

# **CHAPTER ONE**

## **INTRODUCTION AND RATIONALE**

Many studies have confirmed the majority of students who drop-out from or fail higher education courses do so in their first year and as a result, the first year has been referred to, without overstatement, as a ‘make or break’ year (Benn, 1995). According to deputy academic vice-chancellor at University of the Witwatersrand, Professor Yunus Ballim, and the main reason for students dropping out of university is due to poor academic performance. This usually occurs within the first year of study, and the drop-out rates is similar across all faculties (Naidoo, 2008). Consequently, poor academic performance of first year university students seems to be a point of concern for stakeholders in higher education. Some factors cited to explain why students perform the way they do include the effects of the apartheid era, resources, the qualifications of teachers, the socio-economic conditions of the students and language barriers (Sennet, 2003). While the cited factors are valid and pertinent in explaining academic performance, it must be noted, it only addresses issues external to the individual.

This study purports that by looking at student’s identity processing styles – a result of a combination of environmental context and intrapersonal factors - will give a clearer, more accurate understanding of academic performance of first year university students. Such a perspective is better known as sociocognitive. According to Bandura (1989), a socio cognitivist,

“If human behaviour was regulated solely by external outcomes, people would behave like weathervanes, constantly shifting direction to conform to whatever momentary social influence happened to impinge on them. In actuality, people possess self-reflective and self-reactive capabilities that enable them to exercise some control over their thoughts, feelings, motivation, and actions. Human functioning is therefore regulated by an inter play of self-generated and external sources of influence” (p. 249).

It is upon this notion that students attending university in the first year is viewed. This research holds the view that one way to explore academic performance of students is to

examine preparedness for university by assessing the level of their identity processing style and how it relates to academic performance.

## **1.1 Rationale**

Despite the wealth of research already conducted to explain academic performance of first year university students in South Africa, little is known about the relationship between students' identity processing styles (i.e. the processes or strategies adolescents reportedly use to deal with identity conflicts) and resultant academic performance. According to Berzonsky (1989) one of the most important factors found to be associated with academic performance is level of identity development. Berzonsky (1989, 1993) has shown that identity development may affect students' academic performance by influencing not only the nature of their cognitive reasoning skills, but also the manner in which students cope with the stresses of university life. A body of literature cited in the special issue of *Journal of the First-Year Experience & Students in Transition* (Lipsky, 1990) points to a need to investigate reasons why most first year university students fail. Studies indicate that there is a 35 percentage failure rate in South African universities (HESA, 2009) and a 50 percentage failure rate in overseas (Høj, 2007). Although there may be several reasons responsible for high failure rates of first year students, the current study intends to establish if the identity processing style is associated with academic performance. The focus on identity processing style in relation to academic performance is crucial, especially given that studies conducted in this area have largely emphasised on identity as an outcome and not a process (Albert, 1998). Furthermore no study has explored the association of identity processing style in relation to academic performance in South Africa.

## **1.2 Overview of the Study**

This study consists of five chapters. The first chapter provides a comprehensive introduction into the relationship between the two constructs, that of identity processing styles and academic performance. Also emphasised in this chapter is the concern over high failure and drop-out rates of first year university students. Prominence is placed on combining environmental and intrapersonal factors to provide a clearer understanding of academic performance of first year university students in the South African context.

The second chapter of the study reviews literature on theories of identity with specific reference to Berzonsky's intrapersonal identity processing styles as a model for understanding identity processes, and its associations with academic performance. Expectations of first year university students and the fact that they enter university as late adolescents are juxtaposed to provide a framework for a psychological understanding of academic performance. Recognition is given to culture and race as variables in determining academic performance.

Chapter three delineates the aims of the study, research design, sampling, instruments used and how the data was analysed. Berzonsky's Identity Style Inventory (ISI3) was used to measure how students processed identity relevant information. Students' mid-year examination results were employed as measure of academic performance and a biographical questionnaire was utilised for demographic information.

The fourth chapter focuses on results. It gives an overview of data analysis and the presentation of the results. Chapter five, the last chapter, offers a discussion of the results, followed by practical implications and limitations of the study. This chapter also includes recommendations for future research which emerged from the study and concludes with a summary of the findings.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

As briefly mentioned, this chapter reviews literature on first year university students, the period of adolescence and identity development. Regarding identity development special focus is placed on Berzonsky's (1989) three identity processing styles, while the central point is on its relationship to academic performance.

#### **2.1 First Year University Students**

With the increasing diversity of students attending university, there is a growing interest in the factors determining academic performance. It is assumed that first year university students have the intellectual and social competence skills that are required to succeed in higher education. They are expected to be academically and developmentally prepared to handle the responsibilities associated with autonomy to enhance academic success. Although some students experience this transition as a challenge to personal growth, others are overwhelmed by the changes (Cutrona, 1982). Students bring along with them to university, background characteristics (e.g. culture and socio-economic status) and issues relating to undergraduate growth (e.g. achieving a sense of competence, managing emotions, developing autonomy, establishing one's own identity, interacting with others with increasing tolerance, developing a sense of purpose, and clarifying a personal and consistent set of beliefs (Tinto, 1993; Chickering, 1969). Wintre and Yaffe (2000) state that first year university students must incorporate academic and social domains (e.g. parental socialisation) with what is brought to university.

It is interesting to note that for first year university students, issues of autonomy are significant. Keegan (1982, p. 186) iterates if students are unprepared to conduct their lives independently, it can contribute to a "vacuum of expectation". Levels of autonomy have been used to determine the way students adjust to university life and it has been linked to predicting academic performance (Wintre & Yaffe, 2000). According to Berzonsky (1989) one of the most important factors found to be associated with academic performance is level of identity development or the definition of one's self in terms of roles, attitudes, beliefs, and aspirations (Erikson, 1982). This being the case, levels of identity development can determine

academic performance. However, Berzonsky (1993) has shown that the way first year university students cope with university problems, personal problems, make decisions, process self-relevant information, and construct a sense of identity is determined by sociocognitive strategies (ego processes). Therefore social cognitive styles of processing identity forming information would better determine academic performance. For that reason it is more accurate to say that a combination of both intra and interpersonal factors contribute to academic performance of university students.

## **2.2 Adolescence Period**

Adolescence is regarded as one of the most challenging and complex phases of life, uniformly so in terms of experiencing, describing, and studying it. This developmental phase is characterised by gradual biological, physical, cognitive and psychosocial changes that affect the transition from childhood to adulthood (Frydenberg, 1997). Whether internationally or locally, all adolescents confront the same developmental tasks and successfully achieving these developmental tasks, while coping with the changes associated with the various domains of development, can be both difficult and stressful for the adolescent (Gouws, Kruger & Berger, 2000). Hence adolescence is recognised as a difficult developmental stage (psychologically, intellectually, socially, spiritually and emotionally) and is understood to cause difficulties and stress, as well as excitement and growth. Consequently, adolescence can be described as a period of heightened vulnerability (Gouws et al., 2000).

After completing school and then moving on to tertiary education, first year university students are at the late adolescent stage of development. Late adolescence ranges from the age of 17 to 19. It is when adolescents start to realize they are becoming adults so more emotional stability is expected and more emphasis is placed on determining the future. At the time students enter university they are in the process of developing an identity (Erikson, 1980). The adolescent must make a conscious search for identity. An identity crisis is a time of intensive analysis and exploration of different ways of looking at oneself or achieving a coherent identity and avoiding identity confusion. If the adolescent cannot make deliberate decisions and choices, especially about vocation, sexual orientation, and life in general, role confusion becomes a threat (Erikson, 1968). Therefore the primary psychosocial task and goal of adolescence is to form an identity. In essence, adolescence can be viewed as a stage of disruption irrespective of whether this stage is piloted efficiently or not.

## 2.3 What is identity?

Fearon (1999) informs that current meanings of “identity”, is a complicated and unclear concept, however, our present sense of “identity” has evolved in the last forty years, deriving most of all from Erikson's psychosocial model of development. The definition of identity is “psycho” as it is characteristic of a *developmental period*, before which it cannot come to a head, because the somatic, cognitive, and social preconditions are only then given. The "socio" part of identity, then, is accounted for in that communality within which an individual finds himself/herself (Erikson, 1968). Accordingly, the Eriksonian formula for developing an identity delineates the interaction between the individual biology, psychology, and social acknowledgment and response within a historical context. Although equal emphasis is given to the elements, there is more significance placed on importance of historical context for the definition (Erikson, 1959). Thus according to Erikson, identity must be perceived by the individual, but must also be recognised and confirmed by others. Additionally the process of establishing an identity would involve assimilating into a coherent whole one's past experiences, ongoing personal changes, and society's demands and expectations for one's future.

Erikson (1968) viewed identity as built upon childhood identifications but as being more than the sum of these. The process of identity formation is described as being built upon the childhood processes of introjection and identification--that during childhood individuals incorporate their parent's image (or other significant relations) and their roles, values, and beliefs. Thus future identity formation depends on such introjects and identifications. However, it is not until the individual is able to choose some of those childhood identifications, and discard others, based on her or his interests and values, that identity formation can begin. In other words, Erikson stresses that all the necessary ingredients for an identity are not present until adolescence and it is at that point in life, great physiological and cognitive changes coincide with growing social expectations.

Grotevant (1987) discusses a variety of individual and contextual factors in adolescents that affect identity formation. He elaborates that the extent and success of identity formation depends on a) personality factors such as flexibility, self-esteem, tendency to monitor one's behaviour, and openness to one's experience; b) cognitive competence to consider possibilities, draw appropriate inferences and coordinate multiple perspectives; c)

characteristics of one's social context such as cultural support for making personal choices, peer reactions, family communication patterns educational and career opportunities, and exposure to multiple options and viewpoints; and d) the individual's general orientation, at a point in his or her life, to engage in or avoid identity exploration and commitment. Hence, in keeping with Erikson (1980) identity formation is seen as multidimensional (including physical and sexual identity, occupational goals, religious beliefs and ethnic background).

Therefore, while identity development is a complex task for all adolescents; it is particularly complicated for adolescents belonging to ethnic groups. For culturally different adolescents the complications of identity formation may arise as a product of skin colour, language differences, behavioural patterns, cultural values and norms, social stereotypes, parents' misconceptions, and fears (Spencer & Markstrom-Adams, 1990). Identity cannot be separated from the culture(s) which build and structure it. In culturally different adolescents, the possibility of obtaining a positive identity outcome may be affected by prejudice, discrimination, immigration or replacement (loss of significant others, loss of country, uncertainty, instability), socio-economic reality, institutional barriers, acculturation (children and parents), personal impotence, societal inconsistency and conflicts, and developmental factors (Phinney & Alipura, 1990). Berzonsky (1990, 1993) highlights that identity development is considered to involve an ongoing dialectical interchange between assimilative processes governed by the identity structure (explained below) and accommodative processes directed by the social and physical contexts within which adolescents live and develop.

According to Erikson's (1980) stage model of identity development, the fifth stage is when the adolescent must form a stable identity and achieve a sense of self. The adolescent is learning how very complex the world is and begins to develop goals, opinions, attitudes, and many new traits. While social issues such as "fitting in with the group" are important at this point, Erikson (1959) emphasises the importance of achieving an individual identity based on self-knowledge and continuity of experience and making a commitment with respect to an identity. Adolescents explore the multidimensional aspects of forming an identity and usually make commitments to aspects of their identity as they move into early adulthood (Erikson, 1959, 1968, 1980).

Marcia (1967) drawing on Erikson's theory (1980) of psychosocial development and the findings of his own research, including detailed interviews with adolescents – ranging from early adolescence to old age, with most samples consisting of individuals between the ages of 12 and 30 - presented another perspective of adolescent identity, one that would facilitate empirical research. Marcia (cited in Berzonsky & Adams, 1999) was the first theorist to derive an empirically measurable construct from Erikson's conceptual and clinical writings and to build a tradition of scientific research on identity. Accordingly, Marcia (1980) argued that identity could be viewed as a structure of beliefs, abilities and past experiences regarding the self.

"The better developed this structure is, the more individuals appear to be of their own...strengths and weaknesses.... The less developed this structure is, the more confused individuals seem to be about their own distinctiveness from others and the more they have to rely on external sources to evaluate themselves" (Marcia, 1980, p. 159).

Identity therefore is a dynamic, not static psychological structure. The formation of identity in adolescence sets the stage for continual changes in the content of identity through the adult years.

Development as such is a lifelong process (Baltes & Reese, 1984) but the implications of variations in identity development are particularly salient in adolescence (Samet & Kelly, 1987). Marcia (1966) proposes that the balance between identity and confusion lies in making a commitment to an identity and the degree of active self-exploration. In interviews conducted with young people, Marcia (1980) asked whether the participants (1) had established a commitment to an occupation and ideology and (2) had experienced, or were presently experiencing, a decision making period (adolescent identity crisis). It was found that the participants had different ways of arriving at an identity, and displayed diverse outcomes of identity formation (Marcia, 1993a, 1994). Marcia (1980) interprets identity as an ego-driven — an internal, self-constructed and dynamic organization of aspirations, skills, beliefs, and individual history inclusive of culture and race. The central premise of this theory is that young people are faced with various choices and alternatives in life, before they finally make a commitment to a particular life course. This commitment once made, will include the individual's sense of who they are and where they are going. In other words they would have



achieved a sense of identity. Addressing Erikson's notion of identity crisis, Marcia (1994) posited that the adolescent stage consists neither of identity resolution nor identity confusion, but rather the degree to which one has explored and committed to an identity in a variety of life domains from vocation, religion, relational choices and gender roles. The differences found could be explained with reference to two important processes involved in the formation of an identity, namely exploration/crisis and commitment. Exploration refers to the adolescent's period of engagement in choosing among meaningful alternatives (i.e. a time when one's values and choices are being re-evaluated); commitment refers to the degree of personal investment the individual exhibits (Marcia, 1994). The end outcome of a crisis leads to a commitment made to a certain role or value. In other words an identity status is an outcome, based on levels of commitment and self exploration or crisis (Marcia, 1980).

