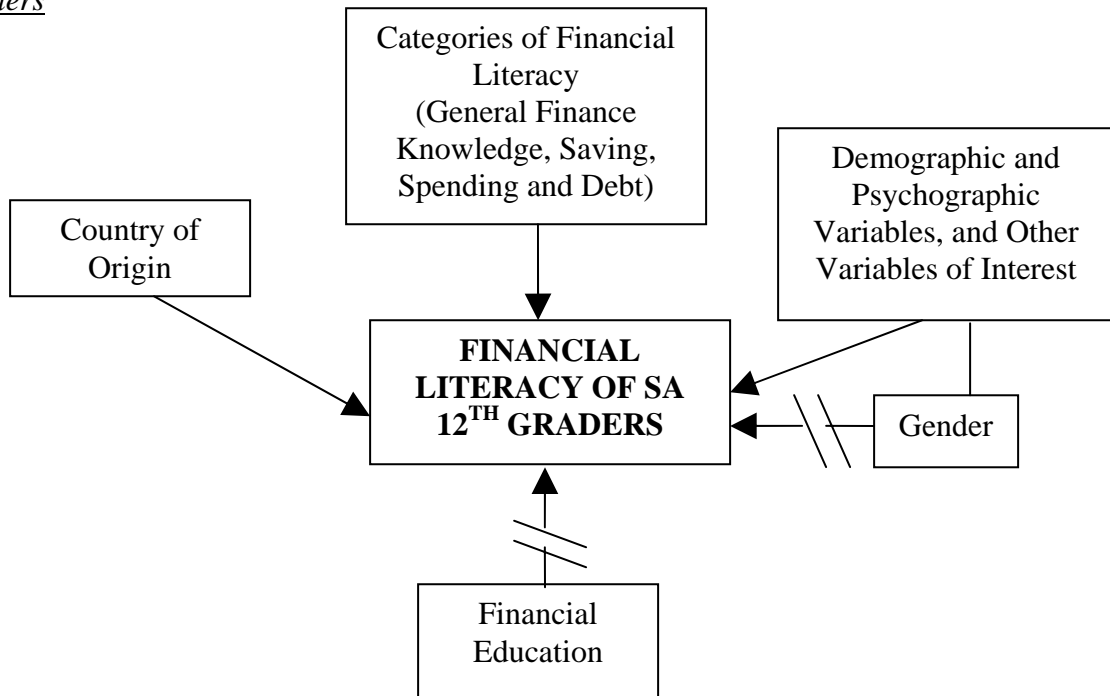
life lessons can best be taught in an interactive, real-time setting through simulations, games and research projects, which are typically not possible in many schools today.

The SA data also revealed that respondents from families with higher income tend to have higher financial literacy, which agrees with the US survey (Jump\$art Coalition, 2006b).

## 7.2 *Proposition of a Model*

In Figure 7.1, a theoretical model is proposed which consolidates the major conclusions from those null hypotheses which were rejected, namely Hypotheses 3-5.

*Figure 7.1: Model Depicting Variables Affecting Financial Literacy Among SA 12<sup>th</sup> Graders*



Unbroken arrows indicate those variables that do significantly influence the financial literacy levels of SA 12<sup>th</sup> graders, while broken arrows denote variables that do not

significantly influence



12<sup>th</sup> graders. Thus, financial

literacy levels seem to be significantly affected by:

1. country of origin – specifically for this study, South Africa’s vs. US 12<sup>th</sup> graders;
2. categories of financial literacy (where the categories are GFK, SVG, SP, and D), i.e.:
  - a. the score in the D category was significantly higher than those in the other categories, and
  - b. the score in the SP category was significantly lower; and
3. demographic variables, namely:
  - a. educational institution,
  - b. public vs. private school (specifically, private schools scored significantly higher than public schools),
  - c. population group;
4. psychographic variables relating to:
  - a. future plans,
  - b. parental influence e.g. income (where respondents from families with higher income tend to have higher financial literacy), and
  - c. certain attitudes e.g. attitudes about sources of money management education (where the majority of SA youth obtain financial literacy education from family at home, and that they obtain better financial literacy education from home than elsewhere);
5. variables of interest, such as having a bank account.

In contrast, the financial literacy levels of SA 12<sup>th</sup> graders are not significantly affected by:

6. the demographic variable of gender, and;





7. financial education courses in financial literacy for those who had some form of financial education compared to those who had none. Learners who played a stock market game obtained higher scores than those who took full financial education courses).

The ways in which this model can be applied, are discussed under Section 7.3 below.

### 7.3 Recommendations to Stakeholders

This study measured learners' basic financial knowledge and found that SA financial literacy levels are poor and lower than US youth, as was expected. This result serves as motivation for enhancement of financial literacy education in the educational curricula of SA schools, in order to help learners improve their knowledge of personal finance.

It also determined differences in financial literacy levels between different demographic and psychographic profiles, as well as the financial literacy categories of GFK, SVG, SP, and D in which learners are particularly weak or strong. With these insights, South Africa's businesses, educational settings and government can now identify where further financial literacy education is required (for example, in public schools and lower-income groups, and in the SP category). They can thus focus on these growth areas, and hence improve poor financial literacy levels and any impact these levels may have on the economy. This study's results should enable South Africa's businesses, educational settings and government to understand the impact of demographic, psychographic and educational differences on financial literacy and the need for improvement in financial literacy levels.



To achieve the dual goal of increasing financial literacy AND successfully raising their financial literacy levels, financial education should involve learners' families. To be most effective at raising financial literacy, real-life lessons in financial literacy should be taught in an interactive, real-time setting through simulations, games and research projects.

#### 7.4 Recommendations for Further Research

This study led to the following ideas for additional research:

- The extent to which a relationship exists between decreased financial literacy and increased propensity for debt, decreased propensity to save and increased propensity to spend is unclear. There is some support for this view, but overall, the evidence is inconclusive and warrants a more detailed investigation;
- This study compared the financial literacy levels of South Africa's youth to those in the US, as US levels have been measured by Jump\$tart and their US questionnaire was available to be adapted for SA youth. However, the US is notorious as a country with one of the worst savings rates worldwide (McGinn *et al*, 2001; MSNBC, 2006; US Department of Commerce (Bureau of Economic Analysis), 2006). Use of a financial literacy benchmark would have been preferable for a country with a higher savings rate than the US, had such a tool been available. Nevertheless, the US vs. SA comparison provides a good framework for financial literacy. If youth financial literacy levels are measured in the future for country/ies where the savings rates exceed the US, this could form the basis of comparison against the levels of SA youth in further research;
- The financial literacy levels of other countries besides the US need to be determined, so that one can get a better idea how South Africa's levels rank worldwide. If financial literacy levels of the youth in other countries are measured in the future, this could form



the basis of comparison further research. This could allow for the determination of South Africa's global ranking in terms of financial literacy level;

- As discussed under Question 44, interestingly, those who were uncertain of their future work or who planned to pursue other future work, were significantly more financially literate than those planning to enter a skilled trade, service work or manual work. A possible explanation could be that other work also includes starting one's own business, which requires good financial skills. As many as 15.1% chose the "other" option. This result could be explained by the suggestion that, in the current political climate in South Africa, with Black Economic Empowerment and Employment Equity prevalent, gender and population groups that are not previously disadvantaged do not seem able to find work easily in the corporate environment and so seem to be increasingly turning to entrepreneurial ventures for income. However, this idea requires further research;
- An interesting avenue for future research would be to determine what percentage of South Africa's youth plan to start their own businesses and to test whether those who plan to start their own business have the financial literacy needed for such ventures.

