CORE SELF-EVALUATIONS, RACIAL EVALUATION AND LEARNING AMONGST ZULU STUDENTS AT THE UNIVERSITY OF ZULULAND

by

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ABSTRACT

Core Self-Evaluations [CSE] are a person’s estimation of his/her own worth and ability (Judge & Scott 2009). This in turn, is related to Racial Evaluation which is a person’s internal evaluation of his/her racial identity (Diller, 2010). The Employment Equity Act (55 of 1998) makes provision for the employment of equity candidates who can acquire skills in a reasonable amount of time. This requires individuals to be able to learn and then achieve in outcomes-based assessment. Core Self-Evaluations and Racial Evaluation can have an impact on how individuals perceive themselves, and how they perform in education, training and development (Hanley & Noblit, 2009).

This study explored the relationship between Core Self-Evaluation, Racial Evaluation, Learning and Outcomes-Based Assessment using an experimental design. The Core Self-Evaluation scores in this study (n=230) were consistent with levels found internationally (Broucek, 2005). There was positive Racial Evaluation, with a relationship existing between Racial Evaluation and Core Self-Evaluations. This means that part of a person’s identity as an individual is related to Racial Evaluation, with that Racial Evaluation being positive amongst young Zulu students at the University of Zululand.

There was a statistically significant, but small correlation between Learning and Core Self-Evaluation and a relationship was also found between CSE and Outcomes-Based Assessment results. When Core Self-Evaluation is higher, Learning tends to be more likely. The same pattern does not hold for Outcomes-Based Assessment results. Among Zulu students, lower CSE is linked to improved Outcomes-Based Assessment results. Racial Evaluation has a small relationship with CSE. However, efforts to remedy apartheid may be directed towards socio-economic development and need not focus on boosting Racial Evaluation when it comes to young Zulu adults.

**Key Words:** Racial Evaluation, Core Self-Evaluations, Learning, Outcomes-Based Assessment
### DEFINITIONS OF TERMS:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>Race:</strong></td>
<td>An assignation of identity based on phenotypic human features such as skin colour and a shared ancestry</td>
</tr>
<tr>
<td><strong>Ethnicity:</strong></td>
<td>An assignation of identity based on shared racial and cultural characteristics</td>
</tr>
<tr>
<td><strong>Core Self Evaluations:</strong></td>
<td>The fundamental evaluation a person makes about themselves</td>
</tr>
<tr>
<td><strong>Racial Evaluation:</strong></td>
<td>The fundamental evaluation a person makes about his/her racial identity</td>
</tr>
<tr>
<td><strong>Learning:</strong></td>
<td>The relatively permanent changes in knowledge and or skills and or attitudes.</td>
</tr>
<tr>
<td><strong>Outcomes-Based Assessment:</strong></td>
<td>The process of measuring the amount of learning achieved against previously specified outcomes.</td>
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DECLARATION:

In accordance with Rule G4.6.3,

4.6.3 A treatise/dissertation/thesis must be accompanied by a written declaration on the part of the candidate to the effect that it is his/her own work and that it has not previously been submitted for assessment to another University or for another qualification. However, material from publications by the candidate may be embodied in a treatise/dissertation/thesis.

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Signature:

________________________________________________________________________

Date:
Prof Robin Snelgar, my stalwart. Thank-you for remaining supportive and a true educator throughout this process. You're my role model, my mentor and an inspiration.

My husband Keith, your calm, steady and unwavering support has been my solace. Your actions say I love you more than words ever could.

To my grandmother, Adriana Cornelia van der Riet. You sacrificed so much so that I could be educated, I try and make you proud of me every day. RIP.
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1. INTRODUCTION

1.1 Overview

Racial tension and conflict has long been a feature of human social interaction (Haralambos & Holborn, 1997). A prime example of racial discrimination took place in South Africa in the twentieth century, with racism pervading all aspects of life in the country (Henrard, 2002).

Shaffer (2009) describes heredity and environment as co-conspirators in the development of personality. Humans develop personality in a dynamic interplay between heredity and environment. The environment in South Africa was a hostile one for Black South Africans during apartheid, and inequity persists in the post-apartheid era (OECD, 2010). Personality is made up of a number of personality traits, which are aspects of a person's personality that are relatively stable over time, and that directly influence behaviour (Matthews, Deary & Whiteman, 2003). One such personality trait is Core Self-Evaluations (Robbins & Judge, 2007), which is the favourability of a person’s estimation of himself or herself.

This thesis explores the post-apartheid status of the relationship between Racial Evaluation (RE), Core Self-Evaluations (CSE), learning, and Outcomes-Based Assessment (OBA) for Zulu students at the University of Zululand. These concepts will be introduced in the sections that follow.

Despite race being arbitrary and phenotypic, it was used as a criterion for the distribution of opportunity in South Africa before and after the demise of apartheid (Posel, 2001). It must be noted, as stated by Jones, that “the overall genetic differences between ‘races’... are no greater than that between different countries within Europe or within Africa. Individuals – not nations and not races – are the main repository of human variation” (Jones, in Haralambos & Holborn, 1995, p656).

The term ‘Bantu’ means ‘the people’ and was applied to the residents of South Africa who were aboriginal (Rosenthal, 1964, p36). This seemingly harmless
definition was used to select, oppress and dis-empower all those who were non-White in South Africa.

In this thesis, the specific focus is on how this process may have had a continued impact on a psychological level after the end of apartheid and how this potentially affects the learning of young Zulu South Africans in the post-apartheid era. The terms ‘native’, ‘African’, ‘Black’, ‘non-White’ and ‘Bantu’ were used by different South Africans in the promotion of separate and often conflicting ideologies (Houser & Shore, 1997). For the purposes of clarity, this thesis uses the term ‘Black’ in the broadest sense of the term, as defined in the Broad-Based Black Economic Empowerment (BEE) Act (53 of 2003) as a generic term including Blacks, Coloureds and Indians.

Instead of focussing on how people perceive others, the focus is on the labels or self-perceptions held by individuals, which may result in low Racial Evaluation – one’s evaluation of the race one belongs to. In particular, in this study, aspects relating to individual and Racial Evaluation (RE) are explored in relation to learning, achievement in OBA, (Outcomes-Based Assessment) and their CSE (Core Self-Evaluations). These variables are looked at in the post-apartheid context in South Africa. This context includes skills shortages (Daniels, 2007) and affirmative action imperatives (Employment Equity Act 55 of 1998). The specific focus was on young adults who speak Zulu as a home language and who were studying at the University of Zululand at the time of the study.

The thesis is that those who were predisposed to higher CSE or who developed higher CSE may fare better in Outcomes-Based Education and Training (OBET) today, despite apartheid’s impact, either directly during apartheid, or through subsequent disadvantage and residual effects, through their ability to better mobilise their psychological resources and to persist in an intense manner in the quest to attain their goals (Robbins & Judge, 2007). CSE is the amount of worth a person believes he or she holds (Judge et al., 2003). There has been a large amount of research support for the validity of CSE as a construct, as well as research support for the relationship between CSE and a number of work and education, training and
Low RE is a situation where victims of racism may begin to believe that they are “less worthy, less capable, less intelligent or less attractive” than their oppressors (Tyson, 2001, p156). RE could have been influenced by the residual impact of apartheid. In other words, the legacy of apartheid may have persisted, even in post-apartheid South Africa, as apartheid did not simply disappear overnight. Instead, there was a process of negotiation and transformation (Henrard, 2002), which is not yet complete. However, given the strides in legislative transformation (for instance, the Constitution, Act 108 of 1996), it would seem possible that young Black Zulus could, in post-apartheid Zululand, hold a positive CSE and RE, given the advent of democracy in South Africa.

Ndamse, a Black political commentator, stated in 1972 (in Biko et al.) that an individual cannot succeed without pride, and this pride makes people aspire to improve. “Wherever you find an individual who is ashamed of his race trying to get away from his race, apologising for being a member of his race, then you find a weak individual” (p12). RE could foster individual resilience and achievement.

The question is: to what extent have the residual psychological effects of racial discrimination, as evidenced by socio-economic inequality in post-apartheid South Africa (Organization for Economic Co-operation and Development, 2010) affected the CSE and RE of those who only marginally or never experienced apartheid first-hand? The first component of the study was therefore to test the link between CSE and RE.

In South Africa, the Employment Equity Act (55 of 1998) requires that ‘suitably qualified’ individuals from previously disadvantaged backgrounds be considered first for vacancies within organizations. ‘Suitably qualified’ refers to those who are formally qualified, have experience, or have the capacity to acquire the relevant skills for the job in a reasonable amount of time. In this study, the notion of being able to learn in a reasonable amount of time is investigated. A reasonable amount of time is understood to be a period of time that is economically feasible to the organization and will not seriously jeopardise the operational capacity of the
organization (Du Plessis, Fouché & Van Wyk, 2001). The acquisition of skills requires learning, which can be described as “any process that...leads to permanent capacity change and which is not solely due to biological maturation or ageing” (Illeris, 2007, p3).

The capacity to learn in a reasonable amount of time may be linked to CSE. In international studies, CSE has been linked to both academic and work performance (Judge et al., 2003). The link could be because of the role that CSE may play in the way individuals mobilise their abilities in a challenging environment such as when engaged in learning opportunities.

The first component of the study was to examine the link between CSE and RE. The second component of the study was to test, through experimental design, the link between CSE, RE, and learning. The relationship between CSE, RE, learning, and OBA were also investigated, where OBA is an indicator of end-point performance in Outcomes-Based Education and Training (OBET) in South Africa. In summation, this study seeks to look at how these variables that affect behaviour, namely RE and CSE, impact upon individual learning and achievement in OBA.

1.2 Racial Evaluation

Racial Evaluation refers to a person’s internal evaluation of his or her ethnicity (Diller, 2010, p118). On the other hand, racism is a form of prejudice that one group asserts over another, and can be defined as a form of antipathy directed towards an out-group that is based on generalizations that are inflexible and incorrect (Kleg, 2003). South Africa had a history of racism which is being systematically dismantled through legislative, economic and social reform (MacDonald, 2006), although there are residual elements of the impact of apartheid in many systems such as education as well as in society as a whole and these may be difficult to change. Ramphele (2002, p 87) states that Bantu education had a limiting impact on the “majority of Africans to utilise the open doors of learning after years of having been shut out”.

Although apartheid has technically been over in South Africa since 1994 (Mandela, 1994), and the process of dismantling apartheid began over twenty years
ago with the release of Mandela, the remnants may remain in people’s psyches and may be perpetuated socially, even influencing those who did not experience apartheid directly. This thesis seeks to assess whether there are psychological remnants of apartheid that affect individual ability to acquire job-related skills in a reasonable amount of time, as required by the Employment Equity Act (55 of 1998) amongst young Zulus in Zululand. This could be affected by Racial Evaluation (RE) that is affected by the remnants of apartheid. RE refers to how a person evaluates his/her own racial group membership (Watson, 2007).

Although a legislative framework has been created to dismantle the systemic segregation and discrimination institutionalised during apartheid, such as the Constitution of the Republic of South Africa (Act 108 of 1996), the life experiences of individuals may still be perpetuating negative psychological consequences in the post-apartheid era. This may result in low RE being experienced by Zulus in Zululand.

When oppressed persons begin to perpetuate stereotypical behaviour ascribed to them by others and they internalise these racist perceptions and apply them to themselves, then the oppression becomes self-inflicted and can cause low RE (Tyson, 2001). Biko (1978) felt that oppressors could use the minds of oppressed persons as weapons, through the creation of thoughts and actions, which he felt caused self-denigration (Biko, 1977). These self-denigration processes could be overthrown through a positive affirmation of one’s racial identity through the re-definition of one’s identity in positive terms, fostering positive RE. Oppression and inequality persists in post-apartheid South Africa, still largely along racial lines (OECD, 2010), which may still have a damaging effect on individual CSE and may cause a negative RE to develop.

Black South Africans were defined in terms of their racial classification and the scene was set for class and societal divisions along racial lines (Posel, 2001). To this day, even reparation is exacted upon racial lines, ignoring very real needs for economic and social reform that stem more from class divides than racial ones. The Broad-Based Black Economic Empowerment Act 53 of 2003 lays out transformation and redress along racial lines, for example.
Apartheid initially had its basis in class protectionism, in particular the protection of the Afrikaner White working class from increased urbanization by Black workers. The protectionism in part was a reaction to the Boer’s experiences of colonization following the Anglo-Boer war (Leach, 1989). Neville Alexander (in Leach, 1989) viewed apartheid as a form of racial capitalism, where racism was used to maintain a specific economic benefit held by one group over another, with large income disparities persisting in South Africa, predominantly affecting Black females (Black Sash, 2010; Kolodko, 2011). One of the reasons for this was the selective access to Education, Training and Development (ETD) afforded to various racial groups in South Africa- something which had potentially lasting consequences for generations which did not necessarily directly experience apartheid. This could have potentially occurred through socialization, and socio-economic opportunities available, especially, where families were victims of racial oppression (Hanley & Noblit, 2009).

The oppression of Black people by White people in South Africa may have had an effect on Black RE. There are still stark differences in wealth and opportunity in South Africa (Hamilton, 2001). One means of empowering the dis-empowered is through ETD (Naik, 2007). Empowerment through investment in skills development is only possible if there are no residual psychological constraints to performance such as damaged RE.

One element of apartheid that could have had a lasting impact is the geographical influence of migrant labour upon society and individuals. During apartheid, poll taxes and other state requirements of the rural population forced rural Blacks into the cities or onto farms as migrant workers. Leach described a situation where the Blacks allowed into the White areas were seen as holding “Gastarbeiter (foreign worker) status” (Leach, 1989, p36) – with potentially harmful psychological ramifications for their RE, not only for them, but also their children, who witnessed this through the way this affected their socialization, or who had absentee parents. The Zulu nation was affected by this especially- with adult Zulus having to travel as migrant workers to the urban areas (Leach, 1989). The focus of this research is on the last generations of Zulu young adults who experienced any form of direct or indirect discrimination through apartheid and how this affects their
South African society was divided by race, and racial thinking and this division still lurks in the form of racial redress such as Broad-Based Black Economic Empowerment (Act 53 of 2003), where redress is directed along racial lines, instead of targeted poverty alleviation, or targeted Human Resources Development (HRD) initiatives aimed at economic reform. It is this environment and job market that young, educated Zulus are entering at present. It is a world where race is still seen along binary and divisive lines, as evidenced by the Employment Equity Act (55 of 1998).

People have thus been conditioned by apartheid to define themselves and others in racial terms (Posel, 2001) to the extent that redress is designed along racial and not socio-economic lines. This discrimination is now embedded into the Constitution of the Republic of South Africa, (Act 108 of 1996), although couched in positive terms. Much of the redress in South Africa is based on the notion of historical disadvantage. Instead, intensive socio-economic development may be needed instead of the provision of general race-based redress.

Instead of a broad, race-based focus, it is possible that the focus should be on those who are from genuinely economically and socially disadvantaged backgrounds, instead of assuming disadvantage purely on the basis of race, which ignores the fact that there was a Black middle class and Black elite during apartheid (Lacob, 1983). Resources could be allocated to the most deserving, the poorest and those most in need of HRD, instead of blanket reparations. The process of reparation began in reaction to an economic threat to the White working class, and in many ways, this implies that race was used as an arbitrary criterion for formalising class divides (racial capitalism). Attempting to remedy the situation through racially defined redress ignores the economic and educational imperatives that are more in need of attention (OECD, 2010).

Apartheid emerged as a reaction to the threat of the Black working class to White economic and imperial control. This was dealt with through the limitation and restriction of almost every aspect of life for Black South Africans including ETD and
employment opportunities (Hummel, 2011). These restrictions could be the most damaging and persistent impact of apartheid, subsequent to the dismantling of the actual legislation. That said, the psychological impact could also have been devastating. These issues will be explored in more detail in the chapters that follow. The residual impact of apartheid on post-apartheid South Africa is complex and this thesis can only tentatively explore it.

Apartheid South Africa divided people by race and legislated racism. These actions earned the world’s hostility (Leach, 1989, p71). This process had begun long before 1948, but became pervasive and most pernicious subsequent to the Nationalist’s victory in the 1948 national elections. All aspects of life were altered by apartheid (MacDonald, 2006), in particular by legislation such as the Population Registration Act (30 of 1950). Black South Africans were forced to live in ‘locations’, native villages and hostels. The isolation of racial groups led to even greater racism, through its promotion of ignorance and fear. Many South Africans were forcibly removed from areas they had lived in for generations and this must have had psychological consequences (UNESCO, 1969). In the last decade of apartheid the unrest accelerated, resulting in riots and widespread clashes between the state and the people (BBC, 2010). Even those who only lived through the last decades of apartheid were not immune to the volatile psychological environment.

1.3 CSE

CSE is the self-belief a person holds. This self-belief combines four sub-factors. Self-efficacy, locus of control, self-esteem, and neuroticism are the four sub-factors that make up CSE (Judge & Scott, 2009). CSE may form the basis for much of the interaction between personality and the environment that dictates human behaviour, with immense literature support (Judge & Scott, 2009). This CSE may be closely tied to RE and may be positively related to learning.

Self-efficacy pertains to believing in one’s capability - the belief that one can succeed (Bandura, 1986). Locus of control refers to the belief that one is in control of the outcomes in one’s life (Rotter, 1954, in Cadinu, Maass, Lombardo & Frigerio, 2006). The third component of CSE is self-esteem, which is the worth a person
attributes to himself or herself (Mrak, 2006). Self-esteem refers to how affectionate individuals feel towards themselves and how they appraise or evaluate themselves. Finally, neuroticism is the level of emotional instability a person has (Cervera et al., 2002). These four aspects interact to form a person’s CSE and determine how individuals react to challenges in life (Judge & Scott, 2009). This study sought to explore the potential relationship between CSE and RE for Black persons, and then relate these two variables to learning and also to achievement in OBA, in a post-apartheid context.

1.4 Human Resources Development

In South Africa, there are still multiple barriers to effective Education, Training and Development (ETD). There are high levels of underdevelopment, environmental deprivation, unemployment, and pessimism regarding the future. During apartheid, family life disintegrated owing to urbanization, and migrant work destroyed family units, forming another barrier to effective education and training. Even during the post-apartheid era, there was a downward trend but not complete reduction in the number of workers seeking migrant work (Posel, 2010).

There is a culture of violence in South Africa, and additionally, HIV/AIDS destroyed families and lives. Finally, language and cultural barriers further inhibit effective Human Resource Development (HRD) (Landsberg, Kruger & Nel, 2008). However, HRD is needed, and organizations are compelled to engage in it, not just because of legislation such as the Employment Equity Act (55 of 1998) and the Skills Development Act (97 of 1998). These could be seen as currently the most important challenges left in South Africa by apartheid because ETD and resultant HRD is needed to unlock all other resources in the country.

Because of apartheid and the levels of deprivation and discrimination experienced, legislation has been enacted to provide better opportunities for Black persons in South Africa. This legislation includes the Constitution of the Republic of South Africa (Act 108 of 1996), which provides justification for discrimination based on redress and The Employment Equity Act (55 of 1998), which provides for affirmative action. This redress will be less likely to succeed if there are
psychological barriers to ETD such as RE and poor levels of CSE.

Skills development in the workplace has also been identified as a tool for transformation in South Africa, or the dismantling of the institutional and systemic aspects of apartheid. As a result, the Skills Development Act (97 of 1998) and the Skills Development Levies Act (9 of 1999) were enacted. These acts aim to provide redress, whilst at the same time enabling South Africa to develop socially and economically. The effectiveness of learning interventions may depend in part on the psychological status of those targeted for skills development input and this psychological status may have been influenced by apartheid, either directly or through the residual impact of apartheid.

All Black South Africans are presumed to be previously disadvantaged and have been given preference in the workplace as a means of social justice. The Constitution of the Republic of South Africa (Act 108 of 1996) specifies that this is justifiable. It states, “to promote the achievement of equality, legislative and other measures designed to protect or advance persons, or categories of persons, disadvantaged by unfair discrimination may be taken” (in Du Plessis, Fouché & Van Wyk, 2001, p86). This includes affirmative action as legislated in the Employment Equity Act (55 of 1998).

In the South African legal context, discrimination refers to treating different people differently. The South African legal interpretation deems discrimination in and of itself as fine; it is unfair discrimination that is considered unacceptable (Du Plessis, Fouché & Van Wyk, 2001). Any discrimination aimed at redress and the achievement of equity is justified legally. However, purely providing social and economic redress may be futile if there are psychological constraints to performance in learning and achievement in Outcomes-Based Assessment (OBA). Assuming that psychological harm and socio-economic deprivation are experienced with uniformity across the majority of a population is a scientifically questionable approach to social justice.

The promotion, training and selection of equity candidates are a legal imperative in South Africa, regardless of the questionable basis for the selection and
identification of equity candidates (Grobler et al., 2006). Organizations need to be able to effectively harness the skills of every employee to achieve organizational performance. This means that if there are psychological influences on learning and achievement in OBA they must be identified and remedied.

South Africa will need competent Human Resource Managers who are capable of enabling their organizations to achieve employment equity targets. Some of these managers will themselves be from equity groups. In this study, students studying Human Resources Management were the focus - the very people who will need to be able to attract, retain and develop quality equity candidates. They are worthy of specific focus because it is they who will be the key to unlocking the talent of equity candidates. They may have only experienced the last few years of apartheid, but these were turbulent years, and may still have had an effect on them psychologically and this may have an impact on their learning and achievement in OBA.

When making an employment decision, an employer must choose to select individuals from designated groups to achieve representivity in the workplace, across occupations and levels in the organization. Designated groups include Black people (including Africans, Coloureds and Indians), women and persons with disabilities. In this thesis, the focus is on Black persons, who bore the brunt of discrimination during the apartheid era. Part of the process of the Employment Equity (Act 55 of 1998) involves intensive development of individuals who are suitably qualified by virtue of their capacity to learn job-related skills in a reasonable amount of time (Employment Equity Act, 55 of 1998).

In order for organizations to comply with the requirements of the Employment Equity Act (55 of 1998), organizations may select incumbents who will need intensive training and development in order to perform in the workplace. In South Africa, this is conducted using OBET (South African Qualifications Authority (SAQA), 2010). OBET is based on the clear specification of outcomes at the outset of learning interventions. These outcomes specify the behaviour that must be demonstrated at end points of the learning intervention. CSE has been linked to academic performance (Broucek, 2009) and may affect how successful individuals
are in learning interventions.

As already mentioned, South Africa makes use of OBET. Outcomes are aimed at enabling learners to acquire competencies that they can use for the duration of their lives. These outcomes are the end-points of learning- what the learner must demonstrate in order for achievement to be considered to have happened (Jacobs, Vakalisa & Gawé, 2004). Achievement may be enhanced by high levels of CSE and low levels of RE.

If RE and CSE affect learning and achievement in OBA, then South Africa must assess the legislative framework of affirmative action in terms of the psychological damage caused by apartheid. Employers may need to take measures to improve the psychological state of potential employees through boosting their levels of CSE and positive RE.

Learning is a change in behaviour that persists over time (Goldstein & Ford, 2002). Learning is a natural process that results in the acquisition of behaviours that allow individuals to succeed in life and in work. Sometimes individuals pick up positive behaviours (such as might arise from CSE), sometimes-negative behaviours or cognitions (such as might arise from negative RE) through learning.

Education can modify these behaviours, through facilitating the acquisition of broad and preparatory knowledge, skills, and attitudes that prepare individuals for work and life. Modification of behaviour can also be achieved through OBET, which improves knowledge, skills and attitudes. Development is also a means for behaviour-change, and prepares individuals for the future through general growth through learning (Noe, 2005; Goldstein & Ford, 2002; 2009; Naik, 2007).

HRD, in this thesis refers to the ETD used to advance humans in their lives and work. “Human resource development is a series of organised activities conducted within a specific time and designed to produce behavioural change” (Nadler, 1970, in Deckop, 2006, p 93) - in other words HRD should result in learning.

As already defined, learning is a change in behaviour, produced by experience
Personality refers to the “more or less stable, internal factors that make one person’s behaviour consistent from one time to another, and different from the behaviour other people would manifest in comparable situations” (Child, 1968, p8). This thesis postulates that interaction between personality and the environment, in this case apartheid’s residual influences on life in post-apartheid South Africa and personality may result in functional or dysfunctional individual characteristics and subsequently functional or dysfunctional behaviour in learning as manifested in the variables CSE, RE, learning and OBA.

A person’s capacity to acquire new skills given a reasonable amount of time, as set out in the Employment Equity Act (55 of 1998), may be influenced by their CSE and RE. Alternately, there may be incongruity between a person’s self-perception and his or her actual ability, leading to either self-doubt or overconfidence. This incongruity may also alter the way that people apply their ability in opportunities through affecting their motivation via their expectation of their own chances of success.

Personality is a result of the dynamic interaction between environmental stimuli, behaviour, and cognitive processes, according to those who adopt a cognitive-behavioural approach. The cognitive behavioural approach merges psychoanalytical theory and behaviourism (Grusek, 1992). This merger between psychoanalytic theory and stimulus-response/behavioural studies looks at the dynamic interface between mechanistic external forces and internal unconscious forces. This approach is adopted in this study, where behaviour is measured in relation to its potential psychological sources, the psychological aspects being influenced by ethnicity and social history. Ethnicity is “a characteristic of shared unique cultural traditions and a heritage that persists across generations” (Spencer
& Markstrom-Adams, 1990, in Hanley & Noblit, 2009, p32). In this study, Zulus were focussed upon.

1.5 Problem statement, research questions, and research method

This study was exploratory, ethnographic and quantitative. What this means is that the hypotheses were tentative and the aim was more to set further agendas for research than provide generaliseable results. The goal of the study was to explore the potential relationships between the variables and to identify future directions for research. The results of the study were not meant to be generaliseable to the broader population, but instead, the aim was to tentatively identify relationships that could be further investigated. In particular, the aim was to shift away from the binary distinctions in South Africa between Black and White, and to acknowledge the plethora of cultural and ethnic dimensions of South Africans.

The scope of a full national survey into the psychological impact of apartheid on multiple generations and ethnic groups would require a large sample. This type of research cannot be undertaken without initially having found some substantive evidence of potential relationships that may exist. It was the aim of this study to look at whether the hypothesised relationships warranted or justified further research. Alternatively, the impact of apartheid on younger generations of Black South Africans could be more attributable to the economic dis-empowerment that was perpetuated by apartheid. The impact of apartheid may have been more social and economic than psychological, because Black South Africans may have drawn on their ethnic identities as a source of racial pride, instead of being dis-empowered by the racist hegemony. Thus RE may have been strengthened by the potential psychological impact of a strong racial identity.

In light of the theory briefly presented above, and discussed in detail in chapters 2 and 3, six research questions were devised. The research questions led to the formulation of six hypotheses. These hypotheses were formulated in a manner that made quantitative testing possible, using inferential statistics, including the Pearson Product Moment Correlations, Chi-Square Analysis, and Analysis of Variance.
**Problem Statement:**
This study examines the interplay between CSE, RE, and learning. The investigation was conducted at the University of Zululand in KwaZulu-Natal, amongst adult Zulus, particularly students in the context of Post-Apartheid South Africa, where apartheid may have had a residual impact on CSE and RE. This residual impact may impede the ETD needed for true transformation in South Africa.

The first relationship explored is directly between CSE and RE. The aim was to find out whether there was any relationship between CSE and RE. The second relationship explored was to examine if CSE relates to learning. This relationship could be important for selection and development purposes in organizations and for OBET.

The third relationship examines whether RE and learning are related. In addition, the relationships between RE, CSE and OBA are examined. Finally the relationship between learning and OBA is explored. The research questions are specified below.

**Research Questions**

**Question One:** Is there a relationship between CSE and RE?

**Question Two:** Is there a relationship between CSE and Learning?

**Question Three:** Is there a relationship between RE and Learning?

**Question Four:** Is there a relationship between CSE & OBA?

**Question Five:** Is there a relationship between RE and OBA?

**Question Six:** Is there a relationship between learning and OBA?

**Hypotheses**

*Research hypothesis 1: There is a relationship between CSE and RE*

H1: CSE and RE are related

This hypothesis was tested using correlations and the Chi Square Test.

*Research hypothesis 2: There is a relationship between CSE and learning*

H2: CSE and learning are related

This hypothesis was tested using correlations and Chi Square Analysis.
Research hypothesis 3: There is a relationship between RE and learning
H3: RE and Learning are related
This hypothesis was also tested using correlations and Chi Square Analysis.

Research hypothesis 4: There is a relationship between OBA and CSE.
H4: OBA and CSE are related
This hypothesis was tested using correlations

Research hypothesis 5: There is a relationship between OBA and RE.
H5: OBA and RE are related
This hypothesis was tested using correlations

Research hypothesis 6: There is a relationship between OBA and learning
H6: OBA and learning are related
This hypothesis was tested using correlations

These hypotheses were tested using inferential statistics. The research method and findings are discussed in chapters five and six respectively.

1.6 Scope of the Study
In this study, CSE and RE are examined in relation to learning and OBA. The study is exploratory. Therefore, findings are not generalisable to the broader population. Specifically, the focus was on young adult Zulu students at the University of Zululand, and, as such, adopted an ethnographic approach. Ethnographic studies are studies that focus on the ethnicity or on groups who share similarities in terms of “language, religion, race and ancestral homeland with its related culture; the members also perceive themselves in that way” (Haralambos & Holborn, 1997, p674). Learning of selected essential embedded knowledge needed in order to become Human Resource Managers was explored because there is a skills shortage in South Africa affecting middle managers (Mbabane, 2008) and trainers will be needed in order to train potential incumbents and workers.

The overall scope of the study therefore was to explore the role of CSE and RE
in learning amongst Zulu-speaking Human Resources Management students at the University of Zululand. These candidates could be considered for selection as equity candidates as they qualify as members of the designated ‘Black’ group. The group is also of interest because Zulu South Africans in KwaZulu had a unique experience caused by apartheid as opposed to those from other ethnic groups or those who resided in urban areas. Zululand retained a greater degree of sovereignty than was seen in other areas of South Africa, having never been as fully colonised as other areas of South Africa, and the Zulu nation retains a singular ethnic identity because of their cultural cohesiveness and their history (Rosenthal, 1964).

Zulus were chosen as a group as they are relatively homogeneous and have a strong cultural and ethnic identity. Zululand, was part of one of the areas specified as a Bantustan during apartheid (Egero, 1991). The area saw much of its economically active workforce having to leave to provide migrant labour, and the area was not of a sufficient size to support the population if they chose to farm at subsistent level. They had a singular experience of apartheid that may have differed from that of Blacks residing in so-called White areas.

1.7 Layout of the Thesis

Chapters 2, 3 and 4 provide a theoretical overview of the literature that forms the basis for the method (chapter 5), used for hypothesis testing that follows in chapter 6. Chapter 7 is a summary of the main findings and literature.

Chapter 2 deals solely with CSE. CSE is an individual’s estimation of their own worth and comprises four elements. These elements are neuroticism/emotional stability, locus of control, self-esteem and self-efficacy (Judge, Van Vianen & De Pater, 2004). These four components of CSE are described in detail in this chapter.

As well as describing the sub-factors of CSE, linkages between these components and learning and work performance and RE are presented in chapter 2. Research evidence is provided for the role of CSE in activating a number of determinants of success in life and work. In particular, research evidence for linkages between CSE, job performance, and achievement in learning are offered.
Chapter 3 explores the residual impact of apartheid on Black South Africans. RE is described in the context of black consciousness, internalized racism, and racial identity. South African authors’ perspectives on apartheid are also included in chapter 3. This chapter alludes to the possible residual psychological consequences of apartheid through describing RE.

Chapter 4 covers the South African Human Resources Development (HRD) landscape. In this chapter, attention will be paid to outlining the impact of Bantu education on the current skills profile of the country. There are numerous measures taken by the state to improve the skills profile of the country such as the Skills Development Act (97 of 1998), the Skills Development Levies Act (9 of 1999), and the South African Qualifications Authority Act (58 of 1995). This is an area of national priority now. The reasons for the need for concerted HRD are given as justification for investigating CSE and RE’s relationship to learning and to achievement in OBA.

Chapter 5 provides a description of the research method. The research instruments used are described, paying attention to their backgrounds, items, and scoring. The validity of the instruments, as well as reliability will be described. More than one sample was used, and the sampling procedure adopted is laid out.

Chapter 5 also serves as a theoretical and methodological basis for the measurement of the learning in the sample and the correlation of learning with CSE and RE. The Solomon four-group design is described and used to assess the validity of the learning experience provided.

In chapter 6, the findings are presented. The sample is described, and thereafter, the main findings are presented, using multiple statistical techniques. These findings are also discussed, in light of the overall scope of the research and research questions. These findings cover the six hypotheses.

Chapter 7 covers the findings in a holistic manner, seeking to integrate the quantitative findings with existing theory. The findings are used to generate new
theory that can be empirically tested. No study is without limitations, and this one was no exception. These limitations are set out in chapter 7. Managerial and educational implications are also offered so that the findings can be put to practical use. Finally, the chapter provides a summary of the thesis.

This thesis, in short, comprises seven chapters that seek to explore the potential relationships between CSE, RE, learning, and OBA, amongst potential equity candidates who may have been affected by apartheid. This study aims to identify whether there is cause for further investigation into the interaction of RE, CSE, learning, and OBA, following the dismantling of apartheid.

1.8 Conclusion
CSE, RE, learning, and OBA were briefly introduced and a rationale was provided for the investigation of the relationship between these variables. Reaction to racism and prejudice may have resulted in a positive affirmation of RE or a negative RE (Hanley & Noblit, 2009). These reactions, in turn, may be related to CSE, an individual's perception of his or her own worth as a person (Judge, Van Vianen & De Pater, 2004).

Affirmative action requires individuals who have the capacity to acquire job-related skills in a reasonable amount of time in order to be awarded opportunities to be employed (Employment Equity Act, 55 of 1998). This is a form of social justice aimed at rectifying past inequity. If apartheid did have a residual psychological impact on Black South Africans, affecting their CSE and RE, then it is important to be able to assess the impact this has on the capacity people have to acquire skills, or to learn. If there is a link, then further interventions may be needed to remedy the residual impact of apartheid on Black South Africans. Chapter 3 examines the apartheid landscape in South Africa, through the eyes of Black South African political commentators and historians.

In chapter 2, the concepts of CSE and its four sub-components are introduced. The relationship between CSE, performance in the workplace, and OBET is presented.
2. CORE SELF-EVALUATIONS

2.1 Introduction

This section defines CSE, a personality trait, which is the overall evaluation a person makes about himself or herself (Brunborg, 2008; Bono & Judge, 2002).

In this chapter, the variables associated with CSE are looked at, including academic performance and learning. Emotional stability, self-esteem, self-efficacy and locus of control are discussed so that the relationship between RE, learning, OBA and CSE can be thoroughly explored.

CSE is an individual's evaluation of his/her own worth and ability (Judge et al., 2003). The concept includes how ‘in control’ of their lives persons feel, and how stable they are emotionally. This concept governs how individuals interact with the environment around them, and can be instrumental in the determination of success or failure (Bono & Judge, 2002).

The four factors that underpin CSE, as already mentioned, namely self-esteem, locus of control, self-efficacy and emotional stability, will be described in detail. This chapter will discuss how CSE and the four related traits affect many aspects of human life. If RE does relate to CSE, then the psychological consequences are worthy of assessment. CSE is important to study because higher levels of CSE link with improved performance, both in the workplace and ETD (evidence of which is provided in this chapter).

2.2 CSE

In this section, CSE will be discussed. CSE is the overarching trait that encompasses four factors namely self-efficacy, locus of control, self-esteem, and neuroticism/emotional stability (Kammeyer-Mueller, Judge & Scott, 2009). The overall construct has evolved from a number of different theoretical fields, mentioned below.
Previously, CSE was measured indirectly using the four measures developed to measure self-esteem, self-efficacy, locus of control, and neuroticism/emotional stability, until a composite measure integrating self-esteem, locus of control, self-efficacy and neuroticism/emotional stability was developed (Judge et al., 2003). CSE is broad, and has linkages with performance across a number of contexts. Each underlying trait shares conceptual similarities, and this led to the development of a unified trait.

As mentioned above, initially CSE was measured by measuring self-esteem, locus of control, self-efficacy, and neuroticism separately, and then forming a composite score. Then, Judge et al., (2003) developed a scale for CSE, with 12 items loading strongly onto the CSE factor.

CSE can be defined as the “fundamental premises that individuals hold about themselves and their functioning in the world” (Judge, Erez & Bono, 1998, p161). The fundamental nature of this trait is what makes CSE the underlying trait to the four other traits already mentioned. CSE can be described as a higher-order trait; “a unidimensional latent construct that causes employees to view themselves as having higher self-esteem, higher generalized self efficacy, lower neuroticism, and an internal locus of control” (Grant & Wrzesniewski, 2010, p109). CSE is the culmination of the evolution of theoretical discourse surrounding a person's estimation of himself/herself.

One underlying component or factor of CSE, which is self-efficacy, is the belief that an individual can deal competently with difficult situations in his or her life (Judge et al., 2003). CSE is the overarching construct however (Judge, Erez & Bono, 1998). This construct is a broad personality trait, encompassing a person’s broad, fundamental beliefs about his/her agency in his/her own life.

CSE is the fundamental evaluation a person makes about him/herself. It determines, to a certain degree, how capable people feel in any situation. Apartheid’s residual inequities may cause individuals to feel less than capable. CSE also deals with how worthy they feel. Finally, it deals with the extent to which people feel in control of their own lives (Judge, Van Vianen & De Pater, 2004, p327).
CSE links with an individual's level of happiness (Piccolo, Judge, Takahashi, Watanabe & Locke, 2005, in Tsaousis, Nikolaou, Serdaris, & Judge, 2007). It may have influenced Black people's affective reactions to the residual impact of racism. When coupled with positive emotions and life satisfaction, individuals with high CSE, are also more likely to have good physical health.

Those with high CSE perceive fewer stressors and experience less strain, coping better (Tsaousis, Nikolaou, Serdaris & Judge, 2007). Individuals with high CSE are also more likely to use problem-solving coping when dealing with challenges in their lives, and are less likely to use emotion-focused coping.

Overall, those with high CSE do not engage in as much avoidance coping when dealing with challenges in their lives, meaning that they are more likely to solve problems in their lives in a proactive manner (Kammeyer-Mueller, Judge & Scott, 2009).

Individuals make a number of inferences about themselves and the favourability of these inferences determines a person's CSE (Judge, Erez & Bono, 1998, p168). This assessment causes people to set goals in their lives at certain levels, in relation to their own sense of self. There have now been 17 years of democracy, but it is still important to assess whether emotional influences from the past remain and affect people from day-to-day.

The traits that comprise CSE have been given considerable attention separately, as isolated and distinct traits. They have considerable contingency upon one another, and many similarities in the outcomes they induce in individual behaviour (Judge, Van Vianen & De Pater, 2004, p328). This research is important because people's CSE does matter and it is imperative that ways be devised to improve people's CSE (Swann, Chang-Schneider & McClarty, 2007).

There has been some pressure to subsume the CSE traits under emotional stability/neuroticism, as there is such an immense body of research on this topic. The problem with doing this is that emotional stability has its roots in post-Freudian
psychopathology and is thus fixated on aspects of neuroticism. Judge, Van Vianen and De Pater (2004, p330) argue that as a result of this predilection for dwelling on man’s foibles and faults, emotional stability does not adequately address issues surrounding locus of control and self-efficacy. Neuroticism has been broadly studied, but this does not mean that the concept is broader than CSE. That would be tantamount to arguing that because scientists know more about the planet earth, they should group the universe hereunder and study the universe as a facet of the earth.

In summary, CSE is an indicator of people’s perception of themselves and of how in control they think they are of their lives (Creed, Lehmann & Hood, 2009, p310). RE may affect CSE and vice versa with RE and CSE both forming part of individual identity. The next section aims to introduce the reader briefly to the four narrow traits, which make up the broader trait, CSE.

High CSE is associated with high approach temperament, which is where individuals are driven to seek positive outcomes- this in turn results in performance and improved well-being (Ferris et al. 2011). Additionally, those with high CSE avoid negative consequences and this also results in performance and improved well-being. This may result in improved performance in learning and in OBA.

2.3 Self-efficacy:

This section will introduce self-efficacy, which is one of the four components of CSE. Self-efficacy refers to an individual’s estimation of his or her own ability to meet situational demands or to solve problems through the mobilization of motivational and cognitive resources (Muchinsky, 2006, p184). Self-efficacy refers to one’s confidence in one’s ability to effectively perform a specific activity (Oka, DeMarco & Haskell, 2005).

Those with high self-efficacy believe that they are capable, and then they use their will and ability to achieve results or solve problems. Research has linked high self-efficacy to improved performance (Carmona, Buunk, Dijkstra & Peiro, 2008). Self-efficacy correlates moderately with the type of activities individuals participate in and the interests they hold (Rottinghaus, Larson & Borgen, 2003).
In the workplace, links exist between self-efficacy and improved performance of tasks with low complexity. Self-efficacy links strongly to task performance but not strongly to job performance (Judge et al. (2007). Individual differences in personality vary greatly in the relationship between self-efficacy and performance (Judge, Jackson, Shaw, Scott & Rich, 2007). In some circumstances, high levels of self-efficacy can even lead to overconfidence, which in turn leads to decreased performance over time (Moores & Chang, 2009).

Moores and Chang (2009) found that performance relates significantly to self-efficacy when it comes to information technology usage, and that successful performance is a determinant of future self-efficacy. However, when there is overconfidence, the relationship between performance and self-efficacy is negative. These authors suggest that feedback is necessary so that self-efficacy adapts to match ability. In this way, people do not hold unrealistic estimations of their own ability.

There is a correlation between self-efficacy and career attainments (Abele & Spurk, 2009). Given equal gender and educational achievements, there is a relationship between occupational self-efficacy and career attainment, suggesting that the way one feels about one’s ability may affect one’s performance.

The question is: “do people have high self-efficacy because they perform, or do they perform because they have high self-efficacy? Do they simply perform because of ability, with ability causing them to hold self-efficacy or do they perform because of their self-efficacy and under-perform if they have low self-efficacy?” Hoffman and Schraw (2009) provide part of the answer, explaining that self-efficacy changes the way that cognitive resources are applied. Self-efficacy, they claim, does nothing to actual cognitive ability; instead it changes the strategies utilised, and results in more focussed effort. This is the motivational efficiency hypothesis. This hypothesis predicts that “motivational beliefs, such as self-efficacy and attributions to meta-cognitive strategy use are related to more efficient problem solving” (Hoffman & Spatariu, 2009, p875).
Self-efficacy is malleable. In a study by Reynolds, it was found that negative feedback reduces self-efficacy amongst managers, regardless of the level of the managers (2006). Negative feedback has the potential to reduce people’s perception of their own ability and in doing so, sets individuals up for failure in similar situations thereafter. Positive feedback, according to Reynolds (2006) has a small but significant impact on the future performance of staff.

With specific reference to problem-solving behaviours, Coutinho (2008) describes those with self-efficacy as those who focus on analysing problems and then solving them. A person may have ample ability, but may still not have high enough levels of self-efficacy to convert the ability into performance. Despite ability, a person who doubts his/her own ability may impede his/her own performance.

Self-efficacy therefore is a perception of ability influenced by a number of judgements people make about themselves (Coutinho, 2008). In its simplest form, it is a self-appraisal of a person’s ability to perform a given task.

People with low self-efficacy doubt their skills and actually see failure as an inevitable outcome of their efforts. As these individuals perceive failure as inevitable, these individuals see no point in actively pursuing problem-solving as a strategy (Bandura & Wood in Coutinho, 2008).

Because people with weak self-efficacy may tend to view their ability negatively, they may experience higher levels of stress (tied in with neuroticism) and may end up using their skills effectively, thus possibly creating a vicious cycle where every successive failure confirms their poor self-perception. People with high levels of ability may become so unsure of themselves because of successive failures, that they end up putting very little effort into what they do. Conversely, those who enjoy success use their past experiences of success to infer that they will be successful in future, boosting confidence and mitigating the effect of self-doubt on performance (Gist & Mitchell, 1992, in Coutinho, 2008).

Self-efficacy affects the way people view challenges presented to them. Those with high self-efficacy will view challenging tasks as opportunities to demonstrate
their competency and grow as people. Those with low self-efficacy will view challenging tasks as insurmountable threats beyond their ability, and will attempt to avoid them (Bandura, 1994).

Lane, Lane and Kyprianou (2004, p247) found, in a study of university students’ academic performance, that there was some effectiveness when using self-efficacy as a predictor of academic performance. In this study, the researcher examines the linkages between academic performance (through learning and OBA), RE and CSE.

Studies of students have shown that self-efficacy has a direct impact on performance (Coutinho, 2008). In the workplace, self-efficacy was found to be positively related to job satisfaction, and was found to moderate the effect of stress on worker well-being (Siu, Spector, Cooper & Lu, 2005). As self-efficacy is a key component of CSE, the same may be true of CSE, to a lesser or greater extent.

The relationship between self-efficacy and academic performance has been scrutinised in detail. Scholars have investigated the relationship between academic self-efficacy and student’s academic self-concept. Students with higher levels of self-efficacy demonstrate higher-level learning strategies such as critical thinking and elaborative strategy (Wang & Wu, 2008).

This study explores the relationship between how students see themselves in terms of their identities as students and their belief in their own ability to solve a problem or achieve in a challenging situation. Academic self-efficacy has been found to be a predictor of academic achievement, and is a mediator in the relationship between ability and achievement (Ferla, Valcke, & Cai, 2009).

Self-efficacy has a mediating role in academic achievement and delinquency. Self-efficacy was found to have a positive relationship with academic achievement and with academic aspiration (Carroll et al., 2008). This implies that CSE could also be influential in academic achievement.

Tzeng (2009) noted that if learners are exposed to novel and taxing tasks, with which they have no personal or vicarious experiences that they can draw from or
refer to, then their self-efficacy beliefs would evolve during the lessons which follow.

Tzeng (2009) also found that students initially overestimate their ability. A relationship was also identified between self-efficacy and performance in Tzeng’s (2008) study. Even procrastination when studying is governed by self-efficacy, which is a sub-component of CSE (Klassen, Krawchuk & Rajani, 2008).

Mathematics and literacy achievement have both been linked to self-efficacy in a study by Liew, McTigue, Barrois and Hughes (2008). In fact, self-efficacy applies across a number of tasks and includes novel, challenging and stressful tasks (Luszczynska, Gutierrez-Dona & Schwarzer, 2005, p81).

In a cross-national study including nine regions, self-efficacy was negatively related to burnout. Thus, it is important to note that self-efficacy can reduce burnout across a number of contexts. Self-efficacy was also a significant mediator in the relationship between role conflict/ambiguity and burnout in eight of the nine regions in the study (Perrewe et al., 2002).

Self-efficacy was found to be positively related to self-esteem, self-regulation and optimism, and negatively related to depression and anxiety (symptoms or manifestations of neuroticism). This was found to be evident across five different countries (Luszczynska, Gutierrez-Dona & Schwarzer, 2005, p81). Authors of the CSE construct concur, claiming that high self-esteem, internal locus of control, high self-efficacy, and emotional stability or low neuroticism are the components of high CSE and are inter-related.

Training was used to successfully increase the self-efficacy of both nurses and teachers in relation to specific skills that these occupations are required to perform (Sela-Shayovitz, 2009; Ammentorp & Kofoed, 2009). In a study conducted on psychological counsellors, feedback in training improved counsellor self-efficacy (Reese et al., 2009).

Training has also improved the self-efficacy of parents of children with disabilities, also reducing their anxious moods (neuroticism) (Barlow, Powell &
Gilchrist, 2006). This again points to the link between feeling capable and experiencing less neurosis.

Even physical activity such as Pilates and Taiji can improve self-efficacy, a study found after testing students after one semester of these activities (Caldwell, Harrison, Adams & Triplett, 2009). Exercise interventions also helped patients who had survived myocardial infarctions (heart attacks) to develop self-efficacy during the recovery and rehabilitation process (Oka, DeMarco & Haskell, 2005).

In the South African context, it is worth paying attention to self-efficacy, because, amongst other factors, the unbalanced allocation of opportunity and resources in the country, particularly in education and employment (Hamilton, 2001), arguably sets some Black citizens up for reduced self-efficacy and concomitant poor performance in learning and OBA. In order to create true equality, this may have to be reversed through the provision of interventions targeted at improving self-efficacy amongst the previously disadvantaged.

Overconfidence and optimism have been linked to performance in an academic context (Pajares & Kranzler, 1995; Pajares & Miller, 1994, in Coutinho, 2008). Negative feedback on performance was found to reduce future performance in those with low self-efficacy, whereas training can improve self-efficacy and the performance that follows (Coutinho, 2008). Given equal ability, those with higher self-efficacy are more likely to achieve. However, this is only in terms of the realism of the self-efficacy belief. If someone has high self-efficacy but is lacking in ability, they will be overconfident and will not perform to their expected level. This should result in lower self-efficacy going into the next encountered similar problem.

2.4 Self-esteem

In this section, self-esteem will be introduced. Bandura (2001, in Creed, Lehmann & Hood, 2009, p311) claims that self-esteem is the key element in human achievement and well-being. Self-esteem is related to well-being, as it is used to estimate how others will see us and affects success in personal relationships.

Our well-being is affected by the success we have in interpersonal relationships.
(Leary, 1999, in Creed, Lehmann & Hood, 2009, p311) and our well-being is directly affected by our levels of self-esteem (Creed, Lehmann & Hood, 2009, p311).

Rosenberg (1962) explained that self-esteem is the degree to which an individual “holds attitudes of acceptance or rejection toward himself” (p135). Rosenberg used Mead’s work to describe the reflexive nature of this evaluation. In this evaluation, the subject and object are the same, skewing self-esteem.

Rosenberg (1962) went on to explain that humans form attitudes about many objects in the world. Humans examine and evaluate something and decide for themselves whether they like or dislike an object. This evaluation also happens with examination of the self and the attitude formed about the self is what is commonly known as self-esteem. To re-phrase then, self-esteem is the attitude an individual holds about him/herself, as determined by a reflexive evaluation of the self.