Marcia (1988) provides an operational definition of four identity statuses, namely: identity achievement, occurring when an individual has gone through an exploration of different identities and made a commitment to a given ideology or interpersonal style; moratorium, the status of a person who is actively involved in exploring different identities, but has not made a commitment. This individual is searching for an adult identity and is delaying the attainment of it; foreclosure status, when a person has made a commitment without attempting identity exploration i.e. the person is committed to a particular identity usually based on parents expectations but who have not explored alternatives i.e. the individual has not realised the necessity of developing an adult identity; and identity diffusion, occurring when there is neither an identity crisis or commitment. On experimental measures, identity-diffused individuals have the most difficulty thinking when under stress and use less complex cognitive styles than do moratoriums and achievements (Marcia, 1993b).

Research on identity status has repeatedly shown that persons who have undergone the exploration-commitment process are more relationally competent and mature than those who have not (Marcia, 1993b). The identity statuses are generally regarded as representing different levels of sophistication. Diffusion is considered the least advanced of the statuses, followed by foreclosure, moratorium, and identity achievement (Adams, Bennion & Huh, 1989). Furthermore, the developmental assumptions are that the amount of identity achieved by individuals' increases with age, and that relatively few late adolescents should be diffused (Adams et al., 1989). It can be argued that since many students are still seeking an identity, admission to university is at different identity statuses. As a result unlike Erikson's (1967,

1980) theory, the four statuses are not seen as stages and therefore do not have to be negotiated in sequence or viewed as sub stages in a linear process (Marcia, 1993a, 1993b). Therefore in order to attain identity achievement and so cope with adulthood, it is not necessary for the individual to successfully complete identity moratorium (Marcia, 1967; 1980).

Waterman (1999) asserts that while all operational definitions of identity represent only a portion of Erikson's conceptualisation of identity, the operational definition of identity in terms of exploration and commitment represents the construct; and using commonly accepted definitions of construct validity, the identity statuses have been amply validated as elements of the broader identity construct. However, the result of Van Hoof's (1999) scrutiny of Marcia's operational definition of identity is that the statuses are insufficiently validated and are unsuitable for measuring identity development. Also, the identity status paradigm has contradictory views regarding development: along with the claim that there is no developmental continuum underlying the statuses, ideas are presented on developmental (continuum-like) hypotheses. As a consequence, fundamental revision of the identity status approach was called for as well as a qualitative change in identity theory and research (Van Hoof, 1999). Such research and qualitative change in identity theory was undertaken by Berzonsky (1990) who showed Marcia's identity statuses are the outcome of identity processing styles that are intrapersonal, sociocognitive strategies.

## **2.4 Identity Processing Style**

Identity processing style refers to reported preferences in the social-cognitive strategies used to engage or to avoid the tasks of constructing and maintaining a sense of identity (Berzonsky, 1990). Based on the work of James, Erikson and Marcia, Berzonsky (1989) proposed a process model of human development - a model to highlight the internal dynamics of constructing an identity. The identity style model using the Identity Style Inventory (ISI3) is employed to describe the processes involved to solve problems and make decisions that affect identity, thus referring to how identity is revised and maintained (Berzonsky, 1992). The four identity statuses used by Marcia were conceptualized in terms of styles of personal problem solving and decision making (Berzonsky, 1989) even though considerable status regression and fluctuation in the identity status model was observed and was seen to no longer be useful to postulate an invariant sequence of identity status stages (Van Hoof, 1999).

It was concluded to be a useful strategy, at least with university students. Also, its efficacy is to focus on the social-cognitive processes that underpin identity statuses and to conceptualise the identity orientations as different styles of dealing with the demands, challenges, and opportunities afforded by institutionalised moratoria, such as a university context (Berzonsky & Adams, 1999). According to Berzonsky and Kuk (2000) student identity processing styles can determine academic performance at university. Whereas identity status is generally assumed to operate in all situations, identity processing style as particularly relevant to problem-solving contexts (Berzonsky, 1992b). Identity processing style refers to the relatively stable differences in how students make decisions, solve personal problems, and process identity-relevant information (Berzonsky 1995).

Berzonsky (1997) presents identity as a constructed theory of self rather than a discovery model. It means individuals construct a theory about themselves that is an integration of assumptions, constructs and hypotheses about how they will adapt and cope with the world (Berzonsky, 1993). The influence of daily experiences on identity development is significant as it influences the way identity-relevant information is mediated and therefore contribute to identity development. Consequently variations in processing of identity-relevant information produce variations in identity stability (Berzonsky & Adams, 1999).

By extending the conception of identity as a theory of self Berzonsky (1993) suggests that the individual be viewed as a self-theorist, engaging in a process of theorising about the self. In other words, a self theory is a conceptual structure made up of assumptions, postulates and constructs relevant to the self interacting in the world (Epstein, 1980). An effective self theory means that a person can cope with information and situations in the course of everyday life in an adaptive manner (Berzonsky, 1993). As such, as a process, identity directs and governs the resources adolescents use to cope and adapt in everyday life (Berzonsky, 1990). If the adolescent receives conflicting information he or she will revise the self theory accordingly.

Berzonsky (1989) identified three identity processing orientations or styles that are defined by exploration/crisis and commitment: diffuse-avoidant, normative, and informational. Berzonsky (2000) points out that the three identity processing styles reflect different social, cognitive, and behavioural approaches for incorporating experiences and information that an individual encounters in daily living. The forming of identity processing style requires the

investigation of presence or absence of identity crisis (doubts about values and goals implemented to the child by his parents) and presence, or absence, of commitments (stability in the selection of values, individual life standards), leading to the achievement of four identity statuses in adolescence (Šramová, Bianchi, Lášticová, Fichnová & Hamranová, 2008). Berzonsky (1992a, 1992b, 2000) report that individuals with diffuse-avoidant orientation possess low levels of self-exploration and commitment; when faced with challenging situations, these individuals are reluctant to confront personal problems and often procrastinate in making decisions. Finally decisions are only made when circumstances promise rewards or other consequences are close at hand. For this reason it is expected that diffuse-avoidant style students will struggle at university academically.

Adolescents who have a normative orientation possess high levels of commitment and low levels of self-exploration; those with this orientation tend to be closed-minded and focus primarily on the standards and expectations of significant others such as parents. They are primarily concerned with conserving their current identity status and may distort or disallow information that is contrary to internalized messages. The result is an adolescent with limited differentiation from others and a rigidity of response. Berzonsky (2005) specifically states normative style students' educational objectives are directed by others but they are firmly committed, and possess a well defined sense of educational purpose (Berzonsky, 2003). In other words, normative style students might make it to university due to pressure from parents and significant others. As such in this study it is expected that they will perform significantly greater than the diffused-avoidant students on academic performance.

Lastly, adolescents with an informational orientation possess a high level of self-exploration and either high or low levels of commitment; these adolescents are introspective and actively seek out, process, and utilise self-relevant information. Evidence proposes that by late adolescence, the time of beginning university, most students have developed the cognitive ability to employ the processing strategies associated with all three styles (Berzonsky & Ferrari, 2009; Berzonsky & Kuk, 2005). In addition, individual differences in reported styles during late adolescence are proposed to indicate relative stable individual preferences rather than developmental differences in social-cognitive competence (Berzonsky, 1990). Subsequently in this study it is expected that informational and normative students would perform significantly better than those who are diffuse-avoidant.

According to Berzonsky (1992a) people can process information, work towards solving problems, and overcome obstacles. As indicated by Berzonsky (1992a) students live and adapt within their environments and societies and encounter different experiences and problems; however, the best way to adapt would be to function as if one were a scientist who is interested in theories and inferences about themselves. Epstein (1973) offers that a self-concept or identity structure recognized as a self-theory, is about a person unconsciously constructs their identity. Berzonsky (1992a) indicates that, successful adaptation involves a dialectical interchange between assimilative and accommodative processes. Therefore efforts to resolve problems and obstacles as they rise provide a basis for assimilating and constructing experiences. In order for a person to cope effectively and resourcefully, Hansen (1982) indicates that people must continually monitor and evaluate their lives for important feedback. In cases where assimilative efforts have failed, individuals may enter a state of dissonance and may need to revamp any and all strategies to accommodate (Berzonsky, 1992a). In the long run, the best approach to adapting would result from a more reasonable or realistic use of assimilative and accommodative approaches (Berzonsky, 1992b).

Using a constructivist view – the assumption that people actively play a role in constructing both who they think they are and the reality within which they live - of theorising, Berzonsky (1993) points out that theorising is not just a matter of assembling together and summarising data and testing predictions. Instead, theorising involved an active process of interpreting one's experiences and generating new ones and three types of self theorists are distinguished, marked by different styles of theorising. The three types of self theorists are: scientific self-theorists, dogmatic self-theorists, and ad hoc self-theorists. Scientific self-theorists,

“tend to be self-reflective, sceptical about self constructions, and open to self-relevant information. ... Such information orientated deal with personal decisions and identity concerns by deliberately seeking out, processing and evaluating self-relevant information.” (Berzonsky, 1993, p.173).

According to Berzonsky's model (2000) information-oriented individuals are similar to Marcia's (1980) achievement and moratorium statuses, as individuals seek and are open to personally relevant ideas and feedback, have good problem-solving skills, and test and revise aspects of their identity. It was found that students who entered university with an informational identity style were best prepared to function successfully in a university setting

as they possessed high levels of academic autonomy, had a clear sense of educational purpose, were socially skilled, and tended to perform well academically (Berzonsky & Kuk, 2003).

Dogmatic self-theorists in contrast, conform to the values and expectations of significant others [including parents] (Berzonsky, 1993). This includes,

“self serving efforts ... to defend against potential threats to their self constructions. Individuals who utilise this protectionist approach to self theorising have been found to endorse authoritarian views to endorse rigid self-construct systems, and to be closed to novel information relevant to hard core values and beliefs” (Berzonsky, 1993, p174).

Dogmatic self-theorists are normative-style individuals, similar to Marcia's (1980) foreclosed status and are low on exploration ditto. Rather, they adopt without exploration the values, ideas, and ideologies of significant others, and hence tend to be closed to information that may threaten adopted values and belief systems. They were found to have a clear sense of academic direction but were significantly less tolerant, and less academically autonomous than their informational counterparts (Berzonsky & Kuk, 2005).

Finally ad hoc self-theorists are diffuse-style individuals who

“continually engage ephemeral accommodative changes in response the vagaries of immediate contextual demand” ( Berzonsky, 1989, p.174).

Further, Berzonsky (1992b) found that students with diffuse-avoidant identity processing styles employed avoidant-oriented coping strategies, such as wishful thinking, distancing, and tension reducing behaviours. Such students also relied on strategies that enabled them to avoid self-relevant conflicts and problems (Berzonsky & Ferrari, 2009). It was also found diffuse-avoidant style students do not perceive themselves as prepared for university in terms of both academic skills and career clarity and felt family support was lacking (Boyd, Hunt, Kandell & Lucas, 2003). The behaviours of diffuse-avoidant-oriented individuals, as the term suggests and similar to Marcia's diffused status, are positively correlated with emotion-

focused, avoidant coping behaviours (Berzonsky, 1992b) and negatively correlated with introspection (Berzonsky & Sullivan, 1992).

According to Berzonsky (1989) individuals from different societies may have distinct ways of thinking about themselves and unique ways of appraising important information about their lives. As indicated by Berzonsky (1992a) people operate on at least three planes informative, normative, and diffuse-avoidant. These three processing styles (orientations) are what Berzonsky (1992a) believes to be reasons people differ in their social reasoning, which is used to create and maintain who they are (individual identities). According to Berzonsky (1992b) a person, as an integrated whole, is actually different from his individual components. Berzonsky (1992a) states that, a more complete understanding of identity development requires consideration of the reciprocal and interdependent relationships among identity components: process, structure, content, function, and context. Berzonsky explained this same concept by indicating that identity processing styles (orientations) can be viewed on three levels - basic, intermediate, and general (Berzonsky, 1990). The basic form of reasoning (cognition) refers to dealing with daily problems and tasks (Berzonsky, 1992a). The intermediate level focuses on social reasoning strategies, which are designed as a way in which to organize basic events (Berzonsky, 1992a). Last, the general level of identity style refers to how a person chooses to negotiate issues related to his own identity (Berzonsky, 1992a).

Of noteworthy, the three orientations or identity processing styles are not mutually exclusive or independent (Berzonsky, 1989, 1992). The identity style theory advocates that individuals prefer to use different styles to regulate behaviour. The individual's selection of style may be related to differences in motivations and in both demands and incentives provided by the environment (Berzonsky, 1989). The preferred style or strategy that a person employs is in response to issues that may affect personal identity (Berzonsky, 1989, 1992b). Whereas in early developmental periods a person is mostly externally controlled, in later developmental stages, a person has assimilated and integrated a large repertoire of cognitions and responses that reflect more self regulation of behaviour. When individuals incorporate standards and values based on a style of taking in new information and revising the self theory accordingly, the experience is genuine and behaviours are self-endorsed (Berzonsky & Kuk 2005). The preferred style as operationalised by the Identity Style Inventory (Berzonsky, 1992) can be conceptualised as dimensions along which adolescents vary. Furthermore, research has been

conducted in the area of identity processing styles and academic performance and some theoretically predictable correlations have been found.

## **2.5 Empirical Research**

The relationship between identity processing styles and variables related to academic performance has been the subject of much research (Hejazi, Shahraray, Farsinejad & Asgary, 2009). A brief discussion of some research in this area reveals that diffuse-avoidant identity style is negatively associated with expectations about academic success, while informational and normative styles are positively associated with this variable (Boyd et al., 2003). Berzonsky and Kuk (2000) also found a positive relationship between informational and normative identity styles and educational purpose and academic autonomy, as well as a negative relationship between diffuse-avoidant processing style and academic purpose and autonomy. In another study, diffuse-avoidant identity style was associated with a low score in feeling of efficacy, accompanied by task-irrelevant efforts, and task avoidance (Nurmi, Berzonsky, Tammi & Kinney, 1997). Based on the abovementioned studies, the question of interest and the focus for the present study is: “Are identity processing styles directly associated with academic performance?”