### 7.5 Concluding Comment

The JumpStart 2006 financial literacy survey is regarded as one of the most important barometers of financial and economic independence for future generations of Americans. This US survey and the data it supplies, provide a valuable assessment tool for educators, policymakers and parents. It is hoped that the 2006 SA survey in this research will become just as significant for SA parents, youth, educators and government, and will serve as a springboard for future financial literacy policies, educational initiatives and research.

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**Appendix 1:** 2006 Jump\$start Questionnaire (i.e. US Personal Financial Survey 2006)  
(Jump\$start Coalition, 2006c) (pages 1-9 in Appendices section)

**Appendix 2:** South African Survey of Personal Financial Literacy 2006, Version 5A dated  
19-May-2006 (Pages 1-21 in Appendices section)

## APPENDIX 1:



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

IRE

1. If you have caused an accident, which type of insurance would cover damage to your own car?
- 1.1% a) Term
  - \*50.5%** b) Collision
  - 9.7% c) Comprehensive
  - 38.7% d) Liability
2. Matt and Eric are young men. Each has a good credit history. They work at the same company and make approximately the same salary. Matt has borrowed \$6,000 to take a foreign vacation. Eric has borrowed \$6,000 to buy a car. Who is likely to pay the lowest finance charge?
- 9.8% a) Matt will pay less because people who travel overseas are better risks.
  - 23.9% b) They will both pay the same because they have almost identical financial backgrounds.
  - \*52.7%** c) Eric will pay less because the car is collateral for the loan.
  - 13.6% d) They will both pay the same because the rate is set by law.
3. If you went to college and earned a 4-year degree, how much more money could you expect to earn than if you only had a high school diploma?
- 23.5% a) A little more; about 20% more.
  - \*63.9%** b) A lot more; about 70% more.
  - 10.5% c) About 10 times as much.
  - 2.1% d) No more; I would make about the same either way.
4. Many savings programs are protected by the Federal government against loss. Which of the following is not?
- \*28.6%** a) A bond issued by one of the 50 States
  - 12.4% b) A U. S. Treasury Bond
  - 9.7% c) A U. S. Savings Bond
  - 49.3% d) A certificate of deposit at the bank
5. If each of the following persons had the same amount of take home pay, who would need the greatest amount of life insurance?
- \*61.3%** a) A young single woman with two young children.
  - 4.4% b) A young single woman without children.
  - 30.0% c) An elderly retired man, with a wife who is also retired.
  - 4.2% d) A young married man without children.
6. Which of the following instruments is NOT typically associated with spending?
- 1.5% a) Cash
  - 2.4% b) Credit card
  - 2.6% c) Debit card
  - \*93.5%** d) Certificate of deposit



7. Which of the following finance charges per year, if they all charge the same amount per year on their cards? **GREATEST** dollar amount in
- 8.8%** a) Vera, who always pays off her credit card bill in full shortly after she receives it.
- \*70.6%** b) Jessica, who only pays the minimum amount each month.
- 14.4%** c) Megan, who pays at least the minimum amount each month and more, when she has the money.
- 6.3%** d) Erin, who generally pays off her credit card in full but, occasionally, will pay the minimum when she is short of cash.
8. Which of the following statements is true?
- 10.0%** a) Your bad loan payment record with one bank will not be considered if you apply to another bank for a loan.
- 11.6%** b) If you missed a payment more than 2 years ago, it cannot be considered in a loan decision.
- \*70.9%** c) Banks and other lenders share the credit history of their borrowers with each other and are likely to know of any loan payments that you have missed.
- 7.5%** d) People have so many loans it is very unlikely that one bank will know your history with another bank.
9. Doug must borrow \$12,000 to complete his college education. Which of the following would NOT be likely to reduce the finance charge rate?
- 32.9%** a) If his parents took out an additional mortgage on their house for the loan.
- 17.6%** b) If the loan was insured by the Federal Government.
- \*30.4%** c) If he went to a state college rather than a private college.
- 19.1%** d) If his parents cosigned the loan.
10. If you had a savings account at a bank, which of the following would be correct concerning the interest that you would earn on this account?
- 13.5%** a) Sales tax may be charged on the interest that you earn.
- 13.0%** b) You cannot earn interest until you pass your 18<sup>th</sup> birthday.
- 50.9%** c) Earnings from savings account interest may not be taxed.
- \*22.7%** d) Income tax may be charged on the interest if your income is high enough.
11. Inflation can cause difficulty in many ways. Which group would have the greatest problem during periods of high inflation that last several years?
- 8.7%** a) Young couples with no children who both work.
- 33.9%** b) Young working couples with children.
- 13.3%** c) Older, working couples saving for retirement.
- \*44.1%** d) Older people living on fixed retirement income.



12. Which of the follow
- 5.9%** a) You don't have to pay the tax if your income is very low.
  - \*49.6%** b) It makes things more expensive for you to buy.
  - 29.5%** c) The national sales tax percentage rate is 6%.
  - 15%** d) The federal government will deduct it from your paycheck.
13. Lindsay has saved \$12,000 for her college expenses by working part-time. Her plan is to start college next year and she needs all of the money she saved. Which of the following is the safest place for her college money?
- 10.4%** a) Corporate bonds
  - \*80.4%** b) A bank savings account
  - 5.3%** c) Locked in her closet at home
  - 3.9%** d) Stocks
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?
- 22.0%** a) A twenty-five year corporate bond
  - \*44.6%** b) A house financed with a fixed-rate mortgage
  - 17.3%** c) A 10-year bond issued by a corporation
  - 16.1%** d) A certificate of deposit at a bank
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?
- 6.6%** a) When some clothes you like go on sale.
  - 31.5%** b) When the interest on the loan is greater than the interest you get on your savings.
  - \*57.8%** c) When you need to buy a car to get a much better paying job.
  - 4.2%** d) When you really need a week vacation.
16. Which of the following statements best describes your right to check your credit history for accuracy?
- 14.7%** a) All credit records are the property of the U.S. Government and access is only available to the FBI and Lenders.
  - 28.9%** b) You can only check your record for free if you are turned down for credit based on a credit report.
  - \*50.1%** c) Your credit record can be checked once a year for free.
  - 6.3%** d) You cannot see your credit record.
17. Your take home pay from your job is less than the total amount you earn. Which of the following best describes what is taken out of your total pay?
- \*53.0%** a) Federal income tax, social security and Medicare contributions
  - 17.2%** b) Federal income tax, sales tax, and social security contribution
  - 9.5%** c) Social security and Medicare contributions
  - 20.2%** d) Federal income tax, property tax, and Medicare and social security contributions



18. Retirement income p

- 3.6%** a) Rents and profits
- 25.9%** b) Social Security
- 32.9%** c) 401k
- \*37.7%** d) Pension

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

- 35.6%** a) Stocks
- 13.1%** b) Savings account
- \*42.7%** c) Invested in a down payment on the house
- 8.6%** d) Checking account

20. Justin just found a job with a take-home pay of \$2,000 per month. He must pay \$800 for rent and \$200 for groceries each month. He also spends \$200 per month on transportation. If he budgets \$100 each month for clothing, \$150 for restaurants and \$250 for everything else, how long will it take him to accumulate savings of \$900.

- 5.9%** a) 1 month
- 14.0%** b) 2 months
- \*66.3%** c) 3 months
- 13.8%** d) 4 months

21. Many young people receive health insurance benefits through their parents. Which of the following statements is true about health insurance coverage?