The previous section described self-efficacy, which is how capable people deem themselves to be. As already mentioned, given a challenge and equal ability, those with higher self-efficacy will tend to perform better. This is because they apply themselves differently to challenges than those with lower self-efficacy do. Self-esteem, on the other hand, is a global self-evaluation of oneself (Porter & Washington, 1993, p 140).

Self-esteem is how people see themselves in terms of their own worth. Self-efficacy is how capable a person feels. Self-esteem effects whether an individual thinks he or she will fail or succeed, how one deals with stress and strain, and influences whether an individual is likely to self-handicap by procrastinating or by not practising particular skills (Smith, Norrell & Saint, 1996, p396).

Self-esteem is different from self-efficacy, as self-efficacy deals with how well a person thinks he/she can do and self-esteem deals with how important a person feels, or a person’s self-worth or self-value. Those with high self-esteem overall experience far better levels of self-regulation and present themselves better (Story, 2003, p117).
Korman (1970) proposes that a person's self-esteem can determine what sort of outcome he or she expects (in Strauss, 2005, p465). In other words, an individual's motivation to succeed or fail is consistent with the way that person feels about himself/herself.

Self-esteem relates to well-being, as it is used to estimate how others will see us, and affects success in personal relationships. Our well-being is affected by the success we have in interpersonal relationships (Leary, 1999, in Creed, Lehmann & Hood, 2009, p311). Our self-esteem is often formed through previous experiences both positive and negative (Rosenberg, 1962).

In addition to the premise that self-esteem is based on prior experience, the internal colonialist paradigm describes how macro-structural forces influence individual perceptions of race or ethnicity. This perception, be it negative or positive, is known as "group self-esteem" (how one feels about oneself in relation to one's group identity), as opposed to personal self-esteem (how one feels about oneself regardless of one's ethnicity) (Porter & Washington, 1993, pp 139-140).

Dubois and Tevendale (1999) found that self-esteem has highly beneficial implications both during adolescence and childhood, but that it could have possible negative outcomes too. There are multiple moderating influences in the relationship between self-esteem and adaptive functioning in development.

Black and White adolescent girls were studied in an American study on self-esteem and body image. The authors, Brown et al. (1998), found that Black girls' self-esteem was higher than in the White sample and also far more stable. They concluded that this was because they were more satisfied with themselves physically because of the cultural differences in terms of acceptability of weight. White girls were expected to maintain more rigid control over their physical appearance and were compared against unrealistic standards, and this led them to make negative inferences about themselves.

Racial discrimination was found to be linked to various health problems, dissatisfaction with life, and lowered self-esteem (Utsey, Ponterotto, Reynolds &
Cancelli, 2000, p72). Racial socialization that is positive can have a positive impact on academic performance and other behaviours also (Bowman & Howard, 1985, in Hanley & Noblit, 2009). This positive impact is mediated however, by self-esteem and ethnic affirmation (Hughes, Witherspoon, Rivas-Drake & Bey, 2009).

In an extensive study of Native American teens, academic achievement and self-esteem were found to be correlated, but there was little relationship between self-esteem and cultural identity, which implies that cultural identity, may not be that influential in determining an individual’s sense of self-esteem in that context (Whitesell, Mitchell & Spicer, 2009).

Research found that multiculturalism can have a positive effect on individual self-esteem for both minority and majority groups. However, in South Africa, Sisulu (in Houser & Shore, 1997) did not advocate multiculturalism. They sought to downplay issues of diversity especially on an ethnic level.

Ndebele (2009) claims that institutionalised racism in South Africa has affected free Black South Africans. The generation of Blacks that did not experience apartheid are experiencing institutionalised racism despite not directly experiencing apartheid. He argues that this racism has been internalized and that they show signs of having low self-esteem (Ndebele, 2009).

When an individual experiences implicit racism, then implicit self-esteem compensation occurs. When people in this situation experience reduced self-esteem they automatically rally their self-esteem. However, at the same time as this increase in self-esteem occurs, inter-group bias increases. This means that the reaction, which is aimed at protecting the self, causes conflict with others (Rudman, Dohn & Fairchild, 2007).

In similar circumstances in Israel, levels of self-esteem were measured for both Arab and Jewish Israelis. Arab youths had higher self-esteem stemming from their RE. The difference was attributed at least in part to differences in socialization, relationships with peers and family, and also the tension between the two groups (Sherer & Enbal, 2006). There was similar inter-group conflict in South Africa as
already described. In an American study, Blacks scored higher than Whites on self-esteem measures, implying that humans may be quite psychologically robust when it comes to racism (Bianchi, Zea, Belgrave & Echeverry, 2002).

If cultures are accepted, then people do not feel like they are lesser beings because low RE, one potential barrier to low self-esteem, is eliminated (Verkuyten, 2009). However, in hostile or discriminatory environments, humans who are discriminated against may rally around the criterion for discrimination and compensate for it by defensively boosting their sense of CSE.

An example of this is the improvement of Black self-esteem in America in the 1970s (Wright, 1985). In the 1970's in America, there was an upsurge in Black Power thinking, which strengthened RE. The movement attacked institutionalised racism and aimed to transform education and politics to treat Black Americans more equitably.

A Chinese study of students found that, in China, collective self-esteem had more impact than the Western concept of individual self-esteem (Gan, Xi, Hu & Zhang, 2009). In South Africa, collectivism may have an impact on self-esteem as well. The strengthening of RE could form part of the process of responding to racism and prejudice.

There is a complicated relationship between self-esteem and academic performance. Self-esteem was found to have a strong and positive relationship with school achievement (Pullman & Allik, 2008). However, students who are successful academically are generally more critical of themselves, whereas those who perform less well academically are more positive about themselves.

Pullman and Allik (2008) suggest that students who perform less well at school may have higher self-efficacy, because the students who are successful are generally critical of themselves, whereas those who do not achieve academically will compensate by having higher self-esteem. There could be other variables at play here. Students who do not perform well academically could be focused more on extra-mural pursuits, or have strong social lives which in turn increase their self-
Self-esteem, a concept similar in broadness to generalised self-efficacy, was found to have limited moderating effect in relationships between job satisfaction and performance (Tharenou & Harker, 1984). Baumeister, Campbell, Krueger and Vohs (2003) after thorough reviews, noted that although self-esteem and occupational success are only sometimes related, the strength of the correlations varies greatly. The direction of the causality is also questionable. They conclude that good self-esteem only enhances an individual's initiative and improves moods. The literature questions whether there is any real benefit in boosting self-esteem through training programmes. A further caveat is that attempts to boost self-esteem may simply result in narcissism, which has negative psychological consequences.

In this section, self-esteem was examined in relation to academic performance and in relation to race. Self-esteem is the general estimation that someone has of his or her worth, and stems from the way in which human consciousness works. Humans evaluate themselves as the subject and object at the same time, and form an attitude which has numerous outcomes in a person's life, but which may not be as instrumental in performance as common-sense suggests.

2.5 Locus of control

This section introduces the notion of locus of control, which was first conceptualised by Rotter in 1954 (Russell, 2001). Rotter developed a scale to measure the degree to which individuals had either an internal or external locus of control. This measure of locus of control is to be treated with caution because it is susceptible to environmental influences in terms of responses elicited (Bailey & Davidson, 1978). Deysach, Hiers, & Ross had similar findings two years earlier in 1976, and cautioned that the measure is susceptible to faking. Nevertheless, locus of control is one of the personality traits subsumed under the CSE umbrella, and as
such will be discussed in this document.

Locus of control refers to whether people believe they are active agents in their lives who are capable of affecting the outcomes of events or whether they believe they are passive, and that external influences determine the outcome of events in their lives. People with internal loci of control believe that their actions can and will influence their lives and that they are accountable for the consequences of their behaviour. When those with an internal locus of control perform, they attribute it to their own ability and effort (Cadinu, Maass, Lombardo & Frigerio, 2006, p185). Those with an external locus of control, on the other hand, believe that they cannot be held accountable. Those with an external locus believe that they are merely passive subjects in their lives and that they have little influence over the outcomes in them.

If someone has an external locus of control they expect that they will be ineffectual and they ascribe success to “fate, luck or more powerful people” (Shaffer, 2008, in Strom & Strom, 2011, p24). Low locus of control results in individuals seeing success as a matter of luck and not effort, which will potentially reduce levels of motivation and effort. When individuals have an internal locus they enjoy improved ego functions and they are proactive when it comes to solving problems presented to them.

Someone with an internal locus of control would attribute success or failure to his or her own ability to make and effect decisions. There would be a higher level of accountability seen in such individuals (Gable & Dangello, 1994, p601). There is more ownership of decisions and their outcomes when people have internal loci of control.

Those with an internal locus of control furthermore also process information better than those with an external locus, and execute better mastery over their environments than those with an external locus of control (Witt, 1987, p703). This may in turn lead to better performance on the job, with task performance also positively influenced by possessing an internal locus of control. Those with an internal locus of control have lower levels of anxiety and enjoy better well-being
Spector (1982), postulates that locus of control is related to motivation, effort and performance. Linz and Semykina (2008) concur and claim that numerous studies have shown a relationship between internal locus of control and performance. In a study in two regions of Russia, Linz and Semykina (2008) found that there was a small relationship between performance and locus of control, but that it varied according to region and gender. A study of workers in the former socialist economies found that locus of control had a similar effect on worker performance to the impact education has on worker performance. Linz and Semykina (2009) did concede that the strength of the relationship varied according to the performance measure utilised.

When a leader of a team has a high locus of control, team members tend to be more satisfied and thereafter perform better (Dailey, 1981). Even the performance of others may be influenced by the locus of control of the leader. Cadinu, Maass, Lombardo & Frigerio (2006) correlated academic achievement with possessing an internal locus of control.

Locus of control must be approached with caution, because it is influenced by culture (Nicholas, 2009). Zulus perceive illness to be caused by supernatural causes (external sources), as opposed to natural causes. Zulu social behaviour is also moulded by beliefs in ancestors (Sibaya, 1994, in Nicholas, 2009), who are seen as being active participants in the outcomes of individual efforts. This all alludes to an external locus of control. However, the impact of Westernisation and modernization may have reduced the beliefs in the supernatural and ancestors. Prior to the end of apartheid, forced removals and other political influences externalised locus of control amongst Zulu farmers, however democratization has in all likelihood mitigated the effects of this. From other perspectives, there was little difference between Western locus of control and the locus of control of Zulu farmers (Magwaza & Bwana, 1991, in Lee, McCauley & Draguns, 1999). Lee, McCauley and Draguns (1999) go on to conclude that locus of control “appears to be a complex, probably multidimensional variable that is co-determined by both cultural and situational factors” (p 151).
“Stereotype threat” refers to when members of an oppressed group begin to experience anxiety when they are put into a situation where their behaviour may be perceived as stereotypical, and this leads to reduced performance. An example would be putting women through a driving test against males (Cadinu, Maass, Lombardo & Frigerio, 2006, p183). Stereotype threat may be particularly evident in testing. This is because testing is understood to be discriminatory (Steele, 2003, in Hanley & Noblit, 2009).

A Stereotype threat occurs where a person is expected to fail because the group that person is associated with has stereotypically substandard behaviour in that field. Experiments in the United States of America (USA) showed that when a golf tournament was labelled a test of sporting ‘intelligence’ Black participants fared worse than White males. When the same tournament was labelled a test of natural athletic ability, then their White counterparts behaved significantly worse (Cadinu, Maass, Lombardo & Frigerio, 2006, p184).

The link between stereotype threat and locus of control will be clarified in the next paragraph. The Stereotype threat is moderated by the level of identification with the stereotypical group and by how aware the stereotypical group is of the stigma associated with them. Those who consider the domain important are actually more inclined to have stereotypes activated, largely because they are anxious to achieve. In this instance, a high internal locus of control actually has a negative impact on the individual’s ability to perform, because they care so much about performing (Cadinu, Maass, Lombardo & Frigerio, 2006, p184).

Locus of control has been discussed in this section. It was shown that locus of control is the extent to which an individual feels like an active agent in the outcomes of his/her life (Gable & Dangello, 1994). Locus of control has been linked with both academic and job related performance but has also been seen to have a negative impact on those who experience stereotype threat.

2.6 Emotional stability/neuroticism
This section will introduce the concept emotional stability/neuroticism. Emotional stability is a facet of high CSE and neuroticism is a facet of low CSE with emotional stability and neuroticism existing as opposite ends of the same continuum (Cervera et al., 2002). Eysenck and Eysenck discriminate between neuroticism and perfectionism stating that neuroticism is “a higher vulnerability when coping with stress or with life events” (in Cervera et al., 2002, p272). They go on to say that it is “a higher propensity to emotional instability and hypersensitivity” (p272). The concept exists on a continuum with emotionally stable and neurotic occupying opposite ends (Hills & Argyle, 2001). Emotional stability is posited as a positive alternative conceptualization of neuroticism.

Neurotics are generally in possession of stronger negative affect and are easily aroused (to displays of emotion) (Kring, Johnson, Davison & Neale, 2010). Neurotics are further described as being emotional, worrying, and insecure and inclined to nervousness. Someone who is more emotionally stable or who is low in neuroticism would be described as unemotional, calm, secure, and relaxed. Claridge and Davis (2001) assert that high neuroticism is deemed to be a constant companion of abnormal psychological and biological functioning. Trait neuroticism accounts for a significant proportion of variation in the psychiatric symptoms that individuals display (Whittington & Huppert, 1998).

People who are neurotic can feel the same positive emotions that emotionally stable people feel. The only difference is that they have the capacity for positive feelings the same as emotionally stable individuals in some, not all situations. Neurotics do not feel positive emotions as consistently as emotionally stable individuals (Ng, 2009).

Neuroticism comprises six facets, but there is one general neuroticism factor. It is this general factor that is associated with depression and anxiety (Roelofs, Huibers, Peeters & Arntz, 2008) resulting at least partially from dwelling on thoughts about stressors. Depression and anxiety have been linked to neuroticism through extensive research (Weinstock & Whisman, 2006).

A further trigger of depression and anxiety are daily hassles in a person’s life as
those with neuroticism are more likely to develop depression when exposed to many daily hassles (Hutchinson & Williams, 2007). Neuroticism is linked to psychological distress but also physiologically damaging changes to health such as ulcers, chronic fatigue syndrome and coronary heart disease (Charles, Gatz, Kato & Pederson, 2008). Bereavement is also experienced far more profoundly by neurotics than by emotionally stable people. Neuroticism is strongly associated with the extent and severity of grief and depression experienced after bereavement (Wijngaards-de Meij et al., 2007).

Emotional stability is one of the oldest areas of psychological study, and is the foundation of psychoanalysis and clinical psychology (Judge, Van Vianen & De Pater, 2004, p325). Neurotic symptoms were scrutinised by Freud and, subsequently, thousands of studies have been conducted to attempt to understand the finer nuances of human dysfunction. Nothing is known about CSE (encompassing neuroticism) amongst young Zulu adults in Zululand.

Neuroticism refers to the propensity for becoming upset and experiencing distress. Ultimately those with high neuroticism experience events as more stressful than their less neurotic counterparts and then subsequently are more reactive to these stressors (Bolger & Schilling, 1991, in Creed, Lehmann & Hood, 2009, p311).

People who are neurotic are predisposed to stronger and more adverse reactions to perceived stressors. Borja, Callahan and Rambo (2009) discovered that neuroticism is correlated significantly with post-traumatic stress disorder symptoms (although this view is questioned in this section). They also found a relationship between neuroticism and depression and distress following a traumatic event (in their study they looked at natural disaster and sexual assault as stressors). In fact, neuroticism has been repeatedly associated with Post-traumatic stress disorder (PTSD) (Engelhard, Van den Hout & Kindt, 2003).

However, a study by Engelhard, Van den Hout and Lommen (2009) found that when one controls for neurotic symptoms evident before a traumatic event, those with higher levels of neuroticism do not react worse to traumatic events than those who have lower levels of neuroticism. In their study of combatants in Iraq, they
found that although there was a difference in the symptoms between those with high and those with low neuroticism after a traumatic event, the symptoms reported were already evident before the traumatic event. Neurotic people are simply more neurotic- and those symptoms may not necessarily be caused by or exacerbated by traumatic events. Changes in the environment or traumatic experiences may not be as instrumental in symptoms of neurosis as initially thought.

An earlier study examining pregnant women and PTSD following the loss of a child found similar results with the neuroticism not predicting rises in symptoms associated with PTSD. The rises in symptoms could not be predicted by the neuroticism (Engelhard, Van den Hout & Kindt, 2003). The overall conclusion was that PTSD symptoms overlap with those of neuroticism but that neuroticism is not a predictor of PTSD symptoms.

There is no research evidence to suggest a strong link between emotional stability and job performance or satisfaction, but CSE is used as a broader substitute for emotional stability/neuroticism with far stronger results (Judge, Van Vianen & De Pater, 2004, p326). One noteworthy finding was that, in busy and stressful environments such as air traffic control and call centres, neurotics performed better than those who were emotionally stable (Smillie, Yeo, Furnham & Jackson, 2006). However, in simulated conditions where an auditory vigilance test was used to test workload pressure, those with higher levels of neuroticism had slower reaction times (Cox-Fuenzalida, Swickert & Hittner, 2004).

Neuroticism does however; affect a person’s well-being (Creed, Lehmann & Hood, 2009, p311) with concomitant effects on performance. Test anxiety has been related strongly with neuroticism (Chamorro-Premuzic, Ahmetoglu & Furnham, 2008), and this corroborates findings that high CSE is associated with greater academic success, as high neuroticism is a contributor to low CSE. The data relevant to the relationship between neuroticism and performance is somewhat contradictory. Studies in military assessment centres have found that when people have low cognitive ability and also have high levels of neuroticism, they perform worse than those who are emotionally stable but have the same levels of ability. However, when candidates have good cognitive ability, neuroticism has no impact
on their performance (Perkins & Corr, 2006).

A study by Tamir (2005) suggested that neurotics can activate negative affect in order to rouse or motivate themselves to better performance. Where emotionally stable individuals may not worry about a task or goal, neurotics can direct their neuroticism towards worrying. They do this, argues Tamir (2005) because of the instrumental benefits of worrying. Another similar trigger could be self-criticism, which is, according to Clara, Cox and Enns (2003) a nested domain of neuroticism.

Neuroticism was attributed to unfortunate circumstances in an individual’s childhood in the 1960’s. Rosenberg (1962) felt that neuroticism was the fruit of secret feelings that an individual held that made an individual feel that he/she had no worth. Rosenberg described it as “the belief that one is unable to master the situations that confront him and that he is undeserving of love” (p135).

Neuroticism and emotional stability are therefore seen as two ends of the same continuum, and as having a varied impact on individuals dependent on the environment the individual finds him/herself in and the other characteristics of the individual.

2.7 CSE and learning

In this section, the relationship between CSE and ETD will be explored. This section looks at some of the research done on the overarching construct as it impacts on individual academic performance.

Research has found that learners who have higher CSE enjoy better health and psychological well-being than those with lower CSE. Burnout is also negatively affected by CSE (Stapleton & Downey, 2005, in Tsaousis, Nikolaou, Serdaris & Judge, 2007).

CSE accounts for variance in both the health and psychological well-being of learners (Tsaousis, Nikolaou, Serdaris & Judge, 2007). This means that, given the same circumstances and ability, those with higher CSE should perform better in learning.
Cognitive ability without CSE does not necessarily translate to academic achievement (Rosopa & Schroeder, 2009). General mental ability and physical attractiveness have both indirect and direct influences on income, but these are mediated by educational attainment and CSE (Judge, Hurst & Simon, 2009). Emotional intelligence is also affected by CSE (Kluemper, 2008). CSE is involved in enhancing or inhibiting many of the major determinants of success.

Although links have been found between self-efficacy and learning performance, the extent of the influence is relatively small. One study found that 20 percent of variation in performance was accounted for by the combination of mood states, self-efficacy, and self-set goals. This variation was in an oral examination. In a written examination the variance dropped to seven percent (Thelwell, Lane & Weston, 2007).

### 2.8 CSE and work-related variables

This section aims to introduce the reader to the performance-CSE relationship. Murphy and Dzeweczynski (2005, p343) argue that personality inventories are not satisfactory predictors of performance. Judge and Bono (2001, p80), however, conducted a thorough meta-analysis of research into the relationship between the four sub-traits comprising CSE, and concluded that the four traits were viable dispositional predictors of job performance. The correlations found were small, but consistent. The relationships between job performance and the four underlying aspects of CSE already were singly examined in this chapter.

Further work-related areas related to CSE include job satisfaction and life satisfaction. Job satisfaction and CSE were found to be related (Judge & Bono, 2001; Dormann, Fay, Zapf, & Frese, 2006, in Creed, Lehmann & Hood, 2009, p311) as were life satisfaction and CSE (Judge, Locke, Durham & Kluger, 1998, in Creed, Lehmann & Hood, 2009, p311). The direction of this relationship can be questioned though.

In terms of work-family balance, CSE was found to be negatively related to both work interfering with family and family interfering with work, this is probably due to
the wider repertoire of coping skills used by those with higher CSE (Boyar & Mosley, 2007).

CSE was found to be influential in job burnout, in conjunction with organizational constraints (Best, Stapleton & Downey, 2005). This implies that those with higher estimations of themselves, who have higher self-efficacy and self-esteem and also an internal Locus of control and emotional stability react to stressful situations proactively thus avoiding burnout.

Judge, Erez and Bono (1998, p167) claim that a positive self-concept contributes to job performance because those holding a positive self-concept are more motivated to perform than those who are not positive about themselves.

Judge, Bono, Erez and Locke (2005) found that CSE is associated with pursuing goals for intrinsic and identified reasons. In terms of future income, family socio-economic status and academic achievement predict income, but this is mediated by CSE, with those with high CSE being especially effective at exploiting advantages in youth, for example, at university (Judge & Hurst, 2007).

In the workplace, CSE has a strong relationship with lowered levels of perceived job stress, and is instrumental in the variance in job stress that employees experience (Brunborg, 2008). When people start new jobs, this may mean that they adjust quicker and perform faster than those who have lower levels of CSE. Popularity in the workplace has also been linked to CSE. This popularity was found to result in more citizenship behaviour from co-workers and less counter-productive behaviour in comparison with less popular co-workers. It is thus evident how pervasive CSE is in its influence on the experience of work and success (Scott & Judge, 2009).

Those with higher CSE enjoy higher levels of initial success in the workplace and succeed quicker than those with lower CSE. Those with higher CSE have quicker ascendant careers and advancement. This is partially due to their pursuit of further educational opportunities and also the better health that they enjoy (Judge & Hurst, 2008). In a South African study, Bonnet (2008) found that CSE are not a
moderator in the relationship between role overload and depression. Bonnet (2008) also found that CSE did not moderate the relationship between role overload and the use of medication.

CSE therefore has linkages with success in ETD as well as in the workplace through its role in mobilization and activation of ability and its moderation of environmental variables.

2.9 Conclusion
This chapter defined CSE, a personality trait that underlies self-esteem, self-efficacy, locus of control and emotional stability (Brunborg, 2008; Bono & Judge, 2002). CSE is an individual's estimation of his/her own worth and ability (Judge et al., 2003). This concept governs how individuals interact with their environments (Bono & Judge, 2002).

Self-efficacy is one of the four components of CSE. Self-efficacy refers to an individual's estimation of his or her own ability to meet situational demands or to solve problems through the mobilization of motivation and cognitive resources (Muchinsky, 2006, p184). Self-efficacy refers to one's confidence that one will be able to perform effectively in a specific activity (Oka, DeMarco & Haskell, 2005).

Well-being is affected by the success we have in interpersonal relationships (Leary, 1999, in Creed, Lehmann & Hood, 2009, p311), and our well-being is directly affected by our levels of self-esteem (Creed, Lehmann & Hood, 2009, p311).

Racial discrimination is linked to health problems, dissatisfaction with life, and lowered self-esteem (Utsey, Ponterotto, Reynolds & Cancelli, 2000, p72). Racial socialization that is positive can have a positive impact on academic performance and other behaviours as well. (Bowman & Howard, 1985, in Hanley & Noblit, 2009).

Locus of control is the degree to which individuals had either an internal or external locus of control. Locus of control refers to whether people believe they are active agents in their lives who are capable of affecting the outcomes of events
Eysenck and Eysenck in (in Cervera et al., 2002) define neuroticism as “a higher propensity to emotional instability and hypersensitivity” (p272). Neurotics are generally in possession of stronger negative affect and are easily aroused (to displays of emotion) (Kring, Johnson, Davison & Neale, 2010).

CSE has been linked to both academic and work performance. The next chapter introduces RE, in relation to racial identity, black consciousness, racism, and internalized racism in a post-apartheid context in South Africa. RE and CSE may interact, inasmuch as they are both components of individual identity.
3. RACIAL EVALUATION

3.1 Introduction

In the previous chapter, the personality trait CSE was introduced. CSE is the broad personality trait that refers to whether an individual evaluates himself or herself in a positive or negative manner. South Africa has a history of racial discrimination, which has persisted after the end of apartheid (Arnold, 2010; Tebele, 2009). This could affect the CSE and RE of even those who did not directly experience the worst impact of apartheid.

In this chapter, attention will be paid to RE and potential contributors to individual levels of RE. Both CSE and RE are investigated in this study, exploring potential relationships with learning and performance in OBA.

The concept is introduced in the context of racial identity and racism. Racism in South Africa is discussed in the light of apartheid’s process of racial classification. Finally, black consciousness is introduced as a means of fostering a positive RE and racial identity.

3.2 Racial Evaluation

Racial Evaluation refers to racial bias and preconceived notions (Gazzaniga, 2004) that form through the internal evaluation of one's ethnicity (Moule, 2011). It is therefore an internal evaluation of one's ethnicity, or “how children come to feel about being black, yellow or brown” (Diller, 2010, p 118).

Racial discrimination in South Africa is so pervasive in the stratification of South African society that it potentially affects RE (Arnold, 2010; Tebele, 2009), despite the democratization of the country. Lentin (2011, p72) points out that "official refutations of racism are not enough to eradicate it". Instead, the end of apartheid can be seen as the beginning of the end of racial discrimination in South Africa.

RE develops as a child internalises the various messages received during
socialization regarding his/her ethnicity. There can be a negative evaluation that society places on members of their group (Thornton, Chatters, Taylor, & Allen, 1990, in Diller 2010).

Biko (1978) blamed socialization as one cause of the ‘inferiority complex’ or spiritual poverty experienced by Blacks in South Africa. He argued that this socialization and domination was designed to prepare the Black man for his acquiescent role in South Africa as cheap manual labour. Desegregation, after the fall of apartheid, did not result in racial integration socially (Hooks, 2003). Even those born during and after the end of apartheid have been born into a society based on race.

RE, or the internal evaluation of one’s race (Diller, 2010) is formed through socialization and the learning of the relative values put upon individual RE by outsiders, and how one’s racial identity can be seen as a source of positivity, even when society at large does not value the race (Hanley & Noblit, 2009). Apartheid in South Africa may have left a knock-on effect, because “centuries of cultural supremacy and denigration have become internalized in the narratives that many construct” (Hanley & Noblit, 2009, p32). This may have occurred through negative racial socialization. Racial socialization can relate to “motivation, achievement, prospects for upward mobility, and racial attitudes” (Coll et al., 1996, p1907).

Racial socialization can lead to a positive RE being assigned to one’s group, or the ability to assign positive evaluation to one's racial group, but in general, it refers to a generic internal evaluation of one’s racial group (Diller, 2010). RE becomes a part of individual racial identity (Varma, 1993).

Even those who profess tolerance in terms of their explicitly espoused RE may have implicit racial bias that their explicitly held views do not correspond with (Doris, 2010). Implicit RE “reflects a semantic association between an attitude object (e.g. a member of a racial group) and general concepts of good versus bad” (Fazio, 2007, in Gawronski & Payne, 2010).

3.3 Racial identity
Racial identity refers to the “aspect of personal identity that contributes to one’s self-image as a person of colour” (Diller, 2010, p334). “Positive racial identity promotes academic achievement” according to Hanley and Noblit (2009, p 11). Victims of oppression and racism succeed when they use their “racial identity and socialization in response to racism and oppression and as a means of knowledge production and self-actualization” (Hanley & Noblit, 2009, p13), thereby creating positive RE.

Racial identity can be seen as a “group or collective identity based on one’s perception that he or she shares a common racial heritage with a particular racial group” (Helms, 1990, in Hanley & Noblit, 2009, p34). This identity, for Blacks includes in-group factors such as closeness to other Blacks but also RE. This evaluation contextualizes the formation of racial identity, with the two concepts being inextricable from one another.

“Having and using a racial identity to negotiate a racist society has positive impacts on senses of efficacy and self-understanding” (Hanley & Noblit, 2009, p34). This ties in with the CSE discussed in Chapter 2. Racial identity is interlinked with culture at home and is linked to achievement in education for those who have been racially oppressed. Families that emphasise racial identity and self-development, or a positive RE, can mitigate the effects of racism upon their children. Racial discrimination and apartheid could have influenced family racial socialization, thereby also affecting achievement. Smalls et al. (2007, in Hanley & Noblit, 2009, p 55), argue that achievement is “more related to a positive racial identity than to acting more like whites… a strong racial identity was associated with achievement”.

Positive racial identity may result in anticipating future discrimination and responding to it with increased academic motivation, instead of racism being internalized. Varma (1993) explains that racial evaluation and racial identity are strongly interconnected, with RE forming one aspect of racial identity, and racial identity forming part of individual identity.

3.4 Racism
One potential determinant of racial evaluation, and racial identity is racism.
“Racial evaluation and prescription is directed at refuting racism” – positive RE can be used to alleviate the impact of racism (Reeves, 1985, in Troyna & Williams, 1986, p4). Shaw (2002) described how racism persisted after the end of apartheid between members of the South African Police Services and the Black public.

Racism can be classified using a tripartite typology (Utsey, Ponterotto, Reynolds & Cancelli, 2000, p72). The first type of racism in the trio is known as individual racism, where someone may, for example, refuse to be treated by a Black specialist. This is where a person is directly discriminated against because of a capricious phenotype.

Institutional racism is best illustrated by the separate health facilities evident under the apartheid regime and where policies prohibited Blacks from participating fully in society (Utsey, Ponterotto, Reynolds & Cancelli, 2000, p72). In other words, it is when separate and not necessarily equal access is given to various elements of society and where this access is determined by race.

Ndamse described the situation saying, “there are those among both Black and White who assert that there is no difference between the White man and the Black man...it must be acknowledged that there is a difference-not an inherent one, not a racial one, but a difference growing out of unequal opportunities in the past and present” (in Biko et al., 1972, p11). These unequal opportunities continue in post-apartheid South Africa (Hamilton, 2001; Zuern, 2011). These unequal opportunities are still in effect in HRD in South Africa (Daniel, Habib & Southall, 2004). This type of bigotry was addressed on a legislative level by various changes in legislation in South Africa, in particular, the Constitution of the Republic of South Africa (act 108 of 1996), but the dismantling of apartheid on a socio-economic and psychological level may take longer.

Cultural racism completes the trio, and urges members of subjugated groups to rebuff their customs and assume those of the governing group (Utsey, Ponterotto, Reynolds & Cancelli, 2000, p72).

Zulu culture in Zululand has remained largely traditional, especially amongst the
rural youth (Addison, 2010). Westernisation has caused some internal conflict within the Zulu culture between the more traditional rural community and the Westernised urban community (Tebele, 2009).

Racism is a form of prejudice. Prejudice refers to instances people make assumptions about something or someone without having enough knowledge to do so in a manner that is accurate. Prejudice can further be seen as “unfair judgement toward people based on race, social class, gender, ethnicity, age, disability, political beliefs, religion, sex orientation or other personal characteristics” (Bell, 2011, p 43). Racial prejudice occurs when the intolerance is directed towards members of a specific racial grouping. Ndamse (in Biko et al., 1972, p11), criticised the apartheid government’s sponsorship of racial prejudice stating, “it requires little wisdom or statesmanship to repress, to crush out, to retard the hopes and aspirations of a people”.

On the other hand, both Sisulu and Biko viewed White persons as the enemy at certain points in their lives (Houser & Shore, 1997; Biko, 1978), implying that the racism experienced by Black South Africans had created racial animosity towards the oppressor. Despite viewing the White group as the ‘enemy’, Sisulu counted amongst his friends Bram Fischer, an Afrikaner, Biko, and Donald Woods, an Englishman (Houser & Shore, 1997; Biko, 1978). The ‘general’ reaction was one of animosity, whilst the ‘specific’ was one of camaraderie. Prejudice can be directed inwards through the process of internalized racism and diminished RE (Paradies & Cunningham, 2008).

Prejudice can result in a state of affairs where a stigmatised or exploited group begins a self-fulfilling prophecy, whereby the stigmatised group may carry out stereotypical behaviour relating to a negative RE (Allport, 1954, in Cadinu, Maass, Lombardo & Frigerio, 2006, p183). This process may result in further reinforcing the oppressor’s point of view on the oppressed and this may have occurred in South Africa.

When victims of oppression and racism end up turning the process of racism and discrimination against themselves and others of their own racial group, this is
identified as internalized racism. The observable fact of internalized racism is arguably, caused by economic imperialism and subsequently reinforced by cultural imperialism (Porter & Washington, 1993, p 144). The internalization of racism would then result in poor racial identity for the individuals. Internalized racism causes children to develop their own stereotypes about Blacks and Whites. These stereotypes show evidence of racism in their stereotypes about their own race. Positive racial socialization is needed in order to combat this (Hanley & Noblit, 2009).

Cultural and economic imperialism ultimately results in a situation where oppressed individuals cease to believe in themselves or in others from the oppressed group (Jones, 2001). The study will explore whether there are manifestations of this in post-apartheid South Africa.

What happens when negative RE is experienced is that educated individuals dissociate themselves from other members of their race (Ndamse, in Biko et al., 1972) but also end up feeling inadequate themselves. This negative RE is often evidenced by covert negative self-talk and the propensity to treat other members of the oppressed group badly. Internalized racism is defined by Jones (2001) as a situation where negative messages are accepted by members of stigmatized races, and this impacts upon RE, negatively affecting racial identity.

Internalized racism and concomitant low RE happens if off-putting messages about ability and intrinsic worth are taken to be true and are internalized by victims of discrimination. Jones (2001) explains that internalized racism manifests itself in three distinct ways. Firstly, ‘Whiteness’ is embraced through the use of skin lighteners, hair straighteners, and Blacks choosing ‘White’ professionals over ‘Black’ professionals because of a seeming superiority. In Biko’s (1971, p1) opinion, “by seeking to run away from themselves and to emulate the White man, Blacks are insulting the intelligence of whoever created them Black”.

In the second manifestation of internalized racism, there is self-devaluation where Blacks begin to use racial slurs as nicknames (n**** for example, has been controversially adopted into social parlance in the United States of America
amongst some African Americans) (Jones, 2001).

Race talk is unambiguous insertion of signs and symbols into everyday life that serve no purpose other than to subjugate people of colour (Myers & Williamson, 2002). This race talk results in a perpetuation of damaging stereotypes and is known as self-devaluation, internalized racism or reduced RE when perpetuated by Blacks (Jones, 2001). This study deals specifically with Zulu South Africans, in a post-apartheid South African context.

The third and worst manifestation of internalized racism is resignation, hopelessness and helplessness evidenced by school drop-outs and risky health practices. The high rate of HIV in South Africa could be evidence of this third manifestation (Jones, 2001). Internalized racism begins with an internal psychological process—a negative one (Jones, 2001).

3.5 Racism in South Africa

The psychological definition of racism, describes it as “a form of organizing peoples, commodities and the relationship between them by making reference to a notion of race” (Dalal, 2002, p27). This author further states that racism can also contain an element of hatred of one race towards another (an affective component).

In South Africa, the real race issue was more one of power, politics and rivalry over resources as proposed by Ndebele (Biko et al., 1972).

Ndebele (Biko et al., 1972) viewed South African society as divided in three different strata each with inter-group and intra-group conflicts, with inter-racial conflict being the highest or most all-encompassing form. The first division was ethnic divisions, the second racial divisions and the third division by nationality. Tebele (2009) found all three divisions being used as a basis for prejudice and RE amongst young Zulus in Zululand.

Ndebele (Biko et al., 1972) viewed the racial group to be comprised various ethnic groups and the national group to be comprised various racial groups. In this study, the racial group was Black, the ethnic group Zulu; the national group was South African. Ndebele argued that the national group could not exist without
interaction between the racial groups and argued that all South Africans would have to learn to interact with each other for the greater good. This is part of the substantiation for focussing on the Zulu ethnic group, then the Black racial group, then the South African nationality in this study.

Ndebele (Biko et al., 1972) felt that the White minority, during apartheid, tried to de-emphasise ethnic/tribal/cultural differences within the White ruling class and emphasise ethnic differences between Blacks. This was in an attempt to divide the opposition or ‘divide and rule’. Although there is potentially truth in this statement, ethnicity is still an area worthy of study as a means to value diversity. These divisions are still evident amongst the Zulu youth in Zululand (Tebele, 2009).

There may have been different experiences of apartheid in the different regions and ethnic groups of Blacks in South Africa and in this particular study; the focus is on the Zulu ethnic group. There are multiple accounts of animosity between Zulu and Xhosa, particularly in migrant groups working on the mines (Leach, 1989). RE is a multifaceted construct in South Africa and is a sensitive issue.

Ndebele (in Biko et al., 1972) stated that there were many social divisions in the midst of Black South Africans. There were profound differences between the rural and urban Black South Africans, persisting in the 21st century (Tebele, 2009). He felt that the rural Blacks embarrassed the urban Blacks because “relative social advancement has tended to make them wish to forget their wretched past constantly being brought to life by the peasant and his companion, the migrant labourer” (Ndebele, in Biko et al., 1972, p3).

During apartheid, migrant labourers came in from the Bantustans and other countries to provide their labour in the factories and mines of the apartheid economy. At the same time this means that there were households in rural Zululand that lost their father figures. When apartheid ended, it stands to reason that the pattern of migratory labour did not cease overnight, although it has declined significantly (Posel, 2010). Young adults in Zululand could still have grown up without father figures. This may have had a lasting psychological impact on individuals who experienced this.
A picture emerges of clusters of individuals living in fractured household units during apartheid, who relied on a remittance economy and subsistence farming, with little education and opportunities for entrepreneurship (Buthelezi, in Biko et al., 1972). This could have had a profound and permanent influence on psychological and personality development of individuals exposed to this, even as children. Alternately, the change of regime may have begun a process of psychological, legal, social, and economic transformation culminating in elevated levels of development and reduced RE.

The divide and embarrassment between rural and urban Black South Africans, as pointed out by Ndebele (1972) in the preceding paragraphs, when looked at in conjunction with ethnic conflict, implies that the Black racial group comprises a number of distinctive sub-groups (Afrikaans: “volke”) with their own distinctive identities. One such group is the Zulu nation (Zulu“volk”).

Because each racial group in South Africa is not homogeneous, some Blacks may think disparaging things about Blacks in general, but may not hold the same negative perceptions about themselves. They may use class, geographical location or ethnicity as a source of CSE. CSE is an individual’s estimation of his/her own worth and hence is based on abilities or achievements. On the other hand, a strong ethnic identity, such as that held by Zulus (Tebele, 2009) may be generalised to all members of the Black racial group by Zulus. This study looks at racial perceptions held by one ethnic group about the racial group to which they belong.

Ndebele (1972) mentioned that the homelands were created because it made it easy to convince the erudite urban Blacks that they were second-rate. Ndamse (1972, p12) supposed that “the effect of discrimination on the human mind has an affinity with the mental condition we call arrested development”. This again aligns with the conceptual definition of CSE described in Chapter 2.

Biko (1978) argued that mentally, Blacks must accept and embrace their roles as active agents in their own futures and not passive victims. With Blacks cast as victims and the oppressed, he felt that they could not actively contribute to society
until change had occurred- a mental revolution was required.

Ndebele concurred, saying that the urban Black “still feels backward in relation to his White counterpart” (Ndebele, in Biko et al., 1972, p3). Ndebele (in Biko et al., 1972) felt that Blacks’ oppression was twofold- he was oppressed because of race and because of being part of the exploited working class in a capitalist economy. Biko argued for both a social and socialist revolution (1977). Biko expressed that “it is a case of have-nots where Whites have been deliberately made have and Black have-nots” (1971, p1).

Biko aimed to liberate Blacks from the psychological oppression Blacks inflicted upon themselves, through their alleged feelings of inferiority and from the external repression by the White man (Biko, 1978, p100). Biko argued that the internal oppression was through a state of alienation, a rejection of the self, because of the Black's perception of White as the source of goodness. He thus wanted to do away with this sense of estrangement and sense of being the ‘other’ and to substitute it instead with feelings of worthiness and usefulness.

The contemporary reaction to racism against Blacks is to adopt an Afrocentric approach- one that teachers children to love themselves, to embrace learning, and to know they are change agents in society (Hanley & Noblit, 2009), in other words, to boost RE. This would be achieved through positive ethnic socialization - through the empowerment of victims of racism to define their own identities. This process of ethnic socialization would result in feelings of belonging and positive RE.

Racial socialization involves communicating, through messages and practises relevant information about race status. This includes the formulation of identity, relationships and social hierarchy. This may include specific verbal behaviours, modelling of target behaviours and exposure to specific artefacts and settings (Hanley & Noblit, 2009). This socialization can be positive, or negative, as was seen in the apartheid era. Racial socialization is instrumental in the reduction of RE and can form a buffer against the damaging impact of racism.
In terms of socialization, even into the 21st century, children could see their relative status in their sports facilities, school uniforms, homes, streets and lighting to mention a few daily experiences, with these discrepancies continuing after the fall of apartheid (Ramphele, 2002). Biko contested that the subjugated children eventually began to feel that there was something incomplete in their humanity and that they would only be complete if they were White (Biko, 1978, p100).

Biko (1978) thought that Black children were pushed into a state of psychological inadequacy- where the ideal was unattainable- again alluding to low CSE and RE (These Black children are now the adults that form part of the sample in this study, or were raised by parents who experienced what Biko described). The question is, some 33 years after the publication of this perception, whether there is any evidence of this phenomenon still being prevalent amongst young adult Zulus?

The Black Consciousness Movement in South Africa, which proposed an independent Afrocentric solution to the problems of racial oppression, was strongly influenced by the Black Consciousness Movement in the United States of America (Leach, 1989). In order to further emphasize sovereignty for Black South Africans, Biko (1978) argued that countries in Africa, which were populated by Africans (Black Africans), should have Black values and should adopt a style that is African instead of emulating a European model which he deemed to be ill-suited to Africa. However, Biko’s philosophy was informed by American writers.

In order for African solutions to be found, the first step would be to ensure that the Black person was psychologically reinvigorated and once more able to be a person in his or her own right without being defined in terms of deficiency and inadequacy. Biko argued that pride and dignity needed to be re-instilled in Black South Africans (Biko, 1978). Efforts to attain this are seen in the Constitution of the Republic of South Africa (Act 108 of 1996).

Biko originally had perspectives on racial identity that were the antithesis of the African National Congress’s (ANC) perspective which was laid out in the ANC freedom charter and which stated that “that South Africa belongs to all who live in it,
Black and White” (African National Congress (ANC), 1955). Eventually, Biko concurred with this and advocated a non-racial egalitarian society (Biko, 1977).

The African National Congress had advocated non-racism from its inception, when Dr Seme proposed, in Walter Sisulu’s words (in Houser & Shore, 1997, p51) “an organization that would put an end to racial ethnicity...end the question of Msotho, Zulu, Xhosa”. This essentially tried to enforce a unity that denied the expression of important ethnic identity in South Africa. Biko’s position differed slightly. He felt that, before national unity could be achieved; White racism had to be counteracted on a psychological level through the development of positive RE.

Biko stated that “If South Africa is to be a land where Black and White live together in harmony without fear of group exploitation, it is only when these two opposites have interplayed and produced a viable synthesis of ideas and modus vivendi” (1971, p1). This could only be achieved when Blacks felt psychologically efficacious and equal and held positive evaluations of their identities.

Biko added that, “we can never wage any struggle without offering a strong counterpoint to the White racism that permeate our society so effectively” (1971, p1). This strong counterpoint to White supremacy was positive RE. Currently, the South African constitution (Act 108 of 1996) promotes a government based on the will of the people. The young adult Zulus surveyed may have benefited from the change in government and this benefit may be evident through CSE, RE and learning.

Biko attributed the demise of Black society to colonialism- something Hanley and Noblit (2009) equate with cultural genocide. In Biko’s own words “when colonialism steps in it devours the indigenous culture and leaves behind a bastard culture that may thrive at the pace allowed it by the dominant culture” (Biko, 1978, p28) - alluding to separate development. Black South Africans internalized the commercial consumerism of the White culture without having opportunities to make money and actually assuage their consumerism. Ndebele (Biko et al., 1972, p5) denounced and derided Blacks who “began taking to fashion” and who “buy(s) a pair of shoes worth about thirty rands when his family is starving”. This phenomenon is generally a
reaction to racism, which includes a component of RE- individuals distance themselves from their own group, whilst seeking to assimilate into the group that is dominant (Demo & Hughes, 1990, in Hanley & Noblit, 2009).

Biko asserted that the Black culture was stripped of all credible heroes, and that the very term ‘Black’ is associated with the sinister, the other, he pointed out that Black was associated with ‘Black markets’, ‘Black magic’ and the ‘Black sheep’ of the family (Biko, 1978, p104). The connotations associated with the word Black thus contributed to the prevailing negative perceptions of Blacks and potentially affected RE.

Biko believed that African children learned to hate their heritage during their education and racial socialization. The image presented to the children, according to Biko (1978, p29) made them want to identify as closely as possible with White culture and reject Black culture. He felt that if RE was to be improved, then heroes similar to those described above needed to be identified, so that the African background could be redefined. Biko argued that “a people without a positive history is like a vehicle without an engine” and that without that positive history they would always live in the shadow of the more successful society (1978, p 29). In this study, the extent to which this has occurred will be investigated. Even those who were only children during apartheid would have been indoctrinated into feeling inferior.

3.6 Racial Classification

This section describes the manner in which the apartheid government classified South Africans using racial criteria. This is in an attempt to sketch out how the process of racial classification may have affected South Africans psychologically, through racial socialization. Race is a vacuous concept- the boundaries tenuous and arbitrary. In South Africa race became a determinant of all aspects of life. The irony is that racial intermingling was common in the Cape colonies in the early days of colonization and research has proven that there is no such thing as “pure 100 per cent Afrikaner blood” (Leach, 1989, p39). This racial classification has continued into post-apartheid era and is seen even in legislation (Posel, 2001).

Posel (2001) quite eloquently states that, “after decades of apartheid’s racial
reasoning, the idea that South African society comprises four distinct races - 'Whites', 'Coloureds', 'Indians' and 'Africans' - has become a habit of thought and experience, a facet of popular 'common sense". In effect, the state's legal and ideological efforts were effective in dividing the nation along purely arbitrary lines. Racial groups are internally very diverse and South Africa is a multicultural society, with race being an inexact and unjustifiable means of categorising South Africans. Unfortunately, ethnic identity and cultural distinctions have been downplayed in an attempt to create binary Black and White identities. Even those who grew up towards the end of apartheid, and during apartheid’s dismantling have been subjected to racial classification. Apartheid did not end overnight and the racial divides of the past were retained into the new dispensation (Posel, 2001). It is thus arguable that it is important to assess current levels of RE and it is arguable how this relates to CSE, learning and OBA, given that even young adults have been socialised to define themselves along racial lines.

This racial categorization is still being utilised and is manifest in the Employment Equity Act (no 55 of 1998) and Black Economic Empowerment as enacted in the Broad-Based Black Economic Empowerment Act (53 of 2003). The Constitution of the Republic of South Africa (Act 108 of 1996) promotes the rights of all South Africans but also strongly promotes redress. These activities afford opportunities for citizens based on their racial classification. Reparation, restitution and reconciliation are all addressing the White-Black divide in a way that accentuates the racial divide. As a result, social reality is still being conceptualised in racial terms. The current status quo forms in-groups and out-groups around racial categorization even though it is with the aim of reparation. The state views discrimination as reasonable, if the aim of that discrimination is to redress past discrimination. Thus, young people may still be taking stock of their RE and using it as a partial basis for their CSE, however the evaluation may be more positive as opposed to negative.

There were two major thrusts within the apartheid ideology. One was to completely segregate ‘Blacks’ and ‘Whites’ territorially (separate development); the other was to simply assert and ensure ‘Black’ inferiority socially, politically and economically with this continuing in various forms well into the 1980’s, thereby influencing today’s young adults either directly, or indirectly through its impact on
caregivers who socialised the young adults. Regardless, racism and racial inequality persists in post-apartheid South Africa (Abbot, 2007).

Black South Africans were confined to the Easternmost parts of the former Cape Province and were scattered across the Transvaal, Natal and Orange Free State (University of Texas at Austin, 2009). The separate territories excluded the most important centres of commerce namely the Witwatersrand, Cape Town, Durban, Port Elizabeth, and Bloemfontein.

The former homelands were Kangwane, Transkei, Ciskei, KwaZulu, Bophuthatswana, Lebowa, Venda, Gazankulu and KwaNdebele (Cahoon, 2001). By 1972, Ndamse felt that the creation of separate states had reached a point of no return (in Biko et al., 1972) and Blacks were treated as “immigrants on sufferance, and not as citizens” (Buthelezi, in Biko et al., 1972, p14).

Buthelezi described the plight of South Africans in KwaZulu. He said that at first the Zulu were capable of supporting themselves, as the land could support the population, but only 30 percent of KwaZulu was arable (in Biko et al., 1972, p14). The reserves comprised the “worst farming lands of the colony” (Buthelezi in Biko et al., 1972). Furthermore, there was conflict within the areas between those led by Buthelezi and those led by the African National Congress (Leach, 1989). Although today’s young adults would not have directly experienced all of what is mentioned in this section, it would have informed the family units they grew up in and their socialization, in a manner which continued in the post-apartheid era (Abbot, 2007).

