

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1. INTRODUCTION

The point of departure for this study is the development of a theoretical framework to explain students' perception of readiness for university education. To conceptualise students' readiness for university education, the theoretical framework consists of:

- Readiness theory (Conley, 2007)
- Transition theory (Schlossberg et al., 1995; Tinto, 1993)
- Longitudinal model of student departure (Tinto, 1993)
- Psychological model of college student retention (Bean & Eaton, 2000)
- Psychological perspectives: constructs that have been related to student success include attribution theory, expectancy theory, achievement goal theory and self-efficacy theory.

The readiness model of Conley (2007) is explained firstly to indicate that readiness for university education is not only associated with academic performance in school or with measures of ability on psychometric tests, but also with socio-cultural and motivational factors. Researchers like Sedlacek (2004, 2005) and Camara (2005a, 2005b) identified the non-cognitive and/or demographic characteristics of students to be used as an admission tool to determine risk and to determine developmental needs. Entry characteristics in the form of demographic variables have shown to predict accomplishment later in one's academic career, for example from school to university (Sedlacek, 2005). Authors like Tinto (1993) and Braxton et al. (2004) have identified a direct relationship between the elements associated with readiness and withdrawal behaviour, including high school academic achievement. The assumption is that students

demonstrate a consistency in their behaviours, attitudes, and values (in other words research in this area will generate the potential to predict future behaviour based on past behaviours).

Secondly, transition theory is briefly discussed to indicate the nexus between readiness theory and the experience of students within the institutional environment. Thirdly, three retention models from various perspectives are discussed to explain the interaction and elements associated with student retention and success. The three models are regarded as reputable by scholars and have been cited or have been empirically researched on many occasions (Braxton et al., 2004). The principal model seems to be Tinto's longitudinal theory of student departure (1993). The majority of researchers use this model as a platform for their own theories or models, such as Braxton et al. (2004, p. 29) and Bean and Eaton (2000). Following in these footsteps, the researcher will use Tinto's theory as a point of entry before moving on to other models.

The entry characteristics identified in the models are summarised and discussed separately in an attempt to determine their relationship with academic achievement or withdrawal behaviour. The readiness characteristics are discussed individually because the withdrawal and retention models do not show the true complexity associated with each element. The theories used are for instance, achievement goal theory, expectancy theory and attribution theory. The expectancy-value model has shown importance in explaining readiness for university education and the choices that students make. The expectancy-value model will therefore be used as the main psychological theory. The remainder of the theories will be discussed to indicate the intricacies and associations of the discussed theory and how it relates to readiness for university education.

In conclusion, a context specific readiness model is proposed that will include the readiness characteristic of first-year students and how these characteristics relate to withdrawal behaviour and academic achievement.

## **2.2. KEY CONCEPTS CLARIFIED**

### **2.2.1. Retention**

Retention refers to the ability of an institution to retain a student from admission to the university through to graduation (Berger & Lyon, 2005).

### **2.2.2. Withdrawal**

Withdrawal refers to the departure of a student from a university campus (Berger & Lyon, 2005).

### **2.2.3. Non-cognitive Variables**

Non-cognitive refers to variables relating to adjustment, motivation and self-concept (Sedlacek, 2005).

### **2.2.4. Persistence**

According to Tinto (1993), persistence refers to the students' decision to continue with their studies. Retention is measured from the institutions' side, while persistence is the measure from the students' side.

## **2.3. LITERATURE DISCUSSION**

Conley's theory on readiness for university education will be discussed in the section below, followed by Tinto's theory on student transition from high school to higher education. This will be followed by a discussion of three retention models.

### 2.3.1. Readiness Theory

Readiness for university education can be defined as the level of preparation a student needs in order to enrol and succeed, without remediation in a credit-bearing programme at a higher education institution (Conley, 2007, p. 1). Readiness for university education is predominantly associated with high school academic achievement and frequently with the results of admission tests (Byrd & MacDonald, 2005; Conley, 2007). In addition to academic achievement, the participants of Byrd and MacDonald's study pointed to additional factors associated with readiness, namely (a) skills in time-management, (b) motivational factors, (c) background factors and (d) student self-concept (Byrd & MacDonald, 2005). The readiness skills and abilities that are important for readiness for university education are further listed below (Byrd & MacDonald, 2005):

The first category identifies participant ideas about skills and abilities:

- Academic skills: the essential academic skills that are included are (a) reading, (b) writing, (c) math, (d) technology, (e) communication and (f) study skills.
- Time management: managing the responsibilities that are associated with the course requirements and 'balancing' personal or family responsibilities.
- Goal focus: the ability to apply oneself and focus on a goal.
- Self-advocacy: being able to speak up for one's needs and to seek help when necessary.

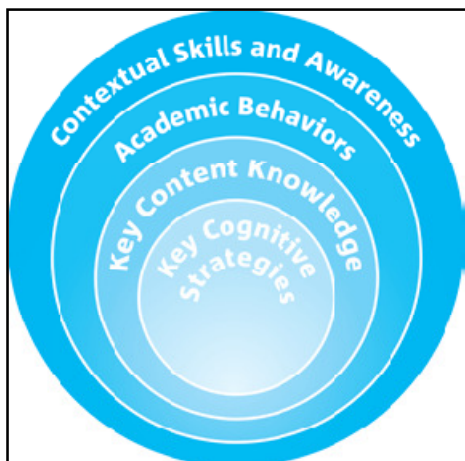
The second category, background, identifies factors discussed by participants as influential to a decision to enrol or prepare for higher education:

- Family factors: family experiences or expectations about higher education that influence decision or readiness.
- Career influences: work experience related to college readiness or career motivations that influenced the decision to go to college.
- Financial concerns: experiences and issues about finances and attending higher education.
- High school preparation: high school and community college educational experiences that contribute to readiness for university.

The third category, student self-concept, relates to a sense of identity as a student and ideas related to navigating the institutional culture.

- Self-concept: identity as a student and/or changes to self-concept as a result of educational experiences.
- Institutional system: understanding the system, standards and culture of the institution.
- Irrelevant information: information that is irrelevant to understanding college readiness.

The three categories of readiness that were identified by Byrd and MacDonald's (2005) qualitative study are confirmed by the research of Conley (2007) on readiness for university over a number of years. Conley (2007) suggests a broad definition of readiness that includes cognitive strategies, acquiring content knowledge, academic behaviours, and contextual knowledge and skills (refer to Figure 2.1.). Conley explains that the various elements of readiness are neither mutually exclusive nor perfectly nested as they appear to be in the model, because they interact with and affect one another extensively.



**Figure 2.1. Elements of college readiness** (Conley, 2007, p. 8)

The most central of the elements according to Conley (2007) is key cognitive strategies and is defined as the development of cognitive abilities through planned and practiced behaviours. The key cognitive strategies that are referred to in the model are amongst other conceptual and evaluative thinking, synthesising and problem solving (see Conley, Lombardi, Seburn & McGaughy, 2009, p. 4). These tasks are usually part of a high school curriculum and are demonstrated primarily through learning activities and tasks. These strategies should be expected to develop over time and have to be honed at high school because they are necessary to attain academic success at university.

Many of the cognitive strategies important for university are assessed by ability tests. Ability tests are frequently used to select high school students for university education (Conley, 2007). A number of researchers however contest the use of ability tests alone as a selection tool, because it does not allow for the influence of psycho-social factors that also contribute in explaining the variance of academic success (Conley, 2007; Sedlacek, 2005; Sternberg, 2007). Conley stresses that the development of cognitive strategies cannot be measured adequately by ability tests, as these are 'static' by nature and therefore imply the need for a 'continuous measurement system that is sensitive to increasing sophistication and elaboration of capabilities and not just counting the presence or absence of particular elements' (2007, p. 16). Conley suggests the collection of evidence that a skill or strategy has been developed and that the student is proficient at performing it.