- 5.8%** a) Young people don't need health insurance because they are so healthy.
- 33.0%** b) You continue to be covered by your parents' insurance as long as you live at home, regardless of your age.
- 20.9%** c) You are covered by your parents' insurance until you marry, regardless of your age.
- \*40.3%** d) If your parents become unemployed, your insurance coverage may stop, regardless of your age.

22. Mike and Dave work together in the finance department of the same company and earn the same pay. Mike spends his free time taking work-related classes to improve his computer skills; while Dave spends his free time socializing with friends and working out at a fitness center. After five years, what is likely to be true?

- \*71.8%** a) Mike will make more money because he is more valuable to his company.
- 11.6%** b) Mike and Dave will continue to make the same money.
- 10.9%** c) Dave will make more because he is more social.
- 5.7%** d) Dave will make more because Mike is likely to be laid off.





23. If your credit card is left of \$1,000, but you notify the issuer of the card as soon as you discover it is missing, what is the maximum amount that you can be forced to pay according to Federal law?

- 55.8%** a) nothing
- \***15.1%** b) \$50
- 17.2%** c) \$500
- 11.9%** d) \$1000

24. Which of the following statements is NOT correct about most ATM (Automated Teller Machine) cards?

- \***66.8%** a) You can get cash anywhere in the world with no fee.
- 12.3%** b) You must have a bank account to have an ATM Card.
- 9.9%** c) You can generally get cash 24 hours-a-day.
- 11.0%** d) You can generally obtain information concerning your bank balance at an ATM machine.

25. Mark has a good job on the production line of a factory in his home town. During the past year or two, the state in which Mark lives has been raising taxes on its businesses to the point where they are much higher than in neighboring states. What effect is this likely to have on Mark's job?

- \***59.0%** a) Mark's company may consider moving to a lower-tax state, threatening Mark's job.
- 15.3%** b) He is likely to get a large raise to offset the effect of higher taxes.
- 17.1%** c) Higher business taxes will cause more businesses to move into Mark's state, raising wages.
- 8.6%** d) Higher business taxes can't have any effect on Mark's job.

26. Kelly and Pete 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?

- 44.8%** a) A U.S. Govt. savings bond
- 34.8%** b) A savings account
- 6.3%** c) A checking account
- \***14.2%** d) Stocks

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

- 13.6%** a) It will charge Karen twice the finance charge rate it charges older cardholders.
- \***55.3%** b) It will start Karen out with a small line of credit to see how she handles the account.
- 10.5%** c) It will make Karen's parents pledge their home to repay Karen's credit card debt.
- 20.7%** d) It will require Karen to have both parents co-sign for the card.



28. Maria worked her w \_\_\_\_\_ per year. After graduation, her first job pays \$40,000. The total dollar amount Maria will have to pay in Federal Income taxes in her new job will:

- 11.0% a) Stay the same as when she was in college.
- 10.7% b) Be lower than when she was in college.
- \*42.1% c) Double, at least, from when she was in college.
- 36.2% d) Go up a little from when she was in college.

29. Which of the following best describes the primary sources of income for most people age 20-35?

- 8.0% a) Profits from business
- 7.2% b) Rents
- 7.0% c) Dividends and interest
- \*77.8% d) Salaries, wages, tips

30. If you are behind on your debt payments and go to a responsible credit counseling service such as the Consumer Credit Counseling Services, what help can they give you?

- \*67.1% a) They can work with those who loaned you money to set up a payment schedule that you can meet.
- 11.8% b) They can force those who loaned you money to forgive all your debts.
- 11.9% c) They can cancel and cut up all of your credit cards without your permission.
- 9.2% d) They can get the federal government to apply your income taxes to pay off your debts.

31. What is your gender?

Score Proportion

- 52.6 46.6 a) Male
- 52.3 53.1 b) Female

32. Does your family rent or own your home?

- 48.5 15.7 a) Rent
- 53.1 84.3 b) Own

33. What are your educational plans after high school?

- 37.9 2.0 a) No further education is planned
- 47.5 14.7 b) Attend a 2-year college or junior college
- 54.9 70.9 c) Attend a 4-year college or university
- 47.6 8.0 d) Other plans for training or education
- 45.3 4.5 e) Don't know



34. What is your best (or second best) source of income in the past year? Consider annual income from all sources before taxes.

Score Proportion

- 48.5** 8.0 a) Less than \$20,000  
**50.8** 17.0 b) \$20,000 to \$39,999  
**53.7** 29.1 c) \$40,000 to \$79,999  
**55.6** 27.0 d) \$80,000 or more  
**48.8** 18.9 e) Don't know

35. How do you describe yourself?

- 55.0** 71.3 a) White or Caucasian  
**44.7** 10.1 b) Black or African-American  
**46.8** 8.6 c) Hispanic American  
**49.4** 4.4 d) Asian-American  
**44.1** 1.5 e) Native American or American Indian  
**44.2** 4.1 f) Other

36. What is the highest level of schooling your father or mother completed?

- 44.5** 6.4 a) Neither completed high school  
**50.6** 24.6 b) Completed high school  
**51.8** 21.0 c) Some college  
**55.6** 43.7 d) College graduate or more than college  
**43.6** 4.2 e) Don't know

37. What type of work do you intend to do when you finish school?

- 41.0** 2.7 a) Manual work such as truck driver, laborer, farm worker  
**47.8** 6.2 b) Skilled trade such as plumber, electrician  
**49.5** 10.6 c) Service worker such as secretary, food service worker, office worker, police officer, firefighter  
**54.9** 50.3 d) Professional worker such as nurse, computer programmer  
**51.2** 30.2 e) Other or don't know

38. When you start to work full-time, after you finish your education, how much do you expect to make per year before deductions for taxes and other items?

- 42.5** 2.8 a) Under \$15,000  
**46.4** 6.1 b) \$15,000 to \$19,999  
**51.6** 13.5 c) \$20,000 to \$29,999  
**53.9** 20.4 d) \$30,000 to \$39,999  
**54.1** 41.4 e) \$40,000 or more  
**50.4** 15.8 f) Don't know

39. Whose credit card do you use?

- 49.6** 12.9 a) My own  
**50.3** 14.5 b) My parents'  
**51.6** 4.8 c) Both my own and my parents'  
**53.4** 67.7 d) None, I don't use a credit card



40. How do you use you

**Score** **Proportion**

**53.6** 30.8 a) For getting cash from an ATM and for buying things directly

**51.2** 17.1 b) For getting cash from an ATM only

**52.1** 52.1 c) I don't have a debit card

41. Which of the following best describes your automobile driving?

**49.7** 17.9 a) I don't have a driver's license.

**43.8** 3.1 b) I have a driver's license, but no car in the family that I can drive.

**49.4** 4.9 c) I drive the family car, which is used by others, and help pay for the insurance.

**53.6** 13.9 d) I drive the family car, which is used by others, and don't help pay for the insurance.

**52.6** 28.4 e) I drive my own car and help pay for the insurance.

**54.7** 31.8 f) I drive my own car and don't help pay for the insurance.

42. How would you describe your employment history?

**52.6** 27.4 a) I work full time in the summers and part time during the school year.

**51.6** 7.1 b) I work full time in the summers and don't work during the school year.

**52.9** 35.9 c) I work part time in the summers and part time during the school year.

**53.1** 11.1 d) I work part time in the summers and don't work during the school year.

**51.3** 18.5 e) I have never been formally employed outside the home.

43. What kind of bank account do you have?

**47.0** 20.0 a) I don't have a bank account.

**53.6** 40.4 b) I have a savings account but no checking account.

**51.7** 10.3 c) I have a checking account but no savings account.

**54.8** 28.4 d) I have both a savings and a checking account.

44. **If you have a checking account**, which of the following is true? (Skip to Question 45 if you don't have a checking account)

**53.6** 47.6 a) I subtract every check and ATM withdrawal from the balance in my checkbook and have never "bounced" a check for insufficient funds.