Despite the setbacks already mentioned, KwaZulu maintained a higher level of sovereignty than other areas of the Republic of South Africa, and was not as affected by the influences of Western socialization and acculturation (Addison, 2010). The area north of the Tugela River was the seat of the Zulu nation, who retained a strong cultural and social identity. Historically, this group was less exposed to the interracial conflict of the time- instead experiencing high levels of inter-tribal and political factionalism and violence. The Zulu nation had kept British and Dutch forces at bay in the centuries before and had not been colonised to the same extent as was seen in other parts of South Africa. Young Zulu adults grew up
within the solidarity of the Zulu culture, but with the spectre of apartheid pervading all aspects of life.

The Zulu ethnic group is a subgroup of the Nguni group, which also includes the Xhosa (of the Eastern Cape of South Africa) and the Ndebele (of Zimbabwe). Also included are dialects spoken by the Swazi, of Swaziland the Ndebele, the Hlubi, Bhaca, Xesibe, Mpondo, Lala and Qwabe (Rosenthal, 1964). Other groups in Southern Africa, separate and distinct from the Nguni are the Sotho, Shona, Tswana, Tsonga and Venda groups each comprising multiple clans and ethnic subgroups and subcultures based largely on familial ties and clans. Ethno-linguistic divisions of the South African population may prove to be a more valuable tool for the study of South Africans than simply racial lines because of the concomitant cultural configurations generally associated with differences in ethno-linguistic identity (Cole, in Rosenthal, 1964). The Nguni group, in particular the Zulu, are the focus for this particular study.

Zulu, and other South Eastern endemic languages, have a rich cultural heritage of traditional literature conveyed in prose and in verse. There are stories, myths, tales and proverbs that help in the sense-making process culturally, providing the more traditional Zulu culture with a specific world-view. A good measure of legends and stories has also been preserved that communicate the strength and value of the contributions of Zulus (Rosenthal, 1964). This gives the Zulu nation a strong identity and this could be used as a source of CSE and positive RE.

It is worth noting that a significant component of Zulu culture is bound in and communicated through songs and dance, with war-songs and hunting-songs. This is a part of the cultural identity of the Zulu nation and may have been one mode adopted to preserve pride and identity through the years of apartheid (Jordan, in Rosenthal, 1964).

Thus, in KwaZulu, or the place of the Zulu, the colonization of the mind may have been less than that seen in the urban crucibles of multiple Black identities. For those working on the mines there was an intermingling and dilution of ethnic identity, giving rise to the adoption of a mixed language and the adoption of a quasi-western,
consumerist culture. This was described by Mandela (1994) and Sisulu (Houser & Shore, 1997). In the mining areas, there were multiple manifestations of low RE seen in many overt aspects of culture (Mandela, 1994) in place of the more traditional ethnic identities preserved in the rural areas such as KwaZulu.

Despite being distanced from the more overt aspects of apartheid acculturation, KwaZulu was not immune to the influences of apartheid and colonization. The impact of colonization, urbanization and migrant labour is evident when examining its impact on the traditional Zulu family unit. The generations that experienced apartheid would still have repercussions for the young adults of the early 21st century. In Western Sociology, a family unit was traditionally defined as “a social group characterized by common residence, economic co-operation and reproduction. It includes adults of both sexes, at least two of whom maintain a socially approved sexual relationship, and one or more children, own or adopted, of the sexually cohabiting adults” (Murdock, in Haralambos & Holborn, 1997, p317). This model of the family applied in Zulu culture prior to this point, being a patrifocal and polygynous society. During apartheid, and immediately after the end of apartheid, the type of family unit altered, with the male heads of households working away from the family unit. Family units in KwaZulu were reduced to a female caring for either children or grandchildren, using remittance income from migrant labourers (absent male members of the household). These matrifocal families may have also affected the socialization of Zulu children and affected their CSE and RE.

Matrifocal families come into being when there are polygynous relationships and the male figure plays a relatively marginal role in the family. Another cause of this family unit is the splitting of the family unit because of desertion by the father figure either to work away from the family, or because of being unable to support the family (Haralambos & Holborn, 1997). These circumstances, created by apartheid, worked in conjunction with the polygynous Zulu culture to create matrifocal families where there was an absence of a strong and constant male presence in the home. A multitude of psychological, social and economic consequences could have arisen from this and affected CSE and RE, even for young adults reared by those who were victims of apartheid.
Bantustans were created during apartheid by the South African government order to afford opportunities for 'separate development'. Bantustan refers to "separate development self-governing areas set up in the Transkei, Zululand, Northern Transvaal and elsewhere in the Republic" (Rosenthal, 1964, p39). Young adults may have grown up within households that were devoid of strong male leadership because of the migrant labour patterns instigated by apartheid.

The Zulu, during apartheid, occupied a territory known normally as either Zululand or KwaZulu. As a tribe, they gained ascendancy under the leadership of Dingiswayo and Shaka. Following the assassination of Shaka, his successor, Dingaan, failed to protect the territories of the amaZulu south of the Tugela River, and they retreated to the north of the Tugela. This became an accepted boundary or border. There was a large amount of infighting between the Zulu tribes in the later part of the nineteenth century, with Mpande installed by the Boer forces as king of Zululand after the battle of Blood river where the power of Dingaan was broken. Britain only gained control of the area in 1897 after the capturing of Eshowe and then Kambula and Ulundi (1879) at massive expense to the British government (Rosenthal, 1964). KwaZulu saw limited White on Black conflict but much Black on Black clan-driven violence during the apartheid era (Leach, 1989).

The might of the Zulu and the strength of their resistance to colonial rule are best exemplified in the battle of Isandlwana, where they defeated the British invasion of Zululand and brought about the deaths of over 800 British troops. Sisulu (in Houser & Shore, 1997) acknowledged that this was used as a source of ethnic fortitude or Zulu-ism. For the Zulu, there was never meek capitulation; instead, the nation remained inviolable and never fully dominated, despite social and economic constraints. Zululand was only formally colonised or annexed in 1879 (Laband & Thompson, 1990).

The homelands, despite, provided an area where negative RE could be avoided, away from the more compelling pressures of Westernisation seen in the urban areas, however, the nature of the land provided in relation to the population occupying it made subsistence impossible and as a result, the traditional social units were fractured. Family units were broken up as family members went off in
search of work (Houser & Shore, 1997).

In essence, the experiences of Zulus in Zululand during apartheid was somewhat different from those who grew up in the ‘townships’ and informal settlements in closer proximity to the urban areas. Workers in urban areas had to get up at 02:30 in the morning to get to work on time, coming back late in the night to get a small amount of sleep. Children were left to fend for themselves (Leach, 1989, p91). It is these children who are currently studying and embarking on professional careers within the context of affirmative action and redress. By the 1980’s townships had evolved into an area where there was an air of self-governance and self-determination, but conditions were still grim and long commutes were still involved to and from places of work.

In KwaZulu, Each homestead had a small tract of land for the production of crops and access to common areas for grazing (Addison, 2010). There was limited enmity between local White farmers and the amaZulu after the turn of the twentieth century and for the most part, the traditional Zulu way of life could be perpetuated-this fostered strong racial and ethnic identities for the residents of the area-although matrifocal families replaced patrifocal ones as adult males went in search of work outside of the area. These areas maintained a semblance of sovereignty from White rule, and the area was populated almost wholly by Zulus. This was somewhat different from the cosmopolitan crucibles of culture seen in mining and industrial areas (Mandela, 1994). The environment in Zululand may have produced positive RE, contributing to positive CSE.
Ultimately, apartheid was to impact on land ownership and movement, attempting to force the Black population into one seventh of the total area of the country (UNESCO, 1969, p15). In 1849, Earl Grey noted how hard it would be to consign enough land to Blacks to cause them to be self-sufficient, yet the apartheid government still pursued their version of separate development (Buthelezi, in Biko et al., 1972). Because of the inadequate employment opportunities in KwaZulu, for example, only a third of all citizens were in the area at any time, with 60 percent of the male population away at any time. Apartheid also affected employment through the regulation of which jobs Blacks could do, and how much they could be paid (MacDonald, 2006, p10). Today’s young adults were socialised into an unequal society. They would have witnessed apartheid’s impact on the people around them.
Education was also impacted upon through the Bantu education system - one that provided inferior education aimed at preparing learners for low-paid manual labour (Gerhart, 1979, p2). “Bantu education” is discussed in detail in Chapter 4. Eventually, Black activists moved towards rebuilding an independent education system in parallel with the Bantu education system, but the efficacy of the implementation of the system is questionable (Leach, 1989). Young adult students at the University of Zululand would have been taught by those who were educated under the Bantu education system.

Nutrition, the right to vote, and even one's choice of spouse or sexual partner was affected or controlled by the state during apartheid (MacDonald, 2006, p10). In short every aspect of South African life was affected at least in part by apartheid. Sisulu (1997, In Houser & Shore, 2007, p36) found the pass laws to be particularly or especially embarrassing and humiliating.

Apartheid was enacted through an assortment of acts including the Population Registration Act (30 of 1950). The Population Registration Act (30 of 1950) divided people categorically into racial groups with Blacks and Whites being considered to be ‘pure blooded’ and coloureds being viewed as a mixture of Black and White. One's racial classification was decided upon by examination of social status and the way society perceived the individual. Little examination has been undertaken into how individuals perceived themselves.

The arbitrary nature of these decisions is illustrated in the following quote:

A White person is one who in appearance is, or who is generally accepted as, a White person, but does not include a person who, although in appearance obviously a White person, is generally accepted as a Coloured person... (a) native is a person who is in fact or is generally accepted as a member of any aboriginal race or tribe of Africa. A Coloured person is a person who is not a White person nor a native.
South Africans termed "coloured" were identified by, and forced to formulate their identity around what they were not. Their identities were fashioned based on the fact that, during the apartheid era, Coloured people could not be classified as Black or as White. Asians were relegated to being a subgroup of the coloured group (UNESCO, 1969, p15). The classification of Coloured was further divided into “Cape Coloured, Cape Malay, Griqua, Indian, Chinese, other Asian and other Indian” (Leach, 1989, p73). In the 1960’s, descent became more important than appearance. The entire process split families, causing psychological distress and potentially much neuroticism and anxiety. Today’s young adults were reared in an artificially segregated society where there were clear class disparities associated with race. This may have damaged RE.

Formal racial classification began in the 1951 census by census takers. South African citizens had to furnish details of their backgrounds and parentage. Aspects examined in the quest to determine race included religion, occupation, education, peers (who the individual socialised with), the amount of alcohol consumed, the sport played, and even the type of bed an individual slept in (Posel, 2001).

By 1966 all South Africans older than the age of 16 had to carry identity cards that indicated race. Over 148,000 people did not submit an application for cards for fear of the racial classification they would be given (UNESCO, 1969, p15). This racial classification could result in one losing one’s job or social status or in being forced to move to another area.

Black citizens had already been compelled since 1952 to carry reference books. Through a number of laws and amendments, they could only live in locations, native villages, and hostels within urban areas. They needed permission to move, visit, and seek work in the areas demarcated as White (UNESCO, 1969, p16).

Those living in urban areas deemed undesirable were ordered to leave the areas deemed to be White areas. The Group Areas Act (41 of 1950) Act set aside
areas as racially exclusive. In District Six, over 20 000 people were forced to move. This same exercise in in Durban in Natal forced 10 000 Indians to move. On the Rand in the Transvaal, 38 000 Indians also had to move (UNESCO, 1969, p17). In Natal, KwaZulu was formed as a cluster of Zulu governed areas. Forced removals occurred around the Richards Bay area when the port was developed (Addison, 2010).

The aim of these exercises of forced removal and classification was to separate the racial groups through making Blacks ‘paper citizens’ in their own territories. However, wealth, minerals, infrastructure, ports and arable land was, for the most part, in the White areas of South Africa. Buthelezi questioned, for example, why Richard’s Bay was viewed as White, for the purposes of developing a port (Biko, 1972). As a result, racial segregation could not truly occur, as manual labour was needed in those areas seen as White (UNESCO, 1969, p17). Race became a fact of life, common-sense, a mixture of class, biology, and culture. Anything and everything could be used as an indicator of race.

MacDonald simply and eloquently describes the impact of apartheid (2006, p8) and writes that: “Colour identified who was the subject and who was the object of power...Whites acted, Blacks were acted upon”. Smuts, one of the authors of apartheid further described Whites as “European, civilized, mature” whereas Blacks were deemed to have the “psychology and outlook of children” (MacDonald, 2006, p8). Smuts felt that Blacks did not have much initiative and did not act well in response to stimuli of progress. Smuts further asserted that Blacks were naturally happy-go-lucky. Ndamse refuted this notion saying, “we have had quack ideas repeated ad nauseam that the Black man is an innocent child of nature who needs the perpetual protection of the White man” (in Biko et al., 1972, p11).

Smuts saw Blacks as a ready supply of labour in need of the guidance and trusteeship of the ‘Whites’ (MacDonald, 2006, p8). Whites were seen as parents to Blacks by the architects of apartheid in an attempt to justify the total power over of Whites over Blacks. This control was framed as a benevolent patriarchy where Blacks would be slowly developed to be self-governing. This discernment gave no regard to the educated and capable Black middle class of the time. The architecture
of apartheid could not be dismantled overnight, with elements of inequality persisting on a social and economic level.

### 3.7 Black Consciousness

One potential contributor to the reduction of negative RE is black consciousness. In 1972 Ndamse, a distinguished educationalist of the time, stated of black consciousness that, “wise men ignore this new development at their own peril” (in Biko *et al.*, 1972, p9). Black Consciousness is conceptualized as an affirmative pronouncement of a Black person’s racial identity, whereas internalized racism is an extremely harmful perception of a person’s racial identity. This philosophy emerged in the early seventies and aimed to unite all Blacks in the fight against White dominance (Bernstein, 1978, p11; MacDonald, 2006). The aim was to improve RE of Blacks.

Bernstein (1978, p12) explains that black consciousness was a response to the oppression of the time. Black consciousness’ most important aim was to diminish the prevalence of feelings of negative RE and put back in them feelings of pride in their racial identity.

Ndebele (in Biko *et al.*, 1972) argued that a “whole human re-orientation” was requisite where “Blacks must awaken intellectually, spiritually, socially, morally, culturally and in many other ways that make life worth living” (p8). This process may have occurred during the process of democratization. In contrast, there may be residual evidence of damaging RE in South Africa.

Biko wanted to undo the psychosomatic subjugation of Black South Africans as he asserted that “Man you are okay as you are, begin to look upon yourself as a human being” (Biko, 1978, p104). This is in line with CSE as already defined in the introduction (Chapter 1). Biko’s assertion that Blacks must be able to look upon themselves as human beings is in line with them having a decent level of CSE and in order to do this they need to be free from damaging RE.

When Biko defined being Black in South Africa he was simultaneously inclusive and exclusive. He did not see Blackness as a matter of skin colour or pigmentation.
Instead, he viewed it as a mental attitude (Biko, 1978, p48). To Biko being Black was an attitude and way of life and he advocated the rejection of all White value systems because they made him a foreigner in his own land (Bernstein, 1978, p13).

Biko thought that Blacks were not oppressed as individuals, or because of their tribal affiliations, instead, he said, Blacks were oppressed because they were Black (Biko, 1978, p97). He then used this common oppression as the basis of a new cohesiveness in South Africa, largely avoiding issues of cultural diversity and ethnicity. Blacks, according to Biko, were all those who were oppressed by Whites including coloureds and Indians (Bernstein, 1978, p14).

Biko focussed on race when forging a new national identity for oppressed South Africans. When an individual chose to be described as Black, it was, according to Biko (1978, p48) the first step towards emancipation. Any struggle against racism had to start with the rejection of negative RE; this is in line with building positive CSE. Biko saw identifying oneself as Black as a way of rebelling against those who wanted to use Blackness as a way of subjugating the individual. By owning one’s Blackness and defining it in one’s own terms, one took away the rights of others to define Blackness in their own derogatory terms and thus perpetuate negative RE. A positive perception of Black may have been positively associated with good levels of CSE.

Blackness, in Biko’s (1978, p49) opinion, was very different from being non-White. Non-White implied exclusion, and being defined in terms of what one was not and could never be. In Biko’s estimation non-Whites were those who wanted to be White, but could not be because they were Black.

Black people-real Black people are those who can manage to hold their heads high in defiance rather that willingly surrender their souls to the White man

Biko, 1978, p49

Biko saw black consciousness as an opportunity to infuse the Black community with pride. This pride was to be in themselves, in their efforts, value systems,
culture, religion and general outlook on life (Biko, 1978, p49). Biko assumed that there was a common Black value system, culture, religion, and outlook on life in South Africa, or at least enough commonality to use as a basis for solidarity. There are differences in all these elements of identity in South Africa, and this may be a shortcoming of Biko’s stance.

Black consciousness, as conceptualised by Biko (1978, p51), aimed to bring into being Blacks who did not merely view themselves as appendages of White society and economy but as sovereign, valid members of society. Biko felt that part of black consciousness was the elimination of self-oppression through feelings of inferiority (Bernstein, 1978, p13). This is, in effect, the promotion of improved CSE and RE.

Walter Sisulu, (1997, in Houser & Shore, p36) viewed himself as Black and not Coloured. Sisulu claimed “I’m alright as I am. I’m a Black man. I’m an African.” This is a vocal assertion of the role of black consciousness in the Shaping of Black South African identity as a catch-all for non-Whites who needed a unified identity as a rallying point for anti-apartheid activities. Sisulu went on to say “I’m a black man. No less. No more” (1997, in Houser & Shore, p37). The younger generations may show high levels of black consciousness and a minimal negative RE as a result of living through the transition to democracy and not living through the worst eras of apartheid (Mandela, 1994).

The implications of black consciousness to Black society were that the false images of Blacks could be corrected in terms of culture, education, religion and economics (Biko, 1978, p51). These were the areas, as already discussed, where White colonization had led to distorted self-image in the Black community. Biko argued that educating people in their second language and forcing people to view themselves as heathen and their cultures as substandard, and marginalizing people economically would be detrimental. Biko felt that this would lead to them begin to believe the myths and lies of racism - that they were unworthy of the rights denied them. This would in effect justify apartheid. This kind of treatment could also undermine learning and the capacity for achievement in OBET.

When Biko envisioned black consciousness, he saw it as an expression of group
pride, the call to all Blacks to rise up and attain status and positive RE. He endorsed a revolution of the mind because of the apathy and subservience he observed in his fellow man. Biko was adamant that “the greatest weapon in the hands of the oppressor is the mind of the oppressed” (Biko, 1978, p68).

3.8 Development of black consciousness

This section will discuss the four phases of black consciousness as outlined by Milliones (1973) and assess Biko against these phases.

There are marked differences between the approach promoted and enacted by Mandela after his release from prison (1994) and that proposed by Biko (1978) when it comes to race relations in South Africa. With this in mind, one must realise that Biko died without possibly having the opportunity for his notion of black consciousness to evolve, as Mandela’s did through his lifetime.

Milliones (1973) plots four phases of black consciousness, derived from the observation of the ideological evolution amongst black consciousness leaders such as Malcolm X, Amiri Baraka and Stokley Carmichael (Jones, 1996, p192) as follows:

Pre-consciousness:
This phase is characterised by an acceptance of the mainstream ideology of the time (Jones, 1996, p191). This is largely the docility and subservience Biko (1978) described in South Africa amongst ‘non-Whites’. This group tends to reject Black Nationalism and also tends to denigrate Blacks as people. This phase can manifest in the selection of a White spouse, perpetuating negative stereotypes about one’s own race, or even trying to affiliate oneself with White groups. This phase is in essence a time of negative RE.

Confrontation:
In the confrontation phase, the mainstream ideology is rejected and Black Nationalism is accepted. It can be manifested in the view that Whites are all evil, in the castigation of White liberals and militantly anti-White behaviour (Jones, 1996, p192). This is largely the position Biko (1978) espoused in his published writings in the 1970’s leading up to his death. At this time, he was blatantly anti-White, because
of feelings of frustration at the way Whites were treating Blacks. Ndebele claimed that Blacks dealt with their frustration, either by becoming passive, seeking no outcome, or by actively searching for outlets for relief (Biko et al., 1972).

Khoapa (Biko et al., 1972) noted that in the early 1970’s, with the rise of Biko’s black consciousness, many Blacks were rejecting integration in lieu of what he termed liberationism. Khoapa and other radicals advocated the development of actions and ideologies as if “Whites did not exist at all” (Biko et al., 1972, p17). He felt that, because the basis of society was assumptions of the superiority of Whites culturally, morally and intellectually. They rejected integration because it could not be conceived if Blacks were still powerless.

The movement argued for liberation before integration or separation (Khoapa, in Biko et al., 1972). Khoapa (Biko et al., 1972) felt that conflict was inevitable and necessary; because of the oppression he completely rejected the notion of unity. As for the White minority group, they were welcome to support the liberation but “not free to join that struggle or lead it”, as Blacks needed to “establish cultural and moral authority over the whole” (Khoapa, in Biko et al., 1972, p19). Integration would be inconceivable without socio-political change, and socio-political change is impossible without unity and integration.

Internalization

Internalization involves an adoption of a Black cultural identity and an exploration of one's own heritage (Jones, 1996, p192). This process of exploration may involve reading, research, and consultation with cultural leaders of the Black community. For Amiri Baraka, it involved starting a Black theatre and school. Biko showed this when developing the black consciousness Movement.

Integration

Integration involves willingness to work with Whites or with Blacks from different ideological standpoints in order to promote the interests of the Black community. In 1972, Ndamse supported this approach saying that “the Black man must be led to see and feel that he must make every effort possible to secure the friendship, the confidence, the co-operation of his White neighbour in South Africa” (Biko et al.,
Ndamse (Biko et al., 1972) felt that Blacks should fight for their own identity but should also unite with other South Africans. He said that we are “all children of the universe no less than the stars, they have a right to be there” (Biko et al., 1972, p12). The actions of Mandela also echo this sentiment (Mandela, 1994).

Malcolm X accepted White donations and was aware of and stressed White strengths. Baraka worked with Blacks who were pro-integration (Jones, 1996, p192). Biko rejected the notion of integration because he felt that it was impossible to achieve (Bernstein, 1978, p14). Biko felt he could only endorse integration if it was accompanied by a complete overhaul of the national systems. The government of national unity in South Africa and preceding talks are an example of integration (Mandela, 1994). Ndamse held an integrative view. He said, “We should hear less nonsense about D*****n, R******s and C******s and K****s. We should realise that every man, woman and child, no matter what colour or creed, is a vital component of a tremendous nation” (Biko et al., 1972, p12).

Milliones (1973) saw the preceding phases as one that leaders could move through progressively, but did not discount the chances that there would be fixation or regression.

Biko did move towards a shared vision for the future of South Africa, more attuned to the transformational leadership demonstrated by Nelson Mandela (Glad Mandela, 1994). This was evident in his last radio interview, given to the BBC in 1977 just before his arrest (Biko, 1977). In the interview, he expressed a need for South Africa to be transformed into a non-racial, egalitarian society.

He stated, “we believe in our country there shall be no minority; there shall be no majority there shall just be people” (Biko, 1977). He argued that all South Africans should have the same status and rights before the law. This meant that his ideology had evolved dramatically and he had in fact progressed through the stages listed.
Biko added that South Africans needed to “explore, as much as possible, non-violent means within the country”. He wanted to see unity amongst the liberation movements “I don’t believe for a moment that we are going to willingly drop our belief in the non-violence stance” (Biko, 1977, 16:00).

3.9 Conclusion
In this chapter, RE was introduced. This construct refers to the way that individuals evaluate their racial identity. South Africans may evaluate their race positively, possibly through black consciousness. Alternatively, negative RE could be a result of internalized racism, caused by racial socialization. South Africa still needs to deal with the residual racial inequity associated with the post-apartheid context. Apartheid South Africa resulted in racial classification of all South Africans and a racist society. This may have altered individual RE, but the transition to democracy may have begun to ameliorate the worst psychological consequences of apartheid.

One area of racial discrimination in South Africa is through disproportionate access to quality education (CHE, Nd). This is partially owing to the ongoing transition from apartheid and racial segregation. In Chapter 4, apartheid education is explored, as is the current status of skills development in South Africa.
4. HUMAN RESOURCE DEVELOPMENT (HRD) IN SOUTH AFRICA: CURRENT AND FUTURE CHALLENGES

4.1 Introduction

In the previous chapters racial evaluation, RE, and CSE were introduced. HRD is important to governments as well as to organizations and individuals (Naik, 2007). Humans are the key to ensuring both organizational and national success, and through HRD; individuals are enabled to fulfil their potential. This fulfilment of potential may be constrained by the psychological issues discussed in the previous chapter. It is important to ensure that all South Africans fulfil their potential if this country is to develop effectively, but the psychological and socio-economic consequences may constrain the achievement of human potential.

This chapter addresses the status of HRD in South Africa more than a decade after the first democratic elections and describes the practical process involved in developing learning interventions in a systematic manner. Before discussing HRD, it is important to be able to distinguish between learning, education, training, and development, and to understand performance. This chapter aims to provide a theoretical foundation to test learning. This is pertinent, as the Employment Equity Act (55 of 1998) compels South African employers to employ and train previously disadvantaged individuals - those who were potentially worst affected psychologically by racism and prejudice.

4.2 Affirmative Action and performance

Performance depends on learning and motivation in the workplace, and is an important focal point for human resources practitioners and industrial psychologists alike. Robbins and Judge (2007) cite three pre-conditions for performance, namely ability, opportunity, and motivation. If any of the three pre-conditions are lacking, then individuals will not be able to perform. The racialization of apartheid, and even post-apartheid South Africa, could have impeded the oppressed individuals’ ability to perform to their full potential. Training may have been lacking, but there may have also been psychological barriers to performance that were caused by the
experience.

Returning to Robbins and Judge’s (2007) three pre-conditions for performance, an individual may be motivated, but without the right opportunities, may never be able to perform. In South Africa, the Employment Equity Act 55 of 1998 was implemented to ensure that historically disadvantaged individuals would have an opportunity to gain employment. The act is based on the equality enshrined in the constitution and includes clauses that relate to equality, anti-discrimination, and affirmative action. The act seeks to eradicate unfair discrimination in the workplace and thus ensure that previously disadvantaged South Africans have the opportunity to perform (Du Plessis, Fouché, & Van Wyk, 2001). This was a reaction to the inequity in the workplace during the apartheid era where apartheid afforded preferential treatment to White males.

The Employment Equity Act 55 of 1998 compels employers to provide opportunities for Blacks, women and people with disabilities. They are compelled to retain and develop people from these ‘designated groups’ and to implement “appropriate training measures” (Du Plessis, Fouché & Van Wyk, 2001, p94). This should provide individuals with the resources to perform as laid out in Robbins and Judge’s (2007) performance triad of ability, opportunity, and motivation.

In order for affirmative action to be a valid intervention in South Africa, a number of conditions must be fulfilled. Firstly, the incumbents must be capable of performing in the positions to which they are appointed. Secondly, Human Resources Practitioners must provide opportunities for the incumbents to acquire the skills to perform. Finally, human resources practitioners must know how to effectively motivate these individuals. This is the post-apartheid Human Resources challenge in South Africa - to create a working environment that is conducive to performance from a diverse working population (Grobler et al., 2006).

One of the clauses in the Employment Equity Act 55 of 1998 outlines how to implement affirmative action in South Africa. It states that when two individuals are both suitably qualified, then employers must give preference to the historically disadvantaged individual. The definition of suitably qualified is broad, and includes
“formal qualifications; prior learning; relevant experience; or the capacity to acquire, within a reasonable time, the ability to do the job” (Du Plessis, Fouché & Van Wyk, 2001, p94). This means that assessment must be made of the individual's ability to do the job.

The clause relating to capacity for the acquisition of ability means that individuals will be employed who will need ETD before they will be fully able to do the job. To employ an equity candidate, suitably qualified individuals need only have the ability to learn. However, it is important to be able to identify any psychological factors that may impede individuals' ability to learn within a reasonable amount of time to do the job. If an individual has lowered levels of CSE and RE, they may not be able to learn as efficiently. The capacity to acquire skills is also dependent on the psychological state of the incumbent, and this could be an important feature to examine when making a selection decision.

4.3 Learning

Learning can simply be defined as “behaviour change owing to experience” (Chance, 2009, p22) where behaviour refers to the “actions and reactions of whole organisms” (Martin & Bateson, 1993) or the responses of individuals (Burns, 1991).

Most behavioural scientists agree that learning is an observable, more or less permanent change in behaviour that occurs as a result of a learner's interaction with a particular environment (Michael & Modell, 2003). Learning has already been defined as “any process that...leads to permanent capacity change and which is not solely due to biological maturation or ageing” (Ilberis, 2007, p3). A caveat must be added that although learning often does comprise immediate behavioural change, that is concomitant with practice, sometimes the learning results in latent capability. This latent capability may result in behaviour change at a later date (Hilgard & Marquis, 1940). Cognition may only be translated into behaviour at a later stage. In ETD, this translation of learning into behaviour is known as transfer of learning. Transfer of learning “is our use of past learning when learning something new, and the application of that learning to both similar and new situations (Haskell, 2001, p xiii).
In order for newly appointed incumbents to perform in the workplace, they will need some ETD. The extent of the intervention depends in part on the level of experience of the incumbent in the profession, and their exposure to work itself (Grobler et al., 2006). This means that new employees have to learn. The extent of the learning required will depend on their experience and their own capacity to acquire new skills. Another influence on the extent of effort in the ETD required will be the psychological state of the incumbent. Levels of CSE and RE may influence this psychological state. Learning is also needed in order for individuals to acquire new skills in the workplace and life, and this is the focus in this chapter.

Those who are suitably qualified but who lack the requisite training or experience will need psychological input before the ETD needed to function effectively in the workplace. The incumbent will need to be able to learn in order to perform on the job. Learning is the cornerstone of ETD.

Noe (2005, p41) provides a work-specific definition of learning. He defines learning as the “acquisition of knowledge by individual employees or groups of employees who are willing to apply that knowledge in their jobs in making decisions and accomplishing tasks for their company.” This definition is too limited because learning is evident in every aspect of human life, not just in the workplace. What Noe (2005) is referring to is the very specific application of learning to the workplace, and he does not capture the general application of learning to every aspect of human life. Learning is not simply study, or the acquisition of organization-specific knowledge. Learning can be described as “any process that...leads to permanent capacity change and which is not solely due to biological maturation or ageing” (Illeris, 2007, p3).

Weiss (1990, p.172, in Goldstein & Ford, 2002) concurs with a broader definition of learning, claiming that “learning is a relatively permanent change in knowledge or skill, produced by experience”. Most behaviour exhibited by humans is a result of learning. Learning does not only result in improved organizational performance and the other goals that authors like Noe (2005) focus on, but also results in many psychological processes within the individual.
Goldstein and Ford (2002) point out that although much learning is deliberate and constructive, learning can also result in antisocial behaviour such as substance abuse and racial hatred. Learning can thus result in dysfunction. This could be the case in terms of learned feelings of low CSE and RE.

Learning usually results in changes across three domains, namely the cognitive domain, the affective domain, and the behavioural domain (Goldstein & Ford, 2002). Existing knowledge, skills, and attitudes, such as poor self-perception, temper this change. In other words, some forms of learning that can create low CSE such as those caused by experiences of racism, could then impair the ability of the learner to successfully acquire new behaviour. This may actually result in self-fulfilling prophecies whereby the performance of the individual over the long term is lower, regardless of actual potential or ability. If individual performance is constrained by CSE and RE, then targeted interventions may ameliorate the situation and unleash individual potential.

Not only intelligence or technical aptitude contribute to success in life and in the workplace. This is why the notion of suitably qualified, as laid out in the Employment Equity Act (55 of 1998), is so tenuous. Those viewed as suitably qualified may not be suitably qualified when considering personality. Personality plays an important role. Elements of an individual’s personality, such as self-control and integrity, play a role in how an individual applies him/herself in the workplace (Werner et al., 2006). Personality is of interest in ETD because of the role it plays in influencing behaviour and individual performance. CSE may affect learning, as those with low self-efficacy may self-handicap because they doubt themselves. Overconfidence arising from unrealistic levels of CSE could also hinder learning.

Social learning theory posits that people do not passively acquire personality and behaviour- instead they engage in self-determining and regulating behaviour. This behaviour includes self-reinforcement and self-punishment. According to Bandura (1977, p vii) “social learning theory emphasizes the prominent roles played by vicarious, symbolic and self-regulatory processes in psychological functioning”. Bandura (1978) claimed that an individual's psychological functioning is a dynamic interaction between the environment, behaviour, and cognitive processes. One
could arguably modify individual psychological reactions to apartheid through the use of social learning theory.

The theory originated in an attempt to merge the more unconscious-based psychoanalytic approach with the stimulus-response type learning theories. The merged product was supposed to provide a more holistic perspective on human behaviour. Both approaches had so many proponents and detractors that this approach tried to take the ‘middle ground’ and create a working solution taking the best from both. Social learning theory provides an account of how human behaviour develops, which in turn uses the other two frameworks to explain why it happens (Grusec, 1992).

In terms of social learning theory, individuals participate in observation, modelling and receiving instructions, and in doing so, learning occurs (Bandura, 1977). Social cognitive theory argues that learning is a product of interactions between influences that are personal, behavioural and environmental (Wang & Wu, 2008). Personalities could have formed through learning as individual personality forces interacted with environmental influences in post-apartheid South Africa.

Personality plays a strong role in self-directed learning (Lounsbury, Levy, Park, Gibson & Smith, 2009). Furthermore, in 2008, Chamorro-Premuzic, and Furnham found that personality accounted for the relationship between academic performance and ability. Chamorro-Premuzic and Furnham (2009) later found that the impact of personality traits on learning styles was statistically significant.

Duff, Boyle, Dunleavy & Ferguson (2004) conducted research on social science students in Scotland (n=146) and found that between 22.7 percent and 43.6 percent of the variance in terms of approaches to learning can be accounted for by personality. This implies that personality does indeed mediate the relationship between ability and learning through the impact personality has on the behaviour we adopt in a given situation. The researchers concluded that learning approach is a subset of personality accordingly; apartheid, and post-apartheid South Africa’s influence on personality could also adjust the way individuals learn, in an OBET context.
4.4 Education, training and development (ETD)

This section will provide definitions and conceptualization surrounding the terms ETD. These three terms encompass the activities engaged in to expose learners and trainees to specific experiences and prepare them for future assignments in the workplace and in life. Human Resource Development practitioners choose these experiences to stimulate the acquisition of new knowledge, skills and attitudes. In other words, ETD is the exposure of learners to specific experiences to bring about change in behaviour (learning) (SAMDI a, 2007).

A paradigm shift has occurred in terms of understanding ETD. This is because there is heightened awareness of the difference between the way adults and children learn. Lifelong learning has also gained precedence in terms of learning being integrated into all developmental phases of a person’s life and not seen as purely existing in educational institutions in the early stages of a person’s life. Once someone has learned how to learn, then he or she is expected to continue to learn throughout his or her life. Learning is not confined to the classroom, but constantly occurs in personal and professional context (SAMDI, 2007a).

Education is formal learning of a general nature aimed at equipping the learner with skills, knowledge, and attitudes that can be useful across a number of contexts. The aim is the development of behaviours that are useful across all walks of life (SAMDI, 2007a). There is a strong communications component in education in terms of verbal, graphic and numerical communication.

Erasmus, Loedolff, Mda & Nel (2007, p2) define education as the knowledge, skills and attitudes that an individual may need in the “ordinary course of life”. The ranges of learning interventions are aimed at broad topics with a broad purpose. Literacy and numeracy are educational topics, as they form the foundation for further learning across a number of disciplines. The philosophy is that this is preparatory exposure to enable future training and development and future
occupational requirements (SAMDI, 2007a). In terms of the Employment Equity Act 55 of 1998, education refers to the formal qualifications described in the definitions of suitably qualified. The responsibility for education is often that of the state, subsidised by the taxpayer, although employers have addressed some of the basic educational deficits in South Africa, through Adult Basic Education and Training (ABET). Education for historically disadvantaged individuals was substandard during apartheid, with little incentive for the practical application of what was learned in school (Kallaway, 2002).

The previous paragraphs explained the broad, preparatory nature of the learning associated with education, which is in contrast to the concept of training, which is, according to Noe (2005, p3) “a planned effort by a company to facilitate employees’ learning of job-related competencies”. What stands out in this definition is the direct relationship between training and the job, and education that is applicable across a number of jobs. The trainable competencies include job-related knowledge, skills, behaviours, and attitudes. The ultimate goal of the intervention should be to enable the organization to enjoy competitive advantage. A secondary goal for training is the development of the employee as a means to foster retention and satisfaction. The Employment Equity Act 55 of 1998 compels employees to develop and retain individuals from designated groups, so training is important to employers (Du Plessis, Fouché & Van Wyk, 2001). In terms of affirmative action, training develops a ‘suitably qualified’ individual from a designated group selected for a job, who has the capacity to acquire the skills. CSE and RE could affect OBET. Training aids the completion of specific tasks associated with a particular job. All incumbents must be capable of learning all tasks associated with their particular job (Du Plessis, Fouché & Van Wyk, 2001). If RE does impact on learning through CSE, then remedial measures will have to be designed.

Goldstein and Ford (2002, p1) explain that training is “the systematic acquisition of skills, rules, concepts, or attitudes that result in improved performance in another environment”. Goldstein and Ford’s definition has its merits as it specifically mentions that training must be systematic, i.e. that it must include feedback and must be carefully considered. The systematic nature of training distinguishes it from day-to-day learning in that it is not a haphazard process. Training is very different to
personality development, whereby behaviour potentially changes simply by chance or circumstance. If training is systematic, then it is more likely to be valid and reliable. If training is systematic and not haphazard, then it alters specific patterns of behaviour, or facilitates learning, in order to bring about behavioural change to improve organizational performance (through improved individual performance).

It is now necessary to look at development, having already discussed training and education. Development is more to do with general growth in the employment and organizational context (SAMDI, 2007a). Noe (2005, p266) claims that “Development refers to formal education, job experiences, relationships, and assessments of personality and abilities that help employees perform effectively in their current or future job and company”. When one examines this definition, it implies a fusion of education, training, and personal development. The definition is similar to that of training, in that the development can aid current performance, but is also similar to the definition of education in the sense of the portability of the knowledge, skills and attitudes gained to other environments/workplaces (Noe, 2005). In South Africa, it is essential that the organization develop all employees in order to foster development and growth in the country (Aspin, 2007). Those from designated groups will also need specific attention owing to our legislative environment.

The other key element of Noe’s (2005) definition in the paragraph above is the focus on the individual's needs as an individual. This is noteworthy, because workplace training generally aims at clearing a deficit between the desired job performance as per the job analysis and description and actual individual performance. This deficit is identified during the needs-assessment phase (known by many different names) (Noe, 2005; Goldstein & Ford, 2002). Development therefore incorporates the psychological concept of development on an individual level. Different South Africans will have different needs in terms of development. Some may need diversity or sensitivity training because of the impact of apartheid (Grobler et al., 2006). The improvement of RE may be a necessary developmental intervention in South Africa.

From a psychological perspective, development spans the entire lifespan of an
individual, not just their time in the world of work. This focus on the entire lifespan starts at conception and ends at death. This is of value because the human who enters the workplace is the product of all the experiences (learning) up to that point, and may well have been profoundly influenced by events leading up to that point (Parke & Gauvain, 2009). In fact, issues like maternal nutrition, radiation, maternal illnesses, and medication, alcohol, and drugs can have a lasting impact on an individual’s behaviour. Other experiences compound these influences as a neonate, infant, and child, adolescent, and adult. Apartheid could have had a significant impact on individuals throughout their development as evidenced by their CSE and levels of RE.

4.4.1 “Bantu education”

This section describes “Bantu education” and some of the events leading to South Africa’s current skills profile. The Bantu education Act, no 47 of 1953 (Disa a, 2009), led to the systematic dis-empowerment of the majority of South Africans through limiting their opportunities to learn and apply that learning to the development of the nation. The inhibition of learning would have had consequences on a personal and professional level on the majority of South Africans, even those partially or completely educated after the dismantling of apartheid. Those who were partially or completely educated after the dismantling of apartheid would have been socialised and educated by those who did experience the brunt of Bantu education.

The Bantu education Act no 47 of 1953 begins by defining a ‘native’ as any “person who is or is generally accepted as a member of any aboriginal race or tribe in South Africa” (Disa a, 2009, p258). It also delineates native schools as schools solely for the instruction of ‘Bantu’ individuals or ‘Bantu’ trainee teachers. The new school system emphasised the learning of manual skills (Ntantala, 1960).

With the enactment of the Bantu education Act, Black education was placed under the control of the central state, removing control from the provincial administrations which were controlling education until that point, and who continued to control White education (Disa a, 2009).
After the enforcement of “Bantu education”, all provincial Black schools became government schools. All private schools had to register with the state. The registrations could be withdrawn if the school was not seen to be “in the interests of the Bantu people or any section of such people or was likely to be detrimental to the physical, mental or moral welfare of the pupils or students attending or likely to attend such school” (Disa, 2009, p266).

The Bantu education system centralised control of primary education, secondary education, teacher training; vocational training and night schools (Ntantala, 1960). The newly formed administration was in a state of chaos for some years after the Department of Bantu Administration took over educational administration from the provinces. Bantu administration changed the face of Black education in South Africa forever. Many mission schools were either severely diminished or closed and placed the focus of training on teacher and vocational training. Many bastions of Black education in South Africa such as the Lovedale Institute were never the same again. The state claimed community schools previously run by communities in conjunction with the church. Registration was refused for many of the Roman Catholic private schools (Ntantala, 1960).

The Bantu Administration Department banned private institutions from running night schools for Blacks. The state gave instructions for the other providers to apply for permission to run night schools. When the other providers did apply for permission to run night schools, they did not get a response (Ntantala, 1960). This meant that those working had little recourse to opportunities to improve their academic qualifications or acquire new skills. Today there is Adult Basic Education and Training (ABET) offered in the workplace to accommodate those who missed primary schooling during apartheid (Organization for Economic Development and Co-operation, 2008). ABET was negligible under the apartheid regime. The educators of today’s young adults were educated under Bantu education.

In terms of the Bantu Education Act, the Minister of Native Affairs was empowered to prescribe the syllabus for Black learners across the country (Disa a, 2009). It was this section of the Bantu education Act that later sparked the Soweto Uprising on 16 June 1976. The Transvaal government issued a directive that
Afrikaans was the new medium of instruction (fifty percent of the syllabus in Afrikaans). This was to be implemented from the last year of primary education in Black schools in the former Transvaal (Strydom, 1974) and this sparked unrest in Soweto. The state dismissed a number of teachers because of their opposition to Bantu education in the years following the promulgation of the Bantu education Act (Ntantala, 1960). The Soweto uprising increased support for the anti-apartheid movement, but also resulted in a ‘lost generation’ of learners who did not receive an adequate education because of the protests and lack of school-attendance (Houser & Shore, 1997). Those who experienced the unrest of the 1970's and 1980's are the adults who raised the current generation of students. The ANC principal of 'liberation before education' achieved liberation at the expense of education.

The apartheid educational system was highly stratified, with the best educational institutions reserved for Whites and Blacks relegated to underfunded, third-rate institutions (Nkabinde, 1997). The White universities rejected the Bantu Matriculation Certificate as a means for entrance into White universities (Ntantala, 1960). This could have been because the syllabus had lost its academic focus and because of the under-skilled educators in the Bantu education system. This may have sent a negative message to Blacks about their worth intellectually. It was yet another component of the system which tried to stratify South African society along racial lines and affected RE. Aspirant Blacks were now indirectly sent messages that they were not good enough to study at White universities, no matter how good their marks were.

In 1959, on the 19 of June, the state passed the Extension of University Act (no 45). The act gave the minister of Bantu education the authority to decide which colleges should be for which specific racial groups in South Africa. Thereafter, the state formed separate Colleges/Universities for separate racial groups. The state declared the prestigious University of the Witwatersrand and the University of Cape Town off-limits for Blacks without a permit from that point on. The Extension of University Act was repealed in 1988 by section 21 of the Tertiary Education Act (no 66 of 1988) (South Africa, 2009).

In Ntantala’s (1960) opinion, for vocational, primary and secondary education,
the Bantu education Act was aimed at lowering standards and was focussed on quantity and not quality. This may explain why the traditionally Black higher education institutions had systemic quality issues. These institutions, placed in geographically isolated, rural areas were under-resourced and badly administrated. One such institution is the University of Zululand.

The University began as the University College of Zululand in 1960. In 1970, the College gained University status. In the 1980’s and particularly 1983, political violence severely impaired the university’s ability to function effectively, with violence killing six students in one night alone in 1983 (Leach, 1986). This is but one example of the challenges facing the ordinary Black South Africans who sought a tertiary education. The University of Zululand was perceived to be Inkatha-led and, in the 1980’s the perception was that the University was Zulu-led. The current students are still predominantly Zulu (University of Zululand, 2009). The strong cultural and ethnic unity may have caused strife and conflict but also created a group with a strong group identity - an identity that may have shielded its members from the worst psychological impact of apartheid.

As a result, a lost generation exists comprising those who only had recourse to Bantu education, a generation that has not enjoyed access to the current educational institutions and does not have the skills needed in the formal sector. Strangely, though, this group enjoys higher employment levels than those who have completed matric recently, largely because of their work experience and the fact that they are prepared to do almost any type of work (Statistics South Africa, 2003). On the supply side, educational requirements for teaching qualifications were lower than the current Matric level and the Bantu education Act (Ntantala, 1960) undermined the standard of teacher training- these teachers are still teaching in the South African training environment and these are the teachers who taught the current generation of younger adults. Those coming through the system did not receive quality education, posing problems for South African HRD. In the 1980’s, there was growing dissatisfaction with the standard of teaching and learning in Black schools in South Africa - this resulted in increased protests and unrest (Leach, 1989). In the early 1980’s the average ratio of students in Black schools was 1:42 whereas in White schools the ratio was 1:18. The sample in this study...
would have experienced the last years of this mode of education, and also would have been educated by products of the Bantu education system.

There are cultural and attitudinal implications of apartheid still evident in contemporary HRD. Students from previously disadvantaged backgrounds shy away from maths, science and engineering, preferring instead to study softer subjects- a consequence of sub-standard teachers (Stuart, 2008).

Farms, mines, homes and factories needed unskilled, cheap labour to drive the economy, the type of labour that did not need high levels of education. There was strict job reservation that protected White skilled workers from any competition and provided a strong disincentive to Blacks to receive training (Wilson, 1972). This was especially evident on the mines (Leach, 1989).

South Africa’s economy was based on exploiting vast natural resources using cheap labour (Beinart & Dubow, 1995), a strategy that began to flounder in the early seventies (Gelb, 1991). The ongoing use of natural resources as a basis for the economy is demanding high skills and capital intensity, and SA is still seeing low levels of economic growth and increased levels of unemployment (Statistics South Africa, 2009). South Africa went from trying to create a large unskilled labour force to needing highly skilled workers. There therefore is a demand for skills that cannot be supplied given the current HRD profile of the country. If RE affects learning then it is imperative that this be remedied so that South Africa can develop enough of the right kind of skills to survive internationally.

4.5 Skills profile

Following the information presented above, it is not surprising that an estimated 27 percent of the economically active population of South Africa is illiterate (grade 5 or lower). This 73 percent literacy rate is higher than Nigeria’s (61%), India’s (55%) and Mozambique’s (42%). However, the rate is lower than Zimbabwe’s (87%), Mexico’s (84%), Malaysia’s (86%) and even Brazil’s (90%). It is unsurprising that the United States of America (USA), United Kingdom (UK) and Australia all have literacy rates in excess of 99% (Erasmus et al., 2007). Locally, the Eastern Cape and Limpopo provinces have the lowest literacy rates, with a clear relationship
existing between education levels and employment in the formal sector. This is the direct result of years of Bantu education and racial marginalization.

Of these, 97 percent of men and 85.7 percent of women can read and write - a noteworthy discrepancy that is suggestive of unequal gender opportunities with regard to education (Erasmus et al., 2009). In addition, only 50 percent of South Africans live above the poverty line and this has an implication for families’ ability to pay for education and to improve literacy rates in future. There still is immense inequality in South African society as a result of apartheid.

4.6 The youth

Young people in South Africa are struggling to transit between high school and employment or even further employment opportunities. A distinctive issue is the perception that South African Further Education and Training (FET) does not provide the youth with the requisite skills to be trained or educated further and that they may not be able to meaningfully contribute to the economy (McGrath, Badroodien, Kraak & Unwin, 2004). This could still be a throwback to the focus on vocational and trade type ETD seen in the apartheid era.

Problems faced by the ETD system in South Africa include low participation rates in further and higher education, repetition (failing of subjects) and drop-outs (leaving full time education). A high number of repeaters eventually drop out, with a large number of scholars dropping out because of a lack of academic success or because of poverty and HIV/AIDS, and because some learners question the efficacy of education in an environment with very high unemployment levels (International Labour Organization, 2006).

The high number of drop-outs in FET and the lack of matriculation exemptions (an entry requirement into higher education) have affected higher education enrolment, leading to skills shortages. The drop-out and failure rates have negatively affected graduation rates of the students who do enrol. This poor throughput (entry-passing-graduation) is attributable to supply issues stemming from the Bantu education Act, where many teachers are of a low quality (Laugksch, 2003).
The teachers who were trained during the Bantu education system are now teaching learners on a common national syllabus that is more advanced than the one they themselves covered when studying. The FET system is simply not providing higher-education-ready students after the FET phase is complete (Ballim, 2010). A further problem is the reluctance of students to enrol for qualifications in science, engineering, and technology, owing to lack of preparation in high school. Far too many students graduate from the humanities and social sciences, when the nation needs scientists, engineers, and medical practitioners. The lack of maths and science input in high school is leading to problems through higher education all the way to the labour market. Students studying subjects that require written communication and group work are performing as well as students before the National Senior Certificate was introduced, however, students are not faring as well in subjects based on mathematics and science (Ballim, 2010).