The second element of readiness is on acquiring key content knowledge. Content knowledge is dependent on developing and using cognitive strategies because it is through the use of key cognitive strategies that content knowledge is achieved (Conley, 2005, 2007). Thus in order to be ready for university, a student has to have knowledge of the skills that are inherently part of specific school subjects, such as maths, languages and the sciences. It is not about the subject *per se* but the type of skills that are nurtured when one is engaged with the subject. English studies, for instance, teaches students to 'engage texts critically and create well written, organized, and supported work products in both oral and written formats' (Conley, 2007, p. 10). It is therefore not only about learning a language but about the skills that are acquired when being involved with the

subject and the ability to transfer the skills to the context of the university. It is therefore important that content knowledge is formally measured by end-of-course exams at high schools and that these tests comply with the standards and expectations of higher education.

The third element of readiness is academic behaviours, consisting of meta-cognitive skills and study skills (Conley, 2007). The meta-cognitive skills compose of self-awareness, self-monitoring and self-control. The study-skill behaviours compose of time management, which according to Conley (2007) refers to planning a task, setting up the study environment, breaking up the tasks into manageable chunks and balancing competing tasks. Academic behaviours also allude to engaging with peers and lecturers on academic matters, using literature resources effectively and being engaged in class (Conley, 2007, p. 13). Academic behaviours can be measured with surveys and questionnaires where students list their methods, tools and strategies in areas such as study skills, time management and self management (Conley, 2007, p. 17).

Lastly, contextual knowledge and skills refers to the ability to adapt and understand the context or climate of the institution. 'Examples of key context skills and awareness include a systemic understanding of the postsecondary educational system combined with specific knowledge of the norms, values, and conventions of interactions in the college context, and the human relations skills necessary to cope with and adapt to this system, even if it is radically different from the community in which a particular student was raised' (Conley, 2007, p. 13). Accordingly, students who do not understand or who are unable to adapt to the norms, values and expectations of the institution are more likely to feel alienated and have intentions to withdraw voluntarily (Conley, 2007). The concept of 'biculturalism' as explained by Rodgers and Summers (2008) and the concept of understanding racism by Sedlacek (2005) are evident here.

The contextual skills and awareness element of Conley also consists of social and interpersonal skills that allow students to work in groups, converse with students from different cultural backgrounds and indicate leadership skills too. Another important area of contextual awareness is known as 'college knowledge' (Conley, 2007, p. 13). College

knowledge refers to an understanding of the bureaucratic processes that are associated with applying, enrolling and studying at a university (Bean & Eaton, 2000; Conley 2007).

‘Student contextual knowledge about, and understanding of, the entire process of college admissions, financial aid, and successful functioning in college can be determined relatively readily through questionnaires’ (Conley, 2007, p. 17). Conley alludes that the most important use for the information is as a general indicator of the quality of the induction programme of an institution. Individual students’ information on the other hand provides a diagnostic perspective on areas where additional information is needed, the overall profile of a student’s values, norms and inter-personal skills.

Student contextual knowledge and skills refers to an understanding of the context or climate of the institution and can only be fully understood through transition theory.

### **2.3.2. Transition Theory**

Schlossberg, Waters and Goodman define transition as ‘...any event, or non-event, that results in changed relationships, routines, assumptions and roles’ (1995, p. 27). Schlossberg et al. (1995) differentiate between three types of transitions, namely anticipated transitions, unanticipated transitions and non-event transitions. An anticipated event could simply refer to a graduating high school student deciding to enrol at a university for a specific degree. The loss of a financial support source and not being able to study your first choice are examples of an unanticipated or a non-event transition relating to the loss of anticipated aspirations due to financial pressures or changes in career aspirations. In the event of any of the types of personal transitions, the evaluation of the transition is vital to how one thinks, feels and copes with the transition or non-event. The extent of the impact on for instance relationships, routines, motivation and expectations are most important in the evaluations of the transition (Schlossberg et al., 1995, p. 31; Beyers & Goossens, 2003, p. 377).



Van Gennep's 'Rites of Passage' (as cited in Tinto, 1993, p. 92) studies the process of establishing membership in traditional societies from a socio-anthropological perspective. Tinto's research on the movement of individuals from membership in one group to another is based on Van Gennep's work. Van Gennep identified three stages of passage (towards becoming a full member of the 'new' group), namely separation, transition and incorporation. Tinto used these three stages of passage as a basis for his reasoning on how a student becomes integrated within the institutional system over time.

According to Tinto (1993), first-year students are in a separation phase where they have to distance themselves as members of their past communities, for example; home and school. Schlossberg et al. states that one has to 'disidentify with one's previous roles' in the first phase of transition and take up the role of being a student (1995, p. 39). It does not mean that a student has to give up their norms, values and beliefs in order to take on the role of being a student (Bean & Eaton, 2000; Kuh & Love, 2000, p. 199; Tinto, 1993). Kuh and Love (2000, p. 201) reason that it is a student's 'meaning-making system' (values, beliefs and perspectives on what a higher education degree entails and what it means to be a student) that determines institutional fit and commitment.

Likewise, the academic and social communities of universities have their own characteristics. According to Kuh and Love (2000, p. 198) higher education institutions develop cultures and traditions over time, each '...expressed through daily interactions and routines, common symbols, and special ceremonies and traditions'. This implies a multitude of relationships between students and lecturers from the institutions, which indirectly and directly influence the values, norms and beliefs that constitute the culture of the institution (Kuh & Love, 2000). Consequently, these interactions have certain effects on students and the institution in the way involvement is nurtured, effort is encouraged and persistence is reached (see Hawkins & Larabee, 2009).

The transition phase refers to the shift from the old to the new by conforming to the norms, values and behaviour of the new community. Large discrepancies between the values, norms and behaviour of the old and the new complicate the transition to the new

community (Kuh & Love, 2000). The transition phase, according to Tinto (1993), is not always identical for each student because individual experiences vary considerably and the shift is not necessarily clearly sequenced. Individual goals and intentions play a role in making a successful transition and differ between students.

Bean and Eaton (2000, p. 51) indicate that the first semester is generally regarded as a period of transition where students have to adjust to the new institutional environment as well as manage increased levels of stress (see Hawkins & Larabee, 2009, p. 180; Tinto, 1993, p. 58; Upcraft, Gardner & Barefoot, 2005). Students who are able to adjust to the new environment experience a sense of belonging to the environment and those who do not experience feelings of isolation. Bean and Eaton (2000) argue that an individual not only has to adjust to the new environment, but has to adapt too. Bean and Eaton define adaptation as a decision to cope with an environment and compares adaptation to Tinto's idea of integration. Within Tinto's frame of reference, adaptation could refer to the process of incorporation of a student into the institutional environment (Bean & Eaton, 2000, p. 51). According to Bean and Eaton's definition of adaptation, students use coping mechanism to deal with the stressors of the environment. According to Lazarus and Folkman (as cited in Brown, Howcroft, & Jacobs, 2009, p. 450) coping refers to the behavioural and cognitive changes that a person has to make to be able to deal with various demands inter-personally or from the environment that are perceived to be intimidating in some way.

During the incorporation phase students are required to become involved in the academic and social communities of the institution (Tinto, 1993, p. 59). They become involved by establishing meaningful relationships with existing sub-cultures on campus. According to Kuh and Love (2000) a student does not necessarily have to conform to the dominant culture of the institution to become integrated or experience cultural connections (sense of belonging). According to Kuh and Love (2000, p. 205) a student can join a 'cultural enclave'. Cultural enclaves are subgroups within the institution that share similar norms, values and beliefs to that of a 'minority' student's culture (see Tinto, 1993, p. 60). Cultural enclaves help students to adapt and have a sense of belonging to the institution (Kuh & Love, 2000).

The extent of conformity is thus not as complete as is expected for transition from one group to another, as is the case in general settings described by Van Gennep (as cited in Tinto, 1993). The effect of university communities are less extensive and weaker than those found in broader society. The process of integration in college is an interactive one in which individuals also act to shape the environment. The term 'membership' would be more appropriate because it allows for more diversity of participation. Membership at an institution is also by definition always temporary (Tinto, 1993). Kuh and Love (2000, p. 206) defines Tinto's perspectives of membership differently by stating that students have to make a 'cultural connection', which is as a subjective sense of belonging with others from the institution.