**43.7** 16.2 b) I subtract every check and ATM withdrawal from the balance in my checkbook but have "bounced" at least one check for insufficient funds.

**53.1** 26.7 c) I don't subtract every check and ATM withdrawal from my checkbook but have never "bounced" a check.

**47.1** 9.5 d) I don't subtract every check ATM and withdrawal from my checkbook and have "bounced" at least one check for insufficient funds.

45. Which of the following is true about your ownership of stocks and mutual funds (circle **all** that apply)?

**53.4** 64.0 a) I own no stocks or mutual funds.

**52.4** 9.4 b) I own stocks in my own name.

**52.3** 10.5 c) I own stocks in my parents' name.

**50.8** 7.5 d) I own mutual funds in my own name.

**53.1** 8.4 e) I own mutual funds in my parents' name.



46. Some people tend to be very thrifty, saving money whenever they have the chance, while others are very spending-oriented, buying whenever they can and even borrowing to consume more. How would you classify yourself?

Score Proportion

- 49.7** 16.6 a) Very thrifty, saving money whenever I can.  
**54.0** 37.8 b) Somewhat thrifty, often saving money.  
**53.9** 22.0 c) Neither thrifty nor spending-oriented.  
**51.4** 17.9 d) Somewhat spending-oriented, seldom saving money.  
**46.9** 5.6 e) Very spending-oriented, hardly ever saving money.

47. What is your high school class level?

- 52.3** 100.0 a) Senior  
b) Junior  
c) Sophomore  
d) Freshman

48. Which of the following do you feel is the greatest cause of serious financial difficulty, where families can't pay their bills?

- 49.0** 8.6 a) Bad luck, such as unexpected illness or job loss  
**48.1** 9.4 b) Not enough savings  
**55.0** 28.9 c) Buying too much on credit  
**53.8** 28.9 d) Not following a financial plan  
**50.6** 24.0 e) Not being able to earn enough money

49. How bad do you think it is for families who don't have enough money to pay their bills?

- 43.2** 8.5 a) Not so bad, a lot of families go through this.  
**53.5** 49.0 b) Pretty bad, it is painful to experience.  
**52.9** 42.5 c) Very bad, it is one of the worst things that can happen to a family.

50. What do you think happens to older people when they retire if they haven't saved much money and don't have a good pension from their former jobs?

- 39.9** 7.5 a) They live pretty well on Social Security.  
**50.4** 42.3 b) They get by on Social Security by keeping their expenses down.  
**56.0** 50.1 c) They find it tough to live on Social Security.

51. Which of the following classes have you had in high school (circle **all** that apply)?

- 51.6** 16.7 a) An entire course in money management or personal finance.  
**53.4** 29.3 b) A portion of a course where at least a week was focused on money management or personal finance.  
**53.2** 38.1 c) An entire course in economics.  
**53.0** 27.4 d) A portion of a course where at least a week was focused on economics.  
**55.0** 27.7 e) A course in which we played a stock market game.



**APPENDIX 2:**  
**SOUTH AFRICAN SURVEY**  
**OF PERSONAL**  
**FINANCIAL LITERACY**  
**2006**

**49 Multiple-Choice Questions**

Name of your High School: \_\_\_\_\_

**INFORMATION LEAFLET:**

Thank you for taking part in this survey. It has been adapted for South Africa from the US Jump\$tart Survey of Personal Financial Literacy. The survey aims to measure South African high school learners' knowledge of personal finance. The results may be used to help students learn more about personal finance and to help high schools improve finance curriculums. Your identity will be kept anonymous. The survey should take you roughly 45 minutes to complete.

**INSTRUCTIONS:**

On this survey form, please circle the correct or most appropriate answer for each question. Please choose only ONE answer for each question (except for Question 13 where you should circle ALL answers that apply). Please answer all questions on all pages of this form. Please use a pen. Please hand in your completed survey form when you are finished. Thank you.

**RESULTS KEY:**

For all respondents, for all 20 questions with a right or wrong answer, the mean overall financial literacy score (MOFLS) was found to be **52.1%**.

Per question, below each answer-option are percentages as follows (to be read from left to right):

- ❖ *in italics*: the proportion (%) of respondents who chose that answer-option e.g. a,b, etc.;
- ❖ **in bold**: their MOFLS (%)
- ❖ [in non-bold, non-italics, in square brackets]: the mean financial literacy score (%) for each of the categories [i.e. General Financial Knowledge (GFK), Saving (SVG), Spending (SP), Debt (D)], respectively.

For example, for Q2 (Question 2),

2. Which of the following is true about VAT?
  - a. the government will deduct it from your paycheque  
*17.9%*, **47.9%** [43.5%, 54.0%, 41.2%, 62.1%]

This should be interpreted to mean that 17.9% of respondents chose answer “a” for Q2, and they attained a MOFLS of 47.9%. Their mean financial literacy score per category was:

GFK=43.5%

SVG=54.0%

SP=41.2%

D=62.1%

For survey questions with a right or wrong answer, an asterisk (\*) denotes the right answer.

Note that the sum of the proportions for all answer-options for a certain question does not necessarily add up to exactly 100%, since some respondents’ data were discarded as invalid. For Q13, the sum of proportions exceeds 100% as respondents were instructed to circle ALL the applicable options.

Those results not corresponding to a specific question (i.e. mean financial literacy scores overall and by category, for each school and for private vs. public schools) are shown in the two tables over the page, before the actual survey questions.





*Table 1: Financial Literacy Scores by School*

<i>School</i>	<i>No. of valid respondents</i>	<i>Proportion</i>	<i>MEAN FINANCIAL LITERACY SCORES</i>				
			<i>Overall</i>	<i>GFK</i>	<i>SVG</i>	<i>SP</i>	<i>D</i>
Greenside High School	68	13.4%	52.1%	57.4%	48.2%	38.2%	59.8%
Bluehills College	56	11.0%	50.9%	47.8%	52.7%	42.4%	69.0%
Ivory Park Secondary School	24	4.7%	30.3%	37.5%	26.0%	28.1%	19.4%
Horizon International High School	10	2.0%	62.0%	60.0%	57.5%	60.0%	76.7%
Ikwezi Technical Skill Centre	187	36.8%	44.1%	46.2%	46.1%	33.8%	48.5%
Redhill High School	53	10.4%	59.5%	60.4%	62.3%	47.2%	69.8%
Crawford College Sandton	110	21.7%	66.9%	67.7%	63.4%	56.1%	83.3%
<b>Overall</b>	<b>508</b>	<b>100.0%</b>	<b>52.1%</b>	<b>53.9%</b>	<b>51.8%</b>	<b>41.8%</b>	<b>61.2%</b>

*Table 2: Financial Literacy Scores by School Status*

<i>School Status</i>	<i>No. of valid respondents</i>	<i>Proportion</i>	<i>MEAN FINANCIAL LITERACY SCORES</i>				
			<i>Overall</i>	<i>GFK</i>	<i>SVG</i>	<i>SP</i>	<i>D</i>
Independent/Private	229	45.1%	61.0%	60.8%	60.3%	50.9%	76.4%
Public	279	54.9%	44.8%	48.2%	44.9%	34.4%	48.7%
<b>Overall</b>	<b>508</b>	<b>100.0%</b>	<b>52.1%</b>	<b>53.9%</b>	<b>51.8%</b>	<b>41.8%</b>	<b>61.2%</b>