FET colleges provide education up to grade 12 levels and learners frequently choose them after have already come through traditional FET up to grade 12. Learners enrol in FET colleges hoping that this will make them more employable. Unfortunately, the statistics indicate that FET college graduates struggle to find work, and that Black graduates were amongst the worst affected (Stuart, 2008).

4.7 Unemployment
The country’s growth in gross domestic product slumped from 5.1 percent for the first quarter of 2007 to only 2.1 percent for the first quarter 2008 (Statistics South Africa, 2008). In 2009, it sat at 0.9 percent in the third quarter (Statistics South Africa, 2009). Higher oil prices, and Eskom’s incapability of providing adequate power for South Africa’s needs are just two of the contributing factors to this situation. Employment levels in South Africa continue to be low with 23 percent unemployment using the expanded definition in 2008 rising to 24.5 percent in the third quarter in 2009 (Statistics South Africa, 2009) and then dropping to 24.00 percent by the last quarter of 2010 (Statistics South Africa, 2011). Black females are most likely to be unemployed in South Africa. Again, this is at least in part owing to the way that ETD was destroyed for Blacks by the state in the apartheid era.
There is a high probability of the young adults of South Africa being unemployed. The lack of pre-employment training available aggravates youth unemployment. Many of the youth lack the skills necessary for employment in the informal sector (International Labour Organization, 2006). The current FET system is equipping scholars with second-rate ‘pure’ academic education, and neglecting vocational training that could translate into self-employment. This aggravated by the aforementioned reluctance on the part of learners to venture away from ‘soft subjects’.

Grade 11 appears to be the critical cut-off for unemployment as 71 percent of those who were unemployed in 2006 had grade 11 or lower (UCT, 2006). Matriculants comprised 26 percent of the unemployed and graduates comprised only three percent of the unemployed. Of those graduates who were unemployed, 82 percent were diplomats. Thus, we can conclude that possession of a tertiary degree does in fact contribute to employability in South Africa.

One cause of Black graduate unemployability could be because these learners accommodated primarily in under-resourced traditionally Black institutions, and may not have been equipped with maths and science at FET level (UCT, 2006). This lack of input in maths and science seriously limits qualification choices for students.

For every new job created between 1995 and 1999, three people entered the workforce (UCT, 2006). In South Africa, unemployment strongly correlates with age. Out of the total population of unemployed people, 56 percent is under the age of thirty, with 30 percent being between 15 and 24 years old. This implies that FET is not providing young people with the skills they need in order to find work. Those who are 17 years old constitute the largest proportion of young people who are unemployed (International Labour Organization, 2006). The Black and coloured population are seeing the highest population growth in South Africa, but unfortunately also see the lowest absorption into the labour market (STATS SA, 2008). There are residual institutional effects of apartheid evident in the educational opportunities and socio-economic environment that Black young people grow up in (Zuern, 2011). This environment implies that even younger generations are still being affected by the impact of RE on CSE.
Of those who do complete matric, 66 percent will be unable to find work. Of those with a post-graduate qualification, 50 percent will be unable to find work, but only 15 percent of those with a post-graduate qualification will not be able to find work (James, 2009). One challenge is ensuring that there is a match between skills development and skills actually needed in the job market. There is a significant problem in South Africa with the mismatch in skills demanded and supplied in the country. The Employment Equity Act’s affirmative action prescriptions complicate the problem. Each employee must be able to perform optimally and psychological challenges involving CSE and RE could be yet another aggravating factor.

To summarise, the challenges facing HRD in South Africa are impacting nationwide on the slow economic growth and employment levels. In the fourth quarter of 2010, Gross Domestic Product was 4.40 percent and unemployment sat at 24.0 percent of those of working age who were actively seeking work (Statistics South Africa, 2011).

One of the problems with labour absorption amongst the youth is that the opportunities for apprenticeships are minimal, and learnerships (the state’s substitute for apprenticeships) were not as prolifically implemented as one would hope before 2005 (Stuart, 2008).

4.8 The importance of learning evaluation
Evaluation can be defined as “the systematic process of gathering and analysing data and other objective information to determine the quality, value, and effectiveness of a learning intervention within the context of the organizational setting with the specific aim of initiating certain actions” (SAQA c, 2009, p1).

In terms of SAQA’s criteria for sound evaluation of training, an individual must firstly plan and prepare for the evaluation and must then collect and record the data. After this planning and collection is complete, the data must be analysed and interpreted and an evaluation report written. The evaluator reviews the evaluation process after completion (SAQA c, 2009).
Apartheid and the skills deficit have had a negative impact on productivity and quality in South Africa and the aim of OBET is to impact at this level, so it is a worthy focus of learning evaluation (Grobler et al., 2006). For the research, the process of acquiring new knowledge was the focus for the experiment, not specific occupational outputs- more the generic capacity for behaviour change, with specific focus on cognitive change.

Learning evaluation is essential to determine whether learners have achieved the stated outcomes of the learning intervention. Learning evaluation also provides feedback that can improve ETD in future and justifies the cost of ETD through measuring the return on investment (Landy & Conte, 2007).

ETD practitioners often avoid evaluation because they worry that money will be cut if they cannot prove the effectiveness of their ETD and there is a difficulty in demonstrating return on investment (ROI). (Landy & Conte, 2007).

Evaluation is important, because it keeps ETD relevant through correct modification and selection and ensures that ETD aligns with learning needs. Valid evaluation data justifies why ETD is useful. Learning evaluation is there to assess whether ETD in fact improves performance and meets the stated objectives. Evaluation also verifies which methods of ETD work best (Goldstein & Ford, 2002, p141).

After evaluation, it should be possible to know whether a change has occurred. It also shows whether that change is attributable to the learning intervention and whether the same sort of change will happen if others go through the same learning intervention (Goldstein & Ford, 2002, p141).

4.9 Learning measurement and evaluation of learning

In this section, the experimental design for learning will be explained as well as the pre-testing and post-testing procedure. It is important to measure how much learners have learned during a learning intervention and how this learning affects organizational performance. Evaluation achieves this. If someone has low CSE and RE, then it is possible that this psychological state will reduce their performance...
during OBA (Goldstein & Ford, 2002). OBA is the current learning evaluation approach in South Africa. If an outcome is an expectation of what someone will have learned after OBET is completed (Driscoll & Wood, 2007), then assessment is an opportunity to demonstrate the achievement of outcomes, in other words, an opportunity to demonstrate that learning has occurred. Outcomes specify what individuals have to know, understand, and be able to do after OBET is completed. Outcomes are specified in terms of cognition, attitudes, and behaviour or knowledge, skills, and attitudes (SAQA, 2010).

Experimental design measures or evaluates the impact of learning interventions in a concrete and quantifiable manner. When measuring the impact of a learning intervention, one can use a post-test only, which measures whether learners have met outcomes (the same as learner assessment) (Goldstein & Ford, 2002). The major drawback is that one has no way of proving that any behaviour change or learning was attributable solely to the learning intervention, as time, work experience, or previous knowledge may all play a part in determining a post-test score.

The post-test, or summative assessment as it is known in Outcomes Based Assessment (SAQA, 2010), does not provide enough data to prove that the learning intervention has been effective in its own right. It simply assesses whether learners can now demonstrate the desired outcomes of the learning intervention. The trainer is empowered to decide whether learners need further intervention before they achieve the outcomes (Goldstein & Ford, 2002). The summative assessment or post-test is an opportunity for learners to demonstrate the achievement of outcomes, and not a valid opportunity for the facilitator to demonstrate that the learning intervention has resulted in, or can be given full credit for the outcomes being achieved. For trainers to fully justify the learning intervention, more sophisticated methods of evaluation are required, some of which will be described in the following sections.

Another, somewhat more valid approach when evaluating learning, is the use of a pretest-posttest design, which ascertains whether the change in behaviour is attributable to learning intervention or not. This method gives evaluators a baseline
(pre-test) to work against when evaluating learning. These techniques are pre-experimental, as they do not include a control group (Goldstein & Ford, 2002). The difference between scores in the pre-test and post-test is used to demonstrate the extent to which learning has been achieved during the learning intervention. Again though, there are threats to validity posed by outside forces, time, and experience, all of which may play a role in the overall success of the learner in assessment.

Experimental learning evaluation at least partially isolates the actual learning intervention’s influence on behaviour change from the other environmental influences on behaviour change. The first experimental design involves a control group and an experimental group both completing pre-tests and post-tests (Abrahams, 2008). The experimental group undergoes learning intervention and the control group does not. This succeeds in ruling out environmental issues, time, and experience in measurement of the behaviour change.

The experimental group undergoes the learning intervention and one can measure the impact that the intervention has had by comparing behaviour change between them and the control group (Goldstein & Ford, 2002), this can be done using simple student t-tests or analysis of variance (ANOVA). Trainers assign learners to a group randomly to further guarantee reliability.

The Solomon four-group design is a more comprehensive evaluation process reference here. It still has a control group and an experimental group, but also includes a group that participates in the learning intervention and a post-test with no pre-test (to isolate the impact of the pre-test or test sensitization on behaviour) and also a group which only receives the post-test to account for any environmentally determined behaviour changes. The Solomon four-group design is the most rigorous experimental design, as it controls for numerous threats to validity.

Many researchers avoid the design, as they erroneously believe that very large samples are needed for each of the four groups involved. This is not true, as small samples can be used for the Solomon four-group design (for example, n=52, or 13 per group in Braver and Braver’s research, 1988).
Table one illustrates four experimental designs. The pre-test/post-test design and the Solomon four-group design were already briefly discussed. Non-equivalent group design is when two similar groups are used for the samples, for instance separate, but highly similar classes at the same institution. Time-series design involves repeated administration of the same assessment to measure change over time (Goldstein & Ford, 2002).

Table 1: Experimental Designs (adapted from Goldstein & Ford, 2002)

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<thead>
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<th>Design</th>
<th>Description</th>
</tr>
</thead>
</table>
| Pre-test/Post-test Control Group design | Learning intervention = x  
Random sample = (R)  
(R)  T1  x  T2  
Experimental group  
(R)  T1  -  T2  
Control group  
Learners are randomly allocated to either the experimental group or the control group.  
The experimental group participates in the learning intervention.  
The control group does not |
| Solomon Four-Group design       | (R)  T1  x  T2  
(R)  T1  -  T2  
(R)  x  T2  
(R)  -  T2 |
| Time-series design              | T1  T2  T3  T4  x  T5  T6  T7  T8 |
| Non-equivalent control group design | T1  x  T2  
Experimental group  
T1  -  T2  
Control group |

Pre-test/Post-test designs aim to measure change in variables (Dimitrov & Rumrill, 2003). In this case, the change is a relatively permanent change in behaviour or learning. The more rigorous the experimental design, the less likely the risk of threats to validity, this is why the researcher selected the somewhat onerous
Solomon four-group design.

The learning intervention must be valid. Learning validity questions whether learners can perform the outcomes specified. Learning validity is the evaluation of whether the intervention has achieved what it was supposed to achieve. Transfer validity asks whether learners can transfer what they have learned into the real world. Intra-organizational validity asks if the intervention works across different groups in the same organization and inter organizational validity checks whether the intervention transfers to other organizations (Goldstein & Ford, 2002). Learning interventions must enable learners to apply what they have learned when back on the job or into real life situations.

A number of internal and external threats to validity exists. However, Solomon's four-group design can overcome most of these. History refers to any events that may occur between the pre-test and post-test that may affect the results (the difference between the post-test and the pre-test) (Ohlund & Chong-Ho, 2009).

Maturation refers to the processes internal to participants that result in their scores improving over time because of their life-experiences, not because of the treatment. Finally, testing refers to the impact that taking the first test has on future test results (Ohlund & Chong-Ho, 2009).

The above-mentioned threats are threats to internal validity. A noteworthy threat to external validity is the reactive or interactive effect of testing. Pre-tests may increase or decrease subject sensitivity/responsiveness to an experimental variable (Ohlund & Chong-Ho, 2009). All of these factors are addressed by the multiple samples drawn and the configuration of treatments and assessments used in the Solomon four-group design. Solomon's design allows for controlling for the effects of testing and treatment. The advantage is that the the potential for generalising the results is greatly improved, although in an exploratory study this is not the major aim.

4.10 Conclusion

Education is broad, preparatory learning, designed to help people in all
occupations. Training teaches specific skills that are necessary for the performance of a job. Development is formative and can be occupational and organizational. All this aims to achieve a relatively permanent change in behaviour, i.e. learning. Learning also accounts for personality formation, but this process is not systematic and intentional.

This chapter described the historical legacy of apartheid as it applies to HRD. The Bantu education Act divided the nation racially, then provided unequal access to opportunities for self-development.

SA now faces a broad spectrum of skills shortages and inequality between the rich and poor, with a high number of citizens living below the poverty line. The Government has enacted skills development legislation to try to compel employers to develop their staff.

An outline of the learning experiment has been presented. The actual method adopted is specified in Chapter 5. In the next chapter, the research method is presented, which was used to test the hypotheses that were described in this chapter.
5. RESEARCH METHOD

5.1 Introduction to this chapter

It is possible that there is a relationship between CSE and RE. These two variables could also be related to an individual's capacity to learn new skills given a reasonable amount of time. Achievement in OBA could potentially be related to CSE, RE, and learning.

Racism and racial inequality may have shaped Black South Africans’ personalities in terms of their RE and CSE. Zulu South Africans may have drawn on their ethnic heritage as a source of identity. RE and CSE may relate to learning and OBA. The process adopted in the testing of these propositions is delineated in this chapter.

The research questions, research hypotheses, and underlying assumptions will be specified in this chapter. These hypotheses deal with the testing of the relationships between CSE, RE, learning, and OBA. The testing of these relationships is presented in chapters 5 and 6. Chapter 5 covers the research method. Chapter 6 presents the findings of the study for all six hypotheses.

5.2 Chapter overview

The variables and concepts used in the study are defined once again in this chapter to remind the reader of them and also to clarify how they are operationalised for the purposes of this study. These variables are CSE, RE, learning and OBA. These definitions are further expressed as operational variables. The research design follows. The specification of the design includes details of the research instruments in terms of their backgrounds, scope and scoring. A description of the sample design follows. The design information includes a description of the population and sampling techniques used.

Having described the sampling technique, the data collection process follows, then the data capturing, cleaning, and coding process. The researcher then ensures the reliability and validity of the measure. Scoring refers to the process of turning
raw data into the operational variables one is looking for. This chapter includes a description of the scoring techniques for the instruments used in the study.

After scoring the responses, the data derived is ready to be analysed. One section provides details of the data analysis processes adopted in the study. Subsequent to the provision of details of the data analysis, the details of shortcomings of the study are provided. Ethics are increasingly important in research, especially when human subjects are involved (Terre Blanche, Durrheim & Painter, 2008). Ethical issues pertaining to this specific study are covered in this chapter.

The next section of this chapter deals specifically with hypotheses 2, 3, 4, 5, and 6. These hypotheses address relationships between CSE, RE, learning and OBA. Details of the hypotheses pertaining to these relationships as well as a detailed rationale for the study are provided.

The learning experiment is discussed next. There is also an outline of the processes in the measurement of learning. Solomon’s four-group design is described and then used to test the validity of the learning intervention. There is a detailed exposition of the methods adopted in the learning experiment, including sampling, measurement of CSE and RE, pre-testing, learning intervention, and post-testing. Again, the ethical implications and considerations of the study are covered by means of an overview of the structure of the research method chapter of this thesis, which covers six hypotheses and four variables.

In phase one, the relationship between CSE and RE is tested. In phase two, RE and learning are measured and correlated. CSE and learning are also measured and correlated. In phase three, CSE is correlated with OBA. The relationship between RE and OBA is also tested. Finally, the relationship between learning and OBA is tested. Each phase is built upon the previous phase, with phase one being an exploration of the potential relationship between CSE and RE, and phases two and three testing the relationship between the variables in a higher educational context.
5.3 Formulation of research questions and hypotheses

The literature surveyed and discussed in chapters 2, 3, and 4 point towards a number of assumptions. These assumptions form the basis for the empirical component of this study, and are summarised below.

The first assumption is that, when individuals experience oppression and racial prejudice, this may change the way they evaluate their race and their subsequent behaviour. Racism may have caused Black South Africans to either experience negative RE with concomitant behavioural and psychological consequences, or they could have defended their racial identity and bolstered themselves psychologically through drawing on sources of individual racial identity and pride.

CSE refers to an individual’s perception of their own worth and capability and is based on four factors: namely self-esteem, locus of control, self-efficacy, and neuroticism/emotional stability (Judge, Van Vianen & De Pater, 2004).

CSE and its sub-factors were linked with both academic and on-the-job performance. Numerous examples are cited in Chapter 2, showing that ability certainly is not the sole determinant of academic performance, CSE is important also (Rosopa & Schroeder, 2009).

There are legislative imperatives to employ and develop Black persons (see the Employment Equity Act, 55 of 1998 and the Skills Development Act, 97 of 1998). If apartheid did affect CSE, either directly or indirectly through RE, and these variables interact with the learning of Black South Africans and their achievement in OBA, then the country’s Employment Equity and OBET targets will not be met. Learning may have been affected by RE or CSE. This, in turn, may affect the OBA results seen in OBET (SAQA, 2010). If OBA is a valid assessment of performance in learning, then it should correlate with learning. However, achievement in OBA is also determined by personality traits that mobilise individual ability (Robbins & Judge, 2007). Achievement in OBA therefore could be dependent on RE, CSE and Learning. There could be a symmetric relationship between the variables, where achievement in OBA boosts RE and CSE, and in turn increases the likelihood of future achievement.
Figure 2: Conceptual Model

Figure two offers a conceptual model for the potential linkages between the variables examined in this study. Owing to the exploratory nature of this study, it is not possible to determine the direction of the relationships at this point, therefore the relationships are symmetrical because the research is exploratory (Bailey, 1994). The model is provided purely to offer some conceptual clarity. The relationships tested are detailed below:

- RE and CSE;
- RE and learning;
- CSE and learning;
- RE and OBA;
- CSE and OBA;
- Learning and OBA.

5.4 Research Questions

The preceding chapters covered existing theory and laid the foundation for the research questions that follow. For theories to be of any utility scientifically, the theory must conform to a number of criteria. First, the theory must be comprised of facts combined or incorporated into an internally consistent cognitive composition (Wilson, 1978).
Second, for theory to be useful for scientific research, the theory must actually be amenable to some form of scientific or experimental test. Third, the theory must drive the search for new knowledge, and, finally, it must fit in with existing knowledge (Wilson, 1978). The researcher used these principles in the exploration of the relationships between RE, CSE, learning, and OBA.

Based on the literature, research questions were formulated. These research questions centre on the interface between CSE and RE and these two variables’ relate to learning and OBA.

The first research question, therefore, is:
*Is there a relationship between CSE and RE?*

This research interrogates any link between an individual's CSE and RE.

Racism and racial inequity may have affected individual CSE through affecting RE during racial socialization. The apartheid and post-apartheid environments discussed in the previous chapters may have sent messages to Black South Africans that changed their evaluations of themselves from and individual and racial perspective, or may not.

The alternative is that there are innate predispositions within people that determine how much influence racial environmental influences have on their CSE. Those who were predisposed to neuroticism and low self-esteem may have had lower RE and CSE. Because of this as they may be more susceptible to environmental influences such as racism.

Racial socialization may have had little impact on individual CSE through RE if individuals had strong social networks, socialization and social support. Those who were naturally psychologically robust may have fared better in terms of racial psychological influences; this may include people like Biko (1978) and Mandela (1994).

This research question was tested using quantitative means during phase one.
through a questionnaire measuring both variables, which was analysed using correlations and Chi-square statistical tests.

The second research question is as follows:

*Is there a relationship between CSE and learning?*

This question seeks to explore whether CSE has an impact on learning, in light of the provisions of the Employment Equity Act (55 of 1998). This question asks whether having high CSE makes individuals more efficacious in learning than those with low CSE. To answer this research question, the researcher drew a sample and measured CSE during phase two of the research.

After calculating CSE scores, the researcher conducted a pre-test to assess baseline levels of knowledge in a predetermined subject area. The researcher then designed and facilitated a learning experience, and then conducted a post-test. The difference in the scores between the pre-test and post-test converted into a gain-score indicate the efficacy of the learning experience and the difference in success levels between those with high and low CSE indicates the extent of the impact of CSE on learning. These differences were tested using Chi-square analysis and correlation.

The researcher divided the sample into groups of those with low CSE, moderate CSE, and high CSE. The difference in the scores allocated between the pre-test and post-test were correlated with the CSE score to determine the relationship between CSE and learning. This experiment could not identify the direction of the relationship; it just tested whether there were a statistical relationship between the sample's CSE and learning. The research is exploratory research, and aims to set a research agenda for these constructs in South Africa in the future.

The third research question asked:

*Is there a relationship between RE and learning?*

In this question, the primary aim was to assess whether RE affects or impairs learning at all. Do an individual’s feelings about their RE relate to his or her ability to learn?
To test the relationship between RE and learning, the same sample drawn to test the CSE-learning relationship was used. This was done during phase two of the research. The sample’s levels of RE were measured, thereafter, the researcher conducted a pre-test to gain a baseline measurement of their levels of knowledge, skills and attitudes in a specific subject area. Assessment or a post-test followed the learning experience, which the researcher conducted after the pre-test.

The difference in the scores before and after the learning intervention measured what learners learned during the learning intervention. The correlation between that score and the RE score indicated the relationship between RE and learning.

The fourth research question asked:
*Is there a relationship between CSE and OBA?*

This research question arose from findings from hypothesis two and was tested in phase three of the research. OBA may indicate the interaction between capacity and ability for learning, motivation, and other psychological influences (such as CSE) and opportunity for performance (such as employment, sound job design, and provision of resources). CSE could influence the extent to which individuals apply themselves when preparing for OBA. Achievement in OBA may also boost CSE, so the relationship could work in either direction.

The fifth research question asked:
*Is there a relationship between RE and OBA?*

The penultimate question tested in phase three pertains to the potential relationship between a person’s RE and achievement in OBA. Learner performance may be affected by a person’s evaluation of his or her own race, be it negative or positive.

The sixth research question asked:
*Is there a relationship between learning and Outcomes-Based Assessment?*

The final question addressed during phase three of the research looked at the relationship between actual performance in OBA and learning. OBA may be affected by a number of factors, but the ability to learn would be necessary for achievement.
5.5 Hypotheses

This section looks at the quantitative component of the research and expresses the research in statistical terms. The relationships between the constructs identified were tested. The tests show whether there is a relationship but cannot prove causality. The hypotheses seek to prove that there is a high probability of a relationship existing between the variables, but not causality. CSE and RE may affect learning, but learning may also affect one's CSE and RE. Success in learning may boost CSE and RE, whereas CSE and RE may also boost learning.

Phase one:

*Research hypothesis one: There is a relationship between CSE and RE*
H1: CSE and RE are related
This hypothesis was tested using correlations and the Chi-Square Test.

Phase two:

*Research hypothesis two: There is a relationship between CSE and learning*
H2: CSE and learning are related
This hypothesis was tested using correlations and Chi-Square Analysis.

*Research hypothesis three: There is a relationship between RE and learning*
H3: RE and learning are related
This hypothesis was also tested using correlations and Chi-Square Analysis.

Phase three:

*Research hypothesis four: There is a relationship between CSE and OBA*
H4: CSE and OBA are related
This hypothesis was also tested using correlations and Chi Square Analysis.

*Research hypothesis five: There is a relationship between RE and OBA*
H5: RE and OBA are related
This hypothesis was also tested using correlations and Chi-Square Analysis.

*Research hypothesis six: There is a relationship between OBA and learning*
H6: Learning and OBA are related
This hypothesis was tested using correlations.

5.6 **Overview of the method**

5.6.1 **Introduction**

This section will provide a description of the measurement processes used in this research. It will describe the sampling technique, measurement instruments, and other facets of the research design. The survey techniques for the measurement of CSE and RE are detailed and the data collection methods for learning and OBA are touched upon, but explained in detail in a later section of the chapter.

The researcher sought to first examine the broader relationship between CSE and RE in the broader community (Phase one), and then examine the relationship between the CSE, RE and learning (Phase two). In addition, the thesis examines the relationship between CSE, RE, learning, and OBA (Phase 3).

5.6.2 **Research overview**

The research comprised three phases. These three phases in the research began with Phase one, which involved initial testing of the CSE-RE relationship (H1) within a broader population- this was to assess if RE plays a role in CSE amongst young Zulus in post-apartheid South Africa.

The next phases focussed specifically on those likely to be looking for work in the next few years. Phases 2 and 3 sought to explore the potential relationships between CSE, RE and learning (hypotheses 2 and 3). Thereafter, the relationships between CSE, RE, learning and OBA are investigated (hypotheses four, five and six).

The reason for specifically looking at the above-mentioned relationships was to determine whether RE and CSE affect individual capacity to learn and perform in OBET, which is the current method of ETD in South Africa (Jansen & Christie, 1999).

Phase 2 involved testing of the relationship between CSE and learning (H2) and
testing of the relationship between RE and learning (H3). Learning refers to the proportion of change in knowledge, skills and attitudes achieved after a learning intervention, in relation to pre-existing levels of knowledge.

The final phase, phase three, stemmed from the findings of the second phase. This phase, examined the relationship between OBA results and CSE as well as between OBA results, RE, and learning. These additional hypotheses were included because learning could be more of ability than an indicator of performance. OBA results may be dependent on CSE, RE and learning.

The literature forms a theoretical basis for the research design and the research questions arose directly from the issues raised in the literature. The learning component discussed in the previous chapter is the theoretical basis for the learning experiment used in the project. This chapter portrays the empirical processes adopted in addressing the issues laid out in the literature. The quantitative component of the research is laid out. All research questions are provided and all hypotheses formulated.

Key variables are described in order to contextualize the hypotheses. Operational definitions are also provided to ensure that the variables are properly specified in terms that can be measured.

The research instruments that were adjusted for use in this study are introduced and their validity and reliability are touched upon. The basis of the measuring instruments are the CSE Scale and the Internalized Racism Scale (IRS), which is introduced in this chapter. Sampling techniques and sample design will be described, as well as details about the population to be studied. The criteria used for the selection of sample size are described.

Data collection methods used is discussed as well as the fieldwork practices employed. Thereafter the methods adopted for data capturing and data editing are expounded upon. Scoring is touched upon, as well as the methods employed in data analysis. Finally, ethical considerations are discussed.
5.6.3 **Key Variables and Concepts**

Cozby (1992, p28) defines a variable as “a general class or category of objects, events, or situations”. In this thesis, the variables are CSE, RE, learning, and OBA.

CSE is a person’s estimation of his or her own worth and ability. This comprises a configuration of levels of locus of control, self-esteem, neuroticism, and self-efficacy (Robbins & Judge, 2007).

Racial Evaluation is a person’s internal evaluation of his or her own ethnicity (Gazzaniga, 2004).

Learning is the process that leads to capacity change, that is relatively permanent, and that is not only due to biological maturation or ageing (Illeris, 2007, p3)

Outcomes-Based Assessment results are results from learner assessment, where the Outcomes and Assessment arrangements were made known to the learner beforehand, and where the OBET and assessment are in line with South African Qualification Authority requirements (SAQA, 2010).

5.6.4 **Operational Definitions**

The variables above are abstract concepts based on theory and literature. In order for findings to be valid, it is necessary to measure these concepts in a concrete manner. An operational definition is a definition “of the variable in terms of the operations or techniques the researcher uses to measure or manipulate it” (Cozby, 1992, p28). These are observable and accessible and they inform the researcher how to measure the abstract or conceptual definitions.

Grinnell (2009, par 1), defines the operational definition as “one or more specific, observable events or conditions such that any other researcher can independently measure and/or test them”. The operational definition is an interpretation of the linguistic meaning of a concept into a measurable and observable indicator (Terre Blanche, Durrheim & Painter, 2008, p144).
For CSE, the researcher used the score from an adapted version of the CSE scale, discussed in the next section. Thus the operational variable is a mean score from a questionnaire. The questionnaire's items all provide indicators of the level of CSE a person has.

For RE, a score is calculated using a measure based on the internalized racism scale of the Nadanolitization Scale, also used as a sub-scale in the measuring of indigenous racist experiences, discussed in the next section, which was adapted and expanded upon to measure explicit RE.

For learning, the researcher uses the difference in the assessment score between the pre-test and the post-test of a valid learning intervention. A learning gains score is calculated as a proportion of the total learning possible. The learning gains score takes into account the influence of pre-test sensitization and is a proportion of all possible learning, taking into account levels of knowledge, skills, and attitudes before commencement of the learning intervention.

OBA results comprise a score from a term assessment for second year Human Resources Management students. The assessment is calculated from the proportion of questions answered correctly by the learner in relation to the total number of questions posed.

Every effort was made to ensure that the operational definitions in the research method coincided with the conceptual definitions in the literature as suggested by Terre Blanche, Durrheim & Painter (2008).

At present, only a symmetric relationship between CSE, RE, and learning can be proposed, as the exploratory research method precluded unambiguously designating cause and effect.
5.6.5 **Research Instruments**

Two measuring instruments were used in the study, namely a) the CSE scale (CSES) and b) The Racial Evaluation Scale (RES). The research questions and hypotheses have already been described. The operational definitions have been provided. Now, the instruments used to measure the variables will be described.

This section introduces the instruments used in the empirical component of the study. These instruments are the RES and an adapted version of the CSE Scale. The existing study makes use of a composite measure derived from those mentioned above.

The measures for learning and OBA are covered in detail later in this chapter. This section focuses on the measures for CSE and RE.

The composite measure developed to look at CSE and RE comprised 17 items (four of which were excluded later following factor analysis and calculation of reliability) on a five point Likert scale (Ekin, 2002, p3). Initially, twelve items were included to measure CSE, and five items to measure RE.

The researcher assessed all the measures for content validity, which assesses whether the measures adequately assess the scope of behaviour associated with the traits. In order to achieve this, one consults subject matter experts during the construction of the measures.

The researcher conducted a comprehensive review of others’ efforts to validate the instruments, and consulted experts as to the validity of the measures in the South African environment. These included experts on the Zulu culture, who helped with the adaptation of the measure for the cultural and linguistic context. A thorough literature review of correlational meta-analyses of the validity of the two traits was also undertaken.

Construct validity refers to whether the measure is actually measuring the trait it is supposed to measure. In this regard, one can correlate the measure with other measures that researchers validated already. The measures were assessed using
Preliminary validity and reliability of the measures involved a pilot study that was conducted on a sample of staff and students of the University of Zululand (n=151). The CSE Scale had a Cronbach’s alpha of 0.63 after the removal of items two, three and four, which is acceptable for studies of this type (Baars et al., 2005; Nunnaly, 1967, in Glynnis & Woodside, 2009), although 0.7 to 0.8 would have been preferred. A Cronbach’s coefficient alpha of 0.60 is considered acceptable as a lenient cut-off for exploratory research (Kelly & Downey, 2011). The reliability of the measures is indicated later on in the thesis. Because of the exploratory nature of the study, a Cronbach’s alpha of 0.63 was accepted. For future studies this reliability will need to be rigorously scrutinised in our specific African context.

The validity of the CSE concept as a comprehensive and overarching personality trait has been examined in terms of its convergent validity, its lack of discriminant validity between the four narrow traits, its evident discriminant validity between CSE and other traits, and its predictive validity. Convergent validity was found to be high, with self-efficacy and self-esteem showing the highest correlation and locus of control and emotional stability showing the smallest relationship (Judge, Van Vianen & De Pater, 2004, p328).

This may be because an internal locus of control sometimes means one blames oneself unnecessarily for negative outcomes in life (Cadinu, Maass, Lombardo & Frigerio, 2006, p184).

Discriminant validity between the CSE traits was not found to be high. All of the traits comprising CSE correlate in a similar manner across a number of variables (Judge, Van Vianen & De Pater, 2004, p329).

The RES was found to have face validity and to be reliable, with a Cronbach’s alpha of 0.79. Parts of the Instrument had already been validated in previous studies (Paradies & Cunningham, 2008), but a focus group and factor analysis was used to further validate the RES. The instruments will subsequently be discussed, one by one, in more detail.
5.6.6 **The CSE Scale (CSES)**

Background:

The CSE Scale may be used to measure CSE. The CSE scale (CSES) evaluates the underlying concept of CSE, not the four traits it comprises (Tsaousis, Nikolaou, Serdaris & Judge, 2007, p1444).

Scale Items:

The CSE Scale comprises twelve items on a Likert scale. The researchers reversed four items to avoid respondents merely responding similarly to each item without reading each one. The researchers based the twelve items on multiple, valid measures of self-esteem, self-efficacy, neuroticism, and locus of control.

Scoring:

Data capturers capture the data, reversing the relevant items. The data analyst sums all items and then calculates the mean. The mean indicates the CSE levels of each respondent. Three items were removed after factor analysis revealed that they loaded onto a separate factor in the sample’s responses. The full instrument is included as appendix A.

5.6.7 **The Racial Evaluation Scale (RES)**

Background:

The RES was based on the personal affective dimension of the internalized racism sub-scale of the nadanolitization scale, which was adapted for the Measure of Indigenous Racism Experiences. Initially designed for use among aboriginal people in Australia, the Measure of Indigenous Racist Experiences is a composite measure comprising numerous sub-scales. What this means is that the Measure of Indigenous Racist Experiences, referred to by the acronym MIRE, integrates a number of previously validated instruments (Paradies & Cunningham, 2008). The adapted RES looks at individuals’ RE in a South African context. It is a subjective scale that looks at a person’s RE in terms of the extent to which he or she identifies positively with his or her race and also the extent to which he or she has or has not internalized racial stereotypes.
Table 2: MIRE Internalized Racism Scale Items

| Question 3 (Q3) Please indicate how much you agree or disagree with each of the following statements. There are no right or wrong answers. (a) I feel accepted by other Indigenous people; (b) Indigenous people have less opportunities than other Australians; (c) Indigenous people should try to think and act more like other Australians; (d) I feel good about being an Indigenous person. | Q3a-d forms the internalized racism scale. Q3a and Q3d assess a personal affective dimension, Q3b a factual dimension and Q3c a normative dimension of internalized racism |

In the MIRE, question three deals with internalized racism and comprises four items, of which three were included in this study, following factor analysis. The personal affective dimension of internalized racism was retained in the RES. The normative dimension and access to opportunity was excluded because of the evaluative nature of RE. In this study, the focus was on the personal, affective perceptions of internalized racism (items a & c). The normative dimension, which was removed after factor analysis, was too closely aligned with internalized racism, as opposed to RE. The inclusion of the items finally used was because of the theoretical basis of RE - inasmuch as it refers to the internal evaluation of one’s ethnicity (Diller, 2010).

The full Measure of Indigenous Racism Experiences (MIRE) covers a number of factors of Racism, each section being a separate measure. The focus of this study being considerably narrower, only question three’s items were adapted for use. In other words one of the measures was selected from the full MIRE. The adapted statements follow:
Table 3: Adapted items from MIRE

<table>
<thead>
<tr>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel accepted by other people of my race</td>
</tr>
<tr>
<td>My race should try to think and act like other South Africans do</td>
</tr>
<tr>
<td>(excluded)</td>
</tr>
<tr>
<td>I feel good about being a member of my race group</td>
</tr>
</tbody>
</table>

(Adapted from Paradies & Cunningham, 2008)

The excluded statement was excluded after factor analysis (Table 3). These statements were re-phrased in a racially neutral manner, in an effort to reduce the amount of discriminatory language used. Statements were changed from mentioning ‘Black’ to mentioning ‘my race’. This was to ensure that the measure did not appear biased or racist and so that, in future, samples may be drawn from all racial groups for comparative purposes. The measure was assessed by experienced academics, including a subject matter expert and a statistician, to ensure that it had face validity in a South African context. A focus group was also consulted which entails a structured group interview, in order to ensure validity, in addition to the validation conducted by Paradies and Cunningham (2008).

Additional items were added to the items taken from the internalized racism scale in MIRE. These items drew on notions of positive RE and of individual internalization of various messages regarding ethnicity (Diller, 2010). The aim was to measure a person’s evaluation of his or her racial identity. Two additional items were added, dealing with pride in one’s racial identity and with the perception of one’s racial identity’s agency in contributing to a better society.

Table 4: Additional items included in the Racial Evaluation Scale

<table>
<thead>
<tr>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>My race group is playing a significant role in building a better South Africa</td>
</tr>
<tr>
<td>I am proud of my race group</td>
</tr>
</tbody>
</table>

The statements used in the final questionnaire are indicated in appendix A.
Scoring:

The item responses are recorded on a five point Likert scale. The score is then calculated as the mean score of the summated score of the items. The statements used in the final measure were all positive evaluations, and as a result, any deviation from agree or strongly agree indicated a poor RE.

Validity of the Measure:

Paradies and Cunningham (2008) validated MIRE during the development of the measure, with the section extracted for use in this study also being validated in the process, as MIRE is a composite measure, with each component being valid. It was found to have good construct validity and focus group studies confirmed the validity of the instrument. The measure was found to have good face and content validity - largely due to its clarity and simplicity. In this study Cronbach's alpha was 0.79 indicating an acceptable level of reliability.

The RES was further validated in this research by a focus group interview comprising a judgemental sample drawn from the original participants in the learning experiment. There were n=12 Zulu speaking participants in the focus group, conducted in April 2011, at the University of Zululand, KwaDlangezwa. The focus group was recorded with the informed consent of the participants. The focus group had a 90-minute duration and was guided by the items pertaining specifically to RE. These items formed the interview schedule. Responses were analysed using content analysis, both to extract key themes and to assess the validity of the RES.

Table 5: Age profile of the focus group

<table>
<thead>
<tr>
<th>Age</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>1</td>
<td>8.33%</td>
</tr>
<tr>
<td>21</td>
<td>4</td>
<td>33.33%</td>
</tr>
<tr>
<td>22</td>
<td>4</td>
<td>33.33%</td>
</tr>
<tr>
<td>&gt;23</td>
<td>3</td>
<td>25.00%</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
Table 6: Gender profile for the focus group

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>5</td>
<td>41.67%</td>
</tr>
<tr>
<td>Female</td>
<td>7</td>
<td>58.33%</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Table 7: Focus group interview statements discussed

1. I feel accepted by other people of my race
2. I feel good about being a member of my race group
3. I am proud of my race group
4. My race group is playing a significant role in building a better South Africa

Content validity refers to the extent to which “an empirical measurement reflects a specific domain of content” (Carmines & Zeller, 1979). Content validity of the RES was checked using the focus group.

Construct validity was also examined. Construct validity is the extent to which a scale matches the theory it is purporting to measure (Shuttleworth, 2009). The theoretical construct measured was RE, which is the internalized evaluation a person holds about his or her ethnic identity, and can be negative or positive. Factor analysis showed that the four items measured all loaded onto the same factor

*I feel accepted by other people of my race:*
Perspectives noted were that important components of feeling accepted were religion, culture, class, and region. The participants noted that it depended largely on culture, and that, although they felt accepted by other Zulus, it did depend on subculture. Respondents also stated:
‘I feel accepted by people who share the Zulu culture’;
‘It’s not about being Zulu, it’s about being in your neighbourhood’; and
‘Sometimes you do feel accepted, sometimes not’.

*I feel good about being a member of my race group*
When it came to feeling good about being a member of the race group, it was a two-way process. South Africa’s democratic government and the freedom of the South African people was a source of positive feelings about membership of the racial group. However, there was the perception that privileged Black South Africans had forgotten about ‘other people’. The observation was made that rich people were getting richer, through interventions such as Black Economic Empowerment, and that power was being abused. Additional abuses of power noted were tendering irregularities where tenders were being used as preferential treatment and nepotism was rife. Those who are close to the politicians are perceived as being given preferential treatment. Another concern was the culture of entitlement, where ‘Black people don’t seem to work’.

Some mentioned that they did not feel good about the crime rate in South Africa, stating that ever since “freedom” was achieved, there was theft and imprisonment. Evidence of internalized racism and lowered RE were seen when one participant noted that the majority of people in prison were Black, although another participant then pointed out that this was because Blacks were in the majority in the country.

The responses to this question overlapped with responses to the next question, providing evidence as to why the reliability of the measure was high.

\[I \text{ am proud of my race group}\]

Participants noted that they were not proud of the fact that there was an abuse of power and the bending of rules since the end of apartheid. Participants felt that freedom was being abused and that they were ashamed of drug abuse within the Black community. One participant explained that he perceived Indians as having family businesses and Whites as performing charitable acts, and the participant felt that you would not see Blacks doing this.

Another participant explained that as an individual, things were going well for him and he was proud of his racial identity, but was not proud of the abuse of power. Participants felt that they would not change their race or ethnicity if they were given a choice.
My race group is playing a significant role in building a better South Africa

There was agreement in general that the participants’ race was playing a role in building a better South Africa. Evidence provided was that the government was Black. One of the examples cited was the provision of free education. In particular, the provision of bursaries to final year students was mentioned as an example. The government, which was described as being a Black government, was perceived as building a better country where people were afforded opportunities to perform to the best of their capability, people were treated equally and the government was trying to open up more opportunities.

The participants stated that the positivity of their responses to the items in the RES was because they thought primarily of the peaceful transition to a multi-racial democracy as a source of RE, however they did perceive that there were problems and challenges facing their race. For the most part, they felt positive about their RE.

5.6.8 Measurement of Learning and OBA

Background:
Assessments are used to measure the extent to which learners have acquired the capacity to demonstrate the specified outcomes, in a formative, developmental and transparent manner, with explicit assessment criteria (Jansen & Christie, 1999; SAQA 2010). Assessments may take a number of different forms, including demonstrations and the fabrication of products, but in this case, the assessments were written under control-test conditions. The assessment tools in this study were created by the researcher using OBET as the guiding philosophy. The guiding principles and criteria are briefly discussed below.

There are a number of criteria for valid test construction in OBET. The first is that the potential answers must be as objective as possible. If a number of assessors each created a memorandum for the assessment, they should all come up with a consistent memorandum. OBA requires that items be stated in a manner that eliminates as much ambiguity as possible (Jacobs, Vakalisa & Gawe, 2008). This is why fixed-response items were used, with a factual or knowledge basis.
The problem with this approach is that it stifles creativity (although claiming that it promotes it) and also that it stifles the development of tolerance for ambiguity. The level of objectivity increases the fairness of the measure, but also limits the amount of cognition involved, rendering it only necessary to recall and process knowledge after receiving triggers to activate the recognition, instead of stimulating gestalt-type learning (Erasmus et al., 2009). The research produced a very plain, unambiguous assessment, so that the results could be as fair as possible. Within a broader learning intervention, however, skills and attitudes would also have been assessed.

The next criterion for test construction in OBA is reliability. This is “defined as the extent to which the same test produces the same results if it is administered to the same group of learners under similar conditions” (Jacobs, Vakalisa & Gawe, 2008). In relation to assessment of learning, this is a tenuous notion. It is assumed that there would be improvement in assessment after each successive assessment owing to rehearsal (Howe, 1998) as well as pre-test sensitization (Braver & Braver, 1988). For the purposes of assessment of learning, the two considerations for validity are therefore somewhat different from those usually seen in surveys or psychological assessment.

For OBA, the learners must be monitored for threats to their consistent performance in the form of environmental constraints and fatigue. Another threat to reliability is the lack of an unambiguous marking memorandum. In this study, the researcher ensured that the environment posed no constraints to performance, and that the memorandum was clear and unambiguous, so that there could be no variation in assessment results owing to unreliable scoring of the assessment.

Discrimination in the context of OBA refers to positive discrimination. This takes the form of being able to discriminate between those who have achieved the outcomes and those who have not. There should be a fair spread between the highest and the lowest marks seen in the assessment (Jacobs, Vakalisa & Gawe, 2008).

Finally, assessments should cover knowledge, higher and lower order cognition, and practical skills. Jacobs, Vakalisa and Gawe (2008) then go on to contradict
themselves stating that there should also be a balance between subjective and objective items. The assessment in this study focussed only on knowledge, in order to ensure objectivity in the assessment.

These criteria were fulfilled in the OBA in the study. The items were as objective as possible, however, to ensure reliability (Jansen & Christie, 1999) and therefore the assessment was based purely on fixed response, multiple choice, and sentence completion. This was to ensure that the assessments were as reliable as possible, given that the results were being used for statistical analysis.

Scale Items:
The assessments in this instance comprised items that were fixed response questions, multiple choice questions, and sentence completion questions. Usually, the researcher uses more complex forms of assessment, but the aim was to ensure as little bias and ambiguity as possible in the assessment, in order to ensure that the scores assigned would be reliable.

There are four types of objective tests. The first is short-answer tests, the second is alternate-response tests, third is matching tests, and the last option is multiple-choice tests. Short-answer tests provide long questions requiring short answers usually of only one or two words, letters, or numbers. They are used for the recollection of facts. Another option is to ask for or sequence data in lists. Sentence completion is another option when formulating objective tests that involve short answers. One can also ask for definitions or identification (Jacobs, Vakalisa & Gawe, 2008). When ensuring that the test is stringent enough, one must only omit words or labels that are important and not trivial.

Alternate-response tests include statements that the learner must evaluate and determine whether they are true or false or right or wrong. These statements must either be entirely true or entirely false, otherwise they are unfair and better suited to discussion. Statements that require opinion should be avoided. Matching tests include sets of data that must be linked together because of commonality. These should cover the same topic and the data in each list should not exceed ten items (Jacobs, Vakalisa & Gawe, 2008).
Multiple Choice items were used in the assessment used to measure OBA results. According to Jacobs, Vakalisa and Gawe (2008) this method is most widely used, because it is so versatile. The structure of a multiple choice item includes a stem, which is a statement used to trigger a response. This stem is followed by responses that include a key or correct item and a number of distracters. This test is included as Appendix C.

Scoring:
Scores are calculated by comparing learner responses to the questions against a predetermined memorandum that specifies the answers deemed to be correct. The scores were then transformed from a raw score into a percentage of the total score.

For learning gains, the score is a proportion of the total possible learning, taking prior knowledge into account. This is measured by first assessing the existing knowledge of the learners using a pre-test. After the pre-test is completed, a learning intervention is administered. The intervention is followed by a post-test. Using the full Solomon four-group design, one can identify the extent to which the pre-test has sensitised the learners to the type of assessment that will follow. One can then control for the influence of the assessment.

The formula for the calculation of learning gains is:

\[
\frac{(\text{Post-test Score}/\text{Pre-test Sensitization})-\text{Pre-test Score}}{100\%-\text{Pre-test Score}}
\]

The learning gains score seeks to isolate the learning achieved from other environmental and testing influences that were included in the OBA assessment.

5.7 Rationale for the use of a learning experiment
In terms of the Employment Equity Act (55 of 1998), the definition of suitably-qualified individuals includes those with the capacity to acquire the skills required for a job in a reasonable amount of time. If this capacity is constrained by low levels of CSE or RE, then this has implications for the way learning experiences are
designed, as special attention may need to be paid to the psychological aspects of performance and the utilization of ability. It is vital to be able to assess whether individuals make accurate estimations of their own ability (CSE), evidenced by the relationship between learning and CSE.

As already mentioned in this chapter, South Africa’s learning paradigm is outcomes based (SAQA, 2010). No mention is made of the required personality aspects of the potential trainee, or the required psychological necessities. CSE and a positive RE may be the required psychological attributes of an individual for learning to occur. Psychological features of individuals, such as CSE and RE may also play a part in the capacity people have for learning.

Although there is no such thing as completely objective assessment (NQF, 2010), assessors must make every effort to make assessment fair, reliable, and valid and to ensure that there are not psychological constraints to achievement during assessment. Two psychological constraints that may need to be borne in mind may be low CSE and poor RE. This is especially relevant in light of the South African skills shortage and the imperatives of redress brought about by apartheid.

In this study, every effort was made to ensure the validity of the learning intervention. A protocol is provided for the validation of OBET using an adapted version of the Solomon four-group design (Braver & Braver, 1988). Although the protocol is time-consuming, it eliminates a number of threats to validity. The validation process is described in detail in Chapter 5.

5.8 Learning gains

This experiment made use of learning gains score testing to ascertain whether learning related to levels of CSE and RE. Gain scores are used to analyse learning data and are “changes of level between two points in time” (Cronbach & Snow, 1977, p 73).

Learning gains can be calculated simplistically as post-test score, less pre-test score, or as the proportion of gain (post-test divided by pre-test score). The latter method may be the more rigorous method, as it assesses the relative amount of
learning that has occurred, as opposed to measuring the extent to which the learner has travelled between absolute ignorance and knowledge in a specific subject area.

Learning gains scores are traditionally calculated as post-test score less pre-test score, however, validity can be improved through the use of Solomon’s four-group design. Solomon’s four-group design will be discussed in the next section. Solomon’s four-group design is used when a pre-test might result in practice effect. The effect of the learning intervention can be isolated (Van der Stoep & Johnston, 2008) from other scores. Solomon’s four-group design makes use of four groups—two experimental groups, who participate in the learning intervention, and two control groups who do not participate in the learning intervention (McDaniel & Gates, 1998).

Notation for the learning experiment, using Solomon Four-Group design, can be conceptualised as follows:

T1 Pre-test scores;
X Experimental treatment;
T2 Post-test scores;
D Gain score, T2-T1;
R Random assignments for groups.

D1 is the gain score for experimental Group 1, which goes through the pre-test, treatment and post-test. This is influenced by the pre-test, maturation, history & treatment (Ohlund & Chong-Ho, 2009).

D2 is the gain score for control Group 1, which goes through the pre-test and the post-test. This is influenced by the pre-test, maturation and history (Ohlund & Chong-Ho, 2009).

D3 is the gain score for experimental Group 2, which goes through the treatment and the post-test. This is influenced by the treatment and the post-test as well as maturation history (Ohlund & Chong-Ho, 2009).

D4 is the gain score for control Group 1, which goes through only the post-test.
This is influenced by only maturation and history (Ohlund & Chong-Ho, 2009).

One can thus separately isolate the influence of history, maturation, pre-test, and treatment (Ohlund & Chong-Ho, 2009).