According to Tinto, lack of incorporation is caused by two sources, namely 'incongruence' and 'isolation' (1993, p. 50). Incongruence refers in general to a mismatch between the entry characteristics of the student and the characteristics of the institution. This sense of mismatch develops from the perception of the student that he does not fit or belong to any of the systems of the university, academically or socially. These systems can range from formal to informal, individual or institutional characteristics, or in the rules and regulations of the institution. Tinto unpacks each of these systems as sources of incongruence. Tinto states that 'incongruence' manifests in students' evaluations of the 'intellectual' and 'social' values of the university compared to their own values and preferences.

The lecturers represent the academic community of the institution. It is then logical to infer that students' interactions with academic staff can affect a sense of incongruence in the student. 'Issues of quality of intellectual work, commitment to student intellectual growth, and opportunities for student involvement in learning, especially in the classroom, are all deeply affected by the way the faculty interacts with students over matters of intellectual substance' (Tinto, 1993, p. 53).

Incongruence in the social community manifests as a perceived mismatch between the 'social values, preferences, and/or behavioural styles' of the student and those of his peers, academic or support staff (Tinto, 1993, p. 53). The social community involves informal interactions and is usually more recreational in nature, although it also refers to the formal social events that are organized by university student bodies or residences. According to Tinto, social incongruence could lead to withdrawal. Most notably, students withdraw from the university where incongruence is experienced and move to another institution where there is a perceived match.

Incongruence due to a mismatch between the entry characteristics of the student and the demands of the academic system could ultimately result in withdrawal behaviour (Tinto, 1993, p. 51). Too high demands usually lead to timely voluntary withdrawal before actual institutional discontinuation due to poor academic achievement. Where the demands of the academic programme are too low, high achieving students tend to change their programmes, or withdraw (programme is not challenging enough). Tinto states that in some cases these students are unwilling to search for academic challenges on their own and are in some cases uncommitted to their own intentions or goals.

'Isolation' (Tinto, 1993, p. 55-56) refers to a student who is unable to establish a meaningful relationship with someone on campus, either with academic staff or peers. A feeling of isolation is regarded '...as the single most important predictor of eventual departure even after taking account of the independent effects of background, personality, and academic performance' (Pascarella & Terenzini, 1980). The work of Pascarella and Terenzini (as cited in Tinto, 1993) forms the backbone of Tinto's work on academic integration and social integration and its relationship with withdrawal. Of the two types of integration that is necessary on campus, contact, both meaningful and frequent, is important for student persistence (Tinto, 1993, p. 57).

Contact between students and academic staff should go beyond structured academic interactions to include interactions on 'intellectual' and 'social' issues that are perceived to be supportive. The extensions of interactions, above those that happen in class or in

lecturer offices, contribute to students' perceived integration and assist in students' decisions to persist. Students have to feel welcome at the university, that they are valued and that their needs are important (Hawkins & Larabee, 2009). The lecturers' behaviour in class 'not only influences academic performance and perceptions of academic quality, it also sets the tone for further interactions outside classroom' (Tinto, 1993, p. 57). For students of commuter institutions, as is the University of Pretoria, the experiences and interactions that happen in class are the main and in some instances the only way of interacting with the academic staff and peers. When this interaction fails, a student experiences a feeling of isolation and as Tinto stresses, can lead to voluntary withdrawal.

According to Tinto, students enrolled in very large institutions are at greater risk for isolation because of the large physical space, the complex administrative system and possible diverse student body. Tinto mentions that students who are able to make friendships easily could help a student to be integrated into the social system much quicker. Tinto also recognises 'social experiences' that could hinder or facilitate interaction, because in some instances the social environment is totally different to that which is experienced in their own communities (Tinto, 1993, p. 58). This could be true for students of colour in Historically White Institutions. Coming from a rural environment could also facilitate feelings of isolation (Jones et al., 2008) because these students are first of all not accustomed to the university culture and secondly the sheer number of students of large universities could be a challenge to overcome.

### **2.3.3. Tinto's Longitudinal Model of Institutional Departure**

Tinto's longitudinal model of institutional departure (Tinto, 1993, p. 114) broadly states that individual withdrawal occurs over a period of interactions between individual members of the academic staff and the social community of the institution. Tinto summarises individual student withdrawal in three broad 'themes' namely the entry characteristics of first-time entering students at university, the quality of their involvement within the university after entering the university, and the external drivers that influence

the students' behaviour. Tinto's longitudinal model of institutional departure is of great importance due to its paradigmatic stature. 'Paradigmatic status connotes the considerable consensus among scholars of college student departure concerning the potential validity of Tinto's theory' (Braxton et al., 2004, p. 7).

Tinto's longitudinal model of institutional departure describes that students enter the institution with differing (refer to Figure 2.2.):

- family backgrounds, including social status, parental education and size of the home community;
- personal attributes, namely gender, race and physical handicaps;
- skills, namely intellectual and social skills;
- financial resources;
- dispositions (intentions and commitments); and
- various pre-college educational experiences (such as high school marks).

According to Tinto, each attribute at entry is posited as having a direct impact upon withdrawal, as it influences individual intentions and commitments regarding future educational activities (also refer to Baird, 2000; Pascarella & Terenzini, 1980; Seidman, 2005, p. 67).

According to Tinto (1993), the abovementioned dispositions fall in two categories, namely intentions and commitments:

- Intentions specify the valued goals of the student, educational and occupational, toward which activities are directed. Intentions or goals reflect both aspiration and expectations. The intentions are stated in goals that mirror both the student's hopes for the future and his assessment, based on past experiences, of the likely attainment of the goals (Tinto, 1993).
- The commitments refer to the willingness of students to work toward the attainment of those goals. Students who are highly committed are willing to commit themselves fully to the attainment of valued goals and expend the

energies and resources to do so. Persons lacking the motivation, regardless of set goals, will be unable to commit themselves to the attainment of such goals.

Strong goals and/or commitments (motivations) may lead students to persist until degree completion. This may be particularly true when educational goals are closely linked to occupational goals. The logical deduction would be to reason that students who study professional degrees, compared to non-professional degrees, are more likely to persist. Tinto (1993) cautions the reader that some students place more emphasis on the intrinsic value of pursuing a degree and are not motivated by short-term occupational goals. These students are therefore still likely to persist even though educational goals are not closely linked to occupational goals.

Tinto states that strong goals and firm commitments are the drivers of persistence during the transition phase and adjusting to the culture of the university (Tinto, 1993, p. 36). This, however, does not guarantee that these students will persist. According to Tinto, some students are unable to cope with the demands of the university environment, both social and intellectual (Tinto, 1993, p. 47). These students are usually unable to make the necessary adjustments and eventually withdraw.

Intentions specify both the level and type of education and occupational goals desired by the individual. Commitments indicate the degree to which individuals are committed to both the attainment of those goals (goal commitment) and to the institution where they are registered (institutional commitment). The less a student is integrated into the academic and social communities of the institution, the more likely students will withdraw (Tinto, 1993).