1. Many people put away money for unexpected expenses. If Jatheen and Fatima put money away for emergencies, which of the following would help them the LEAST if they needed it right away?
  - a. savings account  
50.0%, **44.7%** [46.3%, 47.0%, 34.6%, 50.4%]
  - b. shares  
17.7%, **56.0%** [55.2%, 54.8%, 46.3%, 72.7%]
  - c. cheque account  
3.2%, **48.8%** [39.6%, 57.8%, 46.9%, 66.7%]
  - d. invested in a deposit on the house \*  
29.2%, **63.1%** [68.1%, 57.5%, 50.7%, 72.3%]
  
2. Which of the following is true about VAT?
  - a. the government will deduct it from your paycheque  
17.9%, **47.9%** [43.5%, 54.0%, 41.2%, 62.1%]
  - b. the national VAT percentage rate is 6%  
15.4%, **46.2%** [45.9%, 48.4%, 38.2%, 54.8%]
  - c. it makes things more expensive for you to buy \*  
53.7%, **56.2%** [61.4%, 52.7%, 43.2%, 62.8%]
  - d. you don't have to pay the tax if your income is very low  
13.0%, **49.5%** [49.1%, 48.4%, 41.0%, 63.5%]
  
3. The main forms of income for most people aged 20-35 are:
  - a. salaries, wages, tips \*  
90.1%, **53.9%** [56.4%, 53.0%, 42.3%, 63.1%]
  - b. profits from business  
3.8%, **31.3%** [26.3%, 40.8%, 30.3%, 35.1%]
  - c. dividends and interest  
2.8%, **44.0%** [39.9%, 50.0%, 44.6%, 47.6%]
  - d. rents  
3.4%, **36.5%** [33.3%, 32.4%, 38.2%, 49.0%]



4. Thembi and Sara work in the finance department of the same company and earn the same salary. Thembi spends her free time doing work-related courses to improve her computer skills; Sara spends her free time going out and exercising at a gym. After five years what is likely to be true?
- Thembi and Sara will still earn the same salary  
10.1%, **41.1%** [36.4%, 50.0%, 33.3%, 53.6%]
  - Thembi will earn more money because her company values her more than Sara \*  
83.9%, **55.0%** [57.9%, 53.7%, 43.4%, 64.0%]
  - Sara will earn more because Thembi will probably be fired  
4.0%, **31.3%** [30.0%, 30.0%, 32.5%, 35.0%]
  - Sara will earn more because she goes out more than Thembi  
2.0%, **31.7%** [33.8%, 22.5%, 30.0%, 40.0%]
5. Michael and Christina want to put money away for their baby's education. Which of the following usually grows the most over 18 years or more?
- a government bond  
8.9%, **45.9%** [45.2%, 46.7%, 39.4%, 55.6%]
  - shares \*  
19.4%, **60.4%** [66.4%, 54.8%, 48.0%, 66.3%]
  - a savings account  
67.1%, **50.9%** [52.1%, 52.0%, 40.2%, 60.5%]
  - a cheque account  
4.2%, **45.6%** [44.4%, 45.2%, 40.5%, 57.1%]
6. If the following people each got the same pay after tax, who would need the most life insurance?
- a young married man without children  
6.5%, **36.1%** [36.2%, 40.2%, 33.3%, 34.3%]
  - an elderly retired man, with a wife who is also retired  
33.5%, **46.6%** [45.5%, 48.1%, 39.9%, 56.8%]
  - a young single woman with two young children \*  
53.9%, **59.6%** [62.9%, 57.6%, 46.1%, 70.1%]
  - a young single woman without children  
6.1%, **35.5%** [40.9%, 33.9%, 24.2%, 37.6%]



7. Inflation can create the most pain for a certain group of people would suffer the most when inflation rates are high for a few years?
- young couples who both work and have no children  
4.0%, **35.8%** [37.3%, 36.3%, 31.3%, 36.7%]
  - young working couples with children  
33.6%, **46.4%** [45.8%, 48.4%, 39.9%, 54.3%]
  - older, working couples saving for retirement  
13.6%, **46.7%** [46.2%, 49.6%, 40.6%, 52.7%]
  - older people living on fixed retirement income \*  
48.8%, **59.1%** [63.0%, 56.4%, 44.5%, 70.4%]
8. Lindiwe worked while in university, earning R150,000 per year. After she graduated from university, her first job pays R300,000. The total Rand amount Lindiwe will pay in income taxes in her new job will:
- go up a little from when she was in university  
34.1%, **48.2%** [46.3%, 52.2%, 41.0%, 58.1%]
  - double, at least, from when she was in university \*  
54.8%, **57.6%** [61.8%, 54.8%, 44.1%, 66.7%]
  - stay the same as when she was in university  
6.2%, **39.1%** [39.9%, 41.9%, 34.7%, 38.7%]
  - be lower than when she was in university  
5.0%, **36.1%** [36.6%, 29.0%, 29.0%, 53.3%]
9. Your take-home pay is less than the total amount you earn. What is **usually** taken out of your total pay?
- Income tax, pension fund and medical aid contributions \*  
51.9%, **59.1%** [63.2%, 55.8%, 45.1%, 69.6%]
  - Income tax, capital gains tax, medical aid and pension fund contributions  
15.4%, **48.3%** [44.0%, 54.3%, 42.6%, 60.9%]
  - Pension fund and medical aid contributions  
15.6%, **44.0%** [43.5%, 47.3%, 36.3%, 51.2%]
  - Income tax, sales tax and pension fund contributions  
8.0%, **44.6%** [43.7%, 47.0%, 38.1%, 53.2%]



10. What do you think happens to older people when they retire if they haven't saved much money and don't have a good pension from their previous jobs?
- They live quite well on the state old age pension, without keeping their expenses down.  
8.8%, **37.9%** [42.1%, 38.1%, 24.4%, 42.9%]
  - They manage to live on the state old age pension by keeping their expenses down.  
24.2%, **44.7%** [48.1%, 43.3%, 34.5%, 50.3%]
  - They find it hard to live on the state old age pension, even after keeping expenses down.  
67.0%, **58.5%** [59.0%, 58.7%, 47.7%, 70.9%]
11. How confident do you feel about your ability to manage your own finances?
- Not confident at all – I wish I knew a lot more about money management  
9.1%, **46.7%** [47.8%, 46.7%, 34.8%, 59.4%]
  - Not too confident – I wish I knew more about money management  
27.8%, **52.4%** [53.5%, 54.1%, 41.8%, 61.0%]
  - Somewhat confident – I understand most of what I'll need to know  
33.5%, **56.4%** [57.9%, 54.6%, 45.7%, 68.6%]
  - Very confident – I understand money management very well  
29.6%, **48.9%** [51.7%, 48.5%, 39.7%, 53.8%]
12. Where did you learn the most about managing your money?
- At home from my family  
38.1%, **58.6%** [59.7%, 57.8%, 48.1%, 70.4%]
  - At school in class  
20.8%, **49.2%** [51.0%, 51.9%, 38.8%, 54.0%]
  - From talking with my friends  
3.6%, **42.5%** [46.9%, 27.8%, 41.7%, 50.0%]
  - From magazines, books, TV, radio and the Internet  
16.5%, **47.2%** [49.2%, 48.8%, 37.2%, 52.4%]
  - From personal experience in managing my own money  
21.0%, **49.6%** [50.8%, 48.8%, 38.9%, 61.5%]