The studies of Boyd et al., (2003) and Berzonsky and Kuk (2005) found no direct relationship between academic performance and identity processing styles. In a study carried out by Berzonsky and Kuk (2005) a sample of 460 first- term freshmen (276 female and 184 male) students was used. The sample was predominantly Caucasian (87%) and the mean age was 18.3 years. Berzonsky’s ISI3 ( 1992) was used to assess identity processing styles and for academic performance, freshmen grade point averages for the first two terms on different combination of courses were taken, as well as in five specific freshmen courses. Identity style differences were found across all the dependent measures (e.g. academic autonomy, career planning, and educational involvement among others). According to the findings informational processing style tended to perform the best on all student developmental scales and diffuse-avoidant students performed the worst. As with previous findings (Berzonsky, 1990, 2003) when compared to diffuse-avoidant students, both informational and normative students scored significantly higher on scales that reflected the possession of realistic vocational information and career plans and clear educational objectives and goals. Also, as with the previous research it was noted that informational style is not considered to be



inherently better or more effective than a normative style as students in both style groups were found to have well-defined educational plans and were said to be conscientious and goal directed. Despite finding this number of correlations between different identity styles and academic performance in their study, no style differences in grade point averages on different combination of courses were found but when same courses were examined informational style students tended to do better and diffuse-avoidant students tended to do worse. However, only 1–6 percent of the variance in academic performance was determined by identity styles and there was no significant difference in academic performance regarding the different identity styles (Berzonsky & Kuk, 2005). This means that according to the study by Berzonsky and Kuk (2005) the very weak relationship between identity processing styles and academic performance could not be used to account for variances in academic performance. The lack of difference in academic performance in their study was attributed to characteristics of the sample (Caucasian, university students) and the optimal use of cognitive processing. Using this finding (Berzonsky & Kuk, 2005) it is hypothesised that (1) since all the students used in the present study are from the same course (Psychology I and are not all Caucasian) there would be style differences in academic performance and (2) while this is so, the racial characteristics of the sample in the current study, being completely different to that of the previous study, would yield varied findings with regard to academic performance even though it is suggested that by late adolescence most individuals considered to be normal are intellectually capable of making use of all three social cognitive strategies (Berzonsky & Ferrari, 2009).

In another study (Hejazi et al., 2009) a sample of 400 (200 male and 200 female) sophomore students in Tehran, were selected through random cluster sampling. The average age was 15.6 years. Results of this research revealed a statistically significant positive correlation ( $r = 0.16$ ,  $p < 0.01$ ) between informational identity style and academic performance, and a statistically negative significant correlation ( $r = -0.21$ ,  $p < 0.01$ ) between diffuse-avoidant identity style and academic performance. These outcomes were similar to students in other cultural contexts. By implication it is therefore hypothesised that informational and diffuse-avoidant identity processing styles would relate significantly with academic performance in this study. However, the correlation between normative style and academic performance was not statistically significant ( $r = -0.02$ ,  $p > 0.05$ ). As was found with the study of Berzonsky and Kuk (2005), despite finding correlations between identity processing style and academic performance, identity processing styles only accounted for 8 percent of the variance in

academic performance. It is thus seems there is a weak relationship between identity processing styles and academic performance. However, reliability of the ISI3 in predicting academic performance has not been investigated within the African continent, hence the current study.

Of the three identity processing styles, normative identity processing style has had the most varied relationship to academic performance. Given the history of South Africa it would be interesting to establish what the relationship would be between normative style and academic performance and investigate if race plays a role in the differential findings. This reasoning was sparked by the findings with regard to normative identity processing style in three studies (Berzonsky & Kuk, 2005; Berzonsky & Sullivan, 1992; Hejazi, E., Shahraray, M., Farsinejad, M., & Asgary, A., 2009) this style did not correlate significantly with academic performance. In two studies (Berzonsky & Sullivan, 1992; Hejazi et al., 2009) the trend was a negative correlation to academic performance and it was postulated that it was possibly because of its association with a low level of flexibility/openness. In the third study (Berzonsky & Kuk, 2005) the trend was that normative style had a positive correlation to academic performance. No predictions about academic performance were made as normative style is associated with high levels of conscientiousness but low levels of openness. Based on these findings it would be difficult to hypothesise findings of normative identity processing style on academic performance.

Berzonsky and Kuk's (2000) findings reveal that the manner in which individuals approach or manage to avoid identity relevant problems and decisions play a role as students negotiate the transition to a university context and consequently has an effect on academic performance. More specifically, it was revealed that students who entered college with an informational identity style were best prepared to function successfully in a university setting and tended to perform well academically (Berzonsky, 1995). In contrast, students with a diffuse-avoidant style were at relative disadvantage on these dimensions and consequently experienced difficulty in making the transition to university and students who relied on this style were at increased risk for academic problems (Berzonsky & Kuk, 2000). As with informational style students normative style students also had a clear sense of academic direction. However, because students with a normative identity had been found to define themselves collectively and to have a high need for structure the sense of academic purpose associated with a normative orientation appears to be more externally based and inflexible

(Berzonsky & Kuk, 2003). This collective identity is concentrated in the expectations and normative standards of significant others and referent groups such as family, community, country, and religion (Berzonsky, Macek & Nurmi, 2003). On account of these findings it is thus hypothesised that normative identity style would be significantly represented in this study due to the race composition of students attending the university.

The research reviewed suggests that adolescents differentiated in terms of their psychosocial development and that self-perceptions can greatly influence the degree to which students are prepared to participate in university life. It thus seems that the way students cope with the transitions that occur during entry into university life would be greatly impacted by identity status and in turn by identity processing styles the student adopts to manage self-relevant information. Berzonsky (1993) provided evidence that students' academic performance is in part affected by identity processing styles. As such, it is believed that adolescents' varying degrees of self-identity development have implications for academic performance. Accordingly, the purpose of this investigation is to examine whether identity processing styles in adolescents' self-identity development serve as an important explanatory mechanism for academic performance during the first year of university. It is also evident from the literature that considerable research, in a variety of cultural contexts using Berzonsky's (1992) Identity Style Inventory (ISI3) has been able to link first year university academic performance to identity processing styles. However, no such findings have been reported in the South African context.

It is believed that knowledge of the relationship between identity processing style and academic performance of first year university students can assist universities to plan interventions to improve progression rates. Also, counsellors would be more insightful in terms of support of failing students. The idea is to find ways of improving academic performance and progression rates of first year university students and this study could be very beneficial in a South African context. For instance, if indeed it is found that diffuse-avoidant students' performance is negatively related to academic performance, it would be suggested that ISI3 be used as a screening tool in the beginning of the year for first year students. It would be suggested that those found to be diffuse-avoidant be exposed to a career counselling intervention.

Lastly due to the culturally diverse nature of the South African population more factors need to be taken into consideration when applying labels. In accordance with previous research (Boyd et al., 2003) and recommendations emanating from it issues like race need to be taken cognisance of as there will be cultural underpinnings in the findings.

## **2.6 Race**

According to Elliot (1983) culture is a definition highly misunderstood and misused. He proposes that culture refers to the following ways of life, including but not limited to language- the oldest human institution and the most sophisticated medium of expression; arts and sciences- the most advanced and refined forms of human expression; thought- the ways in which people perceive, interpret, and understand the world around them; spirituality - the value system transmitted through generations for the inner well-being of human beings, expressed through language and actions; social activity - the shared pursuits within a cultural community, demonstrated in a variety of festivities and life-celebrating events and interaction - the social aspects of human contact, including the give-and-take of socialisation, negotiation, protocol, and conventions. All of the above collectively define the meaning of culture. The concept of race internationally, and particularly in South Africa is regarded as sensitive. The literature recommends that race is an elusive concept to define and even though few scientists would question that genetic differences exist within groups, there is a lack of agreement as to what constitute a racial group (Bolaffi, Bracalenti, Braham & Gindro, 2003). Nevertheless, South Africa has been divided in the past on racial lines and currently transformation is directed at eradicating racial discrimination. Race, according to Bolaffi et al. (2003) is a social construction and appears under the guise of cultural difference. It also refers to similar criteria that once formed the basis of now-discredited racial typologies – notably skin colour and physiognomy. Furthermore, it is iterated that culture and race are interrelated (Côté, 2006). Thus cultural and therefore racial contexts which are important for identity formation provide the context for intrapersonal processes (Berzonsky 1989; Erikson, 1980; Marcia, 1980).

The culture in which people study and dwell is instrumental in shaping their sense of self. The identity processing styles employed by first year university students could be influenced

primarily by acculturation strategies, demographic factors such as age and education. A person's identity style as researched by Berzonsky (1990) and Adams (Berzonsky & Adams, 1999) indicates that social-cognitive processes shape a person's identity. Berzonsky's (1992) view on this indicated that identity styles do operate on different levels for different people as intertwined units – cognitive and behavioural. Identity style, as previously stated, is the strategy that an individual typically employs or would prefer to use when negotiating identity-relevant issues (Berzonsky, 1992). One identity-relevant issue necessary to mention in this study is acculturation. Acculturation refers to changes in the individual's behaviour, social and work activities, thinking patterns, values, and self-identification as a result of contact with another culture. When an individual acculturates, the person is not interested in discarding his past, meaningful traditions, and values. Also, acculturation deals with the ways in which students adapted to and accommodated mainstream societal values and demands (Sheet, 2003). Acculturation is the process by which a group changes its distinctive cultural traits to conform to those of the host society (Parrillo, 1997). One's past and current educational setting may be influenced by the new host society's dominant culture. The acculturation strategies deployed by first year university students, as they transition from high school to university, may be a component instrumental in the identity styles which are in operation that in turn may influence academic performance. What makes student experiences different from each other at university may be hidden in the inability or reluctance to see how they could be academically successful. This problem could be further magnified due to their inability to deal with acculturation at university.

According to Graves (1967) the contact between the dominant culture and acculturating groups will generate group-level acculturation, which entails experiencing one or more of the following changes: physical (such as, urbanization) political, economic, cultural, and social. Graves (1967) indicates that the same contact between the cultures can also generate psychological acculturation, which entails experiencing one or more of the following changes: behavioural, value, identity and adaptation. Since identity is about people and how people make sense of their life experiences (Berzonsky, 1992a) identity development is personal and cultural. Therefore, a student must be at one with him/herself capturing unique characteristics such as roles, beliefs, and values, that others can identify (Phinney, 1990). Students will compare themselves with each other as a means for measuring who they are and where their station in life may be. Berzonsky (1992b) indicates that, identity is how we interpret our own existence and understand who we are in our world. Helms (1993) and

Phinney (1990) saw race as a significant element in relation to how a person chooses to define him/herself in the creation of an identity. It is explained that the effects of contextual processes operate through intrapersonal processes (Dodge & Pettit, 2003); therefore culture and race are expected to impact on academic performance. However, research on the relationship between identity processing styles and the variables culture and race as related to academic performance at university is not conclusive yet (Seabi, 2009) and the current problem of both theoretical and practical significance of how to understand the differences in academic performance of students with different racial associations remains (Shuttleworth-Jordan, 1996).

According to Roach (2006) in the United States Mexican-American children lag behind in attaining higher education. Also, there are racial and achievement gaps between African and Latino students, who generally lag behind Whites and Asian Americans. In a country such as South Africa that is still characterised by an array of racial, cultural and linguistic groups who occupy a 'shifting position along a continuum of lesser or greater levels of urbanization, westernization and literacy', the relationship between identity processing styles and the variable culture and race should be a significant variable related to academic performance (Shuttleworth-Jordan, 1996). Although the literature points out that contexts and its role in identity development have been a focus for research, and it is suggested that despite conclusive findings in international research on this issue it is vital to determine whether results found in Western countries can be replicated in South Africa given contextual differences between African and Western countries (Seabi, 2009).

In the literature, identity is described as being multifaceted. Race is said to be a key concept in individual identity and ethnicity per se is described as a collective identity that influences the construction of self concept (Shimahara, Holowinsky & Tomlinson-Clarke, 2001). It has also been stressed that identity develops out of both individual and social processes and that identity forms and is formed by the surrounding milieu (Adams & Marshall, 1996). Taking the aforementioned into account, the implication is that input of identity forming information would vary from culture to culture and from individual to individual depending on the context. To show how culture influences identity formation, Lee and Lui (2001) highlight how members of different ethnic groups tend to use indirect coping strategies (e.g., forbearance) to manage stressful demands. In the given example growing up in an ethnically biased society contributes to internally imposed demands not to yield, but to keep the centre

of attention on the goal in order not to end up on the wayside. Another finding reveals that students with high normative scores emphasise collective self-attributes (e.g., “family” and “religion”) and are more of one culture than another (Berzonsky, 2008, p. 646; Boyd et al., 2003). In addition to these findings it is stated that visible racial groups strive to preserve the norms and values of the family in particular and the culture in general, and this is often considered more important than developing one's individual identity (Helms & Cook, 1999). Thus it becomes evident that identity formation is influenced by cultural influences. The aforementioned, is crucial at a time when students are beginning university, especially in terms of exploring the relationship between identity processing styles and academic performance. It is highlighted that identity processing styles are “differentially associated with the types of self-elements within which one’s identity is grounded.” (Berzonsky, 2008, p. 646). Family norms and values are important identity forming information and are instilled by the way a family functions (Leslie, 1973). This suggests that family functioning would be particularly strongly related to developmental processes including identity formation (Schwartz, Pantin, Prado, Sullivan & Szapocznik, 2005). During the first year of university in present-day western cultures, the Caucasian parent-adolescent relationship is marked by transformation. This adolescence period is marked by the crucial developmental task to gain autonomy from their parents and become independent adults (Kenyon & Koerner, 2009). According to research (Holmstrom, Karp & Gray 2002, p.251) seniors in western culture look forward to the independence of college, some perceiving the college transition as a test of independence, a place where you can “prove yourself,” “see what you are made of,” and “see if you can survive on your own”. Furthermore, they expect their parents to treat them like adults once they attended college and most believed the relationship with their parents would become more positive.