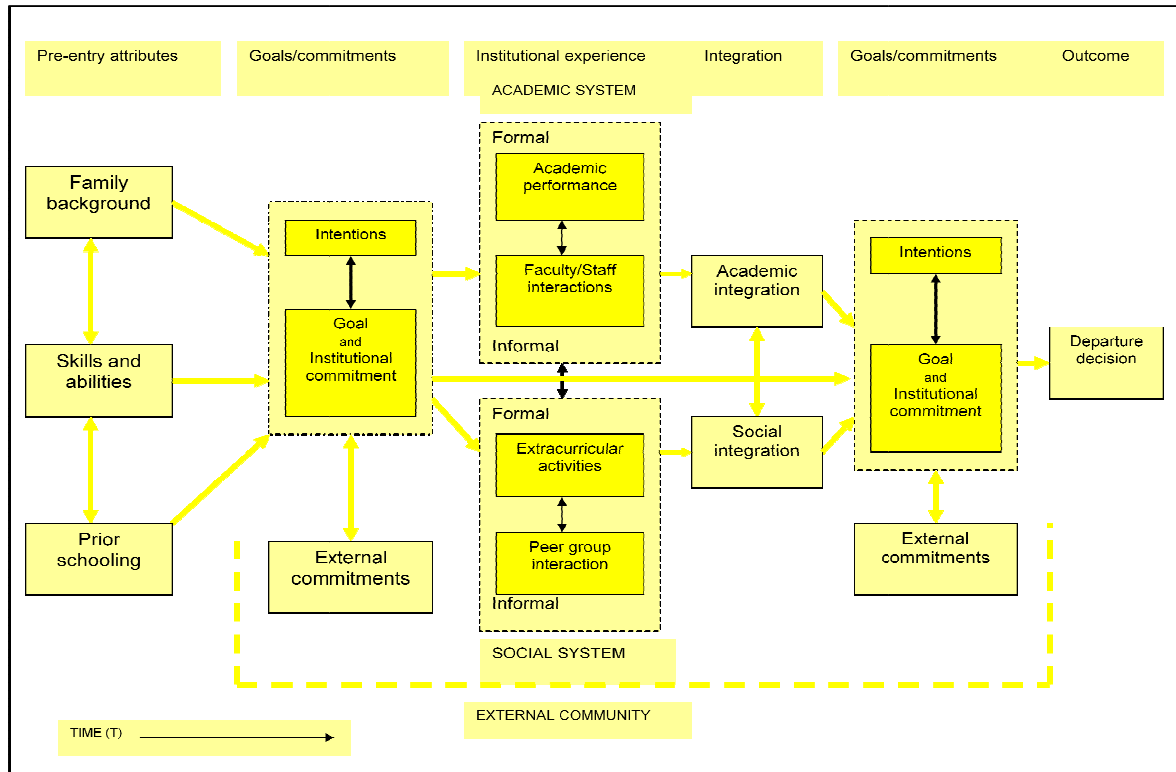
According to Tinto, 'prior dispositions and attributes' may lead directly to withdrawal behaviour, but more weight and importance are placed on the quality of a student's interaction with lecturers and peers on campus and the perception that these interactions satisfy the needs of the students (Tinto, 1993, p. 45). The entry

characteristics together with the intentions, commitments and the external environment establish the conditions for subsequent interactions between peers and the lecturers of the institution (Tinto, 1993).

The individual's experiences of the academic and social systems, indicated by academic and social integration, continually modify intentions or commitments. Integration reinforces persistence through their impact upon heightened intentions and commitments both to the goal of completion and to the institution. The extent to which students are integrated in the academic system can be determined by the academic achievement of students, the value students place on their education and the level of satisfaction students have with their academic programme (Kuh & Love, 2000, p. 196). Social integration on the other hand can be determined by investigating the feelings of belonging students have with a group or groups of people within the institution (Kuh & Love, 2000).

The model (Figure 2.2.) regards the institution, with the academic and social systems that comprise it, as being nested in an external environment comprised of external communities with their own set of values and behavioural requirements. External commitments are able to alter the person's intentions (goals) and commitments at entry and throughout the learning experience. For example, the external communities can have a strong supportive influence on the student that may have a counter effect on withdrawal behaviour when a student is unable to adjust to the campus environment (Tinto, 1993). The actions of one's family, members of community, economic instability, as well as government decisions can play an important part in the decisions of students to withdraw from university. External demands placed on students, like family support, and work obligations can also influence students' decisions to withdraw. When the academic and social systems of the institution provide inadequate support to students, the additional external demands placed on the student can lead to increased intentions to withdraw.





**Figure 2.2. A longitudinal model of institutional departure** (Tinto, 1993, p. 114).

**2.3.3.1. Evaluation of Tinto’s model**

Braxton and Lee (2005, p. 110) conducted a meta-analysis of empirical research on the 13 propositions of Tinto’s model to determine the reliability each. The 13 propositions as referenced in Braxton and Lee are:

1. Student entry characteristics affect the level of initial commitment to the institution.
2. Student entry characteristics affect the level of initial commitment to the goal of graduation.
3. Student entry characteristics directly affect the student’s likelihood of persistence.

4. Initial commitment to the goal of graduation affects the level of academic integration.
5. Initial commitment to the goal of graduation affects the level of social integration.
6. Initial commitment to the institution affects the level of social integration.
7. Initial commitment to the institution affects the level of academic integration.
8. The greater the degree of academic integration, the greater the level of subsequent commitment to the goal of graduation.
9. The greater the degree of social integration, the greater the level of subsequent commitment to the institution.
10. The initial level of institutional commitment affects the subsequent level of institutional commitment.
11. The initial level of commitment to the goal of graduation affects the subsequent level of commitment to the goal of graduation.
12. The greater the level of subsequent commitment to the goal of graduation, the greater the likelihood of student persistence.
13. The greater the level of subsequent commitment to the institution, the greater the likelihood of student persistence.

Braxton and Lee (2005) empirically assessed one or more of the 13 propositions. The first criterion for assessments to be included in their analyses was that multivariate statistical procedures be used for all analyses, like path analysis with linear multiple regression, structural equation modelling, multiple discriminate analysis, or logistic regression. This was used to determine the individual effects of each of the 13 propositions. The second criterion was that the measures used, should have face validity. The third criterion of their investigation is that the propositions are restricted to peer-reviewed journal articles. The last criterion was a restriction to single-institutional samples for testing the propositions. The focus is also on four-year commuter and

residential institutions and a minimum of 10 report findings should empirically support the proposition.

According to the findings only three propositions showed reliable results in both residential and commuter colleges. These are:

Proposition 9: The greater the degree of social integration, the greater the level of subsequent commitment to the institution.

Proposition 10: The initial level of institutional commitment affects the subsequent level of institutional commitment.

Proposition 13: The greater the level of subsequent commitment to the institution, the greater the likelihood of student persistence.

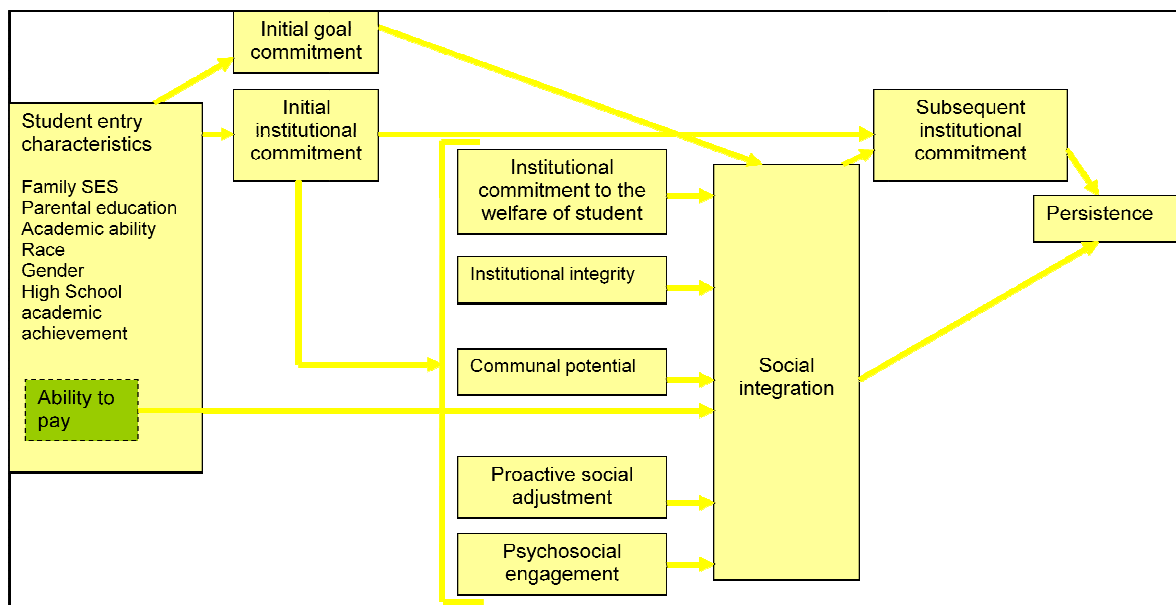
Based on the results of their meta-analyses, Braxton et al. (2004) developed revised models of student withdrawal for residential and commuter institutions. In both instances, Tinto's model was revised in such a way that it resembles the characteristics of the type of institution. Accordingly the entry characteristics for the two models differ moderately. There was also a change in the allocation of 'academic integration' and 'social integration'.