5.8.1 Assessment - the Pre-test and Post-test.

In order to evaluate whether learning has occurred, learners must be assessed (pre-tested) before and (post-tested) after the learning intervention has been conducted. This is usually known as a pre-test and post-test design. Learning evaluation (Assessment) ensures that facts, techniques and attitudes have been acquired. The measurement of learning against predetermined standards is known as assessment. Assessment determines whether enough learning has occurred to award credits for the learning intervention. It is also used to determine whether the learner has made adequate progress for advancement purposes (Goldstein & Ford, 2002).

Once the learning intervention is complete, the trainer must ensure that learning has occurred. Learner assessment refers to checking whether learners have achieved specified outcomes. Noe (2005, p272) explains that learning assessment “involves collecting information and providing feedback to employees about their behaviour”. Assessments will generally assess whether the learner has learned new attitudes, behaviours, or knowledge. The assessment must be structured, must be planned, and must involve more than one technique. It is not a process of failing people, instead it is a way of getting people motivated to learn, and ensuring that they have opportunities to demonstrate what they have learned.

Killen (2000, in Butler, 2004) explains that useful assessment criteria need to conform to a number of principles. Firstly, assessment procedures must be valid. This means that they must assess what they are supposed to assess, and must be based on the outcomes specified. The process should also give consistent results and be culture-fair.

When designing assessment, the focus should be on the most important knowledge, skills and attitudes that the learner needs to learn. The aim should be to
explore the learner’s capacity comprehensively and explicitly (Killen, 2000, in Butler, 2004).

SAQA (2010) insists that assessments must be fair, credible, consistent, reliable, and unbiased, in order to be used in South Africa. Assessments must measure whether learners have achieved the outcomes specified. For assessment to be fair, learners should know which outcomes they will need to achieve before assessment, and more than one method of assessment must be used.

The goals of outcomes-based assessment are to ensure accurate and consistent assessment that does not discriminate against any individual. The focus is on the outputs of the learning intervention and not the inputs (Mokhobo-Nomvete, 2009). The assessment, as already mentioned, must be transparent, valid and reliable. The assessment must also be objective and practically feasible. Additional requirements are that the assessment must be fair and flexible.

In order for someone to design and administer OBA, they must have knowledge of OBET and development, the principles of assessment, recognition of prior learning, methods of assessment, barriers to assessment, the NQF, and moderation (SAQA b, 2009).

It is prudent to collect baseline data prior to the commencement of training. This baseline data is a record of the existing levels of knowledge, skills, and attitudes of the learners. One can then use this data to tailor learning interventions to meet deficits in knowledge, skills, and attitudes, and also to justify whether the learning intervention achieved a behaviour change or not. This baseline data may have already been collected as part of the training-needs analysis (Goldstein & Ford, 2002). The baseline data collected is not assessment per sé but indicates the initial learning needs of the learner, and measures learning success.

OBA usually involves formative and summative assessment (Mokhobo-Nomvete, 2009). Formative assessment provides feedback to improve future performance and shapes behaviour during the learning intervention. There is a developmental focus, therefore, and not an evaluative focus, in terms of formative
assessment. This formative assessment may well help individuals to develop accurate CSE. Another key element of formative assessment is the inclusion of opportunities for reflection on the part of the learner. This reflection is on what has been learned and also the actual learning process itself (Jacobs, Vakalisa & Gawe, 2004).

At the end of the learning intervention, summative assessment determines whether the learner has achieved the outcomes. The summative assessment assesses achievement. This assessment occurs only when the learner is ready for it. The summative assessment determines whether the learner has achieved specified outcomes, and determines the grade of the learner or the awarding of credits to that learner (Jacobs, Vakalisa & Gawe, 2004). Summative assessments or post-tests are compared against pre-tests to measure learning, taking into account pre-test sensitization.

One type of summative assessment is a control test, where the test content is assessed in controlled test or exam conditions. The learners prepare for the test and the learner knows well in advance what content will be assessed. When conducting OBA, firstly one prepares for the assessment by looking at source documents describing the standards learners must achieve and the outcomes they must demonstrate. Preparation for assessment is a process where resources, schedules, people and assessment materials are prepared and organised (SAQA b, 2009). The preparation process must ensure that all the arrangements meet the needs of the assessment and ensure fair and safe assessment (SAQA b, 2009).

It is important to distinguish between learning and OBA results. In this instance, learning refers to the actual knowledge gained during the learning intervention and OBA results are the actual results achieved in an ordinary OBET environment. Learning is one aspect that may predict performance in OBA, but other factors could also contribute to achievement in OBET, such as CSE (Broucek, 2005) and RE (Hanley & Noblit, 2009).

5.8.2 Measuring different skills using taxonomies:
Assessment tends to cover psychomotor skills through observation, skills tests,
simulations and assessment of products. Assessors, through responses and written and oral items also assess cognitive skills of the learners. Affective skills are the individuals' value and attitudinal orientations and assessors measure these values through the observation of how an individual behaves (SAQA, 2009a).

Taxonomies conceptualise the type of behaviour that learners must demonstrate, as specified by the outcomes (SAMDI, 2007b). OBET tries to bring about a change in behaviour, and this change can manifest as changes in knowledge, attitudes, or skills. These three domains of educational activities were identified by Bloom (1956, in Clark, 1999) as:

- Cognitive or mental skills, also known as knowledge;
- Affective - an increase in feelings or emotional responses also known as Attitude;
- Psycho-motor - an increase in manual or physical skills also known as Skills.

These domains influence the learning outcomes written for the learning experiment.

**The Cognitive/Knowledge Domain**

The cognitive or knowledge domain was the focus for the learning experiment. This domain focuses on intellectual skills. Bloom developed specific taxonomies for this domain (Huitt, 2009). The thinking behind it is that knowledge can be classified from the simple to the more complex, in terms of how we interact with it. One level has to be achieved before learners can move on to interacting with the knowledge in a more complex way.

**Levels in the Cognitive/Knowledge Domain:**

- Knowledge - recollection, memorization of information, ideas and principles. Learners may be asked to write, list, label, define, or state (Huitt, 2009).

- Comprehension - translation/understanding/interpretation of the data learned during acquisition of knowledge. Students may be asked to explain, summarise, paraphrase, describe, or illustrate what they have learned (Huitt, 2009).
Application - at this level, the student uses the data to independently solve a problem or complete a task. Verbs used might be compute, solve, use, apply, or construct (Huitt, 2009).

Analysis - at this level the student must be able to dissect and examine the components of the information learned. Students may be asked to distinguish, classify and relate. Verbs used when specifying the outcomes are analyse, categorise, compare, separate, and contrast (Huitt, 2009).

Synthesis - originates new products, plans or proposals new to the learner using the learned data. Verbs might include create, design, hypothesise, invent, and develop (Huitt, 2009).

Evaluation - Learners have to appraise, assess or review data, given standards and criteria. Verbs might include judge, recommend, critique, or justify (Huitt, 2009).

The dimensions of the horizontal cognitive process use verbs to describe what the learner must be able to do. The verbs used are remember (knowledge), understand (comprehension), apply (application), analyse (analysis), evaluate (evaluation) and create (synthesis). The vertical plane comprises four separate types of knowledge, namely factual, conceptual, procedural and meta-cognitive knowledge (SAMDI, 2009b).

When using the taxonomy, the OBET designer assigns all the outcomes or objectives of a course to the relevant point on a tabular matrix of the vertical knowledge plane and on the cognitive process dimension plane (SAMDI, 2009b). The designer then devises the assessments needed for each outcome or objective, and enters the assessments into the tabular matrix. The assessor examines major instructional activities and materials, and then includes the details in the table. The designer must integrate the assessment and instructional design process with one single, central and inviolable concept - that the outcome guides all instructional activities.

Remembering refers to recognising and recalling or identifying and retrieving
information. This entails retrieving information from long-term memory. Understanding is the process of making sense - including interpreting, providing examples, classifying, summarising, inferring, comparing, and explaining. Learners must compare things, construct models, extrapolate, generalise, or abstract from, illustrate, or paraphrase. When learners are asked to ‘apply’, they use a procedure in a given situation (SAMDI, 2009b). This means that learners must carry out certain actions or use tools or techniques. Analysing is a process of scrutinising or unpacking content. Learners differentiate between one or more concept and object. They organise concepts or objects or they deconstruct concepts. Evaluating means making judgements based on criteria or standards known by the learner. In this assessment, the learners check something, identifying errors or any inconsistencies. Learners may analyse or judge something. Creation is the usage of all the elements learned to make something that is complete in itself. The learner creates new patterns or structures through re-organising elements. Learners need to generate hypotheses, plan events/design new procedures, or produce a new product.

5.8.3 **OBET delivery**

Classroom arrangements are suitable if the main method of facilitation will be lecturing. The arrangement has all learners facing the facilitator, who stands front and centre, usually with audiovisual equipment, a Whiteboard or an overhead projector. It is difficult to shift to group-work and the configuration sets the trainer up as the alpha figure in the room (Noe, 2005, p131). Despite these shortcomings, the approach remains popular, particularly when there are resource constraints that prohibit other learning approaches.

When the goal is to disseminate information to a large number of people at the same time, then the lecture is a cheap way of achieving this (Naik, 2007). What the designer must consider is that lectures cannot be the answer to all requirements, and that it is an extremely passive form of instruction (Goldstein & Ford, 2002, p222).

Lectures should by no means be the default choice of any learning method. A problem with lectures is that learners cannot gain further clarity on content they do
not understand (Goldstein & Ford 2002, p222). Lectures can include other media such as transparencies, slides, videos or MS PowerPoint presentations (Byars & Rue, 2006, p186), which are suitable forms of learning intervention to use for the dissemination of Essential Embedded Knowledge, as required in OBET (SAQA, 2010).

Those with low CSE and poor RE may struggle to ask questions during lectures. Variations on the lecture method do exist and may offset the negative aspects (Noe, 2005, p204). Some additions were made to the lecture in this experiment to make the session more interactive. The lecture method continues to be popular in OBET, for the information presentation components of OBET. Advantages and disadvantages of lectures are listed in Table 4.3. These include the opportunity for OBET facilitators to communicate their passion for the subject and hopefully to imbue this passion into the learners they interact with. On the other hand, it is also a fairly one-way method of communication. Students who are learning in their second language may not ask questions, for fear of embarrassment, owing to their lack of fluency in English. These and other advantages and disadvantages of lectures are cited in the table already mentioned.

Table 8: Advantages and Disadvantages of Lectures

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturers can communicate their passion for the subject</td>
<td>Lectures do not enable feedback from learners</td>
</tr>
<tr>
<td>Lectures provide information that is not available from other sources</td>
<td>Lectures are passive</td>
</tr>
<tr>
<td>Lecturers can teach a lot of learners at the same time</td>
<td>A person’s attention span generally is shorter than the duration of the lecture</td>
</tr>
<tr>
<td>Lecturers should act as effective models for the learners</td>
<td>Lecturing ignores whether some learners are falling behind or not</td>
</tr>
<tr>
<td>The instructor can control the scope and pace of material covered</td>
<td>Lecturers cannot ensure the use of higher thinking such as analysis or creation</td>
</tr>
<tr>
<td>There is minimal pressure or threat to the learner</td>
<td>Lecturing is only as effective as the lecturer. The lecturer must have presentation skills</td>
</tr>
</tbody>
</table>
5.8.4 Sampling technique

This section describes the sampling technique utilised in the study. The section elucidates upon sample design, population, and sampling frame. The criteria for choosing a sample size are discussed.

Sampling refers to a process of selecting subjects from a population. A population is all the subjects who are of interest to the study (Cozby, 1992). Samples are used to generalise survey results to the population. A more statistical definition of a sample is that it is a “set of data drawn from the population” (Keller & Warrack, 2003). When one uses a descriptive measure of a sample, it is known as a statistic. These statistics can be used to draw conclusions about the population. This is referred to as drawing inferences about the population.

5.8.5 Sample Design

In this study, non-probability sampling was utilized for the testing of hypothesis one, in phase one, which means that the chances of an element being included in the sample are unknown. Non-probability samples are cost-effective, but it is difficult to ensure that the sample accurately represents the population (Cozby, 1992). The focus in this study was on those Zulus who will be looking for work in the near future and who may be considered as ‘suitably qualified’ in terms of the Employment Equity Act (55 of 1998). These individuals may have experienced apartheid directly, during the last decades of apartheid, or indirectly through the ongoing socio-economic disadvantages that have not yet been rectified (Hamilton, 2001).

This study was largely exploratory, and as a result, it was not designed to provide definitive answers, but merely to identify questions for future research. Because of this, a non-probability sample was deemed to be acceptable for phase one, as the results need not be generalisable to the greater population at this point. The study used a purposive approach to draw a sample, because the aim was to measure relationships between the variables, not to describe the population (Cozby, 1992). A purposive approach involves consciously selecting respondents who fulfil specific criteria. In this case, the target population comprised adult (older than 18
For phases two and three, which involved the learning experiment, a simple random sample was drawn. The population was students studying Human Resources Management at the University of Zululand. Given the skills crisis and shortage of key skills in South Africa (described in Chapter 4); South Africa will need competent trainers and recruiters who can facilitate alleviating the skills crisis. This population is also worthy of examination, because they are from the designated group ‘Black’ and are eligible for positive discrimination and development as per the Skills Development Act (97 of 1998) and the Employment Equity Act (55 of 1998). South Africa will need competent human resources managers in order to effectively capacitate the rest of the workforce.

The learning experiment required four groups, as Solomon’s four-group design was used for learning evaluation. These four groups comprised random samples from the population of students studying Human Resources Management at the University of Zululand (N=336). The respondents will be looking for work in the next three years and would therefore be eligible for recruitment and development as provided for in the Employment Equity Act (55 of 1998) and the Skills Development Act (97 of 1998).

5.8.6 Population

The population for testing or investigating hypothesis one during phase one comprised Black, adult Zulu (18 years or older) South Africans resident on the KwaZulu-Natal North Coast. For the learning experiment in phase two and three (hypotheses two, three, four, five and six) the sample was narrowed to those Black adult Zulus who were studying Human Resources Management in 2010 at the University of Zululand. This comprised a small population of 336 learners.

The age categories below were based on apartheid timelines derived from the apartheid timeline (South African History Online, 2008), which aligns with the intensity and scope of racial discrimination in South Africa. The age groups were chosen to try to group those who had similar experiences of racial socialization together. Not all the groups were represented in the sample. This could be viewed
as a limitation of the study.

However, in South Africa, as stated in the national youth policy, youths are those between the ages of 14 and 35 (South African Regional Poverty Network, 2011). The youth of this country still experienced racism, both through direct experiences and indirect experiences of the post-apartheid environment, which is still heavily informed by the apartheid environment. The generations represented in phase one are profiled below.

Younger than 20, generally referred to as the ‘born frees’, this generation was born after South Africa’s non-racial democracy was incepted and formed, including the release of Nelson Mandela and the introduction of a new constitution (Mandela, 1994, BBC, 2010, South African History Online, 2008). They still experience the side effects of apartheid, during the immediate Post-Apartheid era, because of the slow rate of transformation, particularly in education (Holsinger & Jacob, 2009).

21-30, Comprise a generation who lived through the 1980’s and the transition. This period included economic instability and political unrest, including several states of emergency and increased pressure from the outside world (BBC, 2010, South African History Online, 2008).

31-40, lived through the 1970’s, including the Soweto uprising with the subsequent students’ revolt. In this period, there was much re-settlement of Blacks back into the homelands. Student bodies began to emerge and Biko committed suicide (BBC, 2010, South African History Online, 2008).

41-52, these individuals lived through the 1960’s in South Africa, with notable events being the “Sharpeville Massacre” with seventy dead (BBC, 2010, South African History Online, 2008). These individuals were scholars during the students’ revolt and would most likely have had their schooling disrupted if they were Black or coloured (South African History, 2010).

53-60, these individuals lived through the 1950’s when some of apartheid’s most pernicious laws were enacted such as the Population Registration Act, The
Separate Amenities Act, The Bantu education Act, The Group Areas Act (41 of 1950) and The Black Building Workers Act. This is not an exhaustive list of the Acts enacted during the 1950’s pertaining to apartheid. (South African History Online, 2008).

The older generations were under-represented in the sample. This is because the focus was on those who would need ETD in terms of the application of the notion of “suitably qualified” as laid out in the Employment Equity Act (55 of 1998). As a result, the focus of the study was on younger adults, or the youth. There was no direct exposure to apartheid, but rather, indirect exposure to the consequences through the socio-economic system.

For phases two and three (hypothesis two to six), the population of Human Resources Management students was chosen from the University of Zululand because of the role that Human Resources Managers and ETD practitioners will play in developing Human Resources in South African organizations. The University of Zululand is located in the former KwaZulu region of South Africa and historically is a Black University, serving a historically disadvantaged population group.

This group of learners, who have come from a background which racism has affected, will need to be able to function effectively in the workplace and may need additional ETD in order to be considered suitably qualified.

5.8.7 **Criteria for choice of sample size**

Sample size was determined by the availability of respondents and resources for hypothesis one. Owing to budgetary constraints, the sample for hypothesis one in phase one (CSE-RE) had to be kept relatively small. In total, only 198 usable questionnaires were received (n=198). It must be reiterated that the study was exploratory and as such was not attempting to describe the population, but instead attempted to identify whether the variables CSE and RE may be related. A sample of n=198 usable questionnaires was collected for this stage of the research. The sample profile is described in chapter 6.
For the learning experiment, from the population of Human Resource Management learners at the University of Zululand (N=336), the sample was n=230 (which provides a confidence level of 99 percent and a margin of error of 5 percent). This sample was divided-up in order to provide two experimental groups and two control groups. A subset of this sample was randomly selected, and was used to validate the learning intervention using Solomon's four-group design (n=52). This process is also described in Chapter 6. Please note that this small sample was only used for validation of the learning intervention.

In the context of survey research, the sample may appear small. However, the sample size of 230 is comparable with similar research undertaken by Bretz and Thompsett (1991), n=181, with two groups of n=40; Dijkman (2009), n=108; Berthold, Nuckles and Renkle (2007), n = 84; Scharfenberg, Bogner and Klautke (2006), n=117; Wambugu and Changeiywo (2007), n=161, with an experimental group size of n=35; Linde and Stuart (2002), n=88; Lievens and Sanchez (2007), n=51 (25 in Control Group, 26 in Experimental Group) and Dickey (2003), n=107.

5.8.8 Data Collection Methods

Given the sensitive nature of the questions, trained and qualified fieldworkers had to be utilised. The trained fieldworkers, who all had postgraduate qualifications in Psychology and Industrial Psychology, collected data for phase one, hypothesis one, between the 8th February and 30th April 2010 in Richards Bay, Empangeni, Mtunzini and KwaDlangezwa on the KwaZulu-Natal North Coast.

Respondents were assured of the confidentiality of their responses. The purpose of the research was explained to them and they were made aware of the fact that there were no right or wrong answers. The contact details of the researcher were also made available, should the respondents have any questions.

Informed consent was maintained and the benefit of the study outweighed the harm. Any potential harm and benefits were explained in advance to participants. Respondents were debriefed and had unrestricted access to the researcher, and
received opportunity for feedback on scores, which could be given on request.

5.8.9 Data Capturing and Data editing

In this section, the data capturing, cleaning, and scoring will be described. Data was captured by the researcher in Microsoft Excel. Numerical scores were assigned to each response in a process known as coding. For the learning and OBA, the assessments were first scored against predetermined memoranda, and then the scores were captured in Microsoft Excel.

In the items pertaining to CSE, agreement sometimes indicated a high CSE, and in others, disagreement indicated high CSE. For the items that were reversed (where disagreement indicated high CSE) the data had to be re-coded so that all responses would be in the same direction. The following method was used to reverse the scores:

\[ Y = (K+1) - X \]

Where:
- \( Y \) = the new score
- \( K \) = the number of scaling points used in the rating scale or bipolar adjective scale (in this case five)
- \( X \) = the number marked by the respondent (Tredoux & Durrheim, 2007).

E.g.

\[ Y = (5+1) - 4 \]
\[ Y = 2 \]

Coding is when a numerical value is assigned to a response. The process of coding ensures easy capturing and analysis of data. Coding is simply the way that data is converted into variables and categories using numbers. These numbers are used for analysis using a computer because “processing requires a numeric response for each item of interest” (O’Rourke, 2000, p2).

The researcher specified codes for each variable, including demographics. This information was contained in a separate sheet in a Microsoft Excel workbook. As the data was captured, it was coded. The data was captured in an Microsoft Excel worksheet and then it was cleaned.
Data cleaning is an important part of the process involved in data management, which involves the identification and correction of any data captured erroneously. Conditional formatting that highlights missing values and checks for extreme numbers captured (e.g. six on a five point Likert scale) are two ways that help identify data to be cleaned during this phase (Terre Blanche, Durrheim & Painter, 2006). At this point, prevention is better than cure (Chapman, 2005). Chapman (2005, p2) explains that this ensures the data is “fit for use”.

In this study, incomplete questionnaires were not captured. There are two phases to data cleaning namely detection and correction. The data is checked for missing entries, non-applicable entries, typing errors, column shift (when the data has been entered into the wrong column or the column data has moved across one column), fabricated data, coding errors, or measurement errors (Chapman, 2005; Terre Blanche, Durrheim & Painter, 2006).

Conditional formatting was used in Microsoft Excel to highlight any values not within the applicable range for each variable. This highlighted these blocks in red and made it easier to locate where data needed to be cleaned. The sets of values used to calculate specified variables, were also colour coded to facilitate cleaning. The data was cleaned to ensure that all of the above errors were rectified before the data was analysed (Chapman, 2005; Terre Blanche, Durrheim & Painter, 2006).

**5.8.10 Reliability and Validity**

After completion of the coding, capturing, and cleaning the data from the above samples, the internal consistency, or reliability, was calculated of the data comprising the two variables. Reliability is “the degree to which a measure is consistent” (Cozby, 1981, p304). This means that the measure must consistently produce the same results.

When looking at the internal consistency of the measures, Cronbach’s alpha was calculated as well as factor analysis as suggested by Terre Blanche, Durrheim and Painter (2006). The Cronbach’s alphas for the measures are listed below. The measure for CSE was considerably more reliable when questions two, three and four were excluded (see the factor loadings, where these three questions were
below the cut-off of 0.3). For RE, the reliability was significantly higher without item number 14, jumping from $\alpha=0.52$ to $\alpha=0.75$. Item 14 was under the cut-off of 0.30 also (See Table 9 below). Without item 14, the reliability of RE was high. In the tables, the reliability is illustrated prior to and subsequent to the removal of items.

Table 9: Cronbach’s alpha for Core Self-Evaluations and Racial Evaluation

<table>
<thead>
<tr>
<th></th>
<th>Cronbach’s alpha</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Self-Evaluations</td>
<td>0.61</td>
<td>Q01 to Q12</td>
</tr>
<tr>
<td>Core Self-Evaluations</td>
<td>0.63</td>
<td>Without Q02, Q03 and Q04</td>
</tr>
<tr>
<td>Racial Evaluation</td>
<td>0.52</td>
<td>Q13 to Q17</td>
</tr>
<tr>
<td>Racial Evaluation</td>
<td>0.75</td>
<td>Without Q14</td>
</tr>
</tbody>
</table>

In table 10 below, it is evident that items 2, 3 and 4 had to be excluded, although the factor loadings were not very high for items 12 and 1.

Table 10: Factor Loadings for Core Self-Evaluations

<table>
<thead>
<tr>
<th>Core Self-Evaluations</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q08</td>
<td>.652</td>
</tr>
<tr>
<td>Q07</td>
<td>.648</td>
</tr>
<tr>
<td>Q10</td>
<td>.614</td>
</tr>
<tr>
<td>Q05</td>
<td>.557</td>
</tr>
<tr>
<td>Q06</td>
<td>.454</td>
</tr>
<tr>
<td>Q11</td>
<td>.429</td>
</tr>
<tr>
<td>Q09</td>
<td>.392</td>
</tr>
<tr>
<td>Q01</td>
<td>.360</td>
</tr>
<tr>
<td>Q12</td>
<td>.339</td>
</tr>
<tr>
<td>Q04</td>
<td>.277</td>
</tr>
<tr>
<td>Q03</td>
<td>.247</td>
</tr>
<tr>
<td>Q02</td>
<td>.057</td>
</tr>
<tr>
<td>%Var. Exp.</td>
<td>20.5%</td>
</tr>
</tbody>
</table>

Table 11 shows the items that were used to score CSE in this study. The factor loadings are generally higher, the exception being item 12, which has dropped.
Table 11: Factor analysis for Core Self-Evaluations, excluding items 2, 3, 4

<table>
<thead>
<tr>
<th>Core Self-Evaluations</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q07</td>
<td>.666</td>
</tr>
<tr>
<td>Q08</td>
<td>.648</td>
</tr>
<tr>
<td>Q10</td>
<td>.626</td>
</tr>
<tr>
<td>Q05</td>
<td>.561</td>
</tr>
<tr>
<td>Q06</td>
<td>.470</td>
</tr>
<tr>
<td>Q11</td>
<td>.420</td>
</tr>
<tr>
<td>Q09</td>
<td>.408</td>
</tr>
<tr>
<td>Q01</td>
<td>.369</td>
</tr>
<tr>
<td>Q12</td>
<td>.314</td>
</tr>
<tr>
<td>%Var. Exp</td>
<td>26.3%</td>
</tr>
</tbody>
</table>

The following two tables (Tables 12 and 13) show the factor loadings for the items dealing with RE. Item 14 was excluded to improve the reliability of the measure. The factor loadings all improved when item 14 was removed, with the exception of item 13, which dropped.

Table 12: Factor Analysis for Racial Evaluation Scale

<table>
<thead>
<tr>
<th>Racial Evaluation</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q16</td>
<td>.855</td>
</tr>
<tr>
<td>Q15</td>
<td>.853</td>
</tr>
<tr>
<td>Q17</td>
<td>.735</td>
</tr>
<tr>
<td>Q13</td>
<td>.602</td>
</tr>
<tr>
<td>Q14</td>
<td>.288</td>
</tr>
<tr>
<td>%Var. Exp</td>
<td>48.9%</td>
</tr>
</tbody>
</table>

Table 13: Racial Evaluation Scale excluding 14

<table>
<thead>
<tr>
<th>Racial Evaluation (excluding 14)</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q16</td>
<td>.869</td>
</tr>
<tr>
<td>Q15</td>
<td>.863</td>
</tr>
<tr>
<td>Q17</td>
<td>.734</td>
</tr>
<tr>
<td>Q13</td>
<td>.596</td>
</tr>
<tr>
<td>%Var. Exp</td>
<td>59.9%</td>
</tr>
</tbody>
</table>

In Table 14, the excluded items are indicated for both the CSE scale and the
RES. This table is provided to reflect the responses that were not answered in the same manner as the others. In other words, people were less likely to have a consistent answer for the excluded items. They were more likely to agree to all of the other questions or to disagree.
Table 14: Items used to measure Core Self-Evaluations and Racial Evaluation

<table>
<thead>
<tr>
<th>Item</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>I get the success I deserve in life.</td>
<td></td>
</tr>
<tr>
<td>There are times when I feel depressed. (reversed) (excluded)</td>
<td></td>
</tr>
<tr>
<td>When I try, I generally succeed. (excluded)</td>
<td></td>
</tr>
<tr>
<td>When I fail I feel worthless (reversed). (excluded)</td>
<td></td>
</tr>
<tr>
<td>I complete tasks successfully.</td>
<td></td>
</tr>
<tr>
<td>I do not always feel in control of my work. (reversed)</td>
<td></td>
</tr>
<tr>
<td>Overall, I am satisfied with myself.</td>
<td></td>
</tr>
<tr>
<td>I am filled with doubts about my competence. (reversed)</td>
<td></td>
</tr>
<tr>
<td>I determine what will happen in my life.</td>
<td></td>
</tr>
<tr>
<td>I do not feel in control of my success in my career. (reversed)</td>
<td></td>
</tr>
<tr>
<td>I am capable of coping with most of my problems.</td>
<td></td>
</tr>
<tr>
<td>There are times when things look terrible and hopeless to me. (reversed)</td>
<td></td>
</tr>
<tr>
<td>I feel accepted by other people of my race.</td>
<td></td>
</tr>
<tr>
<td>My race should try to think and act like other South Africans do (reversed) (excluded)</td>
<td></td>
</tr>
<tr>
<td>I feel good about being a member of my race group</td>
<td></td>
</tr>
<tr>
<td>I am proud of my race group</td>
<td></td>
</tr>
<tr>
<td>My race group is playing a significant role in building a better South Africa</td>
<td></td>
</tr>
</tbody>
</table>

The validity of the CSE Scale was already ascertained during the development of the measure, during the pilot phase of the research. The validity of the measures has already been discussed earlier in the chapter.

5.8.11 Scoring

Scores were calculated to measure respondent CSE and RE. These scores were needed so that the relationship between CSE and RE could be statistically tested. In addition, these scores were needed so that they could be correlated with learning and OBA.

The researcher calculated mean scores for CSE and RE. Each of these scores was calculated using the items that were selected after reliability was calculated and the factor analysis was completed. To calculate the scores, the researcher summated the data values and then an average was calculated.

For hypothesis one, cut-offs were determined for each score, to calculate high,
average/moderate, and low scores. For CSE, any score lower than three was considered to be low and anything higher than 3.67 was deemed to be high. This was in light of the quartiles for the scores. Table 15 indicates the cut-points for low, average and high categories for hypothesis one.

Table 15: Criteria for cut-points for low, average and high categories for hypothesis one.

<table>
<thead>
<tr>
<th></th>
<th>Quartiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Q3</td>
</tr>
<tr>
<td>Core Self-Evaluations</td>
<td>3.00</td>
</tr>
<tr>
<td>Racial Evaluation</td>
<td>4.00</td>
</tr>
</tbody>
</table>

Table 15 above indicates that quartile one and three were used for specifying cut-points for low, average and high scores. Low scores for CSE were those below three, average scores were between 3.01 and 3.66, and high scores were those scoring 3.67 or higher (average of summated values).

For RE, any score lower than four was deemed to be low. This was based on the quartiles for the responses, where quartile one was used for the category ‘low’. This is understandable, because the statements are positive affirmations of the respondent’s RE. Scoring below ‘agree’ would indicate that the individual on the most part did not hold positive RE.

Any score between four and 4.75 was seen as average (between quartile one and three), indicating that although the respondent was positive about their RE, they did not wholeheartedly agree with every statement. Finally, a score higher than 4.76 (above quartile three) indicated that they had high levels of RE.

5.8.12 Data Analysis
Data analysis was conducted using Microsoft Excel, OpenStat and MoonStats.

Both descriptive and inferential statistics were calculated. These included:

Mean (M)

Standard Deviation (SD)

Minimum (MIN) and Maximum (MAX)
Quartiles (Q)
Frequency Distribution
Pearson Product Moment Correlations (r)
Analysis of Variance (ANOVA)
Chi
T-tests

5.8.13 Shortcomings and sources of error
The RES is not a particularly refined measure in terms of the responses as it is based on people’s espoused or professed RES, which may differ from their implicit RE (Gawronski & Payne, 2010). Respondents may give socially acceptable responses, whilst still holding negative RE.

The sample comprised Black Zulus in Zululand, KwaZulu-Natal. The size of the sample and the non-probability sampling technique for testing hypothesis one means that the findings cannot be generalised to the broader community. The sample for testing the relationship between learning, OBA, CSE and RE was a simple random sample, but the sample comprised only young adult Zulus studying Human Resources Management at the University of Zululand. These findings also cannot be generalised to the broader population. The aim was to test a method for evaluating the linkages between the variables.

5.8.14 Ethical considerations
It is inarguable that the subject matter for this study is highly sensitive and volatile. Notwithstanding the psychological nature of the research, it touches on scars that may still be rather recent. It is imperative that South Africa heals as a nation, and research such as this could well provide ways of healing and instituting true transformation. In order for this research to be ethical, informed consent had to be obtained and the researcher was completely transparent about the purpose of the research. All information was handled with the strictest confidentiality, and individual identification was known only to the researcher.

Participants had access to full feedback on their scores and had access to the researcher. The researcher also ensured that the completed questionnaires were
stored in a secure location and that the data was used for research purposes only.

5.8.15 Conclusion

In this section, various aspects of the study’s research method were described. These included a specification of the research questions, hypotheses, key variables and concepts, and the operational definitions. In addition, the research instruments were described.

The sample design adopted was non-probability convenience sampling for hypothesis one, and simple random sampling for hypotheses two, three, four, five and six. This was deemed acceptable, because the study is exploratory and not aimed at producing results that are generalisable to the broader population. For hypotheses two, three, four, five, and six, the population of the study comprised Zulu students at the University of Zululand. Data was collected using trained fieldworkers, who were cognisant of the ethical and methodological requirements of valid research. Data was cleaned and captured in Microsoft Excel. It was then scored and statistically analysed using correlations and the Chi Square statistic. The instruments were checked for validity and reliability and were ethically administered.

5.9 Learning gains testing

In this sub-section, the method followed in the learning gains testing will be discussed. The learning gains testing enabled the researcher to test hypotheses two and three. These two hypotheses explored, quite tentatively, potential relationships between CSE, RE and learning among young Zulu adults.

The experiment focussed on the knowledge-based, cognitive elements of work as a Human Resources Manager. The aim is to identify whether CSE and RE serve as potential predictors, enhancers, or inhibitors of learning gains.

The underlying issue explored was whether racism and racial inequity affected individual RE, and whether this interacted or correlated with individual CSE. The sample used to test this relationship is from the same population the participants in the learning gains test were drawn from, except that the learning gains test focussed specifically on those who will be looking for work in the next three years.
and who were studying Human Resources Management. This focus was chosen because of the notion of “suitably qualified” as defined in the Employment Equity Act (55 of 1998).

The Employment Equity Act’s definition of “suitably qualified” includes those who can be trained in a reasonable amount of time to do a job. Persons who can be trained quickly in job-related skills may be given preference over more qualified and experienced individuals if the decision results in ‘positive discrimination’ (Constitution of the Republic of South Africa, Act 108 of 1996).

The link between CSE and RE had to be measured initially, as CSE may be affected by RE and in turn may affect learning. This is why it was important to examine the link between these two variables before commencing the testing of links between CSE, RE and learning in phase2.

The same population was utilised, but a focus on a subset of the population is adopted in this section. This was owing to the need to improve selection approaches and to examine the psychological profile of those who will be entering the job market in the next few years who will be eligible for skilled and professional appointment and training in future.

This section lays down the methodological framework for assessing whether CSE and RE affect learning. Learning evaluation comprises efforts to ensure that ETD is reliable and valid (Noe, 2005). This evaluation looks at the extent to which learning has occurred and also at how this translates into organizational results and success. Again, if psychological factors are not correctly addressed, then even valid ETD design may not result in good ETD results. In this study, in order to measure learning gains, it had to be demonstrated that the learning intervention indeed was valid.

Learner assessment refers to the decisions made about learner competence based on evidence presented against outcomes specified before commencement of ETD (SAQA, 2010). The assessment design is outlined in this chapter, as is the
learning design, including the lesson plan, outcomes, and content of the learning experience.

The actual data collection techniques and learning arrangements are described. Outcomes are used to specify the tasks that must be completed by the learner and also the “ability to demonstrate, at the end of a learning experience, a pre-determined task, skill, or set of behaviours, in a manner that involves understanding” (Jacobs, Vakalisa & Gawe, 2008, p89).

Samples were drawn so that Solomon’s four-group design could be used to test the learning intervention’s validity. Learning was facilitated using an adapted lecturing style. First, RE and CSE were measured, and then a pre-test was conducted. After the pre-test, the experimental groups underwent the learning experience. All four groups participated in the post-test.

The researcher used the learning gains test method to measure whether CSE and RE influence learning gains, which is the gain in knowledge a person has achieved after a learning experience is completed. In this case, the focus was on potential Human Resources Managers, and as a result, the test was used to measure mental or cognitive performance in subject matter related to Human Resource Management.

In order to ensure the validity of the learning experiment, the researcher conducted an evaluation. The learning evaluation, in the form of assessment, also measured the amount of learning that had occurred (an indicator of learning). Evaluation in this instance was used to evaluate how much learning was achieved and to ensure that the learning intervention used was valid and reliable (Goldstein & Ford, 2002).

Use was made of an adapted version of the SAQA (SAQA c, 2009) protocol for learning evaluation in this leg of the study. The researcher designed the assessments as part of the research design process. In this instance, the evaluation is there to measure the amount of learning achieved, and to validate the learning intervention. In this case, the evaluation is a key component of the study itself.
The reason for learning evaluation was to provide validation of the learning intervention, in order to demonstrate that learning gains were accurately measured. One cannot measure learning if one cannot prove that the learning intervention was valid. Learning evaluation was used to assess the amount of learning achieved, not as a measure of learning efficacy, but as a measure of the learner’s learning.

The experiment in this study aimed to identify how much learning had occurred, so that this data could be correlated with the levels of CSE and RE held by the respondents. The learning experiment was used to ascertain the reliability of the learning intervention and an evaluation of whether the intervention resulted in learning.

In this case, the learning intervention had to be valid inasmuch as it must be proven that it was responsible for the change in behaviour seen in the participants, otherwise the learning gains scores would be invalid and renege the purpose of the study.

**5.9.1 Hypothesis two and three: RE, CSE and learning**

This section will provide an exposition of the methods involved in testing the two research hypotheses that deal with learning. These hypotheses seek to explore the relationship between CSE and learning, and the relationship between RE and learning. These hypotheses are expressed as follows:

Research hypothesis two: *There is a relationship between CSE and learning*

If individual CSE is accurate, then it should correspond or co-vary with their learning (the change evident between the pre-test and post-test). If CSE is a person’s estimation of his or her ability and worth, and it is accurate, then the supposition is that it should co-vary with learning.

CSE may enhance or impair individual ability, through affecting how hard a person tries in a situation where performance is expected. On the other hand, inaccurate self-assessments of CSE may mean that CSE may not correlate with
learning. There may be instances where individuals grossly over or underestimate themselves. This would indicate a relationship that cannot be simply described through correlations.

Research hypothesis three: There is a relationship between RE and learning

If people are proud of their race, and have positive RE, they may be less likely to have doubts about their own learning ability. RE may be positively related to learning.

5.9.2 Learning experiment protocol

The learning experiment made use of assessment and evaluation to assess the amount of learning that occurred. Solomon’s four-group design was used to evaluate the learning intervention and validate the learning scores. This is amongst the most exact methods of experimental research (McGahee & Tingen, 2010). Another advantage is the numerous data analysis techniques that can be utilised in this experimental design. These techniques include ANOVA, Chi square, and Correlation Coefficients.

To validate the learning intervention, a sample of n=52 (four groups of 13) was drawn. The sample was then randomly allocated to four groups. Each participant in the experimental groups was assessed to ascertain the level of CSE and the level of RE. This sample was only for the validation of the learning method adopted, not for the measurement of learning, where there were n=46 usable responses in experimental Group 1.

Solomon’s four-group design was selected because it includes two extra groups to control for confounding variables (Shuttleworth, 2009). Confounding variables are those variables that distort the findings and damage the validity of the experiment. This technique is popular in social and educational research.

In Solomon’s design, experimental group 1 goes through a pre-test, learning intervention, and a post-test. Control group 1 goes through the pre-test and post-test, but not through the learning intervention, as indicated in Table 16 (Shuttleworth, 2009).
Experimental group 2 goes through the intervention and the post-test, but not the pre-test, to allow for any influence the pre-test might have had on the results. Control group 2 only goes through the post-test (Shuttleworth, 2009). This design is illustrated in table 16 below.

Table 16: Solomon's design as applied in the experiment

<table>
<thead>
<tr>
<th>Sampling</th>
<th>RE CSE</th>
<th>Pre-test</th>
<th>Learning intervention</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group 1 (n=13)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Control group 1 (n=13)</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>Experimental group 2 (n=13)</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Control group 2 (n=13)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

Only 13 respondents were needed in each group for the evaluation of the learning experience. Braver & Braver (1988) showed that large samples are not needed for the validation of Solomon's four-group design, if the correct statistical approach is followed. For the learning intervention itself, the experimental groups were much larger (n=110).

5.9.3 **Sampling**

A four-group design was applied to ensure that there was a statistically significant difference in the results of those who went through the learning experience, as opposed to those who did not, when going through the same assessment. This process is explained in detail in the sections that follow.

There were separate sample groups for the Solomon four-group validation of the learning intervention. Four sample groups were drawn all coming from the population of learners pursuing careers in Human Resources Management. One group (experimental Group 1 X1) went through pre-test, learning intervention, and post-test. One group went through the learning intervention and a post-test
(experimental Group 2 or X2). The third group went through the pre-test and post-test (control Group 1 or C1) and the final group went through the post-test only (control Group 2 or C2) (see table 16).

This process allows one to isolate the influence of the pre-test and learning intervention on learning, and affords the researcher an opportunity for distinguishing between the two. The experimental groups were randomly selected, and comprised Black, Zulu-speaking students at the University of Zululand.

Table 17 indicates the gender distribution of the sample. The sample was predominantly female (71.00%), which could be an indication that Human Resources Management is a preferred occupation for females, or an indication of the gender distribution for enrolment in higher education Institutions.

| Table 17: Gender Distribution of the sample (n=230) |
|----------------|----------------|----------------|
| Male          | Female         | Grand Total    |
| Frequency     | 67             | 163            | 230            |
| Percentage    | 29.00%         | 71.00%         | 100.00%        |

Table 18 shows the age distribution of the sample. The majority of the sample were young (>20= 45.45%, 21-30=51.08%). Very few respondents were older than 31 (only 3.03%), with even less representing the group between 41 and 50 (less than one percent). The total sample comprised 230 respondents. The age distribution of the sample is understandable, considering it is a sample of students. These respondents represent those Zulu young adults who will be looking for work in Human Resources Management in the next few years.

| Table 18: Age distribution of the sample (n=230) |
|----------------|----------------|----------------|----------------|
| Age            | >20 | 21-30 | 31-40 | 41-50 | Grand Total |
| Frequency      | 104 | 118   | 7     | 1     | 230         |
| Percentage     | 45.45% | 51.08% | 3.03% | 0.43% | 100.00%     |
Most participants were younger than 30. Those twenty or younger comprised 42.21 percent of the overall sample and those between the ages of 21 and 30 represented an additional 55.19 percent of the sample. A very small proportion of the sample was older than 30 (2.60%). The majority of the sample being younger than thirty implies that the sample only experienced a limited exposure to the direct effects of apartheid, but still lives with racial inequality and the after-effects of a divided society. They are the respondents who are likely to be looking for work following completion of their degrees. The youth of the sample is largely indicative of the fact that learners go directly from further education and training into higher education at the age of 18 or 19. It is understandable, therefore, that the sample comprises respondents who are young adults.

5.9.4 Outcomes addressed in the learning intervention

Outcomes used came from the Human Resources Management Syllabus at the University of Zululand. Outcomes were devised in accordance with taxonomies for learning. The following outcomes were addressed:

- Demonstrate a basic understanding of features of the Skills Development Act 97 of 1998;
- Describe the practical implications of the Skills Development Levies Act for South African Organizations;
- Sequence the steps in the skills development process in South Africa in the correct order;
- Distinguish between practical examples of the concepts knowledge, skills and attitudes; and
- Identify the roles and responsibilities of various professionals involved in South African Skills Development.

These outcomes were basic building blocks for further training in OBET and are not as complex as training may be in the workplace. Further research should be undertaken into the relationship between Learning and CSE and RE in more technically complex fields.
5.9.5 **Learning intervention**

The learning component of the experiment involved a lecture. A lecture means using words to get learners to understand and learn (Noe, 2005, p203). When most people think of learning, the first method that comes to mind is lecturing or traditional information presentation. Even OBET includes essential embedded knowledge in every Unit Standard. This essential embedded knowledge is usually delivered using traditional information presentation (SAQA, 2010).

Because the learning experiment focussed mainly on the delivery of facts and data or the knowledge domain, the lecture was deemed an acceptable mode of information presentation. This sort of lecture would precede more practical aspects of a course, where key concepts must be learned and understood before application can be attempted. The learners had three days in which to study for the test and were provided with learning materials to study in their own time. The lecture in the learning experiment included the use of a video and Microsoft PowerPoint slides, in an attempt to make the lecture more vibrant.

5.9.6 **Assessment considerations**

The assessment used was designed by the researcher. Killen (2000, in Butler, 2004) explains that useful assessment criteria need to conform to a number of principles. Firstly, assessment procedures must be valid. This means that they must assess what they are supposed to assess, and must be based on the learning outcomes specified. The process should also give consistent results and be culture-fair. These principles were borne in mind, and informed the choices of assessment criteria in the study. Learners were informed of the outcomes to be achieved prior to the commencement of the learning intervention, but subsequent to the pre-test.

The validity and reliability of the assessment were of particular importance in the present study, owing to the need to accurately assess learning. The researcher has experience in designing and administering OBA. Baseline data was used to ascertain whether learning occurred during this research project. The principles of assessment and evaluation were all integrated into the design of the learning experiment. The pre-test prior to commencement of the learning intervention was not
a control test, although the test conditions were controlled, because the content was not known to the learners in advance. The post-test after the lecture, in the learning experiment, was a control test.

The researcher wrote the outcomes and designed learning materials and then prepared for assessment. In the experiment, there was no formative assessment, as the purpose was to assess how much learning the learners could achieve independently. Assessments were used that covered one outcome per question in a ‘control test’ environment, and a higher education professional moderated the assessment. The higher education professional was a subject matter expert in Human Resources Management.

The next step was to plan the assessment and to compile an assessment plan. This included outlining what types of assessments were to be used and the methods of assessment that were to be employed. The instruments of assessment were determined at the same time.

Barriers to validity of the assessment were addressed, as learning interventions must be valid in order to be justifiable (Erasmus, Loedolff, Mda & Nel, 2009). The learning intervention was validated through the use of the Solomon Four-Group design.

5.9.7 Measurement of CSE and RE

During the learning intervention, the first step was to administer the CSE and RE measures to all participants. Each respondent was allocated a unique identifying number and given a questionnaire, which integrated both measures (for CSE and RE). They completed the questionnaire at the same time as testing.

5.9.8 Pre-test

A pre-test is used to measure the baseline levels of knowledge prior to the learning intervention. This information can be used to identify learning needs or to evaluate the extent to which learning contributed to behaviour change (in conjunction with the post-test data) (Goldstein & Ford, 2002).
Experimental Group 1 and control Group 1 completed the pre-test. The test took 15 minutes and assessed learner knowledge of introductory content for studies in ETD. The items in the test were either fixed response or sentence completion. This was to ensure objectivity when the assessment decisions were made. The level of assessment was not difficult, instead it sought to assess whether the learners could grasp basic content in the field.

5.9.9 Learning intervention

Experimental groups one and two participated in the learning experiment at the University of Zululand. The learning intervention comprised 45 minutes of lecturing and the use of Microsoft PowerPoint and video. The trainees were all in the same lecture venue in order to ensure that the learning intervention was reliable. This was to avoid inconsistencies in the time of the day, temperature, noise outside or any other factors that could contribute to the intervention’s efficacy (Naik, 2007). Prior to the commencement of the learning intervention, the outcomes and assessment arrangements were clearly explained to the learners. This is one of the requirements for OBA (SAQA, 2010).

The learning intervention was outcomes-based and comprised a video, followed by an information presentation (see the lesson plan indicated in table 19). All outcomes were clearly specified at the outset of the intervention and learning materials were provided that directly addressed the specified outcomes. The trainees knew when they would be assessed, and had enough time to learn the work, with understanding. The intervention, in short, was outcomes-based, and was aimed to equip learners with essential embedded knowledge. The learning intervention was aligned with SAQA’s (2010) requirements for ETD in South Africa.

Table 19: Lesson Plan for the Learning Experiment

| Course title: Human Resources Management |
| Lesson title: Introduction to Training in South Africa |
| Lesson length: 45 minutes |
| Learning outcomes: Demonstrate a basic understanding of features of the Skills Development Act 97 of 1998. |
Describe the practical implications of the Skills Development Levies Act for South African Organizations.

Sequence the steps in the skills development process in South Africa in the correct order

Distinguish between practical examples of the concepts knowledge, skills and attitudes.

Identify the roles and responsibilities of professionals involved in South African Skills Development

**NQF level 7:** (Bachelor’s degree)

**Prerequisites:** Business Management (NQF level 6) (CBMG101)

**Learners:** CHRM 201 or Human Resources Management II

**Facilitator:** Nicole Dodd

**Room arrangement:** Classroom

**Materials and equipment needed:** Learning Materials, Evaluation and Assessment materials, Data Projector, Computer, Internet access, external hard drive

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Facilitator</th>
<th>Learner</th>
<th>Materials/Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Minutes</td>
<td>Introduction</td>
<td>Explanation of nature of the assessment and also the right to not participate.</td>
<td>Listens</td>
<td>Assessment</td>
</tr>
<tr>
<td>15 Minutes</td>
<td>Pre-test</td>
<td>Monitors learners, answers questions, and collects completed scripts.</td>
<td>Answers questions</td>
<td>Assessment</td>
</tr>
<tr>
<td>8 Minutes</td>
<td>Video</td>
<td>Facilitator shows a video on Outcomes-Based Education and Training in South Africa</td>
<td>Watches video</td>
<td>Computer, internet access, data projector</td>
</tr>
<tr>
<td>45 Minutes</td>
<td>Presentation</td>
<td>Facilitator provides an overview of the outcomes and then presents content.</td>
<td>Listens, takes notes, asks questions</td>
<td>Computer, PowerPoint presentation, data projector</td>
</tr>
</tbody>
</table>

### 5.9.10 Post-test

All experimental and control groups completed the post-test. The post-test was identical to the pre-test. It was administered under the same control test conditions. The test was monitored to ensure that learners could not copy. The test was administered three days after the completion of the learning intervention.