With regard to Caucasian parents in western culture, the study by Kenyon and Koerner (2009) reveals that parents hold higher expectations for their adolescent children’s autonomy behaviours than did the adolescents themselves. The finding in the aforementioned study was surprising, given the history of adolescent autonomy research that holds the underlying assumption that it is usually the adolescents who strive for autonomy, rather than the parents encouraging adolescents to be more independent (Steinberg, 1990). Although a key developmental task in adolescence is for them to gain autonomy from parents and become independent adults, they were still very emotionally attached to parents at the transition to university phase even though parents expected more autonomy (Kenyon, 2009). Using the

finding that Caucasian adolescents are more autonomous and are encouraged by their parents to be autonomous it is expected that Caucasian adolescents will have high informational processing style scores on Berzonsky's (1992) ISI3 in this study as it places emphasis on self attributes like, "my effort", "my dreams" and "my ideas" and according to research they are expected to be coping academically (Boyd et al., 2003, p. 646).

However, studies on the effects of family functioning on adolescent identity have yielded various findings (Schwartz et al., 2005). The literature shows that unlike the adolescent stage in Western culture, family is still important in Hispanic culture (Santisteban, Muir-Malcolm, Mitrani & Szapocznik, 2002). Traditionally, the Hispanic family is a close-knit group and the most important social unit. The term familia usually goes beyond the nuclear family. The Hispanic "family unit" includes not only parents and children but also extended family (Rodriguez, 1995).

In contrast to Caucasian parents in western countries, Hispanic parents are authoritarian but also tender adolescents' warm emotional support with a demand for considerable respect for parents and other authority figures, including older extended-family members. This is supposed to instil a more collective value system as opposed to the relatively high individualism favoured by European Americans (Lamanna & Riedmann, 2009). This unit is also strongly supportive of achievement. So, despite socioeconomic circumstances, many Hispanic immigrant students in the United States perform well at university (Fuligni, 1997).

While some researchers (Lee & Lui, 2001) have argued that adolescent identity formation may yield different patterns across cultural contexts others (Hamburg, 1986) are saying that, the ages of adolescence vary by culture. This implies for example that while it might be normal for Caucasian adolescents in western culture to gain autonomy by age 18, it might not be the case with African adolescents in Africa. African adolescents in Africa might only be allowed to gain autonomy much later. Thus it is hypothesised there will be low representation of African first year university students in the category of informational identity processing style.

According to Nsamenang (2002) a compelling determinant of parent-adolescent relationships, family interactions and the dependency index is parental expectations. African parents expect adolescents to serve and sometimes to compensate for the parents' disappointments and



failures. Thus parents spare no effort to support and educate adolescents in order to raise status and potential to improve the welfare and resource base of the family. The extended family also plays a pivotal role in adolescents' lives because they are a good social support system to educate and provide for relatives (Nsamenang, 2002). Therefore it is expected that African students will have high normative scores on Berzonsky's (1992) ISI3 as normative scores emphasise collective self-attributes such as family.

It was argued by Phinney (1990) that identity formation among racial minorities is more complex than among those who are part of the majority culture. Adolescents in these situations are confronted with reconciling the values of their group with the values taught to them in the dominant culture. In South Africa, Indians/Asians constitute 2.6 percent of the total population and would therefore be regarded as a racial minority group (Statistics South Africa, 2009). According to available research on Indian culture, it was found that even though Indians are a minority group both the dominant and global culture influences seem to have had very little influence in changing the Indian culture (Hermans & Kempen, 1998). Adolescent socialisation among Indians is still typically within an extended family, with little emphasis on encouraging autonomy (Saraswathi, 1999). There is significant emphasis on relationships with others, particularly with regard to obedience toward and respect for parents and elders. Although parents are willing to give some degree of autonomy to their adolescents to pursue a social life with peers the concern is that such activities should not interfere with academic performance. In general, parental goals are for children's present focus to be on good academic performance (Schlegel, 1999). Subsequently, according to these findings it is hypothesised normative style, in addition to African students, will be represented by Indian students (cultural orientation is collectivism) Furthermore, with such revealing information, dynamics of social and cultural role requirements, and coping styles, should therefore be taken into consideration when studying students identified as having a normative identity processing style.

## **CHAPTER THREE**

### **METHODS**

#### **3.1 Aims of the Study**

##### **3.1.1 General Aim**

The general aim of the current study was to investigate the relationship between identity processing styles as measured by the Identity Styles Inventory and academic performance as measured by first year psychology students' mid-year results. In addition, to this it was to determine if there is a significant difference between the four race groups (African, Caucasian, Coloured and Indian) on academic performance.

##### **3.1.2 Specific Aims**

1. To determine if there is a statistically significant relationship between identity processing styles and academic performance.
2. To determine if there is a significant difference between the three identity processing styles on academic performance.
3. To investigate which identity processing style is predictive of academic performance.
4. To determine if there is a significant difference between the four race groups on academic performance.
5. To determine whether there is a significant difference between the four race groups on all the identity processing styles.

Pertaining to the first, second and third aims of this study, it was expected that there would be a statistically significant relationship between identity processing styles and academic performance. Specifically, a statistically positive significant relationship between informational style and academic performance was expected. This postulation was based on the fact that informational style students have good problem-solving skills relevant to a construction of an identity and are best prepared to adapt to the university context. A statistically significant negative correlation between academic performance and diffuse-avoidant style was expected. These diffuse-avoidant students employ avoidant-oriented

coping strategies and also rely on strategies that enable them to avoid self-relevant conflicts and problems and are most apt to encounter problems at university. Although normative style students are encouraged by significant others to have educational goals it was not possible to anticipate whether there would be a statistically significant relationship between normative identity processing style and academic performance as previous research yielded multiple results on these two variables.

With regard to the fourth aim of this study, given that overseas universities exhibit differences in academic performance based on race, it was expected that due to the great diversity of race groups of first year university students in South Africa, there would be a strong relationship between race and academic performance.

In respect to the fifth aim due to the fact that the literature on identity processing styles emphasise the strong interplay between intrapersonal and environmental factors (with an emphasis on cultural norms) it was anticipated that informational style would be highly represented by the Caucasian group and normative style would have a high representation of Africans and Indians.

### **3.2 Research Questions**

1. Is there statistically significant relationship between identity processing styles and academic performance?
2. Which identity processing style will significantly predict academic performance?
3. Is there a statistically significant difference between the three identity processing styles on academic performance?
4. Is there a statistically significant difference between the four racial groups on academic performance?
5. Is there a significant difference between the four racial groups on all the identity processing styles?

### **3.3 Context of the Current Study**

The current study took place within a university context in Johannesburg, South Africa. It forms part of a longitudinal study which investigates factors associated with high attrition and throughput rates of first year university students.

### **3.4 Sample and Sampling**

A non-probability purposive sampling approach was used to select participants for the current study. Purposive samples are samples dependent not only on availability and willingness to participate, but that cases that are typical of the population are selected (Durheim, 2007). The criteria for participation being students had to be first year psychology students. Out of a possible 1200 students 428 agreed to participate in the study, the average age being 19. The sample composed of a mixed representation of race of whom 250 (58 %) was African, 107 (25%) was Caucasian, 32 (7%) was Indian and 30 (7 %) was Coloured. Africans made up the majority of the sample, followed by the Caucasian Group, then the Indian and Coloured groups.

### **3.5 Procedure**

Permission to conduct the study was obtained from the registrar, head of discipline, course coordinator, lecturers and participants. Furthermore, permission was sought from the participants to use their June Examination results. Although the participants were assured of confidentiality, anonymity could not be ensured, since their names and student numbers were required to match their mid-year examination results with identity processing scores. They however were given surety that only the researcher and supervisor will have access to their personal academic records and scores on the survey.

Then the ISI3 survey (Berzonsky, 1992) was administered to the convenient sample of participants. Before the June Examination at the onset of the psychology lecture students were briefed about the research and the procedure regarding filling in the ISI3 as well as the demographic questionnaire. Both questionnaires were then distributed by research assistants in the presence of the researcher and students were given time to fill them in. Thereafter, the filled in questionnaires were collected by the research assistants and the questionnaires were

placed in a box which was later sealed for confidentiality purposes. The boxes were then kept in a safe place under lock and key until the research was complete. After the researcher's final exam all raw data will be kept for approximately four years for research and publication purposes and will then be destroyed. After the June Examination was written, the marks of the students who were part of the study were obtained from the course co-ordinator and data analysis was conducted.

### **3.6 Research Design**

This study utilised a non experimental correlational research design between identity processing styles and academic performance, as well as ex post facto between race and academic performance. Ex post facto research explores possible causes and effects. The independent variable is not manipulated, it has already been applied. This type of research focuses first on the effect, and then attempts to determine what caused the observed effect (Durheim, 2007).

### **3.7 Instruments**

Three measures were used in the current study, and these included, demographic questionnaire (Appendix B) Identity Style Inventory (Appendix A) and June examination performance.

#### **3.7.1 Demographic Questionnaire**

Information about each participant (sex, age, school type, race / ethnic background, home language, parental education and occupation) was obtained through a demographic questionnaire.

#### **3.7.2 Identity Style Inventory (ISI3)**

Berzonsky's Identity Style Inventory (1992) was used to measure identity processing styles. It consists of 29 items which are statements about beliefs, attitudes, and or ways of dealing with issues. It is scored on a Likert scale ranging from 1 (not at all like me) to 5 (very much like me). The ISI3 contains four continuous style scales: (1) Diffuse-avoidant-style scale (10 items: e.g., "I'm not really thinking about my future now; it's still a long way off"); (2)

Normative-style scale (nine items: e.g., ‘‘I prefer to deal with situations where I can rely on social norms and standards’’); and (3) The Informational-style scale (11 items: e.g., ‘‘I’ve spent a great deal of time thinking seriously about what I should do with my life’’).

The scoring instructions were: Information-Orientation = (2 + 5 + 6 + 16 + 18 + 25 + 26 + 30 + 33 + 35 + 37); Normative-Orientation = (4 + 10 + 19 + 21 + 23 + 28 + 32 + 34 + 40); and Diffuse-Orientation = (3 + 8 + 13 + 17 + 24 + 27 + 29 + 31 + 36 + 38). To categorise the participants according to their identity processing style informational, normative, or diffuse-avoidant - raw scores on the three identity style scales were transformed into standard z-scores. An individual's highest z-score was then used to assign his or her identity style.

Cronbach’s Alpha Co-efficients were run to measure reliability of the ISI3. While there is no agreed cut-off for the alpha coefficient, 0.7 and above is usually the acceptable level (Cohen & Swerdlik, 2005). Reported test reliabilities for the subscales, informational, normative and diffuse orientation range from 0.71 to 0.75 (Boyd et al., 2003). However, test reliabilities for the same subscales in the current study range are 0.49 for informational style, 0.63 for normative and 0.57 for diffuse-avoidant style and the overall result is 0.58. These results indicate lower levels for the alpha coefficients, therefore bringing to the fore the non-reliability of the ISI3 as an instrument for the screening of academic performance for first year university students.

### 3.7.3 Academic Performance

Academic performance was measured with participant’s mid-year examination results which were obtained from university’s records. A consent form was used to attain permission for that.

## 3.8 Data Analysis

Descriptive and inferential statistics were employed to analyse the data from the responses of the participants of this study.

To determine the distribution of the scores (test for normality) of the ISI3, Kolmogorov-Smirnov (K-S) test was used. This test compares the cumulative distribution of the data with

the expected cumulative Gaussian distribution, and bases its p-value on the largest discrepancy. Since the data was normally distributed and other assumptions of parametric tests were satisfied, Pearson's Product Moment Correlation was used. Stepwise Multiple regression analysis was calculated to determine which identity processing style would significantly determine academic performance. Analysis of variance (ANOVA) was used to test the difference between the race groups on academic performance. Tukey's post hoc test was used to determine where the difference was between the four racial groups.

### **3.9 Ethical Considerations**

This research study employed ethical guidelines as required by the University's Ethical committee. As already mentioned, permission to conduct the study was obtained from the registrar, head of discipline, course coordinator, lecturers and participants. Furthermore, permission was sought from the participants to use their June Examination results. Although the participants were assured of confidentiality, anonymity could not be ensured, since their names and student numbers were required to match their mid-year examination results with identity processing scores. They however were given surety that only the researcher and supervisor will have access to their personal academic records and scores on the survey. Subject information letters (Appendix E) were aimed to inform students about the following: the exact nature and purpose of the study and sensitivity with relation to revealing personal information about themselves and their June examination results. It was made clear that participation was entirely voluntary and participants had the right to withdraw from the study at any time without penalty. Participants then were invited to participate. If participants rejected that invitation, they were made aware that they would not be disadvantaged in any way. Similarly if participants chose to partake in the study, they were made aware that involvement would not benefit them in any way. The researcher's contact details were provided in light of participants having any questions. Finally, they were informed that the research results would be made available through a research report which will be found in the Department of Psychology and the library.

## **CHAPTER FOUR**

### **RESULTS**

#### **4.1 Overview of Data Analysis**

Descriptive and inferential statistics were used to analyse the data from the responses of the participants of this study. Statistical Analysis System (SAS) version 9.2 was utilised to conduct statistical analysis. Cronbach's Alpha was applied as a measure of internal consistency. The Kolmogorov-Smirnov (K-S) test of goodness fit was conducted to determine the distribution of the post-test scores of the Identity Style Inventory (ISI3). The results showed the possibility of slight skewing, yielding a normal distribution for the variables and parametric tests were employed.