#### **2.3.4. Theory of Student Departure for Residential and Commuter Colleges**

The limitation of Tinto's theory of student departure is revealed when tested empirically because only five of the 13 propositions can be supported empirically (Braxton & Hirschy, 2005). Braxton et al. (2004) proposed a revision of Tinto's model to account for residential and commuter universities (and colleges). This revised model incorporates empirical findings from Tinto's model and other researchers' models. The contribution of this model involves identifying the background to social integration. Accordingly, students' entry characteristics influence the students' initial commitment to the institution, because it has an influence on a student's commitment to the goal of graduation and the institution. 'Entry characteristics include the student's gender, racial or ethnic

background, socio-economic status, academic ability, high school academic preparation, parental education, and ability to pay for college’ (Braxton & Hirschy, 2005, p 70).

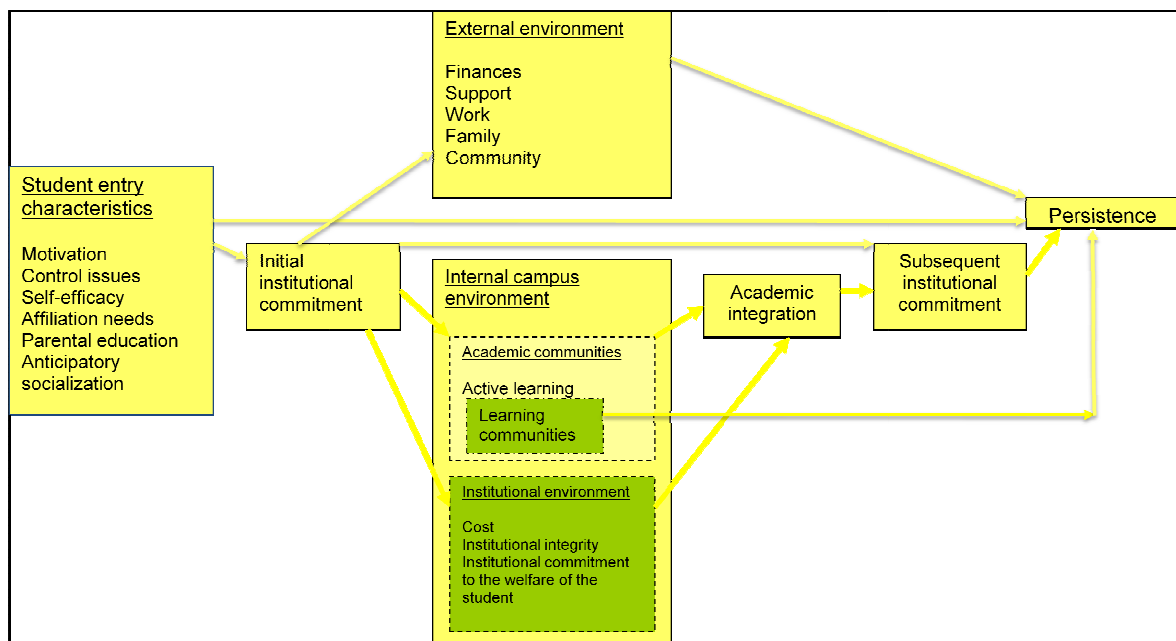
Students’ entry characteristics influence student commitment to the goal of graduation and the institution. The institutional commitments are represented in the values and beliefs of the institution. ‘When there is congruency between the values and beliefs of the students and the institution, students are more inclined to participate in proactive social behaviours (the tendency to approach the demands and pressures of social integration in a positive manner) and psycho-social engagement (the level of psychological energy a student devotes to his or her interactions with peers and to involvement in activities at the chosen college or university)’ (Braxton & Hirschy, 2005, p. 72). The greater a students’ initial institutional commitment, the greater a students’ social integration and subsequent institutional commitment and persistence.



**Figure 2.3. Tinto’s theory revised for student departure in residential colleges and universities** (Braxton et al., 2004, p. 71)

Family SES: Socio-economic status

The factors that influence withdrawal for residential institutions differ slightly from commuter institutions. In commuter institutions an additional contributor to withdrawal or persistence becomes relevant, especially in the South African higher education context, namely the external environment. Elements included in this category are finances, support, work, family and the community. The entry characteristics in the commuter institution model include motivation, self-efficacy, empathy, affiliation needs, and socialisation (also see Braxton & Lien, 2000). South African universities and specifically the University of Pretoria as a contact university have the characteristics of both a residential and commuter institution. The University of Pretoria's students are regarded as full-time students (they are required to be registered on a full-time basis in order to fulfil the requirements of a degree), but not all students reside at campus residences. The majority of students commute to university on a daily basis while a third of undergraduate students live in campus residences.



**Figure 2.4. Theory of student departure in commuter colleges and universities**  
(Braxton et al. 2004, p. 71).

Braxton and Hirschy (2005) provide an explanation of the relationship between the factors in the model and how they contribute to students' decisions to persistence or withdraw:

#### **2.3.4.1. Student entry characteristics**

According to Braxton et al. (2004, p. 71), students' entry characteristics have a direct impact on a student's decision to withdraw and indirectly influence persistence through students' initial commitments to the institution and the extent to which students make the transition from the external environment and adjust to the campus environment.

#### **2.3.4.2. External environment**

The external environment can have a positive or negative influence on students' decisions to withdraw. Most notably, the external environment plays an important supportive or demotivating role in decisions to enrol at a higher education institution in the first place. Students who for instance do not have the financial support to study a degree will decide not to study at all, or enrol but only later withdraw if financial support is still not available (Tinto, 1993). Students at commuter institutions typically have off-campus commitments in addition to their academic responsibilities on campus. These responsibilities influence the time students have to engage with their academic work.

#### **2.3.4.3. Sociological influences**

The social communities of commuter institutions do not have such a strong influence on the students as in residential institutions (Braxton et al., 2004). Students whose parents attended college are more likely to expect social engagement with peers, based on their college experience from their parents. Contrary to expectations, the higher the parental education, the less likely a student feels subsequent commitment to the institution and the more likely a student will withdraw from the institution. It is the anticipatory socialisation and the reality of less socialisation in social activities at commuter institutions that lead to withdrawal. Johnston (2000) adds that first-generation students

are more likely to succeed academically than those students whose parent/s has/have a degree qualification. A possible reason, according to Johnston, is that these students have higher underlying motivational levels because of possible challenges they have faced during their life as well as overcoming many obstacles just to enrol at the university.

#### **2.3.4.4. Internal campus environment**

The internal campus environment is constituted by two components, namely the institutional environment and the academic communities that students are associated with. The two components together lead to students' perceptions of being academically integrated, which lead to subsequent institutional commitment and persistence.

##### *2.3.4.4.1. Institutional environment*

The institutional environment consists of three factors that influence a student's subsequent commitment to the institution, namely institutional integrity, institutional commitment to student welfare and the cost of the education. Over time students perceive institutional integrity, a sense of congruence between the day-to-day actions of faculty, administrators and staff compared to the mission and values of the institution. The greater the perceived institutional integrity, the more students are committed to the institution. The greater the perceptions of institutional commitment to students' welfare, the more students are committed to the institution. Commitment to student welfare is displayed by showing respect toward students, treating students fairly and having concern for the growth and development of students. Students weigh the cost and benefits of investing their time and economic resources on higher education. Institutions that minimise the costs associated with enrolment and maximise the perceived value of the students' investment can influence persistence (Braxton et al., 2004).

##### *2.3.4.4.2. Academic communities*

Academic communities facilitate meaningful connections between students, lecturers and among peers according to Braxton and Lien (2000). The greater the degree of a student's

academic integration, the more subsequent commitment to the institution, eventually adding to their probability of persisting. Tinto (2000) hypothesises that academic communities influences goal commitment, but Braxton and Hirschy (2005) claim that it leads to institutional commitment.