13. Which of the following classes have you had in high school (circle **ALL** that apply)?

- a. A whole course in money management or personal finance  
19.5%, **46.4%**, [47.8%, 47.0%, 38.1%, 52.9%]
- b. Part of a course where a week or more was spent on money management or personal finance  
17.5%, **51.3%**, [50.2%, 54.5%, 41.6%, 62.9%]
- c. A whole course in economics  
44.7%, **51.5%**, [53.5%, 51.7%, 41.7%, 58.4%]
- d. Part of a course where a week or more was spent on economics  
19.1%, **51.7%**, [54.4%, 51.3%, 38.9%, 61.5%]
- e. A course where we played a stock market game  
27.6%, **55.0%**, [57.0%, 55.0%, 42.5%, 65.7%]
- f. A course in functional mathematics or mathematical literacy  
41.5%, **54.0%**, [55.2%, 53.9%, 43.4%, 64.6%]
- g. None  
6.3%, **57.7%**, [59.7%, 59.4%, 41.4%, 70.8%]

*(Note that, for Q13, the sum of proportions, in italics above, exceeds 100% because respondents were instructed to circle ALL the applicable options).*

14. Gary saved R9,000 for his university fees by working part-time. He starts university next year and needs all the money he saved. Which is the safest place for his money?

- a. locked in his cupboard at home  
8.6%, **32.0%** [40.3%, 22.7%, 29.1%, 24.8%]
- b. corporate bonds  
3.2%, **38.8%** [47.2%, 25.0%, 28.1%, 45.8%]
- c. shares  
3.4%, **32.1%** [38.6%, 19.1%, 26.5%, 37.3%]
- d. bank savings account \*  
84.9%, **55.6%** [56.1%, 57.5%, 44.3%, 66.8%]



15. Sipiwe has a job with a take-home pay of R15,000 per month. Each month he pays R7,500 for rent and R1,500 for groceries. He also spends R1,000 per month on transport. If he budgets R1,000 per month for clothing, R1,000 for entertainment and R500 for everything else, how long will it take him to build up savings of R7,500?
- 3 months \*  
59.5%, **59.3%** [59.2%, 63.0%, 48.0%, 69.9%]
  - 4 months  
9.4%, **43.7%** [50.4%, 30.9%, 36.2%, 51.1%]
  - 5 months  
12.0%, **41.3%** [44.2%, 34.2%, 34.6%, 51.1%]
  - 6 months  
19.2%, **41.8%** [45.7%, 39.8%, 31.5%, 46.5%]
16. Which is true regarding the interest that you could earn on a bank savings account?
- you cannot earn interest until you reach your 18<sup>th</sup> birthday  
12.0%, **45.4%** [47.4%, 40.8%, 38.3%, 55.0%]
  - income tax may be charged on the interest if your income is high enough \*  
19.6%, **52.7%** [52.3%, 65.8%, 37.5%, 56.5%]
  - VAT may be charged on the interest that you earn  
17.8%, **46.7%** [50.0%, 44.4%, 39.0%, 50.2%]
  - earnings from savings account interest is not taxed  
50.6%, **55.5%** [57.3%, 51.8%, 45.8%, 68.4%]



17. Danny and Jackie are the same age. At age 25 Danny began saving R2,000 a year while Jackie saved nothing. At age 50, Jackie realised that she needed money for retirement and started saving R4,000 per year while Danny kept saving his R2,000. Now they are both 75 years old. Who has the most money in his or her retirement account?
- Jackie, because she saved more each year  
14.3%, **39.1%** [42.9%, 32.3%, 30.2%, 48.6%]
  - Danny, because he has put away more money  
11.1%, **45.8%** [49.8%, 35.7%, 41.1%, 53.6%]
  - Danny, because his money has grown for a longer time at compound interest \*  
47.5%, **56.9%** [56.1%, 65.7%, 44.4%, 64.3%]
  - they would each have the same amount because they put away exactly the same amount  
27.1%, **53.7%** [57.5%, 45.1%, 44.2%, 66.7%]
18. Which of the following credit-card-users is likely to pay the HIGHEST amount in bank charges per year if they all buy the same amount of goods per year on their credit cards?
- Tammy who only pays the minimum amount each month \*  
41.4%, **61.3%** [59.7%, 57.5%, 61.2%, 71.2%]
  - Kylie who always pays off her credit card in full soon after she receives it  
32.0%, **46.8%** [51.4%, 47.3%, 29.3%, 55.5%]
  - Michelle, who usually pays off her credit card in full but occasionally will pay the minimum when she is short of cash  
18.4%, **42.6%** [46.8%, 44.6%, 26.6%, 48.9%]
  - Jody, who pays at least the minimum amount each month and more when she has money  
18.2%, **48.5%** [51.5%, 52.5%, 29.7%, 59.3%]



19. Thabo and Robby are young men, each with a good credit history. They work at the same company and earn roughly the same salary. Thabo borrowed R25,000 to pay for an overseas holiday. Robby borrowed R25,000 to buy a car. Who is likely to pay the lowest finance charge?
- they will both pay the same because the rate is set by law  
24.0%, **48.2%** [50.9%, 49.4%, 33.1%, 58.3%]
  - they will both pay the same because they have almost identical financial backgrounds  
18.4%, **44.7%** [49.3%, 44.8%, 29.3%, 51.8%]
  - Thabo will pay less because people who travel overseas are better risks  
20.2%, **48.3%** [53.5%, 51.2%, 30.4%, 52.8%]
  - Robby will pay less because the car is collateral for the loan \*  
37.3%, **60.7%** [58.5%, 57.7%, 60.2%, 72.4%]
20. Which of the following is NOT usually linked with spending?
- call-account \*  
53.2%, **60.1%** [59.5%, 57.7%, 56.8%, 69.5%]
  - cash  
9.8%, **39.9%** [44.2%, 35.7%, 27.6%, 49.0%]
  - credit card  
12.4%, **41.7%** [47.3%, 41.9%, 24.6%, 47.8%]
  - debit card  
24.6%, **45.3%** [48.8%, 50.8%, 24.2%, 55.8%]
21. Do you keep track of your cashflows (i.e. much you spend and save every month, in total) and budget to make sure your expenses are less than your income?
- I keep track of my cashflows but I do not budget my expenses vs. my income  
29.5%, **52.9%** [56.4%, 54.2%, 35.2%, 64.7%]
  - No  
34.1%, **51.8%** [55.1%, 52.8%, 33.3%, 65.3%]
  - Yes \*  
36.4%, **52.2%** [50.7%, 49.6%, 55.7%, 55.4%]





22. When you make a purchase, do you:
- look for the best deals and bargains, and compare prices before you buy  
68.6%, **53.2%** [54.2%, 54.3%, 42.7%, 63.0%]
  - buy the first of that type of product that you come across, because you like it  
15.2%, **46.9%** [51.8%, 39.9%, 38.3%, 52.8%]
  - buy your favourite brand, even if it costs the most  
16.2%, **52.6%** [54.2%, 53.0%, 41.5%, 62.2%]
23. Do your parents usually run out of money before they get their next paycheque?
- Yes  
26.3%, **48.2%** [49.6%, 49.4%, 39.7%, 53.6%]
  - No  
47.4%, **56.8%** [57.8%, 56.8%, 45.9%, 68.5%]
  - Don't know  
26.3%, **47.9%** [51.3%, 45.5%, 36.8%, 55.6%]
24. If you currently get pocket money, which of the following is true?
- I usually manage to save some or all of my pocket money each time  
60.8%, **54.5%** [56.1%, 54.6%, 43.8%, 64.2%]
  - I usually spend all of my pocket money each time  
27.4%, **49.4%** [51.0%, 48.2%, 38.7%, 60.4%]
  - I usually spend all of my pocket money each time and need to borrow more  
10.0%, **42.5%** [45.5%, 42.2%, 36.8%, 41.2%]
  - Not applicable ( I do not get pocket money)  
1.8%, **68.3%** [70.4%, 66.7%, 52.8%, 85.2%]