Two levels of analysis were conducted in order to provide a comprehensive set of results. The first level of analysis focused on descriptive statistics and describes the sample. The second level of analysis consisted of inferential statistics. In the current study, Pearson's Product Moment Correlation was used as the statistical technique to show whether and how strongly pairs of variables are related. Linear regression analysis was the statistical method to attain predictions of academic performance. In addition, Analysis of Variance (ANOVA) was utilized to compare the effect of the independent variables on the dependent variables. Lastly Tukey's post hoc analysis was employed to examine specifically where significant differences lie.

#### **4.2 Inferential Statistics**

##### **4.2.1 Reliability of the Identity Style Inventory (ISI3)**

In order to assess the reliability of the ISI3 the Cronbach's Alpha was used as a measure of internal consistency. The alpha coefficient, 0.7 and above is usually the acceptable level (Cohen & Swerdlik, 2005) however, as presented in Table One, it can be seen that the alphas are below 0.7 in all the subscales therefore raising concern with regards to using the ISI in a South African context.



Table One: Cronbach's Alphas

	<b>Alpha</b>
<b>Overall</b>	0.58
<b>Informational</b>	0.49
<b>Normative</b>	0.63
<b>Diffuse Avoidant</b>	0.57

#### 4.2.2 Normality of Data

Examination of the histograms for all three identity processing styles (see Appendix A) indicated that while there might be slight skewing, the distributions seem to be generally normal.

#### 4.2.3 Comparison between identity processing styles on academic performance

The first aim of the present study investigated whether categorisations based on identity processing styles showed differential academic performance. ANOVA as presented in Table Two, was significant,  $F(2,420) = 2.42$ ;  $p = .0323$ , suggesting a difference between the groups (Informational, Normative or Diffuse-Avoidant) on academic performance. Post hoc Tukey's analysis revealed a significant difference between the Informational identity processing style (mean = 55.05) and the Normative identity processing style (mean = 50.81), in favour of the former group.

Table Two: ANOVA table for ISI as independent variable and June marks as dependent variable

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
<b>Model</b>	2	1275.737	637.868	3.46	0.032
<b>Error</b>	417	76845.65	184.282		
<b>Corrected Total</b>	419	78121.39			
<b>R-Square</b>	<b>Coeff Var</b>	<b>Root MSE</b>	<b>Marks % Mean</b>		
0.01633	25.8268	13.57506	52.5619		

#### 4.2.4 Correlation and regression (between identity processing styles and academic performance)

As previously mentioned, the second aim of this study was to explore whether there was a statistically significant relationship between identity processing styles and academic performance. The Pearson's Product Moment Correlation was used to investigate the hypothesised relationships between the styles and academic performance.

As presented in Table Three, of the three identity processing styles: informational, normative and diffuse-avoidant, only the normative identity processing style correlated significantly with academic performance ( $r = -0.110$ ,  $p < 0.05$ , see Table Three). Although the result yielded a significant finding with this variable, the correlation was weak and negative. As already mentioned, the correlation between informational, and diffuse-avoidant identity processing styles with academic performance was not statistically significant.

Table Three: Relationship between Identity Processing Styles and Academic Performance

	<b>Informational</b>	<b>Normative</b>	<b>Diffuse-Avoidant</b>	<b>Marks %</b>
<b>Informational</b>	1	0.374***	0.155***	0.024
<b>Normative</b>	0.374***	1	0.138**	-0.110*
<b>Diffuse-Avoidant</b>	0.155**	0.138**	1	-0.009
<b>Marks %</b>	0.024	-0.110*	-0.009	1

\* Significant at .05 level, \*\* Significant at .01 level, \*\*\* Significant at .001 level

Considering the relationships between the proposed independent variables it was necessary to investigate the data for multicollinearity before regression was run. According to Lomax (2007, p.68) “multicollinearity is a strong linear relationship between two or more of the predictors. The presence of severe multicollinearity is problematic.”

#### Multicollinearity Diagnostics

Table Four: Tolerance and Variance Inflation for ISI scores

<b>Variable</b>	<b>Tolerance</b>	<b>Variance Inflation</b>
<b>Intercept</b>		0
<b>Informational</b>	.848	1.178
<b>Normative</b>	.849	1.177
<b>Diffuse-Avoidant</b>	.968	1.032

Table Five: Collinearity Diagnostics

Number	EigenValue	Condtn Index	Proportion of Variation			
			Intercept	Information	Normative	Diff-Avoid
1	3.938	1	.000	.001	.001	.002
2	.035	10.496	.005	.033	.142	.871
3	.016	15.266	.121	.248	.855	.070
4	.008	20.938	.871	.717	.000	.055

Variance Inflation Factor (VIF) and Tolerance are two measures that can guide in identifying multicollinearity. A tolerance close to 1 means there is little multicollinearity, whereas a value close to 0 suggests that multicollinearity may be a threat. The reciprocal of the tolerance is known as the Variance Inflation Factor (VIF). The VIF shows us how much the variance of the coefficient estimate is being inflated by multicollinearity. Values of VIF exceeding 10 are often regarded as indicating multicollinearity (Bageri & Midi, 2009). Based on this and given the tolerance and variance inflation factors are close to 1, multicollinearity does not seem to be a concern for the present study.

“Multiple regression is a method of studying the separate and collective contributions of several independent variables to the variation of a dependent variable” (Terre Blanche, Durheim & Painter, 2007). In the current study the independent variables are the three identity processing styles – informational, normative and diffuse-avoidant and the dependent variable is the student’s academic performance. Multiple regression analysis was used to establish if a relationship existed between ISI subscale scores and academic performance. Multiple regression analysis as presented in Table Six, suggests no relationship between identity processing styles and academic performance ( $p = .065$ ).

#### 4.2.5 Comparison of academic performance between race groups

In relation to the third aim of this study, it was to compare academic performance of all the

race groups in the study. As presented in Table Six, there was a statistically significant difference between the race groups  $F(2, 420) = 27.5$ ;  $p < .0001$  on academic performance.

Table Six: Race as independent variable and June marks as dependent variable

<b>Source</b> <b>Pr &gt; F</b>	<b>DF</b>	<b>Sum of Squares</b>	<b>Mean Square</b>	<b>F Value</b>	
<b>Model</b>	4	16409.92	4102.48	27.59	<.0001
<b>Error</b>	420	62453.83	148.6996		
<b>Corrected Total</b>	424	78863.76			
<b>R-Square</b>	<b>Coeff Var</b>	<b>Root MSE</b>	<b>Marks % Mean</b>		
<b>0.208079</b>	23.21205	12.19424	52.53412		

Post hoc Tukey's analysis indicated statistically significant difference between the Caucasian students and the other race groups on academic performance. No other significant differences were found (see Table Seven).

Table Seven: Academic performance means of race groups

<b>Level of Race</b>	<b>N</b>	<b>Marks %</b>	
		<b>Mean</b>	<b>Std Dev</b>
<b>African</b>	250	47.956	12.17254
<b>Indian</b>	32	54.5	10.74634
<b>Coloured</b>	30	53.4	14.77323
<b>Caucasian</b>	107	62.63551	11.75649

#### 4.2.6 Comparison between race groups on identity processing styles

As presented in Table Eight, of the three identity processing styles, there is a significant result only on normative style and no other significant results exist.

Table Eight: Comparison of identity processing style scores between race groups

<b>Styles</b>	<b>DF Model</b>	<b>DF Error</b>	<b>F.</b>
Information	4	423	0.46
Normative	4	423	3.27*
Diffuse-Avoidant	4	423	2.08

**\* Significant at .05 level**

Post hoc Tukey's analysis revealed a statistically significant difference between the Indian and the Caucasian students on normative identity processing style (see Table Nine).

Table Nine: Normative subscale means for race group

<b>Race</b>	<b>Normative Style</b>	
	<b>Mean</b>	<b>Std Dev</b>
<b>African</b>	31.08765	5.677349
<b>Indian</b>	32.63636	4.929618
<b>Coloured</b>	30.03333	4.958332
<b>Caucasian</b>	29.42991	5.011519

## **CHAPTER FIVE**

### **DISCUSSION**

#### **5.1 Interpretation of findings**

The present study set out to find if there is a relationship between identity processing styles and academic performance of first year university students in a South African context. It was the intention of the study to determine whether the tool for measuring identity processing styles (ISI3) could be deemed reliable for screening first year university students, so as to assist in curbing their high failure rate. The results of the current study are discussed in accordance with the reviewed literature. Finally, practical implications and limitations of the study, as well as recommendations for future research are made.

#### **5.2 ISI3 Reliability**

The reliability of the ISI3 as a tool for the screening of academic performance was of concern given the findings of Hejazi et al (2009) and Berzonsky and Kuk (2005) that evidenced a weak relationship (8 percent variance) between academic performance and identity processing style. It was hoped the current study would yield a different (positive) result like that of Boyd et al. (2003) so the dismally high failure rate of first year university students could be confidently addressed to bring about higher pass rates. However, current findings indicated the Cronbach Alphas are unacceptably low to deem the ISI3 a reliable tool for screening academic performance in the South African context. Perhaps certain items in the ISI3 like item 12 – “I’m not sure which values I really hold”, item 29 – “I find that personal problems often turn out to be interesting challenges” and item 30 – “I try not to think or deal with problems as long as I can” are ambiguous or too open to interpretation, and this could have affected internal consistency. This requires further analysis and if it is found to be true then perhaps the ISI3 needs revision and some questions – certainly those mentioned – need rewording. Taking this into consideration the ISI3’s poor reliability for this study, should not be viewed in such a way that other findings (discussed below) cannot be used to improve the quality of first year university students because the findings can generate interventions to impact positively on academic performance.

### **5.3 Relationship between identity processing styles and academic performance**

The present study explored the relationship between academic performance of first year university students and the level of their identity processing style (a combination of environmental context and intrapersonal factors) to gain a clearer and more accurate perspective of their academic performance. As an indicator of academic performance the June Examination results of students doing the Psychology I course was utilised. Given that the Identity Style Inventory (ISI3) was successfully used to associate high failure and drop-out rates of first year university students internationally, the first aim of this study was to explore whether there is a statistically significant relationship between identity processing styles and academic performance in a South African context. The results of this study support the hypothesis that a relationship exists between a student's identity processing style and their academic performance. However, the current results do not corroborate previous findings between identity processing styles on academic performance. It was expected that there would be a statistically positive significant correlation between informational identity processing style and academic performance, as well as a statistically negative significant correlation between diffuse-avoidant identity processing style and academic performance (Berzonsky & Kuk, 2005; Boyd et al., 2003; Hejazi et al., 2009). The results in the current study only revealed a statistically negative significant correlation between normative style and academic performance.

Furthermore, the current analysis revealed a statistically negative significant relationship between normative identity processing style and academic performance but as discussed in the literature review previous studies (Berzonsky & Kuk, 2005; Berzonsky & Sullivan, 1992; Hejazi et al., 2009) have suggested that normative identity processing style does not relate significantly with academic performance. Also in addition to no significant findings there were multiple trends found between normative style and academic performance. As mentioned previously (Berzonsky & Sullivan, 1992; Hejazi et al., 2009) there was no significant result between normative style and academic performance but there was a negative correlation trend to academic performance. In another study (Berzonsky & Kuk, 2005) there was also no statistically significant correlation between normative style and academic performance but there was a positive correlation trend to academic performance. Therefore in the decision not to anticipate what the relationship between normative identity processing style on academic performance will be, current findings evidence that it is difficult



to anticipate the type of relationship normative identity processing style on academic performance.

The findings of this research imply that normative identity processing style had a different relationship to academic performance as compared to previous findings because of a combination of issues. One reason that could account for this discrepancy may be related to the characteristics of the sample. In a predominantly Caucasian sample (Berzonsky & Kuk, 2005) normative style students performed just as the informational style students academically. Both style students seemed to be performing well. The sample of the present study consisted of a mixed race group. Another reason for the differing result can be attributed to what was used to indicate academic performance. When more than one mean for students' grade point averages were taken into account (Hejazi et al., 2009) there was no statistically significant result but there was a negative correlation trend on academic performance. Academic performance in this study was determined by only one formal examination, that being the June Examination. A further reason for differential results can be due to gender representation in the sample. A complete sample of Caucasian females (Berzonsky & Sullivan, 1992) yielded a negative correlation trend on academic performance. This study did not consist of a homogenous representation of females. A last consideration for this study's contrasting result on the normative identity processing style is an unequal representation of race in a sample. When the Caucasian group was in the majority and other race groups were very minimally represented there was no significant result but there was a positive correlation trend on academic performance (Boyd et al., 2003). In the current study the African group was in the majority, followed by the Caucasian group who were half of the number of Africans, then the Indian and Coloured groups that were minimally represented. Therefore, it is proposed that owing to the unique characteristics of the present sample in comparison to other samples, there was a significant negative correlation of normative identity processing style on academic performance.

In the present study, one possible factor that led to the negative significant correlation between normative identity processing style and academic performance could be the fact that students' June Examination results were employed as a reflection of academic performance instead of November Examination results. If the November Examination results were utilised the outcome might have been different. By November the processes or strategies adolescents reportedly use to deal with identity conflicts would have improved as they would be more

accustomed to university life. Hence the resultant would be academic progress. As mentioned previously Berzonsky (1989) demonstrated one of the most important factors established to be associated with academic performance is degree of identity development or the definition of one's self in terms of roles, attitudes, beliefs, and ambitions. Consequently, this suggests that academic performance is influenced by levels of identity development. Another possible factor for the negative significant result could be due to the fact that by age 18 at the latest almost all late adolescents are capable of employing the social-cognitive strategies associated with the three orientations (Berzonsky & Kuk, 2005). Normative identity processing style was the preferred style in that problem-solving and decisional situation but due to the nature of the task (the June Examination) they were not able to cope. In order to cope with the academic demands of university it is required that students be sufficiently academically autonomous. Normative style students tend to cope better in a more structured environment. It can only be suggested that to a great degree, normative style students beginning university in the South African context are not utilising high levels of academic autonomy. They still need to look to others for assurance and approval. Lecturers are not able to provide the individual support required by such students hence, they feel lost and are not able to cope with their studies. Therefore in that specific problem solving situation they were unable to cope.