### **2.3.5. Psychological Model of Student Retention**

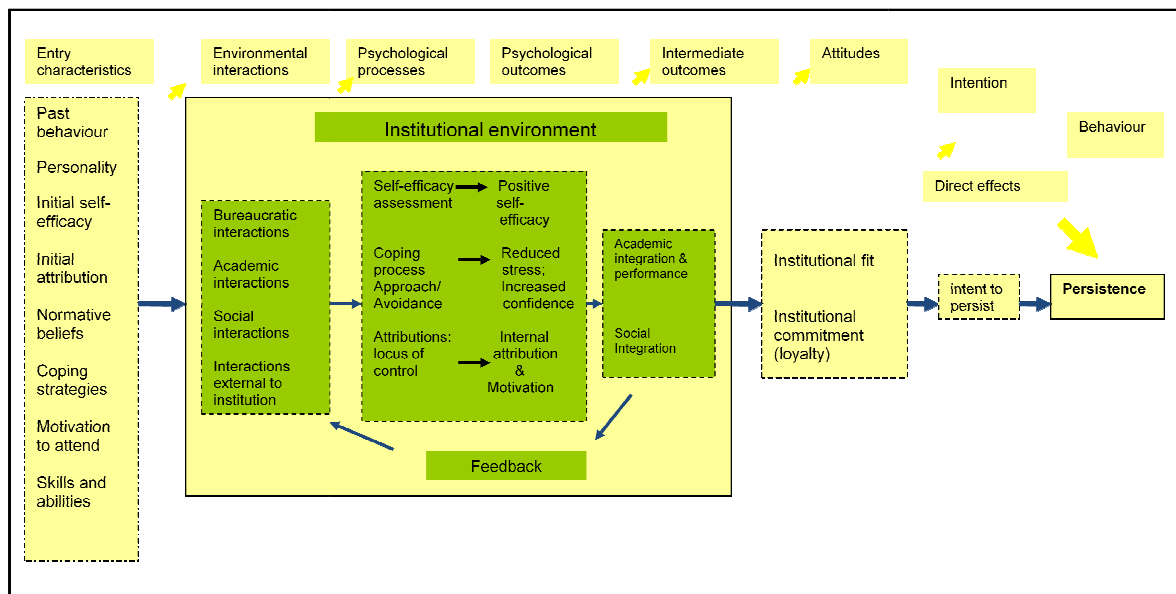
Bean and Eaton (2000, p. 48) developed a model of student retention, based on Tinto's longitudinal model of student departure and added four psychological theories to explain student retention from a psychological orientation. Individual student retention refers to '...studies [that] are conducted to identify how background characteristics, institutional experiences, students' behaviour, and attitudes interact to affect retention decisions' (Bean, 2005, p. 215). According to Bean and Eaton (2000) all behaviour is psychologically motivated. Withdrawing from higher education is therefore also seen as behaviour (p. 49) and therefore withdrawal behaviour is psychologically motivated. The authors focus their attention on the relationship between the independent variables in the model and persistence, both theoretically and statistically. The predictive ability of the variables on persistence is determined empirically and compared with what was expected from a theoretical point of view.

Bean (2005, p. 216) stated that retention models are calculated and developed with statistical procedures, as mentioned above. When there is a significant relationship between two variables it does not guarantee that by improving the independent variable (increasing social integration) it will necessarily increase retention. A significant relationship alludes to the potential of an intervention in that area on increased retention, rather than indicating precisely what the intervention should be. Students who are for instance not oriented socially might not persist because of increased social interaction.

The model attempts to explain withdrawal or persistence behaviour and Bean and Eaton states that behaviour is based on choices that people make. Present behaviour is based on past behaviour, personal beliefs, and the perceptions of others (normative beliefs),



and affect the way a student will interact with the institutional environment (Bean & Eaton, 2000). Accordingly, personal beliefs are determined by initial perceptions of the individual's psychological processes (Bean & Eaton, 2000). 'For example, the individual's efficacy for various tasks within the institutional environment will be based on an assessment of skills and abilities from the past' (Bean & Eaton, 2000, p. 56).



**Figure 2.5. A psychological model of college student retention** (Bean & Eaton, 2000, p. 57)

Bean explains his model with reference to nine themes that affect student retention (Bean, 2005). These themes are in order of importance of their effect on individual student retention. A short overview of the themes follows:

### 2.3.5.1. Intentions

Student intentions refer to the mere contemplation of behaviour (Bean, 2005). According to Bean (2005), the intention to leave is one of the best predictors of student withdrawal

for residential institutions. This predictor does however not predict withdrawal that accurate for commuter institutions. Intentions to withdraw are also dependent on the institutional and external environment. From Tinto (1993) and Braxton, Hirschy and McClendon's (2004) model it is evident too that the external environment can have both a positive or negative influence on students to persist at their studies. The institution (both the academic and social systems) also influences decisions to withdraw or persist. A shortcoming of this theme is that it does not explain why students withdraw, but only predicts who will leave (Bean, 2005, p. 218).

### ***2.3.5.2. Institutional fit and institutional commitment***

Institutional fit is a sense of fitting in with others at the institution. It is a sense of being similar to other members of a group and feelings of belonging (Bean, 2005, p. 219). This notion links to Tinto's longitudinal model of student departure (1993), who borrowed the concept from Durkheim and Spady (as cited in Tinto, 1993). According to Bean (2005), the concept of 'fitting in' implies a social dynamic which most often has a value component. 'A student is likely to fit in if that student shares values with other students' (Bean, 2005, p. 219). These values could, according to Bean (2005), be social or academic in nature, or based on an interest or an activity. The author also states the importance of cultural or ethnic background, religious beliefs and other forms of biases that could be stumbling blocks for students from these groups and their ability to fit into the institutional environment.

Institutional commitment is the commitment to a specific institution above another institution and it gives an indication of the extent to which a student is attached to an institution. It is also the most important variable influencing withdrawal (Bean, 1980). Both institutional fit and commitment represent an attitude toward an institution and can only be determined by asking students about their attitudes. A second set of attitudes that is important for retention but does not seem to be directly related to commitment and fit is attitudes about being a student.

Bean (2005, p. 219) refers to four attitudes about being a student that can influence intent to leave directly or indirectly by affecting institutional fit, loyalty and intent to persist (Bean, 2005, p. 222). These attitudes function interactively, recursively and are related to one another. The four attitudes are:

- positive attitudes relating to satisfaction with being a student;
- feeling a sense of self-efficacy as a student;
- understanding the value of education towards attaining a job; and
- experiencing stress as a student.

### **2.3.5.3. Psychological processes**

Bean refers to three psychological processes that affect social and academic factors and consequently influence retention decisions (2005, p. 220). The psychological processes are explained by three related theories, namely:

- *The theory of self-efficacy*: This refers to a belief in one's ability to perform academically (specific context) and to achieve set goals (specific context). Levels of self-efficacy are however dependent on positive feedback from behaviour in the specific context. According to Bean, there is an interactive influence between self-efficacy, educational goals and persistence;
- *Approach/avoidance behavioural theory*: This is seen as ways of coping with the institutional environment to reduce the stress that the environment creates (Bean, 2005, p. 221). Bean argues that in order to be academically successful, a student has to 'approach' certain behaviour that is associated with academic success (for example using the library and using effective study skills) and 'avoiding' behaviour that is detrimental to academic success (for example antisocial behaviour). These behaviours provide feedback to students and have the potential to increase or decrease a person's feeling of self-efficacy and could lead to various attitudes toward persistence;
- *Locus of control as part of attribution theory*: This means the perception of the source of influence on the person. Students with an internal locus of control believe they are personally responsible for their academic achievements, in contrast to students with an external locus of control who believe the environment or other people have an influence on their academic achievements

(Bean, 2005, p. 221). Bean is of the opinion that the institutional environment has an influence on students' locus of control. The way an institution acts toward its students could alter a student's locus of control. When students perceive lecturers to discriminate toward certain students, it might lead these students, who had an internal locus of control, to change to an external locus of control. This might also affect the students' attitude toward the institution negatively and lead to withdrawal behaviour (Bean, 2005, p. 220).

Bean (2005, p. 223) indicates three spheres wherein students interact with the institution. The spheres are academic, social and bureaucratic in nature.

#### **2.3.5.4. Academic sphere**

Interaction in the academic sphere refers to the interaction between lecturer and students through the course (Bean, 2005, p. 226). According to Bean, lecturers play a vital role in supporting educational development. The interaction with lecturers shapes the psychological processes and attitudes which have an effect on retention (Bean, 2005, p. 223). When there is substantial interaction that contributes to students' interest and when students feel that lecturers are supportive, students are more likely to have positive attitudes towards the institution (Bean, 2005, p. 225).