25. If you run out of pocket money before you get your next pocket money payment, which of the following is true?

- a. It is tough luck, I have to wait until next month to get more money  
39.6%, **51.9%** [53.8%, 52.0%, 41.2%, 60.5%]
- b. my parents usually give me more money before my next pocket money payment is due  
21.5%, **52.0%** [54.4%, 52.1%, 36.7%, 65.1%]
- c. my parents usually lend me more money before my next pocket money payment is due  
14.0%, **51.3%** [53.0%, 50.7%, 45.1%, 55.4%]
- d. I usually do some odd jobs to earn more money in the meantime  
23.1%, **52.4%** [53.5%, 51.1%, 44.9%, 61.3%]
- e. Not applicable ( I do not get pocket money)  
1.8%, **61.7%** [61.7%, 63.9%, 52.8%, 70.4%]

26. Which of the following statements is true?

- a. if you missed a payment more than 2 years ago, it cannot affect a decision to give you a loan  
12.3%, **38.9%** [41.4%, 44.0%, 33.5%, 31.7%]
- b. people have so many loans it is unlikely that one bank will know what your history is with other banks  
12.9%, **43.0%** [47.9%, 48.1%, 34.6%, 32.8%]
- c. credit bureaus share the credit history of borrowers with banks and other lenders, and are likely to know about any loan payments that you have missed \*  
62.5%, **58.2%** [58.1%, 55.3%, 46.2%, 78.3%]
- d. your bad loan payment record with one bank will not be considered if you apply to another bank for a loan  
12.3%, **43.8%** [50.1%, 44.8%, 35.1%, 35.5%]



27. When would it be financially helpful for you to borrow money in order to buy something now and repay it with your future income?
- when interest on the loan is greater than the interest you get on your savings  
31.6%, **47.7%** [50.6%, 50.3%, 40.8%, 45.0%]
  - when some clothes you like go on sale  
21.3%, **42.7%** [45.2%, 45.6%, 36.6%, 39.8%]
  - when you really need a two-week holiday  
4.5%, **41.3%** [50.7%, 44.6%, 22.8%, 33.3%]
  - when you need to buy a car to get a much better paying job \*  
42.5%, **61.3%** [61.0%, 56.7%, 47.3%, 87.1%]
28. Would you borrow money that you knew you couldn't afford to pay back?
- Yes  
12.5%, **36.0%** [43.4%, 37.3%, 32.1%, 17.5%]
  - No \*  
87.5%, **54.6%** [55.5%, 54.1%, 43.3%, 67.6%]
29. What do you think is the most common reason why families have serious financial problems such that they can't pay their bills?
- Buying too much on credit  
33.1%, **53.1%** [54.9%, 53.8%, 43.0%, 60.1%]
  - Bad luck, such as unexpected illness or job loss  
6.7%, **38.4%** [43.4%, 32.0%, 29.7%, 43.8%]
  - Not enough savings  
11.3%, **45.6%** [47.1%, 47.7%, 34.7%, 52.5%]
  - Not following a financial plan  
39.2%, **57.6%** [57.6%, 57.5%, 46.3%, 73.1%]
  - Not being able to earn enough money  
9.6%, **53.4%** [58.2%, 51.6%, 39.7%, 59.4%]



30. What do you think is a fair interest rate for you to be charged on a loan?
- No interest  
15.8%, **45.9%** [46.9%, 47.8%, 35.6%, 54.2%]
  - 5%  
42.9%, **53.1%** [54.2%, 54.1%, 43.2%, 61.4%]
  - 10%  
27.1%, **58.1%** [60.6%, 54.4%, 46.2%, 71.5%]
  - 15%  
6.9%, **47.7%** [50.1%, 45.0%, 38.6%, 56.2%]
  - More than 15%  
7.3%, **42.8%** [46.4%, 43.9%, 33.8%, 42.3%]
31. If a friend asked you for a loan, what would be a fair interest rate to charge them?
- No interest  
34.9%, **53.6%** [55.8%, 52.8%, 43.0%, 62.5%]
  - 5%  
33.5%, **52.2%** [53.2%, 53.7%, 40.4%, 62.9%]
  - 10%  
18.4%, **52.8%** [55.0%, 51.9%, 43.5%, 59.9%]
  - 15%  
6.5%, **46.8%** [50.5%, 41.7%, 37.9%, 54.5%]
  - More than 15%  
6.7%, **49.0%** [49.3%, 47.8%, 42.6%, 57.8%]
32. How would you describe the pocket money you get currently?
- I don't get regular (weekly or monthly) pocket money; I'm given money only when I need it  
42.9%, **52.5%** [54.6%, 53.4%, 42.2%, 59.1%]
  - I get regular pocket money that depends on me completing some household chores  
23.2%, **47.2%** [49.4%, 45.7%, 38.4%, 54.9%]
  - I get regular pocket money and do not have to do chores for it  
33.9%, **55.1%** [56.0%, 54.0%, 44.1%, 68.2%]



33. Some people save money whenever they can, while others spend and buy whenever they can and even borrow to consume more. Which describes you best?
- Save money whenever I can  
44.2%, **50.9%** [53.2%, 52.7%, 40.5%, 55.8%]
  - Often save money and seldom spend money  
23.0%, **52.7%** [54.4%, 50.9%, 42.9%, 63.2%]
  - Neither save nor spend  
8.5%, **49.3%** [52.1%, 45.9%, 38.4%, 60.5%]
  - Spend often, and seldom save money  
17.9%, **58.2%** [57.2%, 56.9%, 48.3%, 76.3%]
  - Spend a lot, and hardly ever or never save money  
6.3%, **44.7%** [49.0%, 43.0%, 33.6%, 49.0%]
34. Comparing yourself to your parents, would you say that you are:
- Much more likely to save what you can  
31.9%, **48.1%** [50.7%, 48.8%, 37.7%, 53.8%]
  - Somewhat more likely to save what you can  
15.7%, **53.3%** [54.0%, 55.4%, 41.1%, 64.6%]
  - About the same  
27.0%, **57.4%** [58.4%, 54.0%, 48.3%, 70.8%]
  - Somewhat less likely to save and more likely to spend what you can  
18.8%, **51.8%** [54.6%, 50.8%, 41.3%, 59.3%]
  - Much less likely to save and much more likely to spend what you can  
6.5%, **49.2%** [49.5%, 53.0%, 39.4%, 56.6%]
35. If you could choose, which would you rather have?
- R500 today  
54.7%, **51.4%** [52.7%, 51.5%, 40.3%, 62.3%]
  - R1000 in 1 year's time  
17.1%, **49.5%** [50.0%, 51.5%, 44.5%, 51.9%]
  - R2000 in 2 year's time  
28.2%, **55.2%** [58.3%, 52.8%, 43.5%, 64.8%]