It was also expected that there would be a statistically positive significant correlation between informational identity processing style and academic performance in this study. Despite the current insignificant result it is still inferred that informational style students are able to cope with the academic demands of the first year of university. From the literature review it can be concluded that they are more successful at university in the first year because informational style students are independent, can work on their own and are able to make the necessary decisions to succeed (Berzonsky & Kuk, 2005). Therefore informational identity processing style is linked to high academic performance.

Additionally, it was anticipated there would be a statistically negative significant correlation between diffuse-avoidant identity processing style and academic performance but the finding was insignificant. By implication this result still shows that diffuse-avoidant identity style is associated negatively with academic performance. With reference to the literature review it is suggested that diffuse-avoidant students are not capable of setting personal goals. They have

a tendency to look up to and follow others and lack educational purpose which leads to a decrease in academic performance (Hejazi et al., 2009).

In addressing the second aim, to determine if there would be differential academic performance against the different identity processing the current study only revealed that students with an informational identity processing style seem to show differential academic performance as compared to students with a normative and diffuse-avoidant identity processing style. This being the case, further analysis could not be conducted regarding identity processing style and academic performance. Therefore this study cannot draw any conclusions concerning the second aim.

#### **5.4 Comparison between identity processing styles and academic performance**

The third aim of the current study was to determine the comparison of identity processing styles on academic performance. It was discovered there was a significant difference only between informational processing style and normative processing style on academic performance and between informational and diffuse-avoidant style on academic performance. There was no significant result between normative processing style and diffuse-avoidant style on academic performance. The finding between informational and normative processing style on academic performance in this study was not anticipated. It was expected that informational and normative students would perform significantly better than those who are diffuse-avoidant. However this finding can be understood based on the fact that informational processing style has always been associated with good academic performance but the relationship between normative identity processing style and academic performance varied (Berzonsky & Kuk, 2003; Berzonsky & Sullivan, 1992; Boyd et al., 2003; Hejazi et al., 2009). Some reasons for the discrepant result in the South African context are explained in terms of the influence of culture and context on identity processing styles. It seems that identity processing styles can be determined by race given the cultural orientation of the particular race group. According to Boyd et al. (2003) Caucasian adolescents are more autonomous because they place emphasis on self attributes like, “my effort”, “my dreams” and “my ideas” and according to research cope better academically (Boyd et al., 2003, p. 646) and are encouraged by their parents to be autonomous. Caucasian students had a high informational processing style score on Berzonsky’s (1992) ISI3. Diffuse-avoidant style students on the other hand were more Asian American and tended to be experiencing

academic difficulties (Boyd et al., 2003). In the same study African Americans and Hispanics were more normative style students and this was attributed to their collectivist self -attributes, but they performed well at university as compared to the normative style students in this study. In the current study it was only the Indian group that was significantly represented as normative processing style students and not also the African group as was expected. Perhaps a possible explanation for the discrepancy in the result is owed to the fact there is a new generation of South Africans born into a new South Africa. This so called “born free” generation of mostly black South Africans have grown up in a different world, and in particular a country that is very different to what their parents knew. They have benefitted from political change. For example many African youngsters attend ex-model C schools in areas that were previously exclusive to Caucasians only. In the process there would have been an integration of new values and an adoption of new ones causing the traditional collectivist culture of African young people to experience change. Although the present study did not measure how many African students in the sample attended ex model C schools it is apparent that first year university African students are seemingly not traditionally collectivistic as was expected. However, taking into consideration the cultural orientation of the Indian group that stresses collectivist self-attributes, the result on normative style was not surprising. Indian students for example tend to place emphasis on pleasing significant others like parents and other authority figures and make career decisions based on pleasing them (Saraswathi,1999). When they experience academic difficulties at university it is not because they are Indian but because their decisions are influenced by their cultural orientation and their beliefs are too rigid to make the necessary changes that could facilitate academic success (Berzonsky, 1997). The corroboration of the significant result between informational processing style and diffuse-avoidant style on academic performance with other investigations on the other hand was more predictable because of the congruent findings in previous research (Berzonsky & Kuk, 2003; Berzonsky & Sullivan, 1992; Boyd et al., 2003; Hejazi et al., 2009). Diffuse-avoidant students in all contexts of previous research experienced academic difficulties. Therefore it was anticipated that there would be a significant finding between informational and diffuse-avoidant processing style on academic performance in the current study. This confirmation of results with previous investigations indicated that diffuse-avoiders would be at risk academically in South Africa because they utilised the least adaptive and effective strategies in their first year at university (Berzonsky et al., 1999).

### **5.5 Comparison between race groups on academic performance**

Given the history of South Africa it was necessary to ascertain if academic performance of first year university students could be determined by race. Thus the fourth aim of the study was to investigate if race had an effect on academic performance. The current findings revealed significant differences in academic performance between the African and Caucasian in favour of the Caucasian group, as well as significant differences between the Indian and African groups, in favour of the Indian group. These findings which suggest that academic performance can be determined by race are consistent with previous research (Boyd et al., 2003). Significant differences in academic performance were found with different race groups. Caucasian students tended to perform well academically (Berzonsky & Kuk, 2005; Berzonsky & Sullivan, 1992; Hejazi et al., 2009). In another study (Boyd et al., 2003) where the sample consisted of a mixture of race groups, African Americans and Hispanics also seemed to be doing well academically. On the other hand, Asian Americans more than any other race group tended to experience academic difficulties (Boyd et al., 2009). These findings seem to support the assertion that academic performance can be determined by race in the United States. However as with previous research (Boyd et al., 2003) this study found that race on its own could not account for differences in academic performance.

Other factors like cultural norms tended to influence the way students performed academically (Boyd et al., 2003). In the South African context the sample group consisted of a mixture of race groups therefore any relationships discussed between academic performance and race cannot be taken at face value. Furthermore it is suggested that the differential results of race on academic performance cannot only be attributed to differences in race. There are other factors needing consideration like the context in which the different race groups live.

In terms of context many first year university students in South Africa come from a wide range of social and cultural backgrounds that give them very different life experiences, different educational opportunities and a great variety of expectations, needs and academic potential (Goduka, 1996). Additionally, at present the inequities of the apartheid era are still haunting the university context: slow change in traditionally African schools which are still educationally disadvantaged (Kagee, 1997) difficulties at university, poor family support, lack of effective study skills (Agar, 1990) financial strain, distance from home and language

barriers (Kapp, 1998) trauma from high levels of violence and poverty (Hamber, 2000) and shifting from a rural to an urban environment (Taljaard-Plaut, 1998). Such contextual factors place first year university students from previously disadvantaged backgrounds more at risk for experiencing difficulty in all spheres of university life including academic performance. By implication race alone cannot account for the significant differing academic results of the previously disadvantaged Indian and African groups.

From a sociocognitive point of view the dynamics of culture and context are found to determine identity processing styles (Bandura, 1989). From the literature review it was discovered that research in the arena of culture and identity processing styles seemed to complement each other. Therefore the criteria for informational and normative styles were in harmony with the findings on Caucasian, Indian and African cultural norms. More specifically, in present-day western cultures, the crucial developmental task of Caucasian adolescents is to gain autonomy from their parents and become independent adults (Kenyon & Koerner, 2009). In terms of identity processing styles research indicates that an informational identity orientation is associated with a personally-defined self-identity and independence of judgement (Berzonsky, 1994) and purposeful self-exploration (Grotevant, 1987). It was found that the Indian and African groups strive to preserve the norms and values of the family in particular and the culture in general, and this is often considered more important than developing one's individual identity (Helms & Cook, 1999; Nsamenang, 2002; Saraswathi, 1999). Identity style research indicates that a normative identity style is associated with a collective self-definition orientation and there is a tendency to be closed to information that poses a threat to personal values and beliefs (Berzonsky, 1994; Berzonsky & Sullivan, 1992). As a result, the findings of the present study reflect that the Caucasian group is largely information style because of their cultural orientation and they produced good academic results. The Indian group is significantly normative style and the African group is largely normative style, because of their cultural orientation and did not perform well academically. Therefore it becomes increasingly evident that race on its own cannot account for differential academic performance between the race groups.

This study has focussed on identity processing styles but as found; identity processing styles is influenced by cultural and contextual factors. As such the final aim is addressed. The aim was to determine whether there was a significant difference between the four racial groups on all the identity processing styles. In light of the previous discussion, the significant result on

normative style by the Indian and African groups confirms that when students in these race groups begin university they will be normative style. Therefore it can be concluded that identity processing styles can be determined by race but only when cultural factors are considered.

Another reason for the significant negative result on academic performance by the Indian and African race groups can be seen in terms of career choice. The proposed exploratory stage of the initial tapering of career options is between the ages of 15 and 24 (Super, 1990). However, in the South African context, due to collectivistic cultural norms of the majority of students attending university, the exploratory stage of career development might be extended to a much later age. This proposes that when normative style students begin university they do so with very little self choice in choosing a career and course subjects. Many who later realise that they would have preferred something else, either refuse to make necessary alterations like changing a major for the fear of disappointing the significant people in their lives or discover too late to change their career path and subject choice. Thus the high failure and drop-out rate of first year university students can also be attributed to wrong career and subject choice.

The current study also reveals that although both the Indian and African groups are normative orientated, there is a significant difference in academic performance between the two groups in favour of the former group. Such a result, being the first of its kind in South Africa requires attention especially in the interest of improving progression rates of first year university students. It is proposed that the differing academic performance of the two normative style groups (Indian and African) can be accounted for by the level of flexibility and openness between the two race groups. The level of flexibility depends on context and culture. It seems the Indian group is more urbanised and are less affected by the contextual factors mentioned above as opposed to the African group who live largely in semi-urban and rural areas and are more affected by the contextual factors mentioned above. Therefore there is significant difference on academic performance by the Indian group over the African group even though both race groups are normative style.

As hypothesised the understanding of the relationship between normative identity processing style and academic performance of first year university students is more complicated than

informational and diffuse-avoidant styles on academic performance. However, as found in this study the findings on normative style were more complicated than expected.

## **5.6 Practical implications of the results**

The present study attempted to investigate the relationship between identity processing styles and academic performance of first year university students in a South African context. The findings of identity processing styles as measured by the Identity Style Inventory (Berzonsky, 1992) on academic performance as measured by the June Examination results of Psychology I students indicated a relationship between normative identity processing style and academic performance. Informational style students performed better academically at university in the first year than normative and diffuse-avoidant style students. Normative and diffuse-avoidant style students were at risk of experiencing academic difficulties which could result in failure at the end of the year. If diffuse-avoidant and normative style students were identified as early as possible in their first year at university, proactive interventions can be designed to support and assist them to attain academic goals.

It is stated that diffuse-avoidant style students fail to attend to detail and operate globally forgetting commitments (Berzonsky & Kuk, 2005). In this case intervention strategies targeting this group should focus on planning and time management, vital for studying and learning. Normative style students on the other hand are more inflexible and have a high need for structure. Further practical implications of this study involve trying to bridge the gap between high school and university because universities are faced with admitting large numbers of students from previously disadvantaged backgrounds that are expected to be normative or diffuse-orientated. They will find it difficult to adapt to university life based on the discussion in the section above. The fact that so many factors can be important in influencing academic performance of first year students is the main reason that single measures will not on its own ensure improved academic performance in the first year at university.

Perhaps a compulsory pre-university orientation course should be installed after grade 12 so that new university entrants could be well equipped to deal with the real experience. Prior investigation on the problems first year university students encounter should be conducted and a relevant curriculum for the programme be established. University administrators could



provide more supportive learning environments to enhance the chances that students will be successful and lecturers could also use the information to enhance the influences of positive factors on student learning. The influence of negative factors could also be minimised accordingly. It is recommended that students be assisted and supported to approach university studies in a way that will increase their chances of success, skills need to be taught on how to function in a less structured environment. Both normative and diffuse-avoidant style groups would benefit from being trained to anticipate difficulties, to develop effective coping strategies, and to be educated in effective methods to improve academic skills. Setting appropriate goals, constructing a good study environment and effective time management are also considered important. First-year university students may have unrealistic expectations about the non-academic factors that could reduce their chances of successful study and this should also be taken into account.

Currently, in South African universities, students are expected to be academically autonomous despite deprived educational experiences of the majority of students. Bearing in mind the findings of this study it is evident that although normative style students might have well-defined educational plans and are conscientious and goal directed they seek approval from parents, friends and lecturers. This indicates that normative style students in particular will experience difficulty in most situations where independence and self-regulating learning is emphasised because they depend on prescriptions from significant others (Berzonsky & Kuk, 2002). This situation demands for more student support by lecturers and student intervention programmes that focus on addressing difficulties associated with gaining academic autonomy. Self-study for example might not be the obvious route to take for struggling normative style students. Therefore it is advised that one focus in an intervention addressing this need should be in the area of resources and strategies to use when academia becomes difficult.

Additionally, research shows normative style students' educational objectives are controlled by significant others (Berzonsky & Kuk, 2005) and diffuse-avoidant students lack educational purpose (Nurmi et al., 1997). Therefore it is stressed that career counselling be a prime objective for students exiting high school. By the time students enter university they should have career clarity. Furthermore significant others like parents should be incorporated into the programme so that the career guidance can be well received and utilised for the overall benefit of the student.

## **5.7 Limitations of the study**

While findings from the present study provide some significant information on the relationship between identity processing styles and academic performance of first year university students there are a few inherent limitations that require consideration. A major limitation of this study is the fact that the sample only consisted of first year psychology students. Further, the sample was drawn from one university only so generalisations should be made cautiously.

Secondly, data was collected mid-year when students were faced with the first significant examination. Two issues emerge from this, (1) the first major examination is met with great amount of uncertainty and students' academic performance might improve with more experience, and (2) due to university experience student midyear identity processing styles might be different later in the year.

Thirdly, the race distribution in the sample was unbalanced. The majority of students were of the African group, followed by Caucasians who were half the number of the African group and a very small representation of Indians and Coloureds. If the sample was equally represented in terms of race the results might have been different. Thus as mentioned previously, the results of this study must be considered with care.