Another form of interaction in the academic sphere is through advising. The advising should be in such a way that it gives information on students' abilities and how their abilities relate to the subjects they propose to take so that students can make informed academic decisions (Bean, 2005). It is therefore important to indicate the relationship of course decisions with possible job opportunities. 'The combination of students' background, interaction with the institution related to academic matters, and a belief in one's ability to perform academic work have a cumulative mutual influence resulting in academic integration' (Bean, 2005, p. 226). Bean (2005) tends to agree with Tinto (1993) on the importance of academic integration in order to have a positive effect on academic performance and the persistence of students.

#### **2.3.5.5. Social sphere**

The social sphere refers to friendships and social support. Bean (2005) has broad perspective in mind when referring to the social sphere. According to Bean, the social sphere includes the friendships one has on campus with peers, lecturers and staff as well as the support a student receives from family members, siblings and friends. The social sphere, especially referring to the support from family members, siblings and friends is very closely related to the external environment theme discussed by Tinto (1993). Accordingly, the role players from the social sphere shape the way in which the student will interact with the institution (Bean, 2005, p. 228). According to Bean, the social interaction between students and lecturers should be focused on the positive aspects of learning and development as they contribute to the academic success of students. Consequently, this leads to institutional fit. Students who have a sense of belonging are believed to be more satisfied, loyal to the institution and will be more inclined to persist at their studies (Bean, 2005, p. 229).

#### **2.3.5.6. Bureaucratic sphere**

The bureaucratic sphere in the institution typically represents the client service centre, student administration and other offices that support students on non-academic issues. 'Bureaucratic factors are defined as the ways in which formal exchanges of resources (time, money, effort and information) between a student and the institution take place' (Bean, 2005, p. 229). These offices in many respects represent students' first contact with the institution and this is where first impressions are formed and positive attitude for integration starts. The operations of bureaucratic services have a direct influence on students' attitudes toward the institution and indirectly to the intent to withdraw (Bean, 2005, p. 230).

In the bureaucratic sphere decisions are made that influence various aspect of the students' learning experience. Some of the decisions that are made relate to financial support, residence and course decisions. According to Bean (2005, p. 230), the way the bureaucratic sphere carries out its services can leave students satisfied and loyal to the institution or disgruntled which influences students' decisions to withdraw or persist.

Students from lower socio-economic status (SES) experience the bureaucratic sphere of the institution more acutely because these students quite often have less knowledge of what to expect and how things are done at university (Kuh & Love, 2000, p. 203). Jones et al. (2008) confirm with recent research of South African students from low SES that it is difficult for these students to manage the administrative load of registering, finding accommodation and financial aid. The bureaucratic sphere that is supposed to provide support is in actual fact thwarting access to important programmes that are there to facilitate integration.

The orientation programme, for instance, is there to facilitate integration and is also used to give valuable information about support services on campus, how to navigate the learning management system and make friends (Mullendore & Banahan, 2005, p. 393; Strydom & Mentz, 2009, p. 62). Many students of disadvantaged backgrounds however miss the orientation week due to late registration or the inability to secure the funds to register (Jones et al., 2008). These students are therefore unable to benefit from these programmes that are there to help students adapt to the institutional environment.

#### **2.3.5.7. External environment**

The external environment is an umbrella term that includes friendships, opportunities to transfer, opportunities to work, and family responsibilities (Bean, 2005, p. 232). The external environment directs students' behaviour and attitudes and has an influence on the interaction between the student and the institutional environment. The factors of the external environment as mentioned in Bean (2005) are similar to the environmental variables that are mentioned in Tinto (1993), except for finances, which are discussed separately by Bean. The external environmental factors are proposed to have a direct affect on students' decisions to withdraw, but in many cases they indirectly contribute to students' decisions to withdraw. These forces are usually out of the direct control of the institution, but institutions can choose to support students within boundaries. Supporting students show that the institution is committed to the welfare of the student that could influence students to return to the institution when they are ready to do so (Braxton et al., 2004).

#### **2.3.5.8. Student background characteristics**

Student background characteristics are, for instance, educational goals, high school achievement, ability, motivation, and parents' education level and income. The student background characteristics as referred to here have been explained in the section on Bean's psychological processes.

#### **2.3.5.9. Financial factor**

In Tinto's (1993) model there is a direct link between a student's ability to pay for studies and retention. Bean (2005, p. 234) however states that understanding the influence of financial factors on retention is not always that clear. The reason for this is because of confounding factors associated with the financial status of families. Higher financial status is usually associated with better education, higher educated parents that are able to support their children financially and educationally, and who are able to pay for the cost of a higher education (Bean, 2005). What makes the influence of financial factors unclear is that even affluent students withdraw from their studies, indicating financial reasons for their withdrawal. Parents of these students might not be willing to pay for a child who is not performing adequately in their studies.

According to Bean (2005, p. 235), the following aspects of financial factors are clear in their influence on retention. Institutions with reduced tuition will likely increase retention. Grants are better than loans because they increase persistence rates. Students who have fewer resources are in some instances excluded from social and academic integration which influences these students to fit in, which consequently might result in intentions to withdraw.

#### **2.3.6. Evaluation of Bean and Eaton's Model**

Rodgers and Summers (2008, p. 182) argue that Bean and Eaton's psychological model does not include a thorough discussion on the effects of African students attending Historically White Institutions. The revised model is based on what Rodgers and

Summers (2008) call the effect of race or culture on the interaction between African students and Historically White Institutions. The first two major areas of Bean and Eaton's model are not changed, although Rodgers and Summers (2008) indicate that the levels of self-efficacy and the initial attributions of African-American students are more sensitive to negative academic experiences early in the academic year than it is for white students. Failure early in the academic year will result in lower levels of self-efficacy and lower expectations of academic success.

According to Tinto (1993), a match between the values, beliefs and norms of the student and that of the institution will promote integration. Bean and Eaton (2000) suggest that these interactions affect the institutional fit of students. Rodgers and Summers highlight what Tinto proposed in 1993, that minority students could belong to sub-cultures with similar values and beliefs in order to experience integration into the social and academic systems of the institution. Rodgers and Summers explain that the interactions of sub-cultures or 'enclaves' lead to certain attitudes, which are almost similar to the attitudes in the Bean and Eaton model, but moved earlier in the process of the model and includes 'belongingness and integration' (2008, p. 176). According to Rodgers and Summers (2008), the attitude of belongingness is defined as a feeling of membership to the institution which is dependent on a caring institutional environment.

The psychological processes and outcomes are similar in the revised model. An addition was made to the intermediate outcomes of Bean and Eaton's model to include the development of 'biculturalism' in African-American and minority students. Biculturalism, according to Rodgers and Summers refers to '...students [that] are able to successfully navigate membership in the larger predominantly white campus community, and also maintain cultural ties to the African American campus culture' (2008, p. 182). The changes made to 'attitudes' and 'intermediate outcomes' are regarded as the major revisions to the Bean and Eaton model to accommodate an explanation into African student retention in Historically White Institutions.



## **2.4. ENTRY CHARACTERISTICS, WITHDRAWAL AND ACADEMIC ACHIEVEMENT**

Tinto's propositions, as stated in Braxton and Lee (2005, p. 113) set the scope and design of the empirical part of the study to investigate proposition 3. 'Student entry characteristics directly affect the student's likelihood of persistence'. The characteristics students present with when entering the institution influence the way students are able to engage with their programme, determine the possibility of becoming integrated and have positive learning experience (Jones et al., 2008). According to these results there is an indication that readiness characteristics directly affect the likelihood of persistence in some students and in some of the cases.

Astin (1975, p. 25) identified 53 variables that significantly predict first-year withdrawal. Stepwise regression analyses indicated that 37 of the 53 predictor variables carried statistical significant weight. The significant predictor variables were then categorised in six themes, namely academic background and ability, family background, educational aspirations, study habits, expectations about the institution, and student characteristics (Astin, 1975, p. 25). The six themes identified by Astin broadly correspond with the entry characteristics that are sourced from the three retention models and are listed in Table 2.1.

Camara (2005b) references 140 predictors and 27 criterion measures of academic success from the Personal Qualities Project conducted between 1978 and 1984. According to Camara (2005a), the three broad categories of entry characteristics that related to academic success are: 1. Temperament, Personality and Self-Appraisal; 2. Personal Qualities, Experiences and Biographical Data; and 3. Interviews, Personal Statements and Recommendations.