Candidates were given full preparation for the assessment (for the post-test). They were told what they would need to do in the assessment. After allowing time for the learners to prepare, the actual assessment commenced in compliance with
the assessment plan (SAQA, 2009a). In the learning experiment, the learners were fully briefed on the assessment protocol and the intended outcomes before assessment commenced. The entire intervention was conducted in line with the specifications of SAQA (SAQA, 2009a; SAQA, 2009b; SAQA, 2009c). The lecture would ordinarily be only one component of a broader scheme of learning interventions in order to achieve Unit Standards or exit level outcomes in terms of the SAQA requirements.

All this assessment involved was the collection of evidence that the learners had achieved the outcomes set. The assessment evidence must be such that it ensures validity (SAQA, 2009b). The assessor documented and recorded evidence of learner achievement through comparing learner responses against those delineated in the memorandum. The assessments were scored and a percentage was calculated.

The assessor evaluated the evidence and made judgements about the learners. Another higher education educator moderated results at this point. After this, feedback was provided to the learners. This feedback was clear and directly relevant to the outcomes covered in the learning intervention. This feedback was also constructive and handled with cultural sensitivity (SAQA, 2009b). After this, the assessor reviewed the assessment process to assure quality.

The assessment type was made consistent with the outcomes that the learners were supposed to demonstrate as specified using the relevant taxonomy. The learning experiment focused on these cognitive skills, assessing them through written items. The researcher decided which approach created the best evidence of achievement of the outcomes. This assessment did not include much higher-order processing of knowledge, which is a limitation of the study.

5.9.11 **Calculation of results**

All data was captured in Excel spreadsheets, data was also cleaned at the same time, as it was checked for missing values or invalid values. CSE and RE scores were calculated using mean scores. These scores were then categorised into the same three categories used in the initial correlation of CSE and RE and calculated
according to the quartiles. The three categories divided the scores into low, average and high, using quartile 1 and quartile 3 to divide the three categories.

These categories were then cross-tabulated in a matrix with learning gains scores. The learning gains score was expressed as a proportion of the total possible learning a learner could achieve. ANOVA, Chi square, regressions and correlation coefficients were then calculated to determine whether CSE and RE had a significant impact on learning.

5.9.12 Assessment Protocol

The pre and post-tests or assessments comprised tests covering basic content from Human Resources Management. Tests were administered during the week of the 10th – 14th of May 2010. Assessment was outcomes-based and aligned with Bloom’s taxonomy. The post-test was administered three days after the initial assessment and learning intervention. The assessment was a written individual assessment, performed under examination conditions in a control test. Learners did not have access to study materials or outside assistance.

The tests were scored against a prescribed memorandum. The scores were recorded against a unique identifying number for each learner. The identifying number was needed so that the researcher could cross-reference the test scores with scores for CSE and RE. This was done so that the researcher could assess whether there is a relationship between CSE, RE, and learning, and whether there is a relationship between Learning and OBA.

5.9.13 Calculation of validity of the learning intervention

The calculation of validity was performed according to the procedure laid out by Braver and Braver (1998) with adjustments recommended by Campbell & Stanley (1963, in Braver & Braver, 1998) and Huck and Sandler (1973, in Braver & Braver, 1988). The validation process is indicated below, and the results are discussed for each step of the validation process.

The notation for Solomon’s four-group validity testing is once again tabulated in table 20 for the reader’s convenience. The validation process involves the use of
four groups, two of which are experimental groups that undergo a learning intervention, and two of which comprise control groups.

Table 20: Notation for Solomon four-group validity testing

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>Learning Intervention</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group 1 (X1)</td>
<td>O1</td>
<td>Yes</td>
<td>O2</td>
</tr>
<tr>
<td>Control group 1 (C1)</td>
<td>O3</td>
<td>No</td>
<td>O4</td>
</tr>
<tr>
<td>Experimental group 2 (X2)</td>
<td>-</td>
<td>Yes</td>
<td>O5</td>
</tr>
<tr>
<td>Control group 2 (C2)</td>
<td>-</td>
<td>No</td>
<td>O6</td>
</tr>
</tbody>
</table>

$O_i$ is the observed mean score for test I

The first step in validation in Solomon four-group design is to determine if there is pre-test sensitization. This is achieved through testing whether the treatment effect is influenced by a pre-test. If this is the case, then O2 will differ from O5 and O4 will differ from O6. If it is found that the treatment effect is significant and unaffected by the pre-test, then O2 and O5 (Experimental groups' mean scores) would be similar but significantly different from the similar O2 and O5 (control groups' mean scores).

A 2X2 factorial design Analysis of Variance (ANOVA) was conducted to perform the Solomon four-group validity test according to the configuration depicted with the corresponding observed descriptive statistics summarised in table 22. This was part of the validation process.

Table 21: 2 X 2 Analysis of Post-test Scores (Braver & Braver, 1988, p151)

<table>
<thead>
<tr>
<th>Pre-test</th>
<th>Treatment (X)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>O2</td>
<td>O4</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>O5</td>
<td>O6</td>
<td></td>
</tr>
</tbody>
</table>

Table 22 indicates the descriptive statistics for the ANOVA used to validate the learning intervention conducted to test hypotheses 2 and 3. The mean score for each group is indicated. Experimental Group 1 had the highest score, followed by
experimental Group 2. These are the two groups that participated in the learning intervention. The two control groups had noticeably lower test scores than those who had undergone the learning intervention. There also was a noticeable difference between the scores for those who went through the pre-test and those who did not go through the pre-test. This implies that there was evidence of a small amount of pre-test sensitization, tested further through Analysis of Variance.

Table 22: Descriptive Statistics for ANOVA (n=52)

<table>
<thead>
<tr>
<th>GROUP</th>
<th>Learning Intervention</th>
<th>Pre-test</th>
<th>N</th>
<th>MEAN</th>
<th>STD.DEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group 1, O2</td>
<td>Yes</td>
<td>Yes</td>
<td>13</td>
<td>78.46</td>
<td>14.05</td>
</tr>
<tr>
<td>Control Group 1, O4</td>
<td>Yes</td>
<td>No</td>
<td>13</td>
<td>51.72</td>
<td>12.83</td>
</tr>
<tr>
<td>Experimental Group 2, O5</td>
<td>No</td>
<td>Yes</td>
<td>13</td>
<td>70.39</td>
<td>21.26</td>
</tr>
<tr>
<td>Control Group 2, O6</td>
<td>No</td>
<td>No</td>
<td>13</td>
<td>41.91</td>
<td>13.35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GROUP</th>
<th>Learning Intervention</th>
<th>Pre-test</th>
<th>N</th>
<th>MEAN</th>
<th>STD.DEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>Yes</td>
<td>Yes</td>
<td>26</td>
<td>65.09</td>
<td>18.96</td>
</tr>
<tr>
<td>No</td>
<td>26</td>
<td>56.15</td>
<td>22.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Intervention</td>
<td>Yes</td>
<td>Yes</td>
<td>26</td>
<td>74.42</td>
<td>18.13</td>
</tr>
<tr>
<td>No</td>
<td>26</td>
<td>46.82</td>
<td>13.77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL | 52 | 60.62 | 21.17 |

A Two-Way ANOVA was conducted with the dependent variable being the post-test score and the independent variables being Factor A, learning intervention, (yes/no) and Factor B Pre-test (yes/no). The results are summarised in Table 23.

Table 23: ANOVA results for Solomon four-group post-test scores (n=52)

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>D.F.</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitization</td>
<td>1</td>
<td>1040.17</td>
<td>1040.17</td>
<td>4.19</td>
<td>.046</td>
</tr>
<tr>
<td>Treatment</td>
<td>1</td>
<td>9907.02</td>
<td>9907.02</td>
<td>39.95</td>
<td>&lt;.0005</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>9.80</td>
<td>9.80</td>
<td>0.04</td>
<td>.843</td>
</tr>
<tr>
<td>Within Groups</td>
<td></td>
<td>11903.32</td>
<td>247.99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
From the results depicted in Table 23 it is evident that there is a significant \( p = .046 \) difference between the average scores of those who underwent the pre-test and those who did not, but there also is a significant \( p < .0005 \) difference between those who underwent the learning intervention and those who did not. It can be concluded, therefore, that the learning intervention did produce a statistically significant \( \alpha = .05 \) change in behaviour even though the pre-test did affect the amount of learning that occurred, through pre-test sensitization of learners, which made them aware of the type of content to be covered in the post-test.

The non-significant \( p = .843 \) result for the interaction between the two factors means that it can be concluded that the magnitude of the treatment effect was independent from the sensitization that occurred due to the pre-test. The learning intervention can therefore be considered valid. Behaviour change can be attributed to the learning intervention, with moderation for the effect of pre-test sensitization.

### 5.9.14 Consideration of the Validation Exercise

The extent of the pre-test sensitization raises several important issues about OBET. OBET requires that all learners know in advance the outcomes that they will need to demonstrate. At the same time, learners are provided with full details of the nature of assessment to be employed, as well as the assessment types and assessment design. The learners are further exposed to assessments through formative assessment, where they are given detailed feedback on how to perform better in the assessments (Killen, 2007). All of these priming and sensitising processes could be considered threats to validity because they prime the learner to perform in the assessments, not necessarily to learn in terms of fully acquiring knowledge, skills and abilities that can be transferred to other contexts.

The intervention above was outcomes-based, with learners being made aware
of the outcomes to be demonstrated and the assessment arrangements. A full investigation into the validity of OBET in the South African ETD context, with the use of a full four-group design, not just a quasi-experimental or pre-experimental evaluation, should be undertaken.

A gains test alone (normal pre-test post-test arrangement) does not fully evaluate OBET in terms of the amount of behaviour change achieved (Braver & Braver, 1988). Even with a control group, a pretest-posttest design is not enough to truly validate learning interventions, because it does not isolate the impact of pre-test sensitization and priming.

OBET may well be rendered invalid by its emphasis on preparing the learner for assessment, instead of preparing the learner to be able to learn knowledge, skills, and attitudes in a manner that can be transferred to any number of contexts, instead of simply being demonstrated in an assessment.

5.9.15 Ethical Considerations

The same ethical considerations that were borne in mind for the measurement of RE and CSE earlier in the chapter were addressed in this component of the study.

All participation was voluntary, and assessment results were kept confidential. Scripts were stored for future reference and will be stored for future reference for the next five years.

Learners received feedback on their performance, in a tactful and confidential manner. Participants had access to the researcher for consultation if they had any questions about the research.

5.9.16 Conclusion

The experimental design for the learning experiment was outlined. This experiment sought to test the hypothesis that CSE relates to learning interventions. A further hypothesis was that RE relates to learning.

The experiment is a worthy area of study because of provisions in the
Employment Equity Act (55 of 1998), which deem individuals who need to be quick learners to be considered suitably qualified. Learning-gains testing will hence be an area for focus if Employment Equity is to be effectively implemented. In addition, any psychological factors that may relate to learning will need to be systematically investigated, in order to identify and eliminate constraints to learning.

The learning evaluation method selected was the Solomon four-group design. In light of this, four groups were formed, two control groups and two experimental groups. The two control groups comprised a normal pre-test/post-test group and a post-test-only group. The experimental group comprised a group that underwent a pre-test, learning intervention, and post-test, and a group that only went through the learning intervention and a post-test.

The experimental groups underwent the learning intervention and their learning was assessed afterwards. The post-test results for all four groups were compared using a 2X2 Analysis of Variance. There was a statistically significant difference between the scores of the control group and the experimental group (p<0.0005, n=52). There was also a significant difference between the scores of those who participated in the pre-test and those who did not (p=0.046, n=52). The interaction between the two variables was insignificant (p=0.84, n=52). This means that although the pretesting did have an impact on the results, the effect of sensitization is independent of the treatment.

The next section will discuss the research method utilised to test the last three hypotheses. These final hypotheses pertain to the relationship between CSE, OBA, learning, and RE.

5.10 CSE, RE, learning and OBA (hypotheses 4, 5, and 6)

5.10.1 Introduction and background

Hypotheses 4, 5, and 6 arose from the findings of hypotheses 2 and 3. This was considered acceptable in this study only because of the exploratory nature of the study. There are other factors that may contribute to performance in OBA, such as existing knowledge, psychological characteristics of the learner, and environmental constraints. One such psychological characteristic may be CSE. One could propose
that, given correct OBET practices and adequate levels of prior learning, trainees can be trained, regardless of their levels of CSE or RE (SAQA, 2010). However, prior research has indicated that there is a relationship between performance in learning and work environments and CSE (Broucek, 2005).

The researcher sought to understand whether CSE and RE played a part in OBA and learning in the South African context, and also whether learning and OBA are interrelated. International studies made use of other indicators, common methods of performance measurement that are more haphazardly designed than in experimental circumstances, and not administered in as controlled environments as one finds when conducting experiments. In other countries, CSE correlated with increased satisfaction with work and life and improved performance on the job; however, the correlations have only been low to moderate (Judge, 2009).

It seems obvious that, given valid and reliable ETD and OBA, and similar levels of ability, as was the case in this study, nearly all learners could pass. This is at the heart of OBET, which assumes that all learners can learn, given a large amount of coaching and preparation for assessment (Baldauf & Kaplan, 2004).

Once learners have the learning assumed to be in place or are fit for the outcomes of the learning, they should all be able to pass if there are resources and OBET facilitation and assessment practices are followed, which limit the usual challenges associated with traditional ETD (Baldauf & Kaplan, 2004).

However, given time and the challenges students face, plus their own misgivings caused by their personal experiences, even those with equal ability perform differently. Rosopa and Schroeder (2009, p1), conclude that “it seems plausible that high CSE could lead to higher levels of both motivation and performance in work or academic settings”. The above-mentioned researchers found that higher levels of CSE strengthened the positive relationship between cognitive ability and academic achievement. This is largely because of learners capitalising on advantages if they have higher levels of CSE.

It follows, then, that CSE, potentially in interaction with RE, may play a part
when environments are not controlled, and when there are challenges in the ETD environment. CSE therefore does not simply influence learning; instead it influences how this learning is utilised by the learner towards achievement in OBA.

Previous research in the field found statistically significant correlations \((r=0.28, p=0.01)\) between grade point average and CSE (Broucek, 2005). The researcher therefore decided to look at the interaction between CSE, RE and OBA results.

The final research proposition is that:

\[ OBA \text{ results are influenced by CSE, RE and learning.} \]

The other potential explanation is that those who are successful in learning endeavours have higher CSE than those who are not successful in learning endeavours. The hypotheses below make no assumptions about causality. The researcher believes that the relationship between success and CSE may be reciprocal, where previous successes may boost future CSE and subsequently motivation. Success improves CSE; the CSE then boosts future performance.

This may be due to Thorndike’s first law of effect, which postulates that behaviour with a satisfactory outcome is likely to be repeated (Thorndike, 1913).

All of the above discussion led to the formulation of the following hypotheses focusing on the interaction between CSE, RE, learning, and achievement in OBA. The investigation into the nature of the relationship, which probably manifests through the interaction of CSE with the environment and with ability, was beyond the scope of the present study.

### 5.10.2 Hypotheses

The hypotheses in this phase of the research dealt with the interplay between CSE, RE, learning, and OBA. These hypotheses are outlined as follows:

H4: There is a relationship between OBA and CSE.
Hypothesis 4 assumes that CSE affects the overall chances of success of learners in OBA through the way CSE interacts with environmental opportunities and threats over time. This hypothesis was tested using correlations.

Hypothesis 5 suggests that results in OBA may be affected by individual RE. The hypothesis that RE is related to OBA was tested using correlations.

Hypothesis 6 posits that OBA is related to the learning gains of an individual during the learning intervention. This hypothesis was tested using correlations. Learning may contribute to results in OBA.

5.10.3 Sampling and data collection

CSE, RE and learning-gains data were already collected for hypothesis two and three, in phase two. The data-collection techniques and other issues were discussed in earlier sections of the chapter. The data-collection techniques were the same for the testing of these hypotheses, as the sample was the same as for hypotheses 2 and 3. This is because the sample for phase 3, hypotheses 4, 5, and 6, comprised the two experimental groups from the testing of hypothesis 2 and hypothesis 3.

The overall sample for the two experimental groups was n=110. From this, the sample was further filtered to include only those who fulfilled specific criteria. This sample was drawn purposively for learners who fulfilled the following criteria:

Learners attempting the course for the first time;
Learners who attended learning-intervention sessions;
Learners who wrote the assessments;
Learners who consented to complete the Instruments for measuring CSE and RE;
Learners who spoke Zulu.

The sample comprised participative learners - those who applied themselves to the course work and participated in learning opportunities. The OBA comprised a mid-term assessment (covering academic work over a one-month period).

The assessment was designed in terms of OBA principles and techniques that were already discussed and validated during the learning intervention testing. The test covered content that was both applied and theoretical in nature.

5.10.4 Research Procedure

The research procedure was already detailed in the previous section, but is briefly laid out here in order to recap. The sample’s RE and CSE scores were assessed. Thereafter, a pre-test on the specified learning outcomes was administered. Learners then underwent a short learning intervention, details of which were provided in chapter 7. The learning intervention was followed, after three days, by a post-test assessment. The learning intervention was validated through the use of the Solomon Four-group design. There was evidence of pre-test sensitization, but the learning intervention was valid. There was a statistically significant difference between the post-test scores of those who underwent the learning intervention in comparison with those who did not, despite pre-test sensitization being marginally evident.

The learners who participated in the learning experiment above also completed a mid-term assessment, which covered approximately one month’s worth of content in the second year Human Resources Management syllabus. A score was calculated for each learner against a predetermined marking memorandum. The course is Outcomes-Based and validated through moderation by peers within the University and external review by the Council on Higher Education.

The scores for learning gains and OBA could then be used in conjunction with the mean scores for RE and CSE to calculate the relationship between the above-mentioned variables and OBA. It must be reiterated that the study was exploratory. No assumptions are made about causality or the direction of relationships.
5.10.5  Administration, instrument and scoring  

The assessment instrument used to test hypotheses 4, 5, and 6 comprised a twenty-five-item assessment that was peer moderated and based on the content of the second year Human Resources Management syllabus. The learners completed the assessment in control test conditions, where they could not crib from one another. The assessment was compared against a prescribed memorandum and then a percentage was calculated. Scores were captured on an Excel spreadsheet for use during hypothesis testing. These considerations were already discussed in previous sections of the chapter.

5.10.6  Conclusion  

This section very briefly described additional research method considerations for the final two hypotheses. These final hypotheses looked at the relationship between individual self-worth/self-perceptions and learner achievement in OBET. Hypothesis 5 examined any potential relationship between RE and achievement in OBET. Hypothesis 6 sought to confirm the relationship between learning and achievement in OBA.

5.11  Conclusion to the chapter  

The research method used in this study was described in this chapter. To avoid confusion, the research method will be summarised again. Research questions were derived from the literature reviewed in chapters 2, 3 and 4. Hypotheses sought to explore the relationship between CSE, RE, learning, and achievement in OBA. Racism during apartheid and the post-apartheid era may have affected the CSE of South Africans by influencing their RE.

Should apartheid have affected CSE and RE, and should these variables interact with learning and OBA, then Employment Equity and ETD targets may not be met.

The research design for each phase of the research was presented. There were three phases to the research. The first explored the relationship between RE and learning. The second phase comprised a learning experiment, and looked at learning
in relation to CSE and RE. In phase 3, the relationship between RE, CSE, learning, and OBA was calculated.

The learning experiment was found to be valid, but there was evidence of pre-test sensitization. There was a detailed explanation of the methods implemented in the learning experiment, as well as sampling, quantification of CSE and RE, pretesting, learning intervention and post-testing. The survey method for the measurement of CSE and RE are detailed and the information gathering processes for learning and OBA results were clarified.

Initially, twelve items were included to measure CSE and five items to measure RE, but these were reduced following the calculation of reliability of the measures. Three items were omitted from the CSE Scale and one was removed from the RE measure. The process for collecting, validating and scoring learning and OBA were covered in detail. All measures and methods were found to have adequate levels of validity and reliability. Mean scores were used to calculate scores for the operational variables.

Convenience or non-probability sampling was used for data collection for hypothesis 1. The data was collected in an ethical manner by trained fieldworkers. The overall sample size was 198, and came from the population of adult Zulus resident in Northern KwaZulu-Natal. For phase two and three, the sample was drawn from the population of students studying Human Resources Management at the University of Zululand. A sample of 230 usable data sets was collected. For the purposes of validation of the learning intervention, four groups of n=13 respondents were used. For the measurement of learning, there were n=46 completed data sets and for the measurement of OBA there were n=60 usable questionnaires. The disparity in sample sizes was owing to the availability of complete data sets for each variable. For hypothesis 2, 3, 4, 5 and 6, a simple random sample was drawn.

Hypothesis 1’s data was collected through the use of a survey. Hypotheses 2 and 3 were tested using a combination of survey data and a learning experiment. For Hypotheses 4, 5, and 6, the data from OBA was correlated with data already collected for hypotheses 2 and 3.
Descriptive and inferential statistics were calculated for the data, after it had been collected, captured, cleaned and scored. These statistical findings were interpreted. The results will be presented in Chapter 6. The sample profile for each phase of the research will also be presented.

Chapter 6 begins by presenting findings on the potential relationship between CSE and RE in a Zulu community (phase one). Thereafter, there is a presentation of findings for testing the relationship between RE, CSE and learning (phase two). Finally RE and CSE are measured against learning and OBA to see if there is any covariance in the variables (phase three).
6. FINDINGS, RESULTS, AND DISCUSSION

6.1 Introduction to the chapter

This chapter brings together the literature and research methods. The data pertaining to the hypotheses is presented. Following the presentation of the results, the research findings are discussed and the implications of the findings are discussed. The researcher proposed that racism and racial inequity in South Africa could have brought about a relationship between RE and CSE. These two variables were then hypothesised to be related to learning. In this instance, learning referred to the capacity to acquire job-related knowledge, skills and attitudes in a reasonable space of time. The researcher also sought to assess whether CSE, RE and learning could also potentially be related to OBA.

The results of the testing of the relationships mentioned above are presented in the sections that follow and thereafter the implications of these findings are discussed as well as future scope for research.

6.2 Chapter overview

In the first section, the results of the testing of the relationship between RE and CSE are presented (Phase one). Thereafter the results of the research into the relationship between RE and CSE and learning are discussed (Phase two). The final sections address the findings relating to OBA, learning and CSE and RE (Phase three).

6.3 Phase One: Hypothesis One

6.3.1 Introduction

In the previous chapter, the research method selected to test hypothesis one was outlined. In preparation for this, the research questions and hypotheses for the study were delineated. Various sampling and ethical issues were also considered.

The first hypothesis tested in this chapter is that there is a relationship between CSE and RE. This relationship may mean that an individual's CSE is partially related to their perception of their RE and vice versa.
This section will explore the relationship between CSE and RE. If these two variables are related, then RE could impact on learning either directly or through CSE. International research has already correlated CSE and job satisfaction and job performance (Bono & Judge, 2002).

The relationship between learning and CSE and Learning and RE will be discussed in the next section. However, it must be kept in mind that RE could interrelate with learning through its influence on CSE. It is thus necessary to look at the relationship between CSE and RE first.

Thus far, the literature suggests that there may be a link between an individual’s estimation of his or her own worth (CSE) and their perceptions of their race (RE). The previous chapter outlined how the researcher has chosen to test this supposition.

6.3.2 Sample Profile for Hypothesis One

At this point, the reader must be reminiscent of the exploratory nature of the study. The study aimed at guarded and provisional exploration of any potential relationships between the variables CSE and RE.

The study did not aim at producing results that could be universally applied to the population in South Africa. A follow-up study will be needed to produce generalisable results, should an association be found during the course of this initial and exploratory study.

Table 24 is an account of the demographic profile of the sample. The sample comprised adult Black South Africans resident in KwaZulu-Natal who speak Zulu as a home language. This is the largest population group in South Africa (Statistics South Africa, 2010) and is therefore worthy of specific attention. The group has its own ethnic and cultural identity.

The sample was young, with 92 percent being younger than 30 years of age (see table 6.1), and 29 percent being younger than 20. Despite the sample’s relative
youth, they still experience racism and racial inequality. Twenty to thirty year olds would have lived through the last years of apartheid leading up to the first democratic elections in 1994 (Mandela, 1994). They would have experienced the turmoil of the 1980’s in South Africa, with necklacing, stayaways and strikes (SAPA, 1996; BBC, 2010). Although the age of the sample indicates that they would not have experienced the turmoil of the Group Areas Act (41 of 1950) and other aspects of apartheid, they still experienced racism in their lifetimes, through their experiences of racially-based socio-economic inequity.

To some extent, any relationship between CSE and RE found in this study may be specific to the Zulu culture and may not be generalised to other ethnic groups in South Africa who happen to be Black. Zulu experiences of CSE and RE may not be the same as those of other cultural groups within the Black community because of the specific cultural identity Zulus may hold. There is considerable pressure in South Africa to downplay the role of ethnicity (“volkskap”) in the determination of individual identity as mentioned by Sisulu (in Houser & Shore, 1997). However, just because of previous unrest one cannot discount ethnic identity (“volkskap”) as an important factor in the determination of individuality.

The formation of a singular African identity cannot come at the cost of cultural heritage or from the resolute refusal to truly acknowledge cultural and ethnic diversity. As Sisulu put it, the challenge is to create “this great culture, a culture of diversity, but united with a view to building the country” (in Houser & Shore, 1997, p211).

With regards to the Zulu community in KwaZulu-Natal, the majority (85%) of the population in KwaZulu-Natal is Black, followed by an Indian/Asian representation of 9 percent, then Whites (5%) and coloureds (1.5%). The main language spoken is IsiZulu (81%) (Statistics South Africa, 2010). Just over half the population lives in non-urban areas (54%). The sex ratio (males to every 100 females) is 88:100.

The sample mainly comprised respondents younger than 30 (92.42%) and nearly 70 percent of respondents were female, as opposed to the provincial average of 53 percent (Brooks, 2004). The sample is not representative, as the aim
at this point was not to make inferences about the population, but instead to ascertain whether the relationship between CSE and RE merited further in-depth investigation.

The sample (n=198) all came from one cultural group in one region, i.e. the Zulu culture in Zululand. This means that there is a fair level of consistency as opposed to what may have been found should a small sample have been drawn from disparate cultural groups within South Africa. The sample’s experiences of discrimination could be considered to be reasonably similar if one adopts a positivist approach.

The scope of the study is very constricted and targets a small sample group with many common features, instead of trying to collect data from a number of different ages and ethnic groups.

The individuals sampled were all from at least one designated group (Black) and the majority were from two designated groups (Black and Female) (Du Plessis, Fouché & Van Wyk, 2001). The partakers were therefore candidates for positions for Employment Equity purposes and had all been either direct or indirect victims of apartheid and likely to have experienced racism.

Positioning in rural Zululand meant that the researcher could draw a good quality sample of young Zulus who would be looking for work and would be considered as equity candidates.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Count</th>
<th>Percent</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20</td>
<td>56</td>
<td>28.28%</td>
<td>28.28%</td>
</tr>
<tr>
<td>21-30</td>
<td>127</td>
<td>64.14%</td>
<td>92.42%</td>
</tr>
<tr>
<td>31-40</td>
<td>11</td>
<td>5.56%</td>
<td>5.56%</td>
</tr>
<tr>
<td>41-52</td>
<td>3</td>
<td>1.52%</td>
<td>7.07%</td>
</tr>
<tr>
<td>53-60</td>
<td>1</td>
<td>0.51%</td>
<td>0.51%</td>
</tr>
</tbody>
</table>

| Gender   |       |          |              |

Table 24: Biographical Information (n=198)
<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Percentage</th>
<th>Reference Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>60</td>
<td>30.30%</td>
<td>30.30%</td>
</tr>
<tr>
<td>Female</td>
<td>138</td>
<td>69.70%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Language</th>
<th>Count</th>
<th>Percentage</th>
<th>Reference Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zulu</td>
<td>198</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>Count</th>
<th>Percentage</th>
<th>Reference Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary School</td>
<td>3</td>
<td>1.52%</td>
<td>1.52%</td>
</tr>
<tr>
<td>High School</td>
<td>1</td>
<td>0.51%</td>
<td>2.02%</td>
</tr>
<tr>
<td>Matric</td>
<td>187</td>
<td>94.44%</td>
<td>96.46%</td>
</tr>
<tr>
<td>Diploma</td>
<td>4</td>
<td>2.02%</td>
<td>98.48%</td>
</tr>
<tr>
<td>Degree</td>
<td>1</td>
<td>0.51%</td>
<td>98.99%</td>
</tr>
<tr>
<td>Honours</td>
<td>1</td>
<td>0.51%</td>
<td>99.49%</td>
</tr>
<tr>
<td>Masters</td>
<td>0</td>
<td>0.00%</td>
<td>99.49%</td>
</tr>
<tr>
<td>Doctorate</td>
<td>1</td>
<td>0.51%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Count</th>
<th>Percentage</th>
<th>Reference Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>184</td>
<td>92.93%</td>
<td>92.93%</td>
</tr>
<tr>
<td>Manager</td>
<td>2</td>
<td>1.01%</td>
<td>93.94%</td>
</tr>
<tr>
<td>Skilled worker</td>
<td>3</td>
<td>1.52%</td>
<td>95.45%</td>
</tr>
<tr>
<td>Line worker</td>
<td>1</td>
<td>0.51%</td>
<td>95.96%</td>
</tr>
<tr>
<td>Self-employed</td>
<td>2</td>
<td>1.01%</td>
<td>96.97%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>2</td>
<td>1.01%</td>
<td>97.98%</td>
</tr>
<tr>
<td>Professional</td>
<td>4</td>
<td>2.02%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

The sample had mostly completed a matric certificate and was studying towards a tertiary qualification (see table 24 above). As they enter the world of work, they will be considered for employment purposes. The Employment Equity Act (55 of 1998) applies to the sample, as they are all from the designated group ‘Black’ and 69.70 percent are women, so their levels of CSE and RE are of importance and worthy of examination.

Any evidence of lowered levels of RE would imply that racism is still affecting Black South Africans entering the workforce. This may be the case, even though most did not directly experience discrimination in the workplace or school (not of school-going age before 1994), racism may still have affected them psychologically.

Lesser levels of CSE amongst skilled work-seekers are worthy of investigation because of the impact this could have on organizational performance and consequently South Africa’s development. It was therefore considered acceptable to begin with an exploration of the levels of RE and CSE amongst this important population sub-group.
6.3.3 Results

The next section addresses the results of the quantitative component of the study for hypothesis one. Scores are provided for CSE and RE and relationships between the variables will be expressed.

Table 25 displays the summary statistics for CSE and RE. The mean score of CSE of the sample was 3.32 (n=198) on a five point Likert scale. Reflecting on the questions asked, this is not a particularly high score, but it is comparable with the score of 3.33 found by Broucek in a similar study in the United States of America in 2005. The level of CSE was accompanied by a small standard deviation of only 0.57. In the sample, the lowest level of CSE was only 1.44 and the highest was 4.78, but the majority was clustered around 3.32.

The mean score for RE was 4.21 (n=198, see table 25). This indicates that the respondents felt positive about their race and were more positive about their race in general than about themselves as individuals. Although this score seems extremely high, it must be borne in mind that the statements that comprised the measure of RE were all positive statements about one’s race. It can be inferred that there is little evidence of poor RE in the sample.

<table>
<thead>
<tr>
<th></th>
<th>Minimu</th>
<th>Q1</th>
<th>Mean</th>
<th>Q3</th>
<th>Maximu</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE</td>
<td>1.44</td>
<td>3.00</td>
<td>3.32</td>
<td>3.67</td>
<td>4.78</td>
<td>0.57</td>
</tr>
<tr>
<td>RE</td>
<td>1.00</td>
<td>4.00</td>
<td>4.21</td>
<td>4.75</td>
<td>5.00</td>
<td>0.76</td>
</tr>
</tbody>
</table>

RE scores were high (see table 25 above). This indicates positive levels of overt or espoused RE. The lowest recorded score was 1.00 and the highest recorded score was 5.00. For the most part though, the sample had positive levels of RE. This may be a sign that racial discrimination has not affected Black RE negatively, at least at a self-report level, for the sample.

In Table 26, the Pearson Product Moment Correlations between CSE and RE are indicated. The sample size was n=198. The correlations are presented for the
sample as an entire unit and also for males and females separately. In the table, marked differences are visible between the correlations for males and females separately.

Table 26: Relationship between Core Self-Evaluations and Racial Evaluation (n=198)

<table>
<thead>
<tr>
<th></th>
<th>Racial Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All (n=198)</td>
</tr>
<tr>
<td>Core Self-Evaluation</td>
<td>0.22**</td>
</tr>
</tbody>
</table>

**p<0.01

A statistically significant positive correlation was found between CSE and RE amongst males (p=0.005, n=60, r=0.358). There was no significant correlation between CSE and RE amongst the female respondents (n=138, r=.142). The overall correlation was r=0.22 (p=0.003, n=198) which indicates a small, positive correlation between CSE and RE (table 26).

For males, those with higher levels of RE were more likely to have higher levels of CSE (table 26). Although this does not prove causality or the direction of the relationship, it does imply that the two areas are moderately related, at least in male Zulus of that age, with a small correlation existing between both variables for the whole sample.

It is possible that those with high CSE feel more positively towards their race, as their self-esteem gives those elevated estimations of the worth of others who belong to their in-group. On the other hand, those who have a positive RE may draw on this as a source of boosting their own self-worth and CSE.

Another possible explanation is that some individuals have the propensity for positive evaluations of themselves and their referent others and that this affects both their CSE and RE levels.

In the female sample, the average score for RE (4.17, SD.78, n=138) was higher than the average score for CSE (3.26, SD.53, n=138, see table 27). This means that, on average, female self-perception was less positive than their perception of
their racial group. This may be due to patriarchal aspects of the Zulu culture, or even internalized sexism.

Rudwick, (2008, p153) notes, “Many traditional African societies prescribe great significance to respectful behaviour towards males and elders. This is because many social practices and cultural customs in these societies are based on strict patriarchy and seniority principles.” In a patriarchy, internalized sexism may be prevalent where “sexism consists not only of exceptional incidents, but also of mundane practices within everyday interactions. Internalized sexism, which occurs when women enact learned sexist behaviours upon themselves and other women, also takes everyday forms” (Bearman, Korobov & Thorne, 2009, p10). This may manifest as beliefs about incompetence, internalized senses of powerlessness, competition and derision between women, objectification of women and derogation of women or their invalidation.

Cut-offs for scores were determined using quartile one and three, dividing scores for both variables into three categories. These three categories are low, medium and high scores. For CSE, the cut-offs were <3.00 for low, 3.01-3.66 for medium and >3.66 for high. For RE, the cut-offs were <4.00 (low), 4.00-4.75 for average and >4.75 for high scores.

A Chi-Square analysis was used to analyse the data in a more sophisticated manner, looking at the interaction between categories of CSE and RE. The Chi-square analysis indicated a statistically and practically significant relationship between CSE and RE across the entire sample (see table 27). There was a medium practical significance, calculated using Cramer’s V. In the sample, if a person had low levels of CSE, he or she was also likely to have low to average levels of RE. If RE levels were average to high, then they were also likely to have higher levels of CSE (see table 27 below):
Table 27: Chi-Square Analysis for Racial Evaluation and Core Self-Evaluations (n=198)

<table>
<thead>
<tr>
<th>Core Self-Evaluation</th>
<th>Low</th>
<th>Average</th>
<th>High</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>18</td>
<td>23</td>
<td>48.9%</td>
<td>6</td>
</tr>
<tr>
<td>Average</td>
<td>28</td>
<td>62</td>
<td>59.6%</td>
<td>14</td>
</tr>
<tr>
<td>High</td>
<td>3</td>
<td>26</td>
<td>55.3%</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>111</td>
<td>56.1%</td>
<td>38</td>
</tr>
</tbody>
</table>

(Chi² (d.f. = 4, n = 198) = 22.49; p < .0005; V = 0.24 Medium).

Table 27 outlines the Categories used for Chi-Square analysis and the statistics computed for the Chi Square. Out of those who had low levels of CSE, the majority of respondents had either low or average levels of RE. Very few of the respondents with high RE had low CSE. This implies that it was unlikely for a person to negatively assess his or her racial group and give themselves a high assessment of their self-worth. For those with average levels of CSE, most also had average levels of RE.

High CSE was associated more with average levels of RE, implying that high CSE does not necessary guarantee high levels of racial pride but very few respondents had high levels of CSE and low levels of RE.

Social identities are the way individuals categorise themselves according to the groups they belong to (Stets & Burke, 2000). The sample in this study could classify or categorise themselves in a number of different ways. Their RE may play a small, but not overarching or dominant role in determining individual self-worth and sense of capability. The findings substantiate further inspection of the relationships between how individuals see themselves and how they view their RE.

6.3.4 Limitations of the Study

The research was aimed at being positivist and as objective as possible. Another
approach that may have yielded richer data is the grounded theory approach, where theory is formulated based upon the data as it is collected (Tredoux & Durrheim, 2007). Although the correlations may seem low, they are still significant for the nature of the research. Bono and Judge's (2002) initial correlations, which they deem to be predictive, between CSE and Job Satisfaction and CSE and Job Performance are only .41 and .23 respectively. The correlation between CSE and RE \((r=.36)\) amongst the male respondents could thus be seen as acceptable, seeing as it is statistically significant. Although the correlations were not particularly high, the Chi square indicated that there are relationships between the CSE and RE \((p<0.005, V=0.24 \text{ or medium practical significance, table 27})\).

The results are not generalisable to the broader population, as this is an exploratory study, aiming to set research agendas for future research in the area and not to draw conclusions about causality or the direction of the relationships. The study sought to add knowledge through contextualizing and exploring potential psychological challenges facing those wishing to train potential incumbents of employment equity posts, the research is not predictive or causal in nature.

The fact that the correlations were only small, and that RE levels were high means that the social by-products of apartheid and its legacy may not have negatively affected CSE in South Africa for young Zulu adults in Zululand and that the younger generations are not negatively affected by poor RE. Individuals may be drawing on other sources for their CSE, not just their RE.

6.3.5 Conclusion

In this section, the relationship between CSE and RE was examined. In the sample \((n=198)\) a small correlation was found between the two variables.

There was a stronger, also statistically significant correlation, between the two variables amongst male respondents, but not among the female respondents. This could be because females are affected by internalized sexism or the impact of cultural issues surrounding patriarchy. In other words, there may be other variables influencing the relationship between how they perceive themselves as individuals and women and how they view their race, which includes their perceptions of male
members of their race.

The Chi-Square analysis revealed that there is a statistically and practically significant relationship between the two variables, the reason for the low correlations being that the relationship is not completely linear. The Chi Square test is more refined than a straight correlation, and more sensitive. This means that some of the variance in levels of RE can be linked to similar variance in the levels of CSE in the sample. These findings do not indicate causality.

CSE may be affected by the way people perceive their RE. They may draw some of their CSE from their RE. At the same time, their elevated CSE may then be projected onto members of the same racial group. They may ascribe their own evaluation of themselves (positive) onto others who share similar characteristics to them.

6.4 Phase two: hypotheses 2 and 3 - learning gains results

6.4.1 Introduction

In this section, the learning experiment is portrayed. The findings are elaborated upon and the inferences from these findings are discussed. The aim of the research was to begin the process of theory formulation around the interplay between the three key issues in the study: CSE, RE, and learning. Specifically, the prospect of relating the construct CSE to a non-Western sample is investigated. The hypotheses in this section explored the relationship between CSE, RE and learning.

The following sections offer a valid process for testing learning in OBET, and then look at the relationships between learning, RE and CSE. Zulu learners engaging in OBET were sampled, to explore the prospective relationships between the variables. This is a narrow sample and the findings cannot be generalised to the broader population. A method for measuring these variables across a broader population is initiated and analysed, however. In the next sections, the learning, CSE and RE scores will be presented, and then, the findings from the hypothesis testing will be presented.

6.4.2 Learning gains
In table 28, the descriptive statistics are provided for the scores used to calculate learning gains.

Learning gains scores were calculated as follows:

\[
\frac{(\text{Post-test-pretest sensitization}) - \text{pre-test}}{100\%-\text{pre-test}}
\]

This calculation provides the proportion of learning that can be directly attributable to the learning intervention. The score was deemed to be an acceptable indicator of learning. The mean score for the pre-test for the learning test was 41 percent. The pre-test score was the score from the assessment prior to commencement of the learning intervention. This score indicated that the learners had been exposed to some of the content in their first year of study or through the day-to-day course of their lives.

For the post-test, the average score was 84.00 percent. The post-test scores were high. This could indicate that the intervention was successful in facilitating learning, or brought about a relatively permanent change in behaviour. When one looks at the score in relation to the pre-test score, one can see that the intervention increased the scores by 43 percent. The high levels of existing knowledge, revealed by the pretest, inflated the post-test scores. Pre-test sensitization also played a role in inflating the post-test scores. The post-test scores were adjusted for the pre-test sensitization that was found to be 11 percent of the post-test score. The adjusted average post-test score was thus 73 percent and this score was used in the calculation of the moderated scores.

The mean learning gains score was 53 percent. In other words, the learners learned, on average, 53 percent of what they could possibly learn in the intervention. This is not particularly high, and implies that the learners may need further input to improve their learning skills.
Table 28: Learning Gains Scores (n=46)

<table>
<thead>
<tr>
<th></th>
<th>Pre-test %</th>
<th>Post-test%</th>
<th>Adjusted Post-test</th>
<th>Adjusted Difference</th>
<th>Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.41</td>
<td>0.84</td>
<td>0.73</td>
<td>0.32</td>
<td>0.53</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.02</td>
<td>0.01</td>
<td>0.01</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>Median</td>
<td>0.41</td>
<td>0.88</td>
<td>0.77</td>
<td>0.33</td>
<td>0.59</td>
</tr>
<tr>
<td>Mode</td>
<td>0.38</td>
<td>0.90</td>
<td>0.79</td>
<td>0.41</td>
<td>0.66</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.11</td>
<td>0.10</td>
<td>0.10</td>
<td>0.15</td>
<td>0.20</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.02</td>
<td>0.04</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.40</td>
<td>0.16</td>
<td>0.16</td>
<td>-0.09</td>
<td>0.52</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.23</td>
<td>-0.88</td>
<td>-0.88</td>
<td>-0.35</td>
<td>-1.13</td>
</tr>
<tr>
<td>Range</td>
<td>0.52</td>
<td>0.40</td>
<td>0.40</td>
<td>0.64</td>
<td>0.76</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.14</td>
<td>0.60</td>
<td>0.49</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.66</td>
<td>1.00</td>
<td>0.89</td>
<td>0.65</td>
<td>0.77</td>
</tr>
<tr>
<td>Sum</td>
<td>19.00</td>
<td>38.75</td>
<td>33.69</td>
<td>14.69</td>
<td>24.36</td>
</tr>
<tr>
<td>Count Confidence Level</td>
<td>46.00</td>
<td>46.00</td>
<td>46.00</td>
<td>46.00</td>
<td>46.00</td>
</tr>
<tr>
<td>(95.0%)</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.04</td>
<td>0.06</td>
</tr>
</tbody>
</table>

6.4.3 Relationship between CSE and RE

The mean level of CSE for the learning experiment was 3.33 overall (table 28), exactly the same as the CSE level found by Broucek in the United States of America in 2005 amongst undergraduate students there.

The mean level of RE was 4.33. The majority of responses were positive in terms of RE, looking at the mode and median, one can conclude that the respondents had very optimistic RE (table 29).

Table 29: Descriptive Statistics Learning Experiment (n=230)

<table>
<thead>
<tr>
<th></th>
<th>Core Self-Evaluation</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.33</td>
<td>4.33</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.03</td>
<td>0.05</td>
</tr>
<tr>
<td>Median</td>
<td>3.33</td>
<td>4.50</td>
</tr>
<tr>
<td>Mode</td>
<td>3.44</td>
<td>5.00</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.51</td>
<td>0.71</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>0.26</td>
<td>0.50</td>
</tr>
<tr>
<td>Range</td>
<td>2.44</td>
<td>3.50</td>
</tr>
<tr>
<td>Minimum</td>
<td>2.00</td>
<td>1.50</td>
</tr>
<tr>
<td>Maximum</td>
<td>4.44</td>
<td>5.00</td>
</tr>
</tbody>
</table>
The alternative explanation is that the highly cohesive Zulu culture (Tebele, 2009) fosters strong levels of RE that do not correlate with individual's CSE. For those who are part of a cohesive and proud culture (Tebele, 2009), CSE and RE may be unrelated, with RE levels remaining high, regardless of their levels of CSE.

The scores were divided according to the quartiles of CSE into low, average and high CSE (low <2.89, average 2.89 to 3.67, high 3.67 and higher). This was to check to see if the two variables interacted differently depending on the levels of CSE. Each group’s CSE scores could then be correlated with the corresponding levels of RE.

The relationship between CSE and RE may be non-linear. Those with low CSE may be more susceptible to poor RE owing to their lowered levels of self-efficacy, self-esteem, increased levels of neuroticism and external locus of control. Those with high or average levels of CSE too may see different interactions between their CSE and RE levels.

Within these quartiles, there was a strong correlation between CSE and RE for those who had low CSE. The $r^2$ for this correlation was .24 (see Table 31). This is an area that will require further examination and may point towards evidence of apartheid’s continued influence on those with low levels of CSE. Table 30 shows the descriptive statistics for the 40 lowest observations of CSE in relation to RE. The mean score for RE was 4.22, with a high median and mode of 4.50 and 5.00 respectively.

**Table 30: Low Core Self-Evaluations and Racial Evaluation (n=40)**

<table>
<thead>
<tr>
<th>Low Core Self-Evaluation</th>
<th>Racial Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>Mean</td>
</tr>
<tr>
<td>2.56</td>
<td>4.16</td>
</tr>
<tr>
<td>Standard Error</td>
<td>Standard Error</td>
</tr>
<tr>
<td>0.04</td>
<td>0.14</td>
</tr>
<tr>
<td>Median</td>
<td>Median</td>
</tr>
<tr>
<td>2.56</td>
<td>4.50</td>
</tr>
<tr>
<td>Mode</td>
<td>Mode</td>
</tr>
<tr>
<td>2.78</td>
<td>5.00</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>0.20</td>
<td>0.95</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>Sample Variance</td>
</tr>
<tr>
<td>0.04</td>
<td>0.90</td>
</tr>
<tr>
<td>Range</td>
<td>Range</td>
</tr>
<tr>
<td>0.78</td>
<td>3.50</td>
</tr>
<tr>
<td>Minimum</td>
<td>2.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>2.78</td>
</tr>
<tr>
<td>Count</td>
<td>40.00</td>
</tr>
</tbody>
</table>

**Table 31: Correlation- Low Core Self-Evaluations and Racial Evaluation (n=40)**

<table>
<thead>
<tr>
<th>Racial Evaluation</th>
<th>Core Self Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.49</td>
</tr>
</tbody>
</table>

p = 0.01

There was no correlation between CSE and RE for those with average levels of CSE, nor was there a correlation between the two variables for those with high CSE. For those with average CSE, the mean score for RE was higher than the mean score for those with low levels of CSE (Table 29 & 32).

**Table 32: Average Core Self-Evaluations and Racial Evaluation**

<table>
<thead>
<tr>
<th>Average Core Self-Evaluation</th>
<th>Racial Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.30</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.02</td>
</tr>
<tr>
<td>Median</td>
<td>3.22</td>
</tr>
<tr>
<td>Mode</td>
<td>3.44</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.25</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>0.04</td>
</tr>
<tr>
<td>Range</td>
<td>0.78</td>
</tr>
<tr>
<td>Minimum</td>
<td>2.89</td>
</tr>
<tr>
<td>Maximum</td>
<td>3.67</td>
</tr>
<tr>
<td>Count</td>
<td>139.00</td>
</tr>
</tbody>
</table>

In Figure 3, the relationship between CSE and RE for those with average CSE is illustrated graphically. The scores are clustered together. Within this category, the range for RE is 3.50, with no lower scores evident. One could infer that those with average CSE will have moderate to high levels of RE, but that there is no evidence of a linear relationship between the two variables. The sample of 139 was drawn from the data originally collected for testing hypotheses 2 and 3.
Table 33 indicates that there was no relationship between CSE and RE for those with average CSE. This means that, for those with average CSE their CSE is unrelated to their levels of RE. These individuals do not rely on their RE to determine their CSE or the other way around.

Table 33: Correlation of Average Core Self-Evaluations and Racial Evaluation (n=139)

<table>
<thead>
<tr>
<th>Racial Evaluation</th>
<th>Average Core Self-Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.01</td>
<td>-0.075x + 4.574</td>
</tr>
</tbody>
</table>

\[ R^2 = 0.000 \]
High CSE was also unrelated to RE (Figure four). Both scores were high (See tables 33, 34 & 35), so it is possible that there was insufficient variance in the scores to accurately calculate correlations. For high CSE, the median of the RE score was 4.50, as was the mode, which implies that both scores were high. Chi Square analysis showed no relationship between CSE and RE overall.

**Table 34: High Core Self-Evaluations and Racial Evaluation (n=51)**

<table>
<thead>
<tr>
<th>High Core Self-Evaluations</th>
<th>Racial Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.01</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.03</td>
</tr>
<tr>
<td>Median</td>
<td>3.89</td>
</tr>
<tr>
<td>Mode</td>
<td>3.67</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.18</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>0.05</td>
</tr>
<tr>
<td>Range</td>
<td>0.44</td>
</tr>
<tr>
<td>Minimum</td>
<td>3.78</td>
</tr>
<tr>
<td>Maximum</td>
<td>4.44</td>
</tr>
<tr>
<td>Count</td>
<td>51.00</td>
</tr>
</tbody>
</table>
Table 35: Correlation between High Core Self-Evaluations and Racial Evaluation (n=51)

<table>
<thead>
<tr>
<th>Core Self-Evaluations</th>
<th>Racial Evaluation</th>
<th>r = 0.16</th>
</tr>
</thead>
</table>

The complete lack of relationship between the variables, for younger Zulus, as sampled, suggests that RE may have little to do with the self-concept these individuals hold about themselves. Young Black South Africans do not necessarily link their sense of CSE to their RE. The only exception was amongst those with low CSE, where there was a strong correlation.