## **5.8 Suggestions for future research**

This research provides insights into the relationship between normative identity processing style and academic performance and submits the Identity Style Inventory (ISI3) as an identity style assessment tool within the South African context. Several submissions are presented:

Adolescence is categorised into early, middle and late adolescence. By the time adolescents reach university, it is late adolescence. Then all major career decisions have been made, coping strategies and social skills have been learnt. In other words students will begin university with identity processing styles based on past experience. It would be of tremendous benefit to follow the identity development of these students over a longer period. Thus this study makes the submission for a longitudinal study over a long period of time and in more than one context. In so doing there will be stronger validity of conclusions as the

study will have sufficient measurement points to distinguish between patterns. There will also be a greater authenticity of insights, and more time will be available for more conceptual attention on what identity is about. Over a longer period of time more information becomes available on how threats to validity may be reduced or eliminated. Additionally, more implications for education and the curriculum can be highlighted. Lastly data analysis and conclusions would be more productive if more dimensions remain constant.

Lastly, previous research on identity formation, identity development and identity processing styles has been conducted in the international arena and samples of major studies have mostly been Caucasian. The different finding on identity processing styles in the current context suggests more in-depth research on personal identity is necessitated on South African soil. Given the sociocognitive stance of this study, and a sociocognitive perspective in general, it is imperative to carry out this research in various contexts.

## **5.9 Conclusion**

This study purported that a student's identity processing styles – a result of a combination of environmental context and intrapersonal factors - will give a clearer, more accurate understanding of academic performance of first year university students in a South African context. The Identity Style Inventory (ISI3) was used as an identity styles assessment tool and June Examination results were employed as a measure of academic performance. Even though the ISI3 had poor reliability for this study significant findings reveal that there is a relationship between identity style and academic performance. More specifically, results show a statistically negative significance on normative identity processing style and academic performance with a positive trend on informational style and academic performance and a negative trend on diffuse-avoidant style and academic performance. In addition, albeit the normative result is incongruent to normative results overseas, usefulness of employing identity processing styles to determine academic performance has been established. Lastly, given the historical background of the South African context variations in the normative style result was anticipated and academic performance could not be determined. Therefore it can be concluded normative identity processing style is complicated and further research on the African continent is required to address the finding.

Nonetheless identity processing styles is regarded to assist tertiary institutions to improve progression rates by early detection of students at risk of failure in the first year. In addition more specific and relevant interventions can be installed to ensure attainment of academic goals when student identity processing styles are considered.

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## **APPENDICES**

APPENDIX A: HISTOGRAMS

APPENDIX B: ISI 3

APPENDIX C: DEMOGRAPHIC QUESTIONNAIRE

APPENDIX D: INFORMATION SHEET – HEAD OF DISCIPLINE

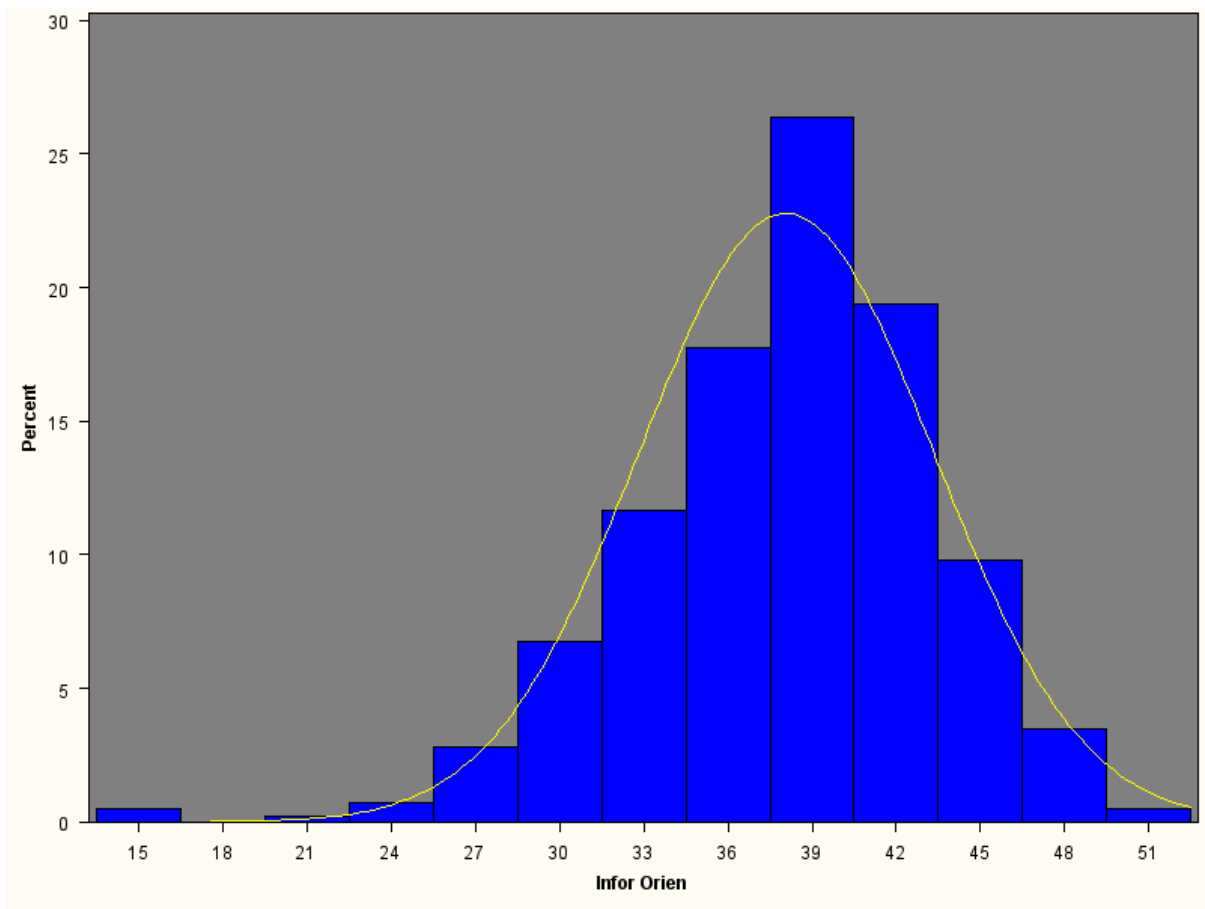
APPENDIX E: INFORMATION SHEET – COURSE COORDINATORS AND LECTURERS

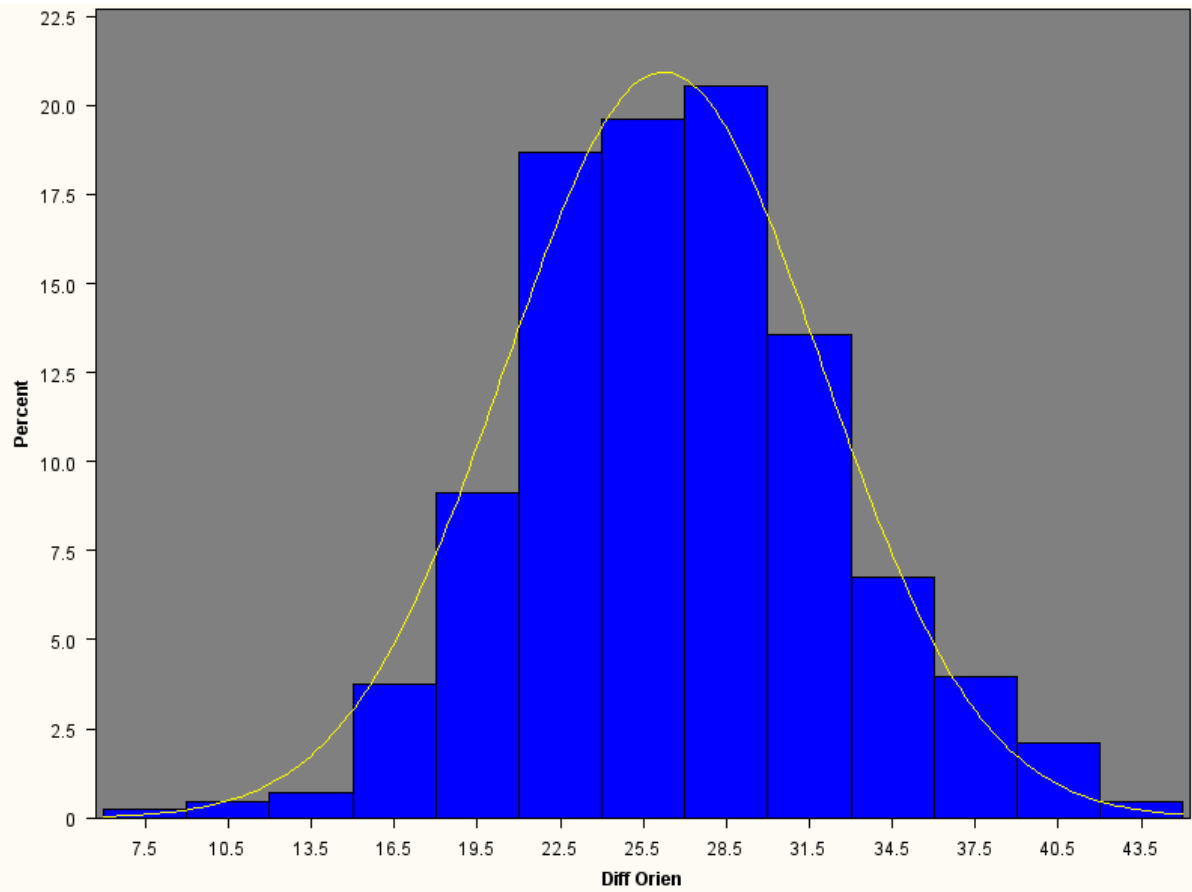
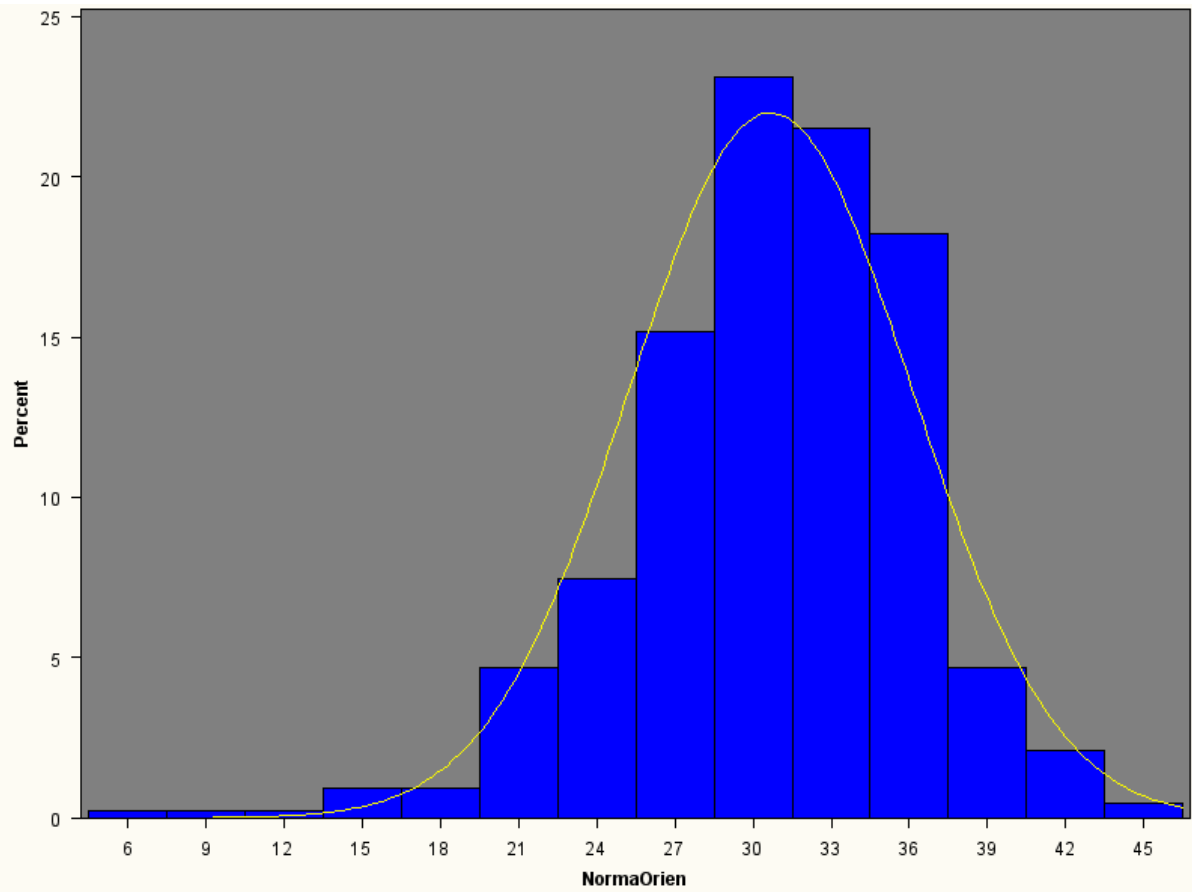
APPENDIX F: PARTICIPANT INFORMATION SHEET

APPENDIX G: CONSENT FORM



## **APPENDIX A: HISTOGRAMS**





**APPENDIX A: IDENTITY STYLE INVENTORY** (Berzonsky M. , 1992)

**PERSONAL SIMILARITIES**

**Berzonsky's Scale (ISI3)**

**INSTRUCTIONS:**

**You will find a number of statements about beliefs, attitudes, and/or ways of dealing with issues. Read each carefully, then use it to describe yourself. On the answer sheet, circle in the number which indicates the extent to which you think the statement represents you. There are no right or wrong answers. For instance if the if the statement is very much like you, mark a 5, if it is not like you at all, mark a 1. Use the 1 to 5 point scale indicate the degree to which you think each statement is uncharacteristic (1) or characteristic (5) of yourself.**