36. The latest model of your favourite gadget e.g. an I-pod or cell phone, has just been launched. You have enough money to buy it at the current price of R2000 at your local store. However, in a month's time, the price will have dropped to R1900. Would you:
- Buy it in a month's time to get the lower price  
66.5%, **52.6%** [54.2%, 52.1%, 42.6%, 62.1%]
  - Buy it now, at the current price  
33.5%, **52.0%** [53.9%, 51.2%, 40.6%, 62.2%]
    - If you answered (b), what price would it need to be, to make you wait a month? \_\_\_\_\_  
(Note: Q36(b)(i) misinterpreted by respondents hence ignored in analysis)
37. When you study for an exam or do your homework, do you tend to:
- Leave studying or your homework until the last minute  
23.9%, **50.4%** [51.5%, 51.5%, 41.5%, 58.1%]
  - Start studying or doing your homework at the latest possible time to still finish studying all the work  
37.4%, **54.7%** [56.3%, 54.0%, 44.4%, 64.5%]
  - Start studying or do your homework well in advance  
38.8%, **51.1%** [53.0%, 50.5%, 40.0%, 60.7%]
38. What is your gender?
- Male  
48.4%, **51.1%** [53.4%, 49.4%, 41.2%, 59.6%]
  - Female  
51.6%, **53.7%** [54.9%, 54.5%, 43.1%, 63.3%]
39. Does your family rent or own your home?
- Rent  
12.6%, **47.9%** [50.7%, 46.4%, 43.3%, 47.6%]
  - Own  
87.4%, **52.8%** [54.3%, 52.6%, 41.9%, 63.2%]



40. What are your educational plans after high school?
- No further education is planned  
4.0%, **34.8%** [40.6%, 28.8%, 23.8%, 40.0%]
  - Attend a technikon  
24.9%, **43.5%** [45.7%, 45.0%, 34.5%, 46.6%]
  - Attend a university  
62.1%, **57.1%** [58.4%, 56.1%, 45.9%, 69.4%]
  - Other plans for training or education  
6.1%, **49.5%** [49.1%, 48.4%, 44.4%, 59.1%]
  - Don't know  
3.0%, **50.3%** [54.8%, 56.7%, 36.7%, 46.7%]
41. Estimate what your parents' combined total income was last year before taxes. Consider annual income from all sources before taxes.
- Less than R50,000  
13.9%, **44.3%** [48.4%, 43.5%, 32.6%, 49.3%]
  - R50,000 to R199,999  
12.3%, **51.9%** [52.8%, 52.0%, 42.6%, 61.7%]
  - R200,000 to R349,999  
10.3%, **49.4%** [51.3%, 47.1%, 41.2%, 58.2%]
  - R350,000 or more  
18.5%, **61.7%** [62.8%, 60.3%, 50.0%, 75.7%]
  - Don't know  
45.0%, **51.2%** [52.8%, 51.8%, 41.1%, 59.2%]



42. How do you describe yourself?

- a. White  
25.6%, **64.9%** [66.6%, 62.8%, 51.8%, 80.1%]
- b. Black  
57.7%, **46.4%** [48.0%, 48.3%, 36.7%, 52.3%]
- c. Indian  
8.2%, **59.3%** [61.0%, 54.9%, 47.0%, 76.4%]
- d. Coloured  
3.0%, **42.3%** [42.2%, 38.3%, 41.7%, 48.9%]
- e. Asian  
2.8%, **49.6%** [48.4%, 51.8%, 42.9%, 59.5%]
- f. Other  
2.6%, **43.1%** [47.0%, 36.5%, 40.4%, 43.6%]

43. What is the highest level of schooling your father or mother completed?

- a. Neither completed high school  
10.6%, **44.2%** [47.0%, 45.3%, 36.8%, 44.7%]
- b. One or both completed high school  
19.9%, **48.2%** [50.5%, 48.5%, 36.4%, 57.2%]
- c. One or both attended but didn't complete university  
13.7%, **47.7%** [50.4%, 44.1%, 44.1%, 49.0%]
- d. One or both are university graduates  
46.0%, **57.8%** [57.8%, 57.9%, 46.3%, 72.8%]
- e. Don't know  
9.8%, **48.5%** [53.6%, 49.0%, 35.2%, 50.3%]





44. What type of work do you plan to do when you finish school?
- Manual work e.g. truck driver, labourer, farm worker  
3.6%, **37.8%** [42.0%, 37.5%, 33.3%, 31.5%]
  - Skilled trade e.g. plumber, electrician  
10.8%, **41.7%** [44.4%, 40.3%, 34.7%, 44.4%]
  - Service worker e.g. secretary, office worker, police officer, firefighter  
8.6%, **41.5%** [44.3%, 44.8%, 28.5%, 46.5%]
  - Professional worker e.g. nurse, computer programmer, lawyer, doctor, teacher, engineer  
62.0%, **56.4%** [57.2%, 56.0%, 46.5%, 67.8%]
  - Other or don't know  
15.1%, **51.4%** [55.2%, 50.3%, 36.5%, 61.4%]
45. When you start to work full-time, after you finish your education, how much do you think you'll earn per year as gross income before deductions for taxes and other items?
- Less than R50,000  
14.3%, **47.4%** [50.8%, 46.9%, 33.0%, 56.9%]
  - R50,000 to R199,999  
19.5%, **55.0%** [54.5%, 55.6%, 47.2%, 66.3%]
  - R200,000 to R349,999  
14.9%, **53.3%** [56.4%, 52.0%, 42.0%, 60.9%]
  - R350,000 or more  
28.1%, **52.0%** [54.0%, 48.8%, 44.9%, 60.3%]
  - Don't know  
23.1%, **52.1%** [53.6%, 55.6%, 38.8%, 60.6%]
46. How would you describe your employment currently?
- I do odd jobs (i.e. not a regular job) outside of school hours to earn extra money  
20.3%, **52.7%** [53.4%, 53.0%, 43.0%, 63.3%]
  - I have a regular job outside of school hours to earn extra money  
21.1%, **46.3%** [49.6%, 44.2%, 35.6%, 53.2%]
  - I don't have a proper job outside the home  
58.6%, **54.2%** [55.8%, 54.1%, 43.9%, 63.9%]



47. What kind of bank
- I don't have a bank account  
33.3%, **47.8%** [50.2%, 47.7%, 36.4%, 55.6%]
  - I have a bank savings account and I don't put money into it regularly  
31.1%, **52.6%** [54.5%, 52.1%, 41.1%, 62.8%]
  - I have a bank savings account and I put money into it regularly  
35.5%, **56.3%** [57.2%, 55.1%, 48.4%, 65.7%]
48. If one or both of your parents didn't have an income for a long period of time against their will, which one of the following applies to you?
- I save more and spend less because I want money available in case it happens to me  
55.3%, **52.7%** [54.2%, 53.6%, 42.1%, 61.2%]
  - it didn't affect the way I manage money  
10.9%, **46.9%** [50.1%, 46.8%, 37.5%, 50.6%]
  - I spend more freely and save less because you never know what will happen tomorrow  
9.1%, **41.0%** [47.2%, 33.3%, 30.6%, 46.7%]
  - this question is not applicable because one or both of my parents were never without an income for a long period of time against their will  
24.7%, **57.1%** [57.0%, 55.5%, 48.6%, 71.3%]
49. If one or both of your parents lost a lot of money through gambling, which of the following applies to you?
- I do not want to gamble because I dislike throwing away money on gambling and potentially getting into debt because of it  
43.7%, **51.2%** [53.3%, 51.0%, 42.0%, 57.7%]
  - it had no effect on the way I manage money  
13.6%, **44.9%** [47.3%, 45.5%, 32.8%, 53.2%]
  - I like gambling because I can win a lot of money very quickly  
3.0%, **35.7%** [40.0%, 31.7%, 26.7%, 40.0%]
  - this question is not applicable as my parents didn't lose a lot of money through gambling  
39.7%, **56.7%** [57.6%, 55.5%, 46.6%, 69.2%]