6.5 Relationship between RE and CSE for learning experiment (n=230)

Using the mean score as the cut-point between high RE and low RE, (M 4.32, n=230, SD, 0.71), a student t-test was conducted on the CSE scores. There was a significant difference between the mean CSE scores for those with low RE in comparison with those with high RE (t=-2.017, df=228, p 0.05). There is a difference in the levels of CSE, depending on whether RE is generally high or generally low.

Analysis of Variance for CSE by RE indicated significant differences between the two variables. This is shown in Table 36. The mean scores for each level are shown in Table 37. For those with low RE the mean score was 3.21, however, for those with high RE the mean score was 3.37. Tukey’s least significant difference was calculated and the difference was significant. This means that, even in the relatively young sample used for hypothesis two to six; there was a relationship between CSE and RE.

Table 36: ANOVA results for Core Self-Evaluations and Racial Evaluation (n=230)

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>D.F.</th>
<th>SS</th>
<th>MS value</th>
<th>F</th>
<th>p-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>1</td>
<td>1.04</td>
<td>1.04</td>
<td>4.07</td>
<td>0.04</td>
</tr>
<tr>
<td>Within</td>
<td>228</td>
<td>58.04</td>
<td>0.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>229</td>
<td>59.08</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 37: Means and Variability of Core Self-Evaluations for levels of Racial Evaluation (n=230)

<table>
<thead>
<tr>
<th>GROUP</th>
<th>MEAN</th>
<th>STD.DEV</th>
<th>VARIANCE</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Racial Evaluation</td>
<td>3.21</td>
<td>0.31</td>
<td>0.56</td>
<td>56</td>
</tr>
<tr>
<td>High Racial Evaluation</td>
<td>3.37</td>
<td>0.24</td>
<td>0.49</td>
<td>174</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.33</td>
<td>0.26</td>
<td>0.51</td>
<td>230</td>
</tr>
</tbody>
</table>

The findings suggest that there is a relationship between CSE and RE, but that the relationship is by no means a clear-cut, linear relationship, especially amongst young Zulu students.

6.5.1 Hypotheses 2 and 3: Testing the relationship between Core Self Evaluations, Racial Evaluation, and Learning

6.5.1.1 Sample Profile

The sample for the examination of the relationship between CSE, RE and learning comprised experimental Group 1, as mentioned in Chapter 5. Experimental Group 1 yielded 46 usable sets of data, where there were no missing data, this was one group of the 230 cases sampled for the purposes of validating the learning experiment and also measuring RE and CSE for the sample.

Experimental Group 1 was composed of Human Resources Management students, looking for work in the next three years, from a designated group. The designated group was Black as defined in the Employment Equity Act 55 of 1998. The students participated in a pre-test, learning intervention and a post-test. The scores from the pre-test and post-test were moderated to remove pre-test sensitisation, and these scores were then transformed into a learning gains score. The process of calculating the learning gains score is described below.

The sample comprised a relatively homogeneous group as all participants were Zulu, Black, and had the same level of education (some tertiary education completed). Table 38 indicates the demographic profile of the sample. Most of the
persons sampled were female (84.79%). One demographic variable, which was overlooked, but should be included in similar studies, is the nature of home residence - urban or rural.

Table 38: Biographical Information (n=46)

<table>
<thead>
<tr>
<th>Age</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>18</td>
<td>39.13%</td>
</tr>
<tr>
<td>21-30</td>
<td>26</td>
<td>56.52%</td>
</tr>
<tr>
<td>31-40</td>
<td>2</td>
<td>4.34%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>7</td>
<td>15.21%</td>
</tr>
<tr>
<td>Female</td>
<td>39</td>
<td>84.79%</td>
</tr>
</tbody>
</table>

The sample is by no means representative of the broader population in terms of gender (see table 38). The majority (84.79%) of the sample was female. The ages represented in the sample are also not representative of the broader population, as they were all from the youngest three categories specified in Chapter 5 (research method).

The sample was younger than 40, with over 96 percent being younger than thirty. Nelson Mandela was released from prison on the 11th February 1990; prompting the peace-talks that led up to the formation of South Africa’s first democratically elected government (BBC, 2010). The youngest participants in the study (n=18, 39.13%) would thus have been born at or just after the dismantling of apartheid began. They still experienced unequal access to opportunity, particularly in HRD, and other forms of racial inequity (Ramphele, 2002).

The rest of the sample would have experienced between ten and twenty years of apartheid and this during their childhood and young adulthood. There may have been some impact of racism on these individuals, either directly, during the apartheid era, or indirectly through discrimination after the end of the apartheid era, but not to the same extent as older generations of Black South Africans.

Although the sample does not represent all generations that directly experienced apartheid, it is still worthy of study because it represents those who will be looking
for skilled or professional employment and the Employment Equity Act (55 of 1998) applies.

6.5.2 CSE Scores

CSE Scores were calculated as the mean responses to items one to nine of the measure. Descriptive statistics for CSE were calculated for the sample and are indicated in table 39 and figure five. The average CSE score was 3.11, which is lower than the mean score of 3.33 found amongst students by Broucek in the United States of America in 2005 and the score for the sample used to test hypothesis 1.

Table 39: Core Self-Evaluations (n=46)

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Self-Evaluations</td>
<td>2.22</td>
<td>4.33</td>
<td>3.11</td>
<td>0.52</td>
</tr>
</tbody>
</table>

The mean of 3.11 (Table 39) is also lower than the mean score of 3.71 (n= 119, SD 0.50) found amongst MBA students in the United States of America (Kittinger, Walker, Cope & Wuensch, 2009).

Furthermore, higher mean scores were found in a study in Botswana (of managers) that was 3.37 (n=167, SD 4.3) (Gbadamosi & Gbolahan, 2006). Further national and international comparative surveys will be needed to explore the variations in CSE nationally and internationally.
6.5.3 Racial Evaluation Scores

RE scores were calculated by calculating the average of items 10, 11, 12 and 13. The summary statistics are indicated in table 40. On average, the scores for RE were relatively high, although the minimum score recorded for RE was a low 1.5.

Table 40: Racial Evaluation (n=46)

<table>
<thead>
<tr>
<th>Racial Evaluation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.50</td>
<td>5.00</td>
<td>4.40</td>
<td>0.67</td>
</tr>
</tbody>
</table>

The high results indicate that the learners surveyed had positive RE. The distribution shows higher numbers of respondents with high RE (see figure 6). The mode was five and the median 4.5, which indicates that the majority of respondents did hold positive feelings towards people of the same race.

Looking at the mean score of 4.4 (n=46, see table 40), the majority of participants either agreed or strongly agreed with the statements regarding RE. The sample had robust levels of pride, possibly due to the cohesiveness of the Zulu
culture and their strong ethnic identity (Tebele, 2009).

Figure 6: Racial Evaluation Scores (n=46)

More investigation may be needed into ways to measure RE in an African context. That said, the espoused levels of RE may indicate that amongst the learners surveyed, RE is positive. This sample comprised younger adult Zulu South Africans and a comparative study with older Zulu South Africans may provide insight into any potential impact RE had across the generations.

This study sought to identify whether apartheid had specifically impacted on RE in relation to learning, and the focus is on equity candidates who may be looking for work in the next few years. The sample consisted of educated young people who have opportunity - substantively different results may be found should one perform the same research in an area where unemployment is rife or where illiteracy prevails.

6.5.4 Learning gains scores

The hypotheses addressed in this chapter examine the relationship between CSE, RE and learning gains. To achieve this, a valid indicator of learning was required. The calculation of learning gains required the validation of a learning
intervention. This was so that any score could be attributed to Learning because of the learning intervention. The validation process was described in Chapter 5.

After validation of the learning intervention, it was found that, although the learning intervention was valid, there was evidence of pre-test sensitization - this had to be addressed through moderation of post-test results.

The learning gains scores were calculated as a proportion of the gain score (post-test less pre-test scores) in relation to the pre-test score. The gain score is the difference between the pre-test and post-test.

In this study, because of the validation exercise, there was moderation for pre-test sensitization. Given the evidence of pre-test sensitization found in the validation of the Learning intervention, adjustments were made during the scoring of the learning gains scores to control for pre-test sensitization. The learning gains score was thus calculated as follows. The mean percentage of sensitization was deducted from pre-test scores to moderate the results:

\[
\frac{(\text{Post-test} - \text{Sensitization} \%)}{(100\% - \text{Pre-test})} - \text{Pre-test}
\]

A worked example may clarify the calculation process:

\[
\frac{(70\%-11\%)}{(100\% - 30\%)} = 40\%
\]

The calculation above indicates how the learning gains scores were calculated. When this method is used, the gain score is a percentage of the total learning the learner could have achieved in the post-test. The descriptive statistics of the learning gains scores are presented in table 41 below.
Table 41: Learning Gains Scores (n=46)

<table>
<thead>
<tr>
<th>Learning gains</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.40%</td>
<td>77.21%</td>
<td>52.95%</td>
<td>20.17%</td>
</tr>
</tbody>
</table>

Using the gain scores calculated as above, the mean gain was 52.95 percent with one individual gaining only 1.4 percent and another improving by 77 percent. The standard deviation was 20.17 percent (table 41).

The learning gains score isolated the proportion of learning that could be directly attributed to the learning intervention, not existing knowledge or pre-test sensitization. Pre-test sensitization was calculated as the mean difference between the scores of experimental Group 1 and experimental Group 2, where both groups were randomly assigned from the same population.

The learning gains score was thus as accurate as possible a measure of the amount of behaviour change directly attributable to the learning intervention.

![Histogram of Learning Gains](image)

Figure 7: Learning Gains (n=46)

Figure seven illustrates learning gains for the entire sample, whilst Figure
eight illustrates learning gains levels and the normal curve excluding the lowest scores (<40 excluded).

Figure 8: Learning Gains >40

The scores were negatively skewed in terms of learning. There are no norms to compare them against it is thus impossible to conclude whether the sample has high or low levels of learning gains. Further research will enable a profile to be compiled of learning gains levels across demographic variables in South Africa, although the method adopted in the learning intervention will need to be revisited to allow for a more general application.

6.5.5 The relationship between Core Self-Evaluations and Learning

To measure the relationship between CSE and learning, the CSE scores were compared with learning gains scores using Pearson Product Moment correlations and a student t-test.
Learning gains scores were divided into two groups, high CSE and low CSE according to CSE levels. The cut-point used to divide the groups was the mean (3.11, n=46). T-tests revealed a statistically significant difference in the mean scores of those with high CSE as opposed to those with low CSE (t=2.5796, df=44, p 0.01).

Table 42 shows the descriptive statistics for learning gains for high and low CSE. The learning gains scores were significantly lower for those with high CSE. In this context, it could be inferred that high CSE cannot be used as a predictor of learning. In fact, it would appear that those with lower levels of CSE may in fact perform better than those who have higher levels.

Perhaps this is because those with lower levels of CSE hold themselves against higher standards than those with higher levels of CSE. They may have elevated
expectations of themselves. When they compare themselves against these elevated standards, they may feel that they are lacking or deficient. Those with lower levels of ability may experience higher levels of achievement than those with higher levels of ability because they do not hold high expectations of themselves. This may then affect their levels of CSE.

Table 42: Mean Scores for Learning (n=46)

<table>
<thead>
<tr>
<th>Learning</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>47.15</td>
<td>61.96</td>
</tr>
<tr>
<td>SD</td>
<td>22.67</td>
<td>10.921</td>
</tr>
<tr>
<td>SEM</td>
<td>4.28</td>
<td>2.58</td>
</tr>
<tr>
<td>n</td>
<td>28</td>
<td>18</td>
</tr>
</tbody>
</table>

Pearson Product Moment correlations were calculated. A small but significant correlation was found between CSE and learning (r 0.32, r^2 0.10, p<0.05, n=46). The correlation is shown in table 43. This means that ten percent of variance between CSE and learning is shared.

Further investigation will be needed to identify whether learning positively influences CSE over time, or whether CSE boosts learning, but initial exploration suggests that the relationship is worthy of more research. In terms of Guilford’s informal interpretations of the magnitude of r, a correlation between 0.2 and 0.4 indicates a low correlation but a definite relationship, albeit small (Tredoux & Durrheim, 2007). With correction for attenuation, the correlation jumps from r 0.32 to r (att) 0.50 (n=46). This would indicate then that 25 percent of variance in CSE is common with 25 percent of the variance in learning.

Table 43: Correlation between Learning Gains and Core Self-Evaluations

<table>
<thead>
<tr>
<th>Learning Gains</th>
<th>Core Self-Evaluations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.32</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).

When the two respondents who were older than thirty were removed from the
sample, the correlation improved to $r=0.38$ (p 0.05, n=44), which brings the strength of the correlation closer to a moderate correlation (Tredoux & Durrheim, 2007). This relationship is shown in Table 44.

Table 44: Correlation between Learning and Core Self-Evaluations excluding >30 years old (n=44)

<table>
<thead>
<tr>
<th>Core Self-Evaluations</th>
<th>Pearson Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>.38</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.011</td>
</tr>
<tr>
<td>N</td>
<td>44</td>
</tr>
</tbody>
</table>

*. Correlation is significant at the 0.05 level (2-tailed).

6.5.6 The relationship between Racial Evaluation and Learning

Overall, there was no relationship between RE and learning. Student t-tests, Chi-square analyses, and correlations were calculated, but the relationships found were insignificant. This could be because low RE has little or no impact on learning for the generations surveyed. For generations born during and just after the dismantling of apartheid, RE may have limited direct interaction with learning.

In the sample, RE had no relationship with learning. The RE levels of the participants were high. The Black South Africans surveyed were extremely proud of their RE, and this identity neither diminished nor enhanced their learning gains.

Tebele (2009) notes that within the Zulu culture, there are large divides between rural and urban cultural identity, with urbanites demonstrating higher levels of multiculturalism and those in rural areas demonstrating more racial and ethnic solidarity. The rural Zulu learners, who have a strong cultural identity and are traditionalist, also have less access to learning facilities (Tebele, 2009).
There are a large number of rural residents who attend the University of Zululand. There may be discrepancies in educational opportunities experienced between the traditional, racially conscious, rural Zulu and the urban, cosmopolitan Zulu. The Zulu community may have disparate levels of RE according to the extent to which they have embraced a more cosmopolitan urban identity.

Further research may be needed to survey Black South Africans across rural, urban and peri-urban domains in order to evaluate whether there are differences in RE. The full range of generations would also need to be sampled to survey RE levels in South Africa. A further research opportunity exists to measure differences in RE levels across socio-economic ranges (income and educational differentials for example).

![Figure 10: Learning by Racial Evaluation Categories (1=low, 2= average, 3= high, n=46)](image)

In Figure ten it is evident that there are only small variances in the levels of learning gains between those with low, average and high RE.

There is a chance that apartheid has not significantly impacted on the learning gains of the sample directly, but instead affected it indirectly through the impact it had on the provision of resources for Black South Africans. These resources
included human, physical and financial resources (Nkabinde, 1997).

6.6 Phase 3: hypotheses 4, 5 and 6: the relationships between CSE, RE and Learning and OBA

6.6.1 Introduction

The researcher noted that the scores for the post-test were high prior to moderation for the impact of the pre-test (mean=84.33\%, SD 9.98, n=46). The pass rate was very high, owing to the rigour of the learning intervention, the clarity of the outcomes, the provision of learning materials, and the simplicity of the content.

One would conclude, if looking at the assessment scores only, that given valid and reliable OBET, prospective Zulu Human Resources Managers can learn, in controlled circumstances where environmental constraints are managed through adequate provision of resources, including human, physical and financial resources. Cognisance must be taken of the fact that, when the Solomon four-group design is used, and scores are adjusted for pre-test sensitization, the mean post-test score drops to 73.33\%.

Furthermore, if one looks at the proportion learned in relation to what was already known, as indicated in the learning gains score calculated above, one sees that the average proportion of learning was 0.77 (n=46). Previous international studies such as Broucek’s (2005) only correlated CSE with end-point assessments, not with the proportion of learning gains.

6.6.2 Hypotheses 4, 5, and 6: CSE, RE and OBA and Learning

6.6.2.1 Introduction

The last hypotheses are tested in this section. Learning may be a contributing factor to achievement in OBA, but not an indicator or predictor of assessment results on its own, owing to the mediating effect of CSE and RE, amongst other variables. Performance in OBA may be related to Learning, CSE and RE.
In this section, the relationship between CSE and OBA and the relationship between RE and OBA after OBET is scrutinised. Furthermore, the relationship between learning and OBA is explored. This is to assess whether these factors modify the chances of performance of an individual in OBA. CSE may interact with other factors, such as, inter alia, sensitization towards the assessments, socio-economic challenges, learning or differences in ability to determine performance in OBA.

Owing to the exploratory nature of the study, it is important to stress that the research aimed to identify potential factors that may influence performance of potential Black Zulu equity candidates in learning and work in order to optimise performance. In this study, no conclusions can be drawn regarding causality; instead a method for identifying potential associations between the variables is tested.

6.6.2.2 Hypotheses

The hypotheses in this phase of the research dealt with the interplay between CSE, RE, learning, and learner results in OBA. These hypotheses are outlined as follows:

H4: There is a relationship between OBA and CSE.

Hypothesis 4 assumes that CSE affects the overall chances of success of learners in OBA through the way CSE interacts with environmental opportunities and threats over time. This hypothesis was tested using correlations.

H5 There is a relationship between OBA and RE.

Hypothesis 5 suggests that results in OBA may be influenced by individual RE and the way they evaluate their race. The hypothesis that RE is related to performance in OBA was tested using correlations.

H6 Learning and Outcomes-Based Assessment are related.

Learning should be a contributing factor in achievement in OBA. OBA should
measure learning, but learning and OBA are not identical, since OBA is affected by existing knowledge and psychological factors such as motivation and problem-solving. The learning gain calculated the capacity of an individual to retain knowledge in experimental conditions, whereas OBA results are formulated in a dynamic environment, where personality may play an important role in determining success.

6.6.2.3 Sample Profile

The sample comprised Human Resources Management students at the University of Zululand (n=60). The course included both practical and theoretical components and prepared learners for careers as Human Resources Managers. The course was vocational in focus, in terms of content selection.

All participants were Zulu speakers (Black, n=60) and attempted the course for the first time. Only twenty percent of the participants were male, which means that the sample was by no means representative of the broader population. The gender profile is made known in table 45.

Table 45: Gender Composition of the sample (n=60)

<table>
<thead>
<tr>
<th>Sex</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>48</td>
<td>80.00%</td>
</tr>
<tr>
<td>Male</td>
<td>12</td>
<td>20.00%</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

This indicates that the results are not generalisable to any specific population as they currently stand. Supplementary research would be needed to produce generalisable results. This study intended to explore the potential for the existence of relationships between the variables. The age of the sample is revealed in the table below (table 46). It is evident that the sample comprises younger adults, with the majority being younger than 30. They would have been children when apartheid began to be dismantled and their experience would not necessarily have been direct experiences of apartheid, more the lingering consequence of decades of institutional racism (Jones, 2001).
The majority (53.33%) of participants were younger than twenty, which means they were born after or around the time of Nelson Mandela’s release from prison and the initiation of the dismantling of apartheid (Mandela, 1994). Respondents of this age would have spent none of their lives directly under the apartheid regime, but still experienced racial inequality, and racial socialization. The first democratic elections occurred in April 1994 (Mandela, 1994), some 16 years prior to the time of data collection (May 2010) in the research.

Those who are younger than 20 (53.33%), are generally referred to as the ‘born frees’. This generation was born after South Africa’s non-racial democracy was incepted and formed including the release of Nelson Mandela and the introduction of a new constitution (Mandela, 1994, BBC, 2010, South African History Online, 2008).

Those of between the age of 21 and 30 (45.00%), comprise a generation who lived through the 1980's and the transition. This period included economic instability and political unrest, including several states of emergency and increased pressure from the outside world (BBC, 2010, South African History Online, 2008).

Those between the ages of 31 and 40 (1.67%) lived through the 1970's, as well as the Soweto uprising with the subsequent students’ revolt. In this era, there was much re-settlement of Blacks back into the homelands. Student bodies began to emerge and Biko died (BBC, 2010, South African History Online, 2008).

One can see that the generations surveyed comprised the three youngest adult generations in South Africa at present, in relation to the apartheid timeline.
6.6.2.4 CSE Scores

The average CSE score amongst the learners sampled was 3.28 (n=60, SD.47), superior to the mean score of the Experimental group (n=46, mean=3.11, SD 0.51). The mean CSE score is lower than the mean scores of 3.33 (Rosopa & Schroeder, 2009) and 3.78 to 4.03 (Judge et al., 2003) found in studies in the United States and also lower than the CSE scores found for repeating students (3.43, n=36) and for hypothesis one (3.33, n=198).

Further research is now justified to contrast South African levels of CSE with those of people of other nationalities, or diverse aspects of the South African populace. This study concentrated on Black Zulu South Africans who were younger than 40 at the time of the investigation and were likely to be looking for work following their graduation.

The results above imply that racial discrimination may have had a small impact on CSE amongst young adult Zulu Human Resources Management students. This assumption cannot be confirmed without further research and international comparison, as well as inter-racial and inter-ethnic comparisons. The range for CSE scores was wide, with the minimum score being 2.56 and the highest score being 4.33 (see table 47 below). At this point, the reader is reminded that the CSE scores could range from the lowest score of one to the highest score of five.

### Table 47: Descriptive Statistics for Core Self-Evaluations (n=60)

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Self-Evaluations</td>
<td>2.56</td>
<td>4.33</td>
<td>3.28</td>
<td>0.47</td>
</tr>
</tbody>
</table>

6.6.2.5 Racial Evaluation Scores

The average level of RE was 4.37, with a small standard deviation (SD= 0.67, n=60). The experimental group’s mean score was 4.40 (n=46, SD 0.67) (table 48). The recurrent score was five. This means that there were a few who experienced feelings of negativity towards their race. Most people were positive about their RE.
Table 48: Racial Evaluation (n=60)

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racial Evaluation</td>
<td>2.50</td>
<td>5.00</td>
<td>4.37</td>
</tr>
</tbody>
</table>

The levels of RE were high. Those learners repeating the module had lower levels of RE (4.19, n=30). This is a positive outcome for the country, considering the pervasiveness of racial discrimination in every aspect of Black South Africans’ lives. Amongst the learners doing the module for the first time, the mean score was 4.37 (n=60), which means that there were some negative responses with regard to RE. In this measure, anything less than a score of five indicates some hesitancy in ones RE.

The lowest score was 2.5, which implies that at least one respondent responded mainly neutrally towards the statements about their race. The maximum score was five, and looking at the mean, it is evident that many respondents felt secure about their RE. This implies that the impact of apartheid may not have been high on those who did not live through it directly.

6.6.2.6 Assessment Scores

Descriptive statistics for assessment scores are indicated in Table 49. The sample of 60 had a minimum score of 28 percent and a maximum score of 68 percent. The mean score was 48.40 percent. This is a wide spread and is desirable according to Jacobs, Vakalisa and Gawe’s (2008) criteria for OBA.

Table 49: Descriptive Statistics for Outcomes Based Assessment (n=60)

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes Based Assessment</td>
<td>1.4</td>
<td>3.4</td>
<td>2.42</td>
</tr>
</tbody>
</table>

The raw assessment score (out of 25) was converted to a score out of five. The mean score was 2.42 out of five, or 48.40 percent, which means that the average score was just below a pass, which was set at 2.5 out of five, or 50 percent. The standard deviation was 0.52, with a sample size of 60. The minimum assessment score was 1.4 out of five, or 28 percent and the highest score was 3.4 out of five or
The relationship between CSE and OBA

Hypothesis four proposed a relationship between CSE and OBA results. As opposed to the relationship being between CSE and learning, which was more looking at the interaction between ability and psychological aspects of a person, this hypothesis assessed the relationship between CSE and performance in OBA.

Using correlations, the researcher tested the relationships between CSE and OBA results. There was no overall correlation between CSE and OBA. This was because there was dissimilarity in the way that the two variables interacted amongst those with high CSE.

Despite no relationship being found directly between OBA and CSE, a strong positive relationship was found between OBA results and CSE for scores between quartile 1 and quartile 3 ($r=0.47$, $n=33$, $p<0.01$). This corresponds with the positive relationship seen between CSE and learning for those within the average range of scores for CSE, in the previous section.

For those in quartile 1, there was a statistically significant negative relationship between CSE and scores in OBA ($r=-0.58$, $p<0.05$, $n=14$). This means that those with low CSE underestimate their own ability to achieve in OBA.

There was no relationship between CSE and OBA for those in the uppermost quartile of CSE; this is liable due to overestimation of underachievers clouding the relationship between CSE and OBA for those who have high assessment results and high CSE.

The correlations are presented in table 50, with evidence of a very strong negative correlation between CSE and OBA for those with low CSE. The table also shows the positive correlation between average levels of CSE and OBA.

The correlation between low CSE and OBA was negative and high. The higher the level of CSE an individual has (amongst those with low CSE) the lower the level
of achievement in OBA.

**Table 50: Core Self-Evaluations and Outcomes Based Assessment**

<table>
<thead>
<tr>
<th>Core Self-Evaluations</th>
<th>Low (n=16)</th>
<th>Average (n=23)</th>
<th>High (n=21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes Based Assessment</td>
<td>-0.74**</td>
<td>0.42**</td>
<td>0.21</td>
</tr>
</tbody>
</table>

**<0.01**

The results in Table 50 must be viewed in conjunction with Table 51. In table 51, it is clear that the average scores for OBA results were higher for those with high CSE, with a decreasing mean score with lowering levels of CSE. These mean scores do not mean that there is a linear relationship between the variables, given the correlations in table 50.

**Table 51: Outcomes-Based Assessment Scores by Core Self-Evaluations**

<table>
<thead>
<tr>
<th>Core Self-Evaluations</th>
<th>Low (n=16)</th>
<th>Average (n=23)</th>
<th>High (n=21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes-Based Assessment Results</td>
<td>Mean</td>
<td>2.31</td>
<td>2.35</td>
</tr>
<tr>
<td>SD</td>
<td>0.53</td>
<td>0.46</td>
<td>0.43</td>
</tr>
</tbody>
</table>

Table 51 shows OBA scores for each level of CSE. Although the mean assessment scores do improve, with CSE, the correlations imply that the direction of the scores is not necessary a positive linear relationship. There appears to be a central band where CSE is positively related to OBA results, but too high CSE may harm rather than help achievement in OBA.

Among Zulu students, lower CSE is linked to improved OBA. Average CSE is positively related to assessment results, and there is no significant relationship between high CSE and OBA. This may be because of overestimation of aptitude, or the over-representation of capacity by some participants.
Although the exact nature of the interface is still indefinite, CSE does relate to OBA results in the South African OBET context. The nature of the interface is not linear across the population studied. It appears that those with low CSE achieve relatively better than would be estimated by their CSE. Those with high CSE, although having higher test scores on average, may sometimes over or underestimate their ability, leading to no relationship being evident between CSE and OBA.

Amongst those with moderate or average levels of CSE, CSE correlates with performance in OBA. This may be because these individuals have a more accurate assessment of their ability to perform - they are not underestimating or overestimating their ability to perform in OBA. CSE cannot be used as a valid predictor of OBA. The construct is not applicable in South Africa in the same way that it is applicable in the United States of America.

### 6.6.2.8 The relationship between RE and OBA

The OBA results were divided into three groups, determined by the cut-points for quartiles one and three. No significant relationship was found between the espoused perceptions of RE and OBA results in the sample. This could be owing to the need for socially acceptable responses (although the questionnaire was confidential). A further explanation is that the ages surveyed did not experience racism as acutely as the older generations in South Africa. This area will require further refinement and scrutiny before conclusions can be drawn about RE. Pearson Product Moment Correlation, Chi Square and T-tests yielded no significant relationships between OBA and RE in this study.

It can be concluded that RE may not be a major threat to success in OBA amongst younger Zulu South Africans (ages up to forty), despite the relationship with learning for those with average levels of RE. The interaction of RE may, however, be directly with CSE and indirectly with OBA, as opposed to directly with OBA.

Black South African learners may have robust RE. At any rate, RE did not relate
to learner performance in this instance, although the relationship between CSE and RE amongst repeating students may merit further investigation.

6.6.2.9 **Hypothesis 6: the relationship between Learning and OBA**

In terms of the interaction between learning and OBA, experimental Group 1 had data for both OBA results and learning (n=38 usable data sets). The learning gains score was used as an indicator of learning, and the OBA score was used as an indicator of success in OBA.

The data collection, scoring and other methodological details were presented in Chapter 5. The sample profile for experimental Group 1 has also already been presented in this chapter. There were 38 cases where data was available for both Learning and OBA.

Learning and OBA were correlated using Pearson Product Moment Correlation to assess whether Learning did in fact relate to achievement in OBA. There was a small but definite correlation between Learning and OBA. This indicates that other factors also play a role in achievement in OBA; factors that could influence individuals could include CSE and RE. The influence of learning, CSE, and RE most likely vary from individual to individual in relation to their life’s experiences.

**Table 52: Learning Gains and Outcomes-Based Assessment (n=38)**

<table>
<thead>
<tr>
<th>Learning Gains</th>
<th>Outcomes-Based Assessment Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.37</td>
</tr>
<tr>
<td>p 0.02</td>
<td></td>
</tr>
</tbody>
</table>

The correlation in table 52 indicates that there is a relationship between learning and OBA results, which further validates the calculations used to measure Learning. Other factors also influence learner performance, such as the nature of the assessment, the learning environment, and the personality of the learner (Erasmus et al., 2009). The correlation suggests that learning gains testing does measure the potential for learners to achieve in OBA.
6.6.3 Conclusion

CSE was found to be lower in the sample than found amongst learners researched in the United States of America (Broucek, 2005). In this section, three hypotheses were tested.

A relationship exists between CSE and OBA in this study. There was no relationship between RE and OBA results. Learning and OBA were found to have a relationship.

In the next section, results will be discussed for all the hypotheses examined in this study. Implications of the study are discussed as well as the limitations faced by the research.

6.6.4 Further insight into the Relationship between CSE and RE

Data was collected for the measurement of hypotheses 2, 3, 4, 5 and 6 (the hypotheses deal with the relationship between CSE, RE, Learning and OBA). The relationship between RE and CSE in the group who had failed at least one module in the preceding year was tested, while the data was explored for any relationships or anomalies.

Table 53 indicates that 38.89 percent of the repeating students were male, and 61.11 percent were female. This is in keeping with the other subsets of the sample examined, but the level of males is higher than was seen in the other samples drawn. The majority of students sampled in this subset of the sample were female.

Table 53: Gender Distribution for Repeating Students (n=36)

<table>
<thead>
<tr>
<th>Repeating Students</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>14</td>
<td>38.89%</td>
</tr>
<tr>
<td>Female</td>
<td>22</td>
<td>61.11%</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
The age distribution for repeating students indicated that most of the students were between 21 and 30. These respondents would have lived through the last years of apartheid, but may not have been as negatively affected as those who spent more time as adults during apartheid. The age configuration is in keeping with the profile representing students who were repeating modules. The age distribution is indicated in Table 54.

Table 54: Age Distribution for Repeating Students (n=36)

<table>
<thead>
<tr>
<th>Repeating Students</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>6</td>
<td>16.67%</td>
</tr>
<tr>
<td>21-30</td>
<td>29</td>
<td>80.56%</td>
</tr>
<tr>
<td>31-40</td>
<td>1</td>
<td>2.78%</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

The descriptive statistics for repeating students are presented in table 55. The correlation between CSE and RE was r=.39, with a p value of 0.05 (n=36). Looking at table 55, it is evident that the average level of CSE was higher than all the other groups sampled in this study, and was higher than the levels found by Broucek (2005) in the USA.

These elevated levels of CSE may have caused the students to feel complacent about their potential for achievement, and may have resulted in their not putting as much effort into their studies as those with lower levels of CSE. The group had lower levels of RE than the other groups.
The average CSE of the group was 3.43, which is higher than the mean scores in similar studies by Judge et al. (2003) and Broucek (2005) in the United States. The average level of RE was 4.19 in this sample. This means that the respondents were not all wholly positive about their RE.

The Correlation between CSE and RE is given in Table 56. Given the high correlation, there may be some aspect of failure, which is affected by or affects our racial and personal evaluations of ourselves. This merits further investigation in a larger-scale study.

The correlation in Table 56 is almost moderate (which begins at a correlation of \( r_0.4 \)). This small but definite correlation indicates that the two variables interact differently for people who have experienced some sort of failure in learning. The correlation may have formed in reaction to the failure; the failure may have been brought about by the correlation also.
6.7 General Discussion of hypotheses

6.7.1 Introduction

There were six hypotheses, and, at first sight, they may seem disjointed or even stemming from separate studies. They all, nonetheless, could be seen as pertaining to the inspection of the same theory. There were three phases to the research and each phase stemmed from the previous phase. Phase 1 measured the relationship between CSE and RE in the broader Zulu community. Phase 2 tested the relationship between CSE, RE and learning amongst students. Finally, phase 3 tested the relationship between CSE, RE, Learning and OBA, using a subset of the same sample drawn for phase 2.

The intention of the research was to explore potential indicators of influence of apartheid on OBET in post-apartheid South Africa. The two potential indicators, used in this study, were CSE and RE.

Six hypotheses tested the relationship between CSE, RE, Learning and OBA. The aim was to evaluate whether RE and CSE had any influence on Learning and OBA performance. The study entailed drawing two samples. CSE and RE were first interrelated using a sample of n=198. Thereafter Learning and OBA were tested in relation to RE and CSE using a sample of n=230.

Respondents had a very positive RE. This may be because of the collectivistic nature of the Zulu Culture or the high levels of pride the Zulu culture holds in its history. The rise to power of the African National Congress and the transition to a non-racial government may have also boosted levels of RE.

6.7.2 Demographic profile of the samples

For hypothesis 1, a sample of 198 respondents was drawn. Although 230 students were surveyed to validate the learning intervention for hypotheses 2 and 4, only n=46 were used to test hypotheses 2 and 3. This was the group of usable data sets from experimental Group 1. The larger sample was needed to validate the learning intervention, but the learning gains scores were calculated using the data collected for experimental Group 1.
The group of 230 was used to draw further subsets of the samples to measure the relationship between RE, CSE and OBA \((n=60)\), OBA and Learning \((n=38)\) and the relationship between RE and CSE for repeating students \((n=36)\). In this section, the demographic profile is compared and contrasted across these groups.

In the sample for hypothesis 1, 92.42 percent was younger than 30 \((n=198)\). For hypotheses 2 and 3, the sample size of 46 included 96.65 percent who were younger than 30. Finally, for hypotheses 4, 5, and 6, the sample size was 60, and 98.33 percent of the respondents were younger than thirty (Table 57). This is not to say that they did not experience either the negative impact of apartheid or negative residual effects of apartheid and racism. There was no abrupt and radical transformation in 1994 (Mandela, 1994).

**Table 57: Age distribution of the samples**

<table>
<thead>
<tr>
<th></th>
<th>Hypothesis 1 ((n=198))</th>
<th>Hypotheses 2,3, and 6 ((n=46))</th>
<th>Hypothesis four and five ((n=60))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Count</strong></td>
<td><strong>Percent</strong></td>
<td><strong>Count</strong></td>
<td><strong>Percent</strong></td>
</tr>
<tr>
<td>&lt;20</td>
<td>56</td>
<td>18</td>
<td>39.13%</td>
</tr>
<tr>
<td>21-30</td>
<td>127</td>
<td>26</td>
<td>56.52%</td>
</tr>
<tr>
<td>31-40</td>
<td>11</td>
<td>2</td>
<td>4.34%</td>
</tr>
<tr>
<td>41-52</td>
<td>3</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>53-60</td>
<td>1</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>198</strong></td>
<td><strong>46</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

Hypothesis 1’s group included 28.28 percent of respondents classified as younger than twenty. For hypotheses 2 and 3, this figure went up to 39.13 percent, and for hypotheses 4, 5 and 6, the figure increased to 53.33 percent. This is because hypotheses 4, 5 and 6 excluded repeating students, who tend to be older than twenty by the time they get to second year (See table 57). These ‘born frees’ were born after the release of Nelson Mandela and the introduction of a new constitution (Mandela, 1994, BBC, 2010, South African History Online, 2008).
The generation who lived through the 1980's and the transitional government arrangements comprised 64.04 percent of the sample for hypothesis 1, 56.52 percent for hypotheses 2, and 3 and 45.00 percent for hypothesis four, five and six. There was political instability and political unrest during this time, but the respondents would have been children during this time and may have been shielded from the worst of the experiences by their caregivers (BBC, 2010, South African History Online, 2008). Racial socialization and development of RE occurs before the age of seven, however (Watson, 2007).

The next generation represented in the sample is represented in small numbers only. This group lived through tumultuous times in South Africa and would have experienced apartheid as teenagers and young adults. These respondents are now between the ages of 31 and 40 (BBC, 2010, South African History Online, 2008). Hypothesis 1's sample had 5.56 percent from this generation, hypotheses 2 and 3 had 4.34 percent, and hypotheses 4, 5 and 6 only had 1.67 percent come from this group.

Only 1.52 percent of hypothesis 1 came from the group that is now between the ages of 41 and 52. This group lived through very trying times in South Africa. These individuals were scholars during the “students’ revolt” and would most likely have had their schooling disrupted if they were Black or coloured (South African History, 2010).

One respondent in hypothesis 1 came from the age category 53 to 60, this person would have been alive during the 1950’s, which was when some of apartheid's most pernicious laws were enacted.
Table 58: Gender distribution for each Hypothesis

<table>
<thead>
<tr>
<th></th>
<th>Hypothesis One (n=198)</th>
<th>Hypothesis two, three and six (n=46)</th>
<th>Hypothesis four and five (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>Percent</td>
<td>Count</td>
<td>Percent</td>
</tr>
<tr>
<td>Male</td>
<td>60</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>30.30%</td>
<td>15.21%</td>
<td>20.00%</td>
</tr>
<tr>
<td>Female</td>
<td>138</td>
<td>39</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>69.70%</td>
<td>84.79%</td>
<td>80.00%</td>
</tr>
<tr>
<td>Total</td>
<td>198</td>
<td>46</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

In all three samples, most of the respondents were female (see table 58). Between 15.21 percent and 30.30 percent were male in each group. This could indicate, at least for hypotheses 2 to 6, that Human Resources Management is preferred by females as a profession, or that females are more likely to gain admission to the University of Zululand.

The high numbers of females in the sample mean that the findings cannot be generalised to the population other than those studying Human Resources Management at the University of Zululand. This over-representation of females may also mean that the sample’s responses may have been clouded by internalized sexism or gender differences.

For hypotheses 2, 3, 4, 5 and 6, the sample was selected randomly and it should be an accurate reflection of the population of students studying Human Resources Management at the University of Zululand, but not of the broader population.

Any future research should include purposive sampling of more males, so that CSE and RE levels of males and females can be compared and contrasted. Any differences in the interaction between CSE and RE between males and females could be assessed also.
6.7.3 **CSE Scores in the study**

CSE Scores are displayed for comparative purposes in table 59. The lowest CSE Scores were seen for experimental Group 1, used for testing hypotheses 2 and 3. For this group, the mean score was 3.11 (SD 0.52, n=46). The highest scores occurred in the group of repeating students with a mean score of 3.47 (n=36).

The overall scores were consistent with scores found by Broucek in 2005 for a similar study in the United States of America. The highest score was seen for those who were repeating modules, who had not succeeded in at least one module. The scores for repeating students were 0.10 points higher than the score for the sample from which that subset was drawn (See table 59).

This could indicate an over-inflated sense of self-worth amongst that group. This may have negatively affected their ability to perform in OBET, or could have developed as a reaction to failing in the first place.

**Table 59: Core Self-Evaluations Scores in the Study**

<table>
<thead>
<tr>
<th>Core Self-Evaluations Scores</th>
<th>Minimum</th>
<th>Mean</th>
<th>Maximum</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1 (n=198)</td>
<td>1.44</td>
<td>3.32</td>
<td>4.78</td>
<td>0.57</td>
</tr>
<tr>
<td>Validation (n=230)</td>
<td>2</td>
<td>3.33</td>
<td>4.44</td>
<td>0.51</td>
</tr>
<tr>
<td>Hypotheses 2, 3, and 6 (n=46)</td>
<td>2.22</td>
<td>3.11</td>
<td>4.33</td>
<td>0.52</td>
</tr>
<tr>
<td>Hypotheses 4 and 5 (n=60)</td>
<td>2.56</td>
<td>3.28</td>
<td>4.33</td>
<td>0.47</td>
</tr>
<tr>
<td>Repeating Students (n=36)</td>
<td>2</td>
<td>3.47</td>
<td>4.33</td>
<td>0.61</td>
</tr>
</tbody>
</table>

6.7.4 **Racial Evaluation Scores in the Study**

In table 60, one can see the RE scores for the various groups used to test the hypotheses in this study. All groups had a maximum score of five, indicating very positive responses.

The minimum score was very low for Hypotheses 1, 2, 3 and 6 as well as for the group of repeating students. There were respondents with very positive and very negative responses in the measure of RE.
Table 60: Racial Evaluation Scores in the Study

<table>
<thead>
<tr>
<th>Racial Evaluation</th>
<th>Minimum</th>
<th>Mean</th>
<th>Maximum</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1 (n=198)</td>
<td>1</td>
<td>4.21</td>
<td>5</td>
<td>0.76</td>
</tr>
<tr>
<td>Validation (n=230)</td>
<td>1.5</td>
<td>4.32</td>
<td>5</td>
<td>0.71</td>
</tr>
<tr>
<td>Hypotheses 2 and 3 (n=46)</td>
<td>1.5</td>
<td>4.4</td>
<td>5</td>
<td>0.67</td>
</tr>
<tr>
<td>Repeating Students (n=36)</td>
<td>1.5</td>
<td>4.21</td>
<td>5</td>
<td>0.83</td>
</tr>
<tr>
<td>Hypotheses 4 and 5 (n=60)</td>
<td>2.5</td>
<td>4.37</td>
<td>5</td>
<td>0.67</td>
</tr>
</tbody>
</table>

For repeating students, who had the highest scores for CSE, their RE scores were the lowest of all the groups examined (table 60). The highest levels of RE were seen for the experimental group used to test for hypothesis 1 and 2. The mean scores for hypotheses 4, 5 and 6 were 4.37, the second highest level amongst all the groups.

The levels of RE were very high. This, accompanied by the younger ages of the sample groups, connotes that the younger generations of adults surveyed do not show evidence of a poor RE. Instead, these individuals appear to have predominantly positive perceptions of their race and have not been adversely affected by racism in their lifetimes in terms of RE.

Any impact wrought by racism on these individuals most likely was at a socio-economic level. The impact of the socio-economic circumstances affected by apartheid may have had an impact on the RE of the respondents.

6.7.5 Relationship between RE and CSE

The relationship between RE and CSE was initially tested using a sample of n=198. Additional correlations were found for repeating students. These findings are presented in this section. There was a small but definite correlation between the RE and CSE in the first sample (for hypothesis 1).

This sample included a wider cross-section of the community, not just students studying Human Resources Management at the University of Zululand. A larger proportion of that sample was male in comparison with the other samples drawn.

The male portion of the sample showed a significant small but definite
correlation between CSE and RE. The gender disparities may be because of the patriarchy and gender discrimination in the Zulu culture (Tebele, 2009) (see Table 61). When Black males have strong cultural pride they can formulate positive self-concepts and this helps them in terms of agency and resilience against psychological forces that are negative (Hall, 2007).

Table 61: Relationship between Core Self-Evaluations and Racial Evaluation (n=198)

<table>
<thead>
<tr>
<th>Racial Evaluation</th>
<th>All (n=198)</th>
<th>Male (n=60)</th>
<th>Female (n=138)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Self-Evaluations</td>
<td>0.22**</td>
<td>0.36**</td>
<td>0.14</td>
</tr>
</tbody>
</table>

**p<0.01

In table 62, the Chi Square analysis statistics are indicated. There were distinctive variations in the configuration of levels of CSE and RE. Those with low CSE were most likely to have low or average RE. For those with average CSE the respondents were most likely to have Average levels of RE. Those with high CSE had predominantly average or high levels of RE. This suggests that for the broader population of Zulus in Zululand, levels of CSE and RE could co-vary.

For those who were studying Human Resources Management at the University of Zululand who were not repeating modules, there was no relationship between CSE and RE. In these groups, the majority of respondents were either younger than twenty or younger than thirty and were predominantly female. Younger South Africans may not have been directly affected as badly by racial discrimination. The fact that they were all Zulu may mean that they mostly have a strong sense of RE linked to their ethnicity.

In addition, the majority of each sample was female and may be contending with internalized sexism or other issues such as the role that patriarchy may have played in their socialization and personality development.
Table 62: Chi-Square Analysis for Racial Evaluation and Core Self-Evaluations (n=198)

<table>
<thead>
<tr>
<th>Core Self-Evaluations</th>
<th>Low</th>
<th>Count</th>
<th>%</th>
<th>Average</th>
<th>Count</th>
<th>%</th>
<th>High</th>
<th>Count</th>
<th>%</th>
<th>Total</th>
<th>Count</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>18</td>
<td>38.3%</td>
<td>23</td>
<td>48.9%</td>
<td>6</td>
<td>12.8%</td>
<td>47</td>
<td>100.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>28</td>
<td>26.9%</td>
<td>62</td>
<td>59.6%</td>
<td>14</td>
<td>13.5%</td>
<td>104</td>
<td>100.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>3</td>
<td>6.4%</td>
<td>26</td>
<td>55.3%</td>
<td>18</td>
<td>38.3%</td>
<td>47</td>
<td>100.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>24.7%</td>
<td>111</td>
<td>56.1%</td>
<td>38</td>
<td>19.2%</td>
<td>198</td>
<td>100.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Chi² (d.f. = 4, n = 198) = 22.49; p <.0005; V = 0.24 Medium).

RE did correlate with CSE amongst repeating students (those who had not succeeded in a previous attempt to complete a module successfully). The correlation was small but definite with an $r^2$ of 0.15. This means that 15 percent of the variance between the variables is shared with the other variable (see table 63).

Table 63: Correlation Core Self-Evaluations and Racial Evaluation for repeating students (n=36)

<table>
<thead>
<tr>
<th>Core Self-Evaluations</th>
<th>Racial Evaluation</th>
<th>0.39</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>P</td>
<td>0.01</td>
</tr>
</tbody>
</table>

For those learners who had experienced failure, this correlation poses some thought-provoking questions for future research. The average level of CSE was higher for those learners repeating modules. This may mean that the learners over-estimated their own ability. They may have pinned their identity on their RE. In addition, it is possible that they were drawing their own sense of worth and identity on the feelings of satisfaction they felt in their race and background.

Perhaps this group did not experience a need to prove themselves because of their heightened sense of CSE (and associated lack of neuroticism). The evidence points against CSE being a valid predictor of performance in South Africa amongst younger Zulu adults, given that repeating students had the highest mean level of CSE out of all the groups sampled.
Learning

The measurement of learning is often referred to as learner assessment or learner evaluation. Learner assessment usually occurs after the learning intervention is completed, and covers the content taught in the course. In the assessment, learners are expected to demonstrate what they have learned, as specified by learning outcomes or objectives (Noe, 2005; Goldstein & Ford 2002).

Learning outcomes or objectives specify the minimum level of proficiency a learner must be able to demonstrate after the learning intervention is completed. They describe the endpoints of learning.

It is generally easy to identify a learning outcome or objective, because it starts with the statement:
After completing this training/session/unit the learner should be able to ...

After that follows a verb e.g. create, justify, evaluate, list, and extrapolate.

After that follows the specific content the learner must take action on, the conditions under which the behaviour must be demonstrated, and the minimum acceptable standard that will be accepted.

For example:

After this module, the learner must be able to justify the importance of the Constitution as a semiotic framework for legislation.

After this training, the learner must be able to manage an airlift rescue, under simulated rescue conditions, using a civilian aero medical helicopter

This assessment/test measures the knowledge, skills and attitudes of the learners after the training is completed, usually against a prescribed standard. It does not take into account the existing levels of knowledge of the individual, or any learning that may have occurred because of events outside the classroom.
To specifically isolate the amount of learning achieved that is directly attributable to the learning intervention, you can use a pre-test and post-test. The pre-test is administered before the learning intervention and the post-test is administered afterwards. The difference between these scores is often used as an indicator of learning.

Unfortunately a pre-test and post-test only design does not take into account the effects of maturation and history on individual learning, where learners learn because of exposure to the environment over time, and not because of the course.

To make certain that one has isolated the amount of learning directly attributable to the learning intervention, one uses a Solomon four-group design (Braver & Braver, 1988). This design makes use of two experimental groups and two control groups, and identifies any influence that pre-test sensitization may have had on test scores. Pre-test sensitization is the effect that writing the pre-test has on learners. It makes the learners aware of what to focus on and what to look out for in the learning intervention, and this affects their scores in the post-test.

To effectively measure learning, one must use the Solomon four-group design to test the validity of the learning intervention and then calculate learning as follows:

\[
\text{learning gains} = \frac{(\text{Post-test Score} - \text{Pre-test Sensitization}) - \text{Pre-test Score}}{100\% - \text{Pretest Score}}
\]

Worked Example:

\[
\begin{align*}
(70\% - 11\%) - 30\% \\
\hline
(100\% - 30\%)
\end{align*}
\]

learning gains = 40%

In table 64, the descriptive statistics for the learning gains test scores are specified. The average pre-test score of 41 percent either implies that the learners were adept at guessing the answers, or they had levels of existing knowledge acquired through their other studies and also their life-experiences. The high pre-test level may also
partially explain why the average post-test score was 84 percent. This high score was partially attributable to the pre-test sensitization that was identified during the validation process.

Pre-test sensitization was moderated by reducing the post-test score by the percentage of impact that the pre-test sensitization had on the post-test score. This dropped the mean score in the post-test to 73 percent, which is still high. The difference between the pre-test score and moderated post-test score was, on average, 32 percent. If the learners had begun with lower levels of existing knowledge, then their post-test scores would have been significantly lowered.