		1) Not at all like me	2) Not like me	3) Undecided	4) Like me	5) Very much like
1	Regarding religious beliefs, I know basically what I believe and don't believe.	1	2	3	4	5
2	I've spent a great deal of time thinking seriously about what I should do with my life.	1	2	3	4	5
3	I'm not really sure what I'm doing in university; I guess things will work themselves out.	1	2	3	4	5
4	. I've more-or-less always operated according to the values with which I was brought up.	1	2	3	4	5
5	I've spent a good deal of time reading and talking to others about religious ideas.	1	2	3	4	5
6	When I discuss an issue with someone, I try to assume their point of view and see the problem from their perspective	1	2	3	4	5
7	I know what I want to do with my future.	1	2	3	4	5
8	It doesn't pay to worry about values in advance; I decide things as they happen.	1	2	3	4	5
9	. I'm not really sure what I believe about religion.	1	2	3	4	5
10	I've always had purpose in my life; I was brought up to know what to strive for.	1	2	3	4	5
11	I have some consistent political views; I have a definite stand on where the government and country should be headed.	1	2	3	4	5
12	I'm not sure which values I really hold.	1	2	3	4	5
13	Many times by not concerning myself with personal problems, they work themselves out.	1	2	3	4	5
14	I'm not sure what I want to do in the future.	1	2	3	4	5
15	I'm really into my major; it's the academic area that is right for me.	1	2	3	4	5
16	I've spent a lot of time reading and trying to make some sense out of political issues.	1	2	3	4	5
17	I'm not really thinking about my future now; it's still a long way off.	1	2	3	4	5

		1) Not at all like me	2) Not like me	3) Undecided	4) Like me	5) Very much like
18	I've spent a lot of time and talked to a lot of people trying to develop a set of values that make sense to me.	1	2	3	4	5
19	Regarding religion, I've always known what I believe and don't believe; I never really had any serious doubt	1	2	3	4	5
20	I'm not sure what I should major in (or change to).	1	2	3	4	5
21	I've known since high school that I was going to university and what I was going to major in	1	2	3	4	5
22	I have a definite set of values that I use in order to make personal decisions.	1	2	3	4	5
23	I think it's better to have a firm set of beliefs than to be open-minded.	1	2	3	4	5
24	When I have to make a decision, I try to wait as long as possible in order to see what will happen.	1	2	3	4	5
25	When I have a personal problem, I try to analyze the situation in order to understand it.	1	2	3	4	5
26	I find it's best to seek out advice from professionals (e.g., psychologists, doctors, lawyers) when I have problems.	1	2	3	4	5
27	It's best for me not to take life too seriously; I just try to enjoy it.	1	2	3	4	5
28	I think it's better to have fixed values, than to consider alternative value systems.	1	2	3	4	5
29	I find that personal problems often turn out to be interesting challenges.	1	2	3	4	5
30	I try not to think about or deal with problems as long as I can.	1	2	3	4	5
31	I try to avoid personal situations that will require me to think a lot and deal with them on my own.	1	2	3	4	5
32	Once I know the correct way to handle a problem, I prefer to stick with it	1	2	3	4	5
33	When I have to make a decision, I like to spend a lot of time thinking about my options.	1	2	3	4	5
34	I prefer to deal with situations where I can rely on social norms and standards.	1	2	3	4	5
35	. I like to have the responsibility for handling problems in my life that require me to think on my own.	1	2	3	4	5
36	Sometimes I refuse to believe a problem will happen, and things manage to work themselves out.	1	2	3	4	5
37	When making important decisions I like to have as much information as possible	1	2	3	4	5
38	When I know a situation is going to cause me stress, I try to avoid it.	1	2	3	4	5
39	To live a complete life, I think people need to get emotionally involved and commit themselves to specific values and ideals.	1	2	3	4	5
40	I find it's best for me to rely on the advice of close friends or relatives when I have a problem.	1	2	3	4	5

## **APPENDIX C: DEMOGRAPHIC QUESTIONNAIRE**

### **Demographic Questionnaire**

**Please provide the following demographic information:**

**1. Name:** \_\_\_\_\_ **Student number:** \_\_\_\_\_

**2. Age:** \_\_\_\_\_ **3. Gender:** Male | Female |

**4. Race/Ethnicity:**

4.1 African | 4.3 Coloured |

4.2 Indian | 4.4 White |

**5. Home Languages:**

5.1 Afrikaans | 5.7 English |

5.2 Isizulu | 5.8 Ndebele |

5.3 Sepedi | 5.9 Sotho |

5.4 Swati | 5.10 Tsonga |

5.5 Tswana | 5.11 Venda |

5.6 Xhosa | 5.12 Other \_\_\_\_\_

**6. School Type (Matriculation)**

6.1 Government school |

6.2 Independent / private school |

6.3 Former Model C |

6.4 Other \_\_\_\_\_ |

**7. Parental education: Please tick one box to indicate the years of schooling of your parents or guardians. If one is deceased, please tick N/A**

	BELOW GRADE 10	GRADE 10	BELOW GRADE 12	GRADE 12	COLLEGE DIPLOMA	UNIVERSITY DEGREE	POSTGRADUATE DEGREE	N/A
FATHER								
MOTHER								

**8. Parental occupation**

Father : \_\_\_\_\_

Mother : \_\_\_\_\_

Guardian: \_\_\_\_\_

## **APPENDIX D: INFORMATION SHEET – HEAD OF DISCIPLINE**



School of Human and Community Development

Private Bag 3

Wits 2050,

Johannesburg, South Africa

Tel: (011) 717- 4500

Dear Professor Duncan

### **RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN THE DEPARTMENT OF PSYCHOLOGY**

My Name is Mrs Renée Ramdin. I am currently a master's student in Educational Psychology at the University of The Witwatersrand. In order to fulfill the requirements for a M. Ed. Psychology degree I wish to conduct research about the effect of identity processing styles on academic performance of first year university students. A body of literature points to a need to investigate reasons why most first year university students fail. Studies indicate that there is 35 percentage failure rate in South African universities and over fifty percent overseas. Although there may be several reasons responsible for high failure rates of first year students, the current study intends to establish if the identity processing style is associated with academic performance. The focus on identity processing style in relation to academic performance is crucial, especially given that studies conducted in this area have largely emphasised on identity as an outcome and not a process. According to Berzonsky (2000) a researcher in identity processing styles, academic performance can be linked to identity processing styles. Through carrying out this investigation, it is hoped that valuable insight will be gained about how academic performance is affected by identity processing styles. Since the study has not been carried out in South Africa, this will be the first.

This is a quantitative study. A non-probability purposive sampling approach will be used to select participants - first year psychology students between the ages of 17-21 years. A sample of 300 students will participate in the study. Data will be collected through the use of a: demographic questionnaire, identity style inventory and a record of student's June examination results. Descriptive and inferential statistics will be employed to analyse the data from the responses of the subjects of this study. A skewness statistic will be used for normal distributions. To determine the distribution of the scores (test for normality) of the ISI3, Kolmogorov-Smirnov (K-S) test will be used. Depending on the outcomes of the distribution of the data Pearson's or Spearman's rank for correlating will be used. Multiple regression analysis will be calculated to determine which identity processing style will significantly predict academic performance.

The research results shall be presented in terms of a research report keeping to requirements set out by the department of psychology. Participants will be allowed nonparticipation at any

point. It should be noted that only my supervisor and I will have access to the survey. On completion of this research all raw data shall be kept for four years for research and publication and will then be destroyed.

This is a request for permission to conduct the study in the Department of Psychology. It would be appreciated if you could inform me in writing regarding your decision on this matter. Should you have any other queries do not hesitate to contact me.

Kind Regards

Mrs Renée Z. Ramdin      reneeramdin@gmail.com

Supervisor: Dr C.Gordon 0117174527 [charmaine.gordon@witd.ac.za](mailto:charmaine.gordon@witd.ac.za)

Supervisor: Mr J. Seabi 011 717 8331 joseph.seabi@wits.ac.za



## **APPENDIX E: INFORMATION SHEET – COURSE COORDINATORS AND LECTURERS**



School of Human and Community Development

Private Bag 3

Wits 2050,

Johannesburg, South Africa

Tel: (011) 717- 4500

Dear Sir or Madam

### **RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN THE DEPARTMENT OF PSYCHOLOGY**

My Name is Mrs Renée Ramdin. I am currently a master's student in Educational Psychology at the University of The Witwatersrand. In order to fulfill the requirements for a M. Ed. Psychology degree I wish to conduct research about the effect of identity processing styles on academic performance of first year university students. A body of literature points to a need to investigate reasons why most first year university students fail. Studies indicate that there is 35 percentage failure rate in South African universities and over fifty percent overseas. Although there may be several reasons responsible for high failure rates of first year students, the current study intends to establish if the identity processing style is associated with academic performance. The focus on identity processing style in relation to academic performance is crucial, especially given that studies conducted in this area have largely emphasised on identity as an outcome and not a process. According to Berzonsky (2000) a researcher in identity processing styles, academic performance can be linked to identity processing styles. Through carrying out this investigation, it is hoped that valuable insight will be gained about how academic performance is affected by identity processing styles. Since the study has not been carried out in South Africa, this will be the first.

This is a quantitative study. A non-probability purposive sampling approach will be used to select participants - first year psychology students between the ages of 17-21 years. A sample of 300 students will participate in the study. Data will be collected through the use of a: demographic questionnaire, identity style inventory and a record of student's June examination results. Descriptive and inferential statistics will be employed to analyse the data from the responses of the subjects of this study. A skewness statistic will be used for normal distributions. To determine the distribution of the scores (test for normality) of the ISI3, Kolmogorov-Smirnov (K-S) test will be used. Depending on the outcomes of the distribution of the data Pearson's or Spearman's rank for correlating will be used. Multiple regression analysis will be calculated to determine which identity processing style will significantly predict academic performance.

The research results shall be presented in terms of a research report keeping to requirements set out by the department of psychology. Participants will be allowed nonparticipation at any point. It should be noted that only my supervisor and I will have access to the survey. On

completion of this research all raw data shall kept for four years for research and publication and will then be destroyed.

This is a request for permission to conduct the study in the Department of Psychology. It would be appreciated if you could inform me in writing regarding your decision on this matter. Should you have any other queries do not hesitate to contact me.

Kind Regards

Mrs Renée Z. Ramdin      reneeramdin@gmail.com

Supervisor: Dr C.Gordon 0117174527 [charmaine.gordon@witd.ac.za](mailto:charmaine.gordon@witd.ac.za)

Supervisor: Mr J. Seabi 011 717 8331 [joseph.seabi@wits.ac.za](mailto:joseph.seabi@wits.ac.za)

## **APPENDIX F: PARTICIPANT INFORMATION SHEET**



School of Human and Community Development

Private Bag 3

Wits 2050,

Johannesburg, South Africa

Tel: (011 717- 4500

Dear Student

My name is Renée Ramdin and I am conducting research for the purposes of obtaining a Masters at the University of the Witwatersrand. My area of focus is that of identity styles, and how these affect academic performance of first year university students.

A body of literature points to a need to investigate reasons why most first year university students fail. Studies indicate that there is 35 percentage failure rate in South African universities and over fifty percent overseas. Although there may be several reasons responsible for high failure rates of first year students, the current study intends to establish if the identity processing style is associated with academic performance. The focus on identity processing style in relation to academic performance is crucial, especially given that studies conducted in this area have largely emphasised on identity as an outcome and not a process. According to Berzonsky (2000) a researcher in identity processing styles, academic performance can be linked to identity processing styles. Through carrying out this investigation, it is hoped that valuable insight will be gained about how academic performance is affected by identity processing styles. Since the study has not been carried out in South Africa, this will be the first.

On the day of collecting the data, you will be given instructions for filling in the questionnaire. Thereafter, questionnaires will be handed out after which you will be required to fill it in. This process should take approximately fifteen minutes. Subsequently, the questionnaires will be collected and will be placed in a sealed box, which I will collect and store in a safe locked up area. This will ensure that no one will have access to the completed questionnaires, and will ensure your confidentiality. Information from the questionnaire will be correlated with the results from your June Examination, which we will collect from the course coordinator. This information will also be kept confidential.

Participation is voluntary, and no student will benefit or be disadvantaged in any way for choosing to complete or not complete the questionnaire. Questions are asked about your beliefs, attitudes, and or ways of dealing with issues. Identifying information, such as your name, age, sex, race, school and parents years of schooling and occupation is asked for. Your completed questionnaire will not be

seen by any person in this university at any time, and will only be processed by myself. Your responses will only be looked at in relation to all other responses. It will also be necessary for the study to access the June examination results.

Your participation in this study would be greatly appreciated. This research will contribute to a larger body of knowledge on academic performance and transition to university, as well as to your understanding of the role identity styles play in the transition. This can help to inform curriculum development in high school.

Kind Regards

Mrs Renée Z. Ramdin      [reneeramdin@gmail.com](mailto:reneeramdin@gmail.com)

Supervisor: Dr C. Gordon    011 7174527    [charmaine.gordon@witd.ac.za](mailto:charmaine.gordon@witd.ac.za)

Co Supervisor: Mr J. Seabi    011 717 8331    [joseph.seabi@wits.ac.za](mailto:joseph.seabi@wits.ac.za)

## **APPENDIX G: CONSENT FORM**

I \_\_\_\_\_ as \_\_\_\_\_ of \_\_\_\_\_

hereby agree to participate in research regarding the effect of identity processing styles on academic performance of first year psychology students. I also grant permission for the use of my June Examination results for the purpose of this study. I understand that I am participating freely. I also understand that I can withdraw my participation at any point should I not want to continue and that this decision will not affect me negatively in any way.

The purpose of the study has been explained to me, and I understand what is expected of my participation. I have received contact details should I require contacting anybody if issues do arise.

I understand that this consent form will not be linked to the questionnaire and that my answers will remain confidential. I also understand the results of this research will be made available in the final report of this research, which might be published in a scientific journal

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date