The mean learning of the group was 52.95 percent (table 64). The implication is that the learners learned only 53 percent of what they could have learned during the learning intervention. The average level of learning was 41.60 percent for males. For females, the average learning score was 54.65 percent. The female group showed higher levels of learning in this sample. Comparative studies could be undertaken to determine ways to boost learning gains for young adults in South Africa.

Table 64: Learning Gains (n=46)

<table>
<thead>
<tr>
<th></th>
<th>Pre-test %</th>
<th>Post-test %</th>
<th>Adjusted Post-test %</th>
<th>Adjusted Difference</th>
<th>Learning Gains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.41</td>
<td>0.84</td>
<td>0.73</td>
<td>0.32</td>
<td>0.53</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.02</td>
<td>0.01</td>
<td>0.01</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>Median</td>
<td>0.41</td>
<td>0.88</td>
<td>0.77</td>
<td>0.33</td>
<td>0.59</td>
</tr>
<tr>
<td>Mode</td>
<td>0.38</td>
<td>0.90</td>
<td>0.79</td>
<td>0.41</td>
<td>0.66</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.11</td>
<td>0.10</td>
<td>0.10</td>
<td>0.15</td>
<td>0.20</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.02</td>
<td>0.04</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.40</td>
<td>0.16</td>
<td>0.16</td>
<td>-0.09</td>
<td>0.52</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.23</td>
<td>-0.88</td>
<td>-0.88</td>
<td>-0.35</td>
<td>-1.13</td>
</tr>
<tr>
<td>Range</td>
<td>0.52</td>
<td>0.40</td>
<td>0.40</td>
<td>0.64</td>
<td>0.76</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.14</td>
<td>0.60</td>
<td>0.49</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.66</td>
<td>1.00</td>
<td>0.89</td>
<td>0.65</td>
<td>0.77</td>
</tr>
<tr>
<td>Sum</td>
<td>19.00</td>
<td>38.75</td>
<td>33.69</td>
<td>14.69</td>
<td>24.36</td>
</tr>
<tr>
<td>Count</td>
<td>46.00</td>
<td>46.00</td>
<td>46.00</td>
<td>46.00</td>
<td>46.00</td>
</tr>
<tr>
<td>Confidence Level</td>
<td>(95.0%)</td>
<td></td>
<td></td>
<td>0.03</td>
<td>0.06</td>
</tr>
</tbody>
</table>
6.7.7 The relationship between CSE and learning

There was a small but definite correlation between CSE and learning amongst those in the experimental group (r=.32, p 0.05, n=46, table 65). This relationship should be treated with caution, and should not be used for predictive purposes in South Africa without further research into the nature of the interaction between CSE and learning.

Table 65: Correlation between Learning and Core Self-Evaluations

<table>
<thead>
<tr>
<th>Core Self-Evaluations</th>
<th>Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.32*</td>
</tr>
</tbody>
</table>

*. Correlation is significant at the 0.05 level (two-tailed).

The relationship suggests that there could be a link between CSE and learning, but the nature of this link is still unclear. It could be that individuals have higher CSE if they know that they are capable of learning.

6.7.8 The relationship between RE and Learning

There was no relationship between learning and RE in the study. This could mean that one needs not necessarily worry about racial influences on learning from a psychological angle.

The literature suggests that, instead of having a direct impact psychologically, racial discrimination influenced learning through the patterns of socio-economic privations that it created. Adequate provision of learning resources should be enough to empower young Zulus in HRD, without the need to remedy issues of RE.

Black South Africans in the sample had positive RE and these levels were unrelated to their learning gains. Black South Africans, who receive the same opportunities as White South Africans, may not be at any historical disadvantage, because there is no evidence of damaged RE or lowered levels of CSE. There was also no relationship between RE and OBA, possibly for similar reasons.
6.7.9 OBA

The average score for OBA used in this study was 48 percent. This score is a lot lower than the post-test score seen in the learning experiment described above, where the moderated mean percentage was 73 percent.

This score indicates that the learners are not all successfully performing in OBA. The lowest score in the OBA was 28 percent and the highest score was 68 percent, lower than the mean score on the learning experiment (See table 66).

Table 66: Descriptive Statistics for Outcomes-Based Assessment Scores (n=60)

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes-Based Assessment</td>
<td>1.4</td>
<td>3.4</td>
<td>2.42</td>
<td>0.47</td>
</tr>
</tbody>
</table>

6.7.10 The relationship between CSE, RE and OBA

There was no direct correlation in the complete experimental sample for phases 2 and 3 between RE and CSE. When the sample was divided into three groups (low, average, and high) by CSE levels, a new picture began to emerge. For those with low CSE, there was a very strong negative correlation between CSE and their OBA results in OBET.

Table 67 shows the correlations for low, average, and high CSE and OBA. The proportion of shared variance between low CSE and OBA was 55 percent. This is very high. In this sample, there were a group that had relatively low CSE and were high achievers in OBA. The notion of CSE being a valid predictor of performance is further brought into question. A straight correlation does not indicate the pockets of anomalies wherein individual behaviour cannot be predicted in a linear manner.

Table 67: Core Self-Evaluations and Outcomes-Based Assessment Results

<table>
<thead>
<tr>
<th>Core Self-Evaluations</th>
<th>Low (n=16)</th>
<th>Average (n=23)</th>
<th>High (n=21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes-Based Assessment</td>
<td>-0.74**</td>
<td>0.42**</td>
<td>0.21</td>
</tr>
</tbody>
</table>

**<0.01
The group with the lowest CSE were more likely to have higher OBA, within their group, than groups with higher CSE. In the group with average CSE, the opposite was true. In this group, there was a moderate, positive correlation between CSE and achievement in OBET. In the group with low CSE, there was evidence of underestimation of their own capability and agency in their own lives. The group with average CSE appeared to be able to accurately estimate or assess their CSE.

In the group with high CSE, the correlation was small and insignificant. This was because there were some participants who completely overestimated themselves (high CSE and low OBA) and some who accurately estimated themselves (high CSE and OBA).

In Figure 11, it is apparent that there are some respondents with high CSE and low OBA, for example, there is a case with a CSE score of 4.33 and an OBA score of 40 percent. There is also a case with an identical CSE score of 4.33, but with an OBA score of 60 percent. Perhaps one may gain CSE from some areas in one’s life, which make one feel capable and self-efficacious, which one then generalises to other facets of one’s life.

The impact of past experiences on CSE may cause a disparity between CSE (high) and OBA (low). Similarly, there may be individuals whose CSE may have been diminished through life’s events and previous experiences of failure, who underestimate their ability despite achievement in OBA, or other aspects of their lives.
6.8 Conclusion

The relationship between CSE and RE, learning and CSE, and learning and RE were discussed. Thereafter, CSE was found to be positively related to OBA.

For the testing of the relationship between CSE and RE, a convenience sample of n=198 was drawn from adult Zulus in Northern Zululand. The relationship between CSE, RE and learning and OBA were tested on a random sample of students studying Human Resources Management at the University of Zululand. The sample comprised young adult Zulu learners.

The majority were younger than 30, and as such had exposure to apartheid for a short period of their lives (directly) although they experienced socio-economic consequences. The majority of respondents in all the samples drawn were predominantly female. Female CSE may also have been affected by internalized sexism, which is beyond the scope of the current study.

The mean score of CSE of the sample was 3.32 (n=198). The level of CSE was accompanied by a small standard deviation of only 0.57. In the sample, the lowest level of CSE was only 1.44 and the highest was 4.78, but the majority were clustered around 3.32. The mean score for RE was 4.21 (n=198). This indicates high levels of overt or espoused RE. The lowest score was 1.00 and the highest score was 5.00.
For the most part though, the sample had high levels of RE.

There was a small but definite relationship between CSE and RE, with a stronger correlation evident amongst male respondents. A statistically significant positive correlation was found between CSE and RE amongst males (p=0.005, n=60, r=0.358). There was no significant correlation between CSE and RE amongst the female respondents (n=138, r=.142). The overall correlation was r=0.21 (p=0.003, n=198) which indicates a small, positive correlation between CSE and RE.

The correlation, albeit small, provides some grounds for further investigation into the relationship between the two variables, with a broader sampling technique, and the inclusion of further ethnic groups and ages. Chi square analysis indicated a statistically and practically significant relationship between CSE and RE across the entire sample.

The learning intervention was validated using the Solomon four-group design. Although the learning intervention was found to be valid, there was some evidence of pre-test sensitization. Learning gains relate to the capacity for individuals to acquire knowledge, skills, and attitudes required on the job within a reasonable amount of time. In this case, a pre-test was followed by a learning intervention and a post-test (using a valid learning intervention) to measure learning gains. The post-test scores were high. The high levels of existing knowledge inflated the post-test scores. The mean learning gains score was 53 percent. To measure the relationship between CSE and learning, the CSE Scores were compared with learning gains scores using Pearson Product Moment correlations and the t-test.

When the learning gains scores were calculated as a proportion of total learning possible, a relationship was found between CSE and Learning. The correlation was small but definite. Learning gains scores were divided into two groups, high CSE and low CSE, according to CSE levels. T-tests revealed a statistically significant difference in the mean scores of those with high CSE as opposed to those with low CSE (t=2.5796, df=44, p 0.01).

A small but significant correlation was found between CSE and learning (r
Further investigation is warranted to test whether learning gains positively influence CSE. There was no relationship between RE and learning. The RE levels of the participants were positive.

Learning gains may contribute to achievement in OBA, without being influenced by CSE or RE. Performance in OBA may depend on learning and on CSE and RE. The relationship between CSE and OBA and the relationship between RE and OBA after OBET are scrutinised in this section.

For the testing of pertinent relationships with OBA, the mean CSE score amongst the learners sampled was 3.28 (n=60, SD 0.47), higher than that of the experimental group (n=46, mean=3.11, SD 0.51). The mean CSE score is lower than the mean scores of 3.33 (Rosopa & Schroeder, 2009) and 3.78 to 4.03 (Judge et al., 2003) found in studies in the United States and also lower than the CSE scores found for repeating students (3.43, n=36) and for hypothesis 1 (3.33, n=198).

There was no overall correlation between CSE and OBA. Despite no relationship being found directly between OBA and CSE, a strong positive relationship was found between OBA results and CSE for scores between quartile one and quartile three (r=0.47 n=33, p=<0.01). This corresponds with the positive relationship seen between CSE and Learning for those within the average range of scores for CSE, in the previous section.

There was no relationship between CSE and OBA for those in the uppermost quartile of CSE; this is liable due to overestimation of underachievers clouding the relationship between CSE and OBA for those who have high OBA results and high CSE.

There was a strong negative correlation between those with low CSE scores and OBA results. The results imply that, among young Zulu students, lower CSE is linked to improved OBA results.

Average CSE has been positively related to assessment results and there is no significant relationship between high core self evaluation and test results. It appears
that those with low CSE achieve relatively better than would be estimated by their CSE.

Those with high CSE, although having higher test scores on average, may sometimes over or underestimate their ability, leading to no relationship being evident between CSE and OBA.

Amongst those with moderate or average levels of CSE, their CSE correlates with their performance in OBA. The Black South African learners surveyed may have robust levels of RE. There was a correlation between learning and OBA for the experimental group, as can be expected.

In the last chapter, the findings of the study will be summarised and formed into a theory on the impact of CSE and RE on the capacity for the acquisition of knowledge, skills and attitudes related to the job within a reasonable amount of time. The literature will be revisited and then related back to the findings of the study.

Recommendations will be presented for future research into the area, and managerial implications will be suggested. This is in an attempt to prove the practical utility of the study in the working context. This chapter provided details of all the findings of the study, based on the literature in chapters 2, 3 and 4, and made use of the research methods detailed in Chapter 5. All of this will be integrated in chapter 7, the final chapter of this thesis.
7. CONCLUSION AND RECOMMENDATIONS

7.1 Introduction to the chapter

This study explored the relationship between RE, CSE, learning, and OBA results. RE is a person’s internal evaluation of his or her race (Watson, 2007). CSE refers to individuals’ estimation of their own worth and ability, including perceived control over one’s life and one’s levels of emotional stability (Bono & Judge, 2002). Learning refers to long-term change related to practice and rehearsal (Hilgard & Marquis, 1940). The prevailing ETD paradigm in South Africa is OBET (Jansen & Christie, 1999). Assessment in this paradigm entails the provision of fair opportunities for learners to demonstrate the outcomes specified at the outset of the learning intervention. These are the four variables that were explored in the study.

In this chapter, the study is summarised and the findings are interpreted. The limitations of the study will be cited. There is a lot of scope for future research; recommendations for possible future research opportunities are provided and the practical implications of the findings are explored.

At the outset of the chapter, the research questions and hypotheses are briefly restated. Thereafter, the research method is summarised. Then, the findings from the study are looked at in relation to the literature initially reviewed. An overall theory on the findings is then presented.

The findings revealed that the above-mentioned variables interact, but not in a manner which could have been predicted by examining the international literature on these variables.

7.2 Research Questions

The research questions in this study sought to cover the relationship between the four variables mentioned in the introduction to this chapter, which were CSE, RE, learning, and OBA.

*Question One: Is there a relationship between CSE and RE?*
CSE is described by Judge and numerous co-authors (Judge, Erez & Bono, 1998; Kammeyer-Mueller, Judge & Scott, 2009; Tsaousis, Nikolaou, Serdaris & Judge, 2005; Bono & Judge, 2002; Judge et al., 2003; Robbins & Judge, 2007) as a person's estimation of himself or herself, whereas RE is his/her evaluation of his/her race (Gassaniga, 2004). These two variables both relate to a person's estimation or judgement of contributors to identity the perception and evaluation of the self.

**Question Two: Is there a relationship between CSE and learning?**

Previous international research showed that there is a relationship between CSE and academic performance (Tsaousis, Nikolaou, Serdaris & Judge, 2007). International research also showed that academic ability without CSE does not necessarily translate to academic achievement (Rosopa & Schroeder, 2009). General mental ability and physical attractiveness have both indirect and direct influences on income, but these are mediated by educational attainment and CSE (Judge, Hurst & Simon, 2009). CSE is involved in enhancing or inhibiting many of the major determinants of success. Learning in this study could be construed as a determinant of success in OBA.

**Question Three: Is there a relationship between RE and learning?**

In South Africa, the Employment Equity Act (55 of 1998) requires that ‘suitably qualified’ individuals from previously disadvantaged backgrounds be considered first for vacancies within organizations. ‘Suitably qualified’ refers to those who are formally qualified, have experience, or have the capacity to acquire the relevant skills required for the job in a reasonable amount of time.

Ndamse, a Black political commentator, stated in 1972 (in Biko et al.) that an individual cannot succeed without pride, and this pride makes people aspire to improve. “Wherever you find an individual who is ashamed of his race trying to get away from his race, apologising for being a member of his race, then you find a weak individual” (p12).

The aim in this research question was to ascertain whether racism had caused any lasting damage to individual capacity for the acquisition of skills as required by the Employment Equity Act (55 of 1998). Evidence of a relationship may have
pointed towards the need to provide remedies for damaged RE so as to boost performance.

**Question Four: Is there a relationship between CSE and OBA?**

The prevailing ETD approach in South Africa is OBET (Jansen & Christie, 1999). OBA results are based on evaluating whether learners can demonstrate what they have learned.

CSE was linked to performance and the mobilization of ability and opportunity, which are two preconditions to performance (Robbins & Judge, 2007). The third precondition of performance is motivation. Motivation refers to the intensity, direction and persistence put into achieving a goal. Motivation may be affected by CSE, which may deter or compel someone to work harder towards goals, based on a person’s belief in himself/herself, thus CSE may relate to achievement in OBA.

**Question Five: Is there a relationship between RE and OBA?**

If racist stereotypes and prejudice were internalized, resulting in poor RE, then this could have resulted in stereotype threat (Cadinu, Maass, Lombardo & Frigerio, 2006). This would have then become evident in the relationship between RE and OBA.

**Question Six: Is there a relationship between learning and Outcomes-Based Assessment?**

Learning contributes to achievement in OBA. OBA may be affected by other factors also, however, and this may undermine the strength of the relationship. In order to further validate the OBA, learning and OBA were correlated.

### 7.3 Hypotheses

The research questions discussed in section generated the hypotheses listed below.

*Research hypothesis 1: There is a relationship between CSE and RE.*

*Research hypothesis 2: There is a relationship between CSE and learning.*
Research hypothesis 3: There is a relationship between RE and learning

Research hypothesis 4: There is a relationship between OBA and CSE.

Research hypothesis 5: There is a relationship between OBA and RE.

Research hypothesis 6: There is a relationship between OBA and learning

7.4 Research Method

The hypotheses in section 7.3 were tested making use of instruments designed to measure CSE, RE, learning and OBA. A learning intervention was conducted to measure hypotheses 2 to 6. This intervention was valid and was Outcomes-Based. The measures were valid and reliable and were administered in an ethical manner.

The hypotheses were tested using inferential statistics namely correlations, Analysis of Variance, and Chi-square analysis. In terms of the hypotheses, a small but definite relationship was found between RE and CSE. Hypothesis 1 is accepted.

There was also a statistically significant, but small correlation between learning and CSE. Hypothesis 2 is therefore also accepted in this study, but the nature of the sample and sample size mean that the correlation should not be used as a predictor of either variable. All that this indicates is that there is scope for further research.

Hypothesis 3 was rejected. There was no evidence of a relationship existing between RE and learning, nor was there any evidence of a relationship between achievement in OBA and RE.

For hypothesis 4, there was a qualified relationship between CSE and achievement in OBA. For those with low CSE, there was a strong negative relationship with OBA results. With average CSE, there was a moderate relationship between CSE and OBA results. These findings are discussed in relation to the literature in the rest of
Hypothesis 5 proposed a relationship between RE and OBA, this hypothesis is rejected. Finally, hypothesis 6 proposed a relationship between OBA results and learning. This hypothesis was accepted. There was a statistically significant relationship between learning gains and OBA.

7.5 Racial Evaluation

Racism can take a number of forms and can influence many aspects of a person, both psychologically and socio-economically. Utsey et al. (2000) proposed the classification of racism under three separate categories, namely individual, institutional, and cultural racism.

Individual racism is where one person is racist towards another person directly (Utsey et al., 2000). This could have a lasting impact on a person psychologically. The few instances where individuals had poor RE could have been because they experienced individual racism in a manner that had a permanent influence on them.

An alternative is that individuals are robust and do not necessarily internalise racism to the extent proposed by Jones (2001). South Africans and Zulus in particular, could have clung to their strong RE and CSE, despite racism being experienced. They could actually have fostered stronger RE in response to the negative racial environment- a vaccination effect could have occurred.

For many, in particular the educated, Black elite, the reaction to apartheid may well have been one of strengthened RE and fortitude. The sample profiled in this study comprised persons predominantly younger than thirty who have lived in the post-apartheid era, where rising unrest and protest may have shaped and informed their perceptions of themselves and their RE (BBC, 2010). Ndamse noted, in 1972 (Biko et al., 1972), that educated individuals dissociated themselves from others of their race. However, in this study; the educated individuals had positive levels of RE and appeared to be proud to be associated with their race.

Cultural racism occurred in South Africa. This is when members of oppressed
groups reject their customs and adopt the customs of the ruling group (Utsey et al., 2000). Biko favoured the rejection of all White customs and culture (Biko, 1978). This rejection of Westernisation was not always seen as a negative thing by all Black activists and commentators. Ndebele (in Biko et al., 1972) saw this process as necessary if customs did not fulfil the purpose they were originally intended to fill.

The group sampled in this thesis were from the Zulu culture, a culture with a strong element of traditional customs and identity, as well as having adopted some Western customs, particularly amongst urban Zulus (Tebele, 2009). The retention of some traditional values and customs, as well as a strong cultural and ethnic identity may be why the positive RE was evident in the sample.

The group sampled had limited exposure to apartheid directly, having been born in the last decades of apartheid, and are members of the elite in terms of access to education (Erasmus et al., 2009). They are in possession of positive RE.

7.6 CSE

CSE is a person's estimation of his/her own worth and ability. This self-perception comprises a configuration of levels of locus of control, self-esteem, neuroticism, and self-efficacy (Robbins & Judge, 2007). The average CSE score among the learners sampled for testing the relationship between CSE and Outcomes-Based Assessment was 3.28 (n=60, SD.47). This was greater than the mean score of the experimental group (n=46, mean=3.11, SD 0.51) but lower than the CSE scores found for repeating students (3.43, n=36) and for hypothesis 1 (3.33, n=198). International studies found mean scores of 3.33 (Rosopa & Schroeder, 2009) and 3.78 to 4.03 (Judge et al., 2003) in the United States of America.

The levels of CSE in the study were within the same range as those seen in international studies, with the exception of the scores found by Judge et al. (2003), where the scores were higher. The initial assumption was that apartheid may have robbed South Africans of scope to develop high levels of CSE. Although levels of CSE were somewhat lower than those measured amongst managers and MBA students in international studies, they were much in keeping with the levels seen in a similar studies amongst undergraduate students in the United States of America.
The scores found may be in keeping with CSE levels of students, and there is scope for comparative studies investigating this further.

The levels of estimation of worth and ability seen amongst the young adult Zulus were not much different from those of their American counterparts. One interesting anomaly was the higher levels of CSE seen amongst those who failed modules and were repeating years of their studies.

The comparably acceptable levels of CSE may be further evidence that apartheid's residual impact on Black South Africans may be institutional and socio-economic, rather than psychological. There is limited evidence for the need for psychological interventions to boost CSE, although CSE should be incorporated into Critical Cross-field outcomes in OBET in South Africa (Clarke et al., 2007).

These Critical Cross-Field Outcomes are aimed at engendering generic life-skills that are useful across a number of contexts and can be generalised to other aspects of a person's life. Critical Cross-Field Outcomes, also referred to as Critical Outcomes, are a quite new introduction into curriculum design and are seen in all SAQA-accredited OBET in South Africa. These outcomes are aimed at being practical in terms of the attitudes, skills and knowledge developed (Jacobs, Vakalisa & Gawe, 2008).

The Critical Cross-Field Outcomes include the ability to identify and solve problems, to solve problems using both critical and creative cognitive approaches. The second outcome is to be able to work with others; this may be in the form of teams, groups, organizations and the community. Third, learners must learn to manage themselves in a responsible manner that is also effective. The fourth Critical Outcome is the ability to collect, analyse, organise and evaluate information. Critical Outcome number Five pertains to communication using a number of media. Six is the use of science and technological resources effectively, critically and responsibly. For Critical Outcome Seven, the aim is that learners must be able to view the world in a systematic manner—people must be able to see the world as a set of systems that interact with each other (Jacobs, Vakalisa & Gawe, 2008, p96).
CSE comprises self-esteem, self-efficacy, locus of control, and emotional stability (Judge et al., 2003). These facets are all useful in learning, and could also be used to achieve the Critical Outcomes above. For example, the ability to manage one’s own work would need self-efficacy and an internal locus of control. Working with others may require high levels of emotional stability as well as healthy levels of self-esteem.

Given the necessity of HRD in South Africa, and the clear linkages between CSE, learning and OBA, it is important for learners to be able to effectively master the Critical Outcomes. To master these, they must be able to possess realistic levels of CSE, and also be aware of how their CSE could be limiting their performance. Learning interventions may be needed to help learners to identify their weak points in their CSE and also to rectify any behavioural and performance constraints brought about by their CSE.

Acceptable levels of CSE have been linked with individual happiness, life satisfaction and physical health (Tsaousis, Nikolaou, Serdaris & Judge, 2005). They also link with less strain and better coping skills. However, the highest levels of CSE were found in the group of students repeating subjects (ostensibly those with the lowest levels of success).

Previous research found that those who had higher levels of CSE did not engage in as much avoidance behaviour when coping with challenges (Kammeyer-Mueller, Judge & Scott, 2009). The group of repeating students may not have fitted in with these findings. Possibly, in South Africa, individuals may develop higher levels of CSE that are not based on actual achievements. Instead, the heightened CSE is formed as a psychological defence and as a means for coping psychologically with failure.

One component in CSE is self-esteem. In the United States of America, Brown et al. (1998) discovered that Black girls had higher self-esteem than White girls. Perhaps the same situation was evident in the sample in terms of the levels of CSE, with the Zulu sample developing a stronger level of CSE in relation to the influence of the end of apartheid. When it comes to self-esteem, this process is
known as self-esteem compensation (Rudman, Dohn & Fairchild, 2007).

In light of the findings in the study, Core Self-Evaluations Compensation occurred amongst Black South Africans, where, in the face of oppression and denigration, individuals rallied their CSE and boosted their levels without basing this increased CSE on substantive achievement. They reacted by creating a new psychological stance that defined them as worthy and self-efficacious. This is also evidenced in the positive RE evident in the study. Further evidence is the pockets of high CSE found in the sample. There was a negative relationship between CSE and OBA. The lowest levels of achievement in OBA had the highest levels of CSE.

Evidence of psychological compensation for racism is further found in the relatively high levels of CSE in the group that had failed modules and the anomalies in the group with High CSE where there were a few respondents with extremely high levels of CSE who had extremely low levels of achievement in OBET. Compensatory CSE could be a term used to denote the process where individuals defensively inflate their levels of CSE in reaction to negative experiences.

7.7 CSE and RE

The environment in South Africa was a hostile one for Black South Africans during apartheid, and racial inequity persists (OECD, 2010). One area that RE impacted on slightly was CSE. CSE is how an individual feels about him/herself. CSE is made up of self-esteem, self-efficacy, locus of control, and also neuroticism/emotional stability (Scott & Judge, 2009).

Judge, Erez and Bono (1998) claim that the favourability of a person’s inferences about himself/herself determines his or her CSE. Possibly, in South Africa, strong ethnic, racial, and cultural identities, such as seen amongst the Zulu (Tebele, 2009), may play a role in the determination of CSE.

There was evidence of a relationship between CSE and RE amongst a broader sample of the population, particularly amongst males, and those repeating modules. The link may diminish over time, or be less marked amongst the elite, and those who have adopted a more individualistic stance than the more traditional
collectivism.

A statistically significant positive correlation was found between CSE and RE amongst males (p=0.005, n=60, r=0.358). There was no significant correlation between CSE and RE amongst the female respondents (n=138, r=.142). The overall correlation was r=0.21 (p=0.003, n=198) which indicates a small, positive correlation between CSE and RE.

There was little relationship between RE and CSE in the experimental groups, with the exception being those learners who were repeating modules, where there was a significant correlation between CSE and RE. The correlation found was r=.39, with a p value of 0.05 (n=36). This may be because the samples drawn held high levels of RE irrespective of their sense of CSE, or because females rated their race higher than they rated themselves because they possessed high levels of internalized sexism as a result of the patriarchal nature of the Zulu culture.

The mean level of RE was 4.33. RE plays no significant role in the determination of CSE for young Black Zulus who are studying Human Resources Management. The scores were divided according to the quartiles of CSE into low, average, and high CSE (low <2.89, average 2.89 to 3.67, high 3.67 and higher). Each group’s CSE scores could then be correlated with its corresponding levels of RE.

The relationship between CSE and RE may be non-linear. Those with low CSE may be more susceptible to poor RE, owing to their lowered levels of self-efficacy, self-esteem, increased levels of neuroticism, and external locus of control. Those with high or average levels of CSE too may see different interactions between their CSE and RE levels. Within these quartiles, there was a strong correlation between CSE and RE for those who had low CSE.

7.8 RE, learning and OBA

The RE levels of the participants were high. Black South African learners may have robust levels of RE. At any rate, RE did not relate to learner performance in this instance, although the relationship between CSE and RE amongst repeating
students may merit further investigation.

RE has a small relationship with CSE, and never with learning or OBA. This means that efforts to remedy apartheid may be directed towards social, economic, and ETD oriented interventions and need not focus on RE.

7.9 CSE, learning and OBA

Learning refers to an individual's capacity to acquire knowledge, skills and attitudes during a learning intervention. This then contributes to achievement in OBA. OBA refers to opportunities for learners to demonstrate that they have achieved outcomes specified at the outset of OBET.

In this study, these two concepts were looked at in relation to CSE. This was achieved through the measurement of learning using a valid learning intervention. Learning was measured as a proportion of the overall learning possible during the learning intervention. The sample scored an average learning gain of 53 percent. More research will be needed to be able to assess whether this level is high or low. OBA results were drawn from moderated assessment that formed part of a Human Resources Management syllabus.

When CSE is higher, learning tends to be higher too. There was a small but definite and statistically significant correlation between CSE and learning ($r = 0.32$, $n=46$, $p = 0.05$). The same pattern does not hold for OBA. Among young Zulu students, lower CSE is linked to improved OBA results ($r = -0.74$, $p < 0.01$, $n=16$). Average CSE is positively related to OBA results ($r = 0.42$, $p < 0.01$, $n=23$) and there is no significant relationship between high CSE and OBA results.

It appears that those with low CSE achieve relatively better than would be estimated by their CSE in OBA. This could be because neurotics can activate negative affect in order to rouse or motivate themselves to better performance (Tamir, 2005). Where emotionally stable individuals may not worry about a task or goal, neurotics can direct their neuroticism towards worrying. They do this, argues Tamir (2005) because of the instrumental benefits of worrying. Another similar
trigger could be self-criticism, which, according to Clara, Cox and Enns (2003) is a
nested domain of neuroticism. This element of neuroticism in CSE could increase
performance in OBET.

Those with high CSE, although having higher test scores on average, may
sometimes overestimate or underestimate their ability, leading to no relationship
being evident between CSE and OBA. This is out of sync with international findings
that suggested that there was a causal relationship between CSE and achievement
in learning (Rosopa & Schroeder, 2009).

There is international research evidence that suggests that high levels of self-
efficacy (one component of high CSE) may lead to diminished performance, because
it leads to overconfidence. The higher levels of CSE among repeating students may
be the result of overconfidence (which may also have been why they failed modules
in the first place). If there is increased feedback, this leads to greater congruity
between CSE and learning (Moores & Chang, 2009).

Amongst those with moderate or average levels of CSE, their CSE correlates
with their performance in OBA. A relationship exists between CSE and OBA results
in this study. It is possible that the students in this band have accurate perceptions of
their ability (Moores & Chang, 2009).

High levels of CSE did not always correlate with levels of achievement in OBA
results. There may be the need to look at learning Self-Evaluation, which specifically
focuses on the constructs associated with CSE, applied to HRD

Learning and OBA results were found to be related (r 0.37, p 0.02, n=38). Learning
can be assumed to be a partial predictor of performance in OBA, in
conjunction with CSE. RE is sometimes related with CSE, but never related to OBA
results or learning. RE levels are high amongst young Black Zulus, generally
independently of their CSE.

CSE relates positively to learning, but the correlation is small (r 0.32, p 0.05,
n=46). This relationship should be treated with caution, as learning can be viewed as
an ability or capacity, which may be used as a source of CSE. Both of these variables may be instrumental in achievement in OBET.

The CSE-OBA relationship is complex. For those with low CSE, the relationship is negative. For those with average CSE, the relationship is positive. The relationship between CSE and OBA results for those with high CSE is impossible to predict in South Africa, this is largely because of the fact that some individuals over-estimate themselves.

The incongruity between CSE, learning and OBA could be because of Compensatory CSE. This is when individuals defend themselves psychologically by fabricating a high sense of CSE that is not necessarily based on ability or previous performance.

7.10 Limitations

The study's exploratory nature means that it poses more questions than answers. Areas were created for future research and theory development. The findings are not conclusive and cannot be generalised to the broader population. Instead, they define a possible direction for future research into these areas in South Africa.

The study sought to apply Western theory to an African context. A possible alternative approach would have been the creation of new theory based directly on African influences and perspectives.

The RES is a new measure, and may need further validation if it is to be used in future. Depth-interviews and focus groups could be utilised to formulate a conception of RE as it stands within the South African context.

The sample has a number of flaws also. The sample was chosen in an effort to maintain homogeneity and to control for ethnic variations in RE and CSE levels. This renders the findings ungeneraliseable to other populations in South Africa. This results in the necessity for further research into the levels of RE and CSE for other ethnic and racial groups in South Africa.
The ages of the sample are also questionable. The study aimed to assess racism’s influence on the variables in question and yet focused only on the youngest generations who may have had only limited exposure to experiences of racism. There is some mitigation in the fact that these generations do need to be assessed, as they are the ones who will be looking for work in the next few years.

If the Employment Equity Act angle were ignored, (in terms of the notion of suitably qualified), then a wider sample would be warranted with stratified random sampling instead being favoured as the preferred method for data collection. Each sample could have aligned with the samples specified in Chapter 5 and could have spanned the generations that were affected by apartheid.

The breadth of the learning intervention and the relatively limited standard of the outcomes could also be questioned. OBET includes knowledge, skills and attitudes, but the learning outcomes covered in this study were knowledge-based. This was in an effort to limit the subjectivity of assessment decisions. The same objectivity could have been achieved through skills testing where tangible products could have been produced or output could have been measured in terms of quantity or quality of work produced. The assessments could also have been made more stressful or could have been otherwise manipulated to try to instigate the activation of CSE as a role-player in performance. The author was concerned about the ethical implications of such actions and as such avoided them.

The instruments and learning intervention were in the second language of the trainees and this may have affected the results. In future studies, there is scope for the development and validation of measures for RE, CSE and learning in the other official languages of South Africa, not just English.

Small correlations were found for previous studies of this nature, and yet the findings were called valid predictors of performance by the authors (Judge et al., 2003). The correlations in this study were also small and should be treated with caution, given the small sample size.
The sample sizes for the Solomon four-group design could have been far larger than the groups used for validation in the learning experiment. Braver and Braver (1988) specified a method that could be used to validate learning, even with small sample sizes, but to the uninitiated, the small sample sizes could damage the credibility of the study.

A further limitation is the lack of a unified sample for the study. A unified sample would have ensured that more sophisticated forms of statistical analysis could have been undertaken.

The fact that there are no assertions of causality or generalization does offset the severity of the limitations of the study. The research method provides a new approach to a relevant field of study in South Africa and produces opportunities for future research. Some suggestions for future research are provided in section 7.11 below.

7.11 Suggestions for future research

Hanley and Noblit (2009, p 36) claim that although “stereotypes held by the larger society may be difficult to change, it is possible to create niches in which negative stereotypes are not felt to apply”. Given South Africa’s tumultuous past, researchers must identify these niches and capitalise upon them in order to fully capacitate learners in South Africa.

Owing to the exploratory type of research described in the study, there is ample scope for future research. There is little existing research into this area in South Africa. It is a relevant area to focus on in South Africa because of its utility in Human Resources Development in South Africa. There is a need for research that will contribute on a practical level to developing the skills of South Africans. Studies that promote valid learning that is cognisant of potential psychological constraints could help ETD practitioners.

One potential area for future research is a national study, which examines the relationship between CSE and RE and focuses on the age groups specified in
Chapter 5. These age groups divided South Africans into groups that had similar experiences of racism. One could then examine whether there were age distinctions in RE and CSE levels. Furthermore, there may be relationships between CSE and RE that are stronger when one examines the relationship between the variables for older South Africans.

Further to the above, the sample could also be divided according to differences between those who live in rural areas versus those who live in urban areas. There may be significant differences in the way that those two groups experienced apartheid. From a geographical perspective, there may be different levels, according to whether the area was a former homeland or not. A map of the former homelands is provided in Chapter 3.

Another area omitted in this study that warrants further analysis is the potential differences in CSE between different racial and ethnic groups in South Africa. This may provide further insight into if apartheid had disparate effects on different racial and ethnic groups in South Africa.

Race may not be a primary source of differences in CSE and RE, it is possible that culture and ethnicity play an important role in determining CSE. Furthermore, the cohesive nature of the Zulu culture may mask poor RE that may be evident among other ethnic groups in South Africa.

Gender differences and internalized sexism may play a mediating role in CSE and RE, particularly in patriarchal cultures. Any larger survey may be able to pick up on gender differences in CSE and RE. The higher correlation between RE and CSE among males may indicate the need to explore that relationship further. Why is it that males had a link between CSE and RE, but not females? This question merits further interrogation.

The relationship between CSE and RE among repeating students may be indicative of defensiveness that culminates in CSE and RE being bolstered in reaction to failure. A longitudinal study could be conducted to gauge any potential changes in CSE over time.
The sample could start as a single sample, and would then be divided according to success or failure in OBET. Any differences between the two groups over time could be compared. This would yield data about the impact of failure on CSE and RE over time. In addition, a longitudinal study could test whether CSE has predictive value in terms of success in OBET. Throughput is important in South African ETD, and any research into positive influence on such throughput is important.

Research into learning in relation to CSE for different occupations could yield valuable data. There are possibly varied links between CSE and learning, depending on the type of occupation tested. It is possible that CSE plays a stronger role when jobs are considered stressful or challenging, or even technically challenging or requiring dexterity in psycho-motor tasks.

OBET may have problems in terms of the amount of priming that learners receive prior to the assessment. It is questionable whether OBET equips learners with transferable knowledge, skills and attitudes, or whether it simply sensitises learners to the assessment and coaches learners to produce the behaviour required purely for assessment purposes.

The stating of outcomes, formative assessment and specification of assessment arrangements in advance create a different set of demands from those seen when behaviour is required either in the real world or in the workplace. Full validation of OBET could be conducted, with not only pre-tests and post-tests but also the full four-group design. Simply conducting a pre-test and post-test, even with a control group, does not control for the pre-test sensitization which may occur through the specification of outcomes, the description of assessment arrangements and formative assessment.

The small correlations between CSE, learning, and OBA do provide scope for the testing of a model that shows how CSE interacts with both learning and achievement in OBA. A stronger link may be found with different, larger samples. There consequently is more scope for exploration and research in South Africa.
There may be a need to refine the concept CSE for the purposes of Educational Self-Evaluation. There may be significant differences between one's global CSE and specific CSE that describes how one feels about one's ability when it comes to learning.

*Compensatory CSE* could refer to the propensity for individuals who have experienced threats to their self-worth to artificially boost their CSE. Compensatory CSE may lead to a mismatch between ability and self-estimation. This may result in overconfidence, further failure and then further rationalization and justification to protect CSE.

CSE may, in the case of Compensatory CSE, mean that trainees do not put enough effort into learning opportunities because of their inaccurate self-perceptions. This may be a phenomenon that results in a correlation emerging between CSE and RE only for those suffering from Compensatory CSE. There is scope for experimental and survey research into the phenomenon of Compensatory CSE.

### 7.12 Practical implications

For selection purposes, for both OBET opportunities and employment, a selection interview is simply not enough. Candidates with high CSE may be able to 'sell' themselves in the selection interview, without this resulting in predicting performance. They may project high levels of self-efficacy, locus of control, and self-esteem and emotional stability. This would give the impression that the candidate is capable and is likely to be able to learn, but the projected CSE may not be supported by actual capacity to learn and perform. Selecting those with high levels of CSE and RE may not be enough to predict performance in ETD and on the job.

Assessment should ensure that feedback is as accurate as possible, so that people can reconcile their CSE with their actual ability in OBET. In addition, OBET should ensure that individual race and ethnicity is respected in the mode of OBET adopted.

In terms of ETD, there is a need to validate OBET using the most rigorous
possible methods. The technique may be beset with problems surrounding pre-test sensitization and priming. In terms of the learning design itself, Critical Cross-field Outcomes should also seek to ensure that learners reflect on their own ability and CSE in a realistic manner, as well as promoting a positive RE. This could guard against learners either overestimating or underestimating their ability and self-worth.

Facilitators should also seek to create an environment that fosters positive CSE and RE. Learners should be given opportunities to boost their CSE in a meaningful manner. Facilitators must also be cognisant of those who have unrealistically high levels of CSE and seek to reconcile these with actual ability, in a supportive and constructive manner.

7.13 Conclusion

In this chapter, the thesis was concluded. Theory was proposed to account for the findings, with Compensatory CSE emerging as a potential reason for a disparity between CSE and achievement in OBA.

Compensatory CSE may be a defensive response to failure or subjugation, where individuals develop artificial self-perception that does not inform or align with performance, and negates the possibility of using that variable as a predictor of performance. The limitations of the study have been discussed in this chapter, as have the managerial implications of the findings. Scope for future research was suggested.

A significant relationship was found between RE and CSE amongst adult Zulus at the University of Zululand. This means that part of a person’s identity as an individual may be related to his or her RE within the sample.

There was a small but definite correlation between learning and CSE and between learning and OBA. Learning gains scores were moderated for pre-test sensitization, which was found in the validation process. There is a possibility that CSE could mobilise learning to facilitate achievement in OBA.
CSE had a disparate impact on OBA, depending on its level. It was found that, among those with low CSE, the lower their CSE levels were, the higher their levels of achievement, suggesting higher levels of neuroticism, which sometimes results in greater effort towards achievement (almost a motivational force to alleviate anxiety).

In the group with average levels of CSE, there was a positive relationship with learning. One possible reason could be that those with average CSE had accurate self-perceptions about their ability and efficacy. The group with the highest levels of CSE contained those with both low levels of achievement and those with high levels of achievement in OBA. There was no correlation between the variables in the highest category of CSE.

The samples drawn had positive RE. This could be because of the psychological impact of nearly 20 years of democratic governance in South Africa and high levels of current multiculturalism and national pride.

There was no relationship between RE and learning. Nor was there a relationship between RE and achievement in OBA. This may be because the levels of RE were high and unwavering, and as such did not show enough range for any meaningful data analysis to occur.

CSE levels were comparable with levels found in other countries suggesting that the young, Black Zulus surveyed have relatively normal levels of CSE in comparison with other countries.

There was limited evidence of any lasting psychological harm done to younger generations of Zulu South Africans caused by racism. If social and economic measures are taken to empower Black South Africans then apartheid’s alleged impact can be undone in a reasonable amount of time, followed by the revisiting of Employment Equity and other social justice legislation.
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### APPENDIX A: RACIAL EVALUATION SCALE

| Occupation | \_ | \_ | \_ | \_ |
| Race: | Black | Indian | White | Coloured |
| Gender: | Male | Female |
| Home language: | Zulu | English | Other (specify) |
| Age: | 18-28 | 29-49 | 50-71 |
| Highest Level of Education: | \_ | \_ | \_ |

Please indicate to what extent you agree with the following statements, 1=Strongly disagree (SD), 2=Disagree (D), 3=Neutral (N), 4=Agree (A), 5=Strongly agree (SA)

<table>
<thead>
<tr>
<th>Statement</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I get the success I deserve in life</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. There are times when I feel depressed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. When I try, I generally succeed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. When I fail I feel worthless.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I complete tasks successfully</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I do not always feel in control of my work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Overall, I am satisfied with myself</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. I am filled with doubts about my competence</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. I determine what will happen in my life</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. I do not feel in control of my success in my career</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. I am capable of coping with most of my problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. There are times when things look terrible and hopeless to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. I feel accepted by other people of my race</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. My race should try to think and act like other South Africans do</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. I feel good about being a member of my race group</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. I am proud of my race group</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17. My race group is playing a significant role in building a better South Africa</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX B: OBA TEST (BASIC KNOWLEDGE) (20 MARKS)

3 Arrange the steps in the Training process into the correct order. Fill them in underneath (8)
   Assess Training
   Design Materials
   Design Assessment Materials
   Compile the Workplace Skills Plan
   Conduct Training
   Skills Audit
   Write Annual Training Report
   Moderate results
   3.1
   3.2
   3.3
   3.4
   3.5
   3.6
   3.7
   3.8

4 Indicate which of the following are skills/knowledge/attitudes in the brackets provided (5).
   4.1 Communication [
   4.2 Theory [
   4.3 Calculation [
   4.4 Valuing [
   4.5 Time Management [

5 Indicate who is responsible for the following tasks in an organisation (5)
   5.1 Assessment of Learning .......................................................
   5.2 Moderation of assessment ..................................................
   5.3 Facilitation of Training........................................................
   5.4 Compiling the Workplace Skills Plan...................................
   5.5 Compiling the Annual Training Report.................................

6 On which date was the Skills Development Act enacted? (1)

7 What percentage of payroll must be paid to the South African Revenue Service for skills development purposes. (1)
1. Which of these is the most common method of reference checking?

   a. Writing a letter
   b. Phoning the referee
   c. Emailing the referee
   d. Visiting the referee
   e. Asking for a letter of recommendation

2. You are interviewing potential secretaries. You want to include a question about whether a potential female staff member wants to have children. HR says no. This is because.

   a. She may not want to talk about her dreams because she is shy
   b. She may think you're calling her fat
   c. As a female, she is a member of a designated group and the question could disqualify her
   d. You may not discriminate against people based on whether they have or want to have children
   e. c & d

3. Which of the following is negative reinforcement

   a. The feeling of hunger, until you eat
   b. Someone shouting at you to get you to run faster
   c. A high pitched siren telling you to switch off a machine
   d. Having to work late, because you arrived at work late
   e. a, b & c

4. One of these lists is not a good set of references
a. Pastor/Priest, School Teacher and Best friend
b. Aunt, Best Friend, Headmaster
c. Ex-boss, Colleague, Parent
d. Ex-boss, Headmaster, Sports Coach
e. a, b & c all have something wrong with them
f. a, b, c & d all have something wrong with them

5. BFOQ stands for

a. Benevolent Foundation Organisational Quest
b. Broad Funding of Quotes
c. Black Finance Organisation of Quebec
d. Bona Fide Occupational Qualification
e. Bona Fide Organisational Qualification

6. The three key elements of motivation are

a. Wanting something, working for it and getting it
b. Knowing who you are, knowing what you want and why you want it
c. Motivation, Intensity and direction
d. Intensity, persistence and direction
e. a, b & d

7. Which information absolutely must be included in the main body of your CV

a. If you haven't got your driver's license
b. If you smoke cigarettes
c. All the modules you did at university
d. Your date of birth
e. None of the above
8. One of the following is not a punishment

a. Getting shouted at until you tidied your room
b. Having to walk to university until you have improved your marks
c. Tidying your room because you don't like looking at the mess
d. Being shouted at after failing a test
e. a, b & c are all not punishments
f. all are punishments

9. You have a shortlist of candidates for the position of CEO, which method of reference checking would you use to check a reference in the same company, in the same building as you?

a. Writing a letter
b. Phoning the referee or emailing or writing a letter
c. Emailing the referee or phoning or visiting the referee
d. Visiting the referee
e. Asking for a letter of recommendation

10. The process of finding out why people want to leave a company is known as

a. Retention
b. Exit interviews
c. Internal Staffing
d. Career Management
e. Retention interviews

11. Proficiency tests

a. measure latent ability to learn and perform a job
b. measure dexterity, strength and coordination
c. measure job knowledge
d. measure how well a candidate can perform a sample of the work
e. compare applicant’s interests against those of people who are successful at the job

12. A resignation is when

a. You retrench someone but they don't want to leave
b. Someone does not turn up for work
c. Someone gives a few day's notice and then leaves
d. Someone provides you with notice and then leaves
e. Someone is too old to work and is asked to leave

13. Selection includes

a. advertising a post and then shortlisting candidates
b. deciding what Training a candidate will need
c. choosing a candidate for a job
d. a & b
e. a, b & c

14. You are interviewing candidates for the position of hostage negotiator. Which interview technique do you use?

f. Unstructured group interview
g. Behavioural interview
h. Stress interview
i. Structured panel interview
j. All except a
k. All of the above
15. Correct induction results in

l. Increased productivity and lower labour turnover
m. Increased productivity, increased absenteeism and increased wastage
n. Decreased commitment to values and goals and increased customer service
o. More labour turnover and better relationships between managers and subordinates
p. Improved customer service and reduced job satisfaction

16. An application blank

5.12 Is when the selector uses a form to capture biographical and other information about a potential incumbent
5.13 Is when the selector uses a form to capture data for the purposes of formulating interview questions
5.14 Is when the selector uses a form to capture data for the purposes of weeding out undesirable candidates
5.15 a & b
5.16 a, b & c

17. During induction, who explains grievance procedures to the employee

a. The manager
b. The buddy
c. The shop-steward
d. The HR Department
e. The Head of Department

18. Which of the following achievements would not be considered important on a CV

a. Attendance prize at school
b. Merit award for music
c. Head Pupil (Head girl/Head boy)
d. Prefect/SRC Member
19. You have recently merged with another company, for the next six months, who should go on induction?

3.10 New employees
3.11 Recently transferred employees
3.12 Recently promoted employees
3.13 Existing employees
3.14 All employees

20. Which of the following would not be considered a reason for using HR to run the selection process?

   a. HR has knowledge of the law
   b. Involving HR ensures the process is objective
   c. Don’t work with staff directly so no backlash if they don’t hire
   d. Line managers are involved in interviews because they know the work
   e. HR has interviewing skills and experience

21. In which order does Maslow's hierarchy go?

   6.9 Security, Social, Self-Actualisation, Physical, self-esteem
   6.10 Physical, Security, Social, self-esteem, Self-Actualisation
   6.11 Self-Actualisation, self-esteem, Social, Security, Physical
   6.12 Physical, Social, Security, self-esteem, Self-Actualisation
   6.13 Social, Physical, Security, self-esteem, Self-Actualisation

22. Which of the following individuals is considered 'suitably qualified'?

   1.9 Someone who has the qualifications
1.10 Someone who has the necessary experience
1.11 Someone who can be trained to do the job
1.12 Someone who has prior Learning
1.13 All of the above are suitably qualified

23. To which need/s does Alderfer's Relatedness need correspond on Maslow's hierarchy?

a. Self-Actualisation
b. self-esteem
c. Social
d. Social and self-esteem
e. Security and Social

24. Human Resource Management refers to

a. activities designed to provide for & co-ordinate the human resources of an organisation.
b. the linking of human resources with strategic goals and objectives in order to improve business performance and develop organizational culture that foster innovation and flexibility.
c. accepting the HR function as a strategic partner in the formulation of the company's strategies as well as in the implementation of those strategies
d. to specific HR courses of action the company plans to pursue to achieve it's aims.
e. All of the above

25. Which of the following is not a condition for human resource managers to affect the success of the organisation

a. the HR director must report directly to the General Manager
b. There must be major emphasis on recruitment, selection and training
c. Team-building and participative decision making must be discouraged
d. Clear communication of objectives must be achieved
e. Hr planning must be incorporated into strategic planning.