Table 2.1 provides a summary of the student entry characteristics related to persistence and academic achievement that have been sourced from the retention models

highlighted in the theoretical discussion. The student readiness characteristics will be discussed directly thereafter by way of a number of psychological theories.

**Table 2.1. Summary of the student readiness characteristics**

AUTHOR	PERSONAL & DEMOGRAPHIC	NON-COGNITIVE	COGNITIVE	OTHER
Tinto (1993)	<b>Family background</b> <ul style="list-style-type: none"> <li>Social status</li> <li>Parental education</li> </ul>	<b>Dispositions</b> <ul style="list-style-type: none"> <li>Intentions (goals)</li> <li>Commitments (motivations)</li> </ul>	<b>Skills and abilities</b> <ul style="list-style-type: none"> <li>Intellectual and social</li> </ul>	<b>External community</b> <ul style="list-style-type: none"> <li>Size of the home community</li> </ul>
	<b>Personal attributes</b> <ul style="list-style-type: none"> <li>Gender</li> <li>Race</li> <li>Physical handicaps</li> </ul>		<b>Prior schooling</b> <ul style="list-style-type: none"> <li>High school marks</li> </ul>	<b>External commitments</b> <ul style="list-style-type: none"> <li>Financial resources</li> </ul>
Braxton & Hirschy (2005) (Residential)	<b>Personal attributes</b> <ul style="list-style-type: none"> <li>Gender</li> <li>Racial or ethnic background</li> </ul>	<b>Dispositions</b> <ul style="list-style-type: none"> <li>Goals</li> <li>Values and beliefs</li> </ul>	<b>Prior schooling</b> <ul style="list-style-type: none"> <li>Academic ability</li> <li>High school academic preparation</li> </ul>	<b>Financial</b> <ul style="list-style-type: none"> <li>Ability to pay</li> </ul>
	<b>Family background</b> <ul style="list-style-type: none"> <li>Socio-economic status</li> <li>Parental education</li> </ul>			
Braxton & Hirschy (2005) (Commuter)	<b>Family background</b> <ul style="list-style-type: none"> <li>Parental education</li> </ul>	<b>Dispositions</b> <ul style="list-style-type: none"> <li>Motivation</li> <li>Self-efficacy</li> <li>Affiliation needs</li> <li>Anticipated socialisation</li> </ul>		<b>External environment</b> <ul style="list-style-type: none"> <li>Finances (cost of education)</li> <li>Support or discouragement</li> <li>Work</li> <li>Family support</li> <li>Community</li> </ul>
Bean and Eaton (2000)	<b>Family background</b> <ul style="list-style-type: none"> <li>Parental education and income</li> </ul>	<b>Dispositions</b> <ul style="list-style-type: none"> <li>Personality traits</li> <li>Initial self-efficacy</li> <li>Initial attribution</li> </ul>	<b>Skills and abilities</b> <ul style="list-style-type: none"> <li>High school grades</li> <li>Past behaviour</li> </ul>	<b>Financial</b> <ul style="list-style-type: none"> <li>Ability to pay</li> </ul>



		<ul style="list-style-type: none"> <li>• Normative beliefs</li> <li>• Coping strategies</li> <li>• Motivation</li> <li>• Educational goals</li> </ul>		<b>Bureaucratic factors</b> <ul style="list-style-type: none"> <li>• Administration process</li> </ul>
	<b>Personal attributes</b> <ul style="list-style-type: none"> <li>• Cultural backgrounds</li> <li>• Religions</li> <li>• Languages</li> <li>• Experiences</li> </ul>			<b>External environment</b> <ul style="list-style-type: none"> <li>• Work opportunities</li> <li>• Family responsibilities</li> </ul>

### 2.4.1. Non-Cognitive Predictors

#### 2.4.1.1. Expectancy-value theory

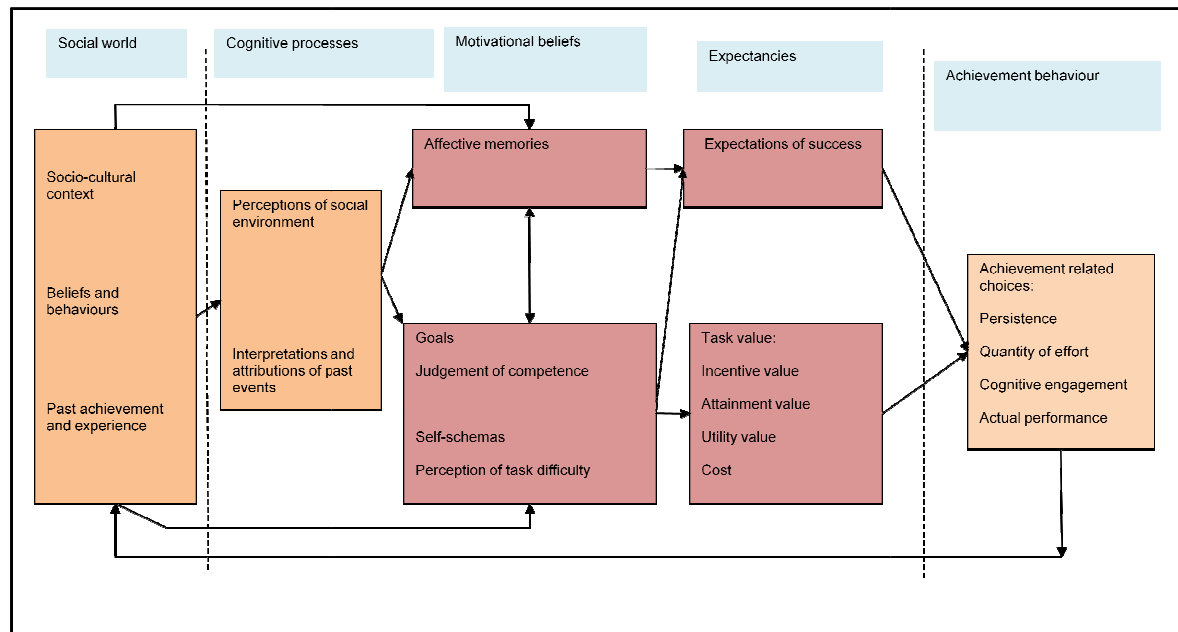
Expectancy-value theory is a school of thought to explain how motivation influences task initiation, persistence and performance (Wingfield & Eccles, 2000, p. 68). Accordingly the theory states that motivation is dependent on outcome expectations, thus what would be the likelihood of achieving an outcome and what is the perceived value of achieving the outcome (see Figure 2.6 below). A positive deduction from the expectation and value of the outcome will lead to a change in behaviour that would increase the probability of achieving the outcome. The outcome in an educational context is indirectly influenced by one or more forms of choices, like persistence, increasing effort, being more engaged or choosing different strategies for success (Geiger & Cooper, 1995, p. 251).

The type of subjective task value determines the behaviour. The types of value are attainment value, utility value, intrinsic value and the cost (Wingfield, Tonks & Eccles, 2004, p. 171). Attainment value refers to the importance of doing well on a task and the person usually identifies with the task. The utility value of a task refers to the usefulness of the task

to acquire something else. The cost of pursuing the outcome refers to choices one has to make as well as the expected effort one has to expend in order to complete the task (Wingfield et al., 2004).

The self-assessment of expectations and values are subsequently influenced by perceptions of motivational beliefs, personal past experiences and socio-cultural influences. The motivational beliefs incorporated into the theory are goals, concepts of ability, difficulty of the task and the way a student thinks about himself (self-schemata). The motivational beliefs directly influence the expectations for success as well as the subjective task value. The motivational beliefs are subsequently influenced by personal past experiences and socio-cultural influences and the attributions and interpretations of these past experiences and socio-cultural influences.

In an educational context students will be more motivated to expend effort at their work when their expectations for success are perceived to be achievable based on current evaluations of ability, task difficulty, goals and when a higher education degree is valued as important for career success (Wingfield & Eccles, 2000, p. 69). Vroom's 'Expectancy-valence theory of motivation' adds instrumentality to the equation and refers to the perceived expectancy that a reward (outcome) will actually be received based on performance levels (as cited in Geiger & Cooper, 1995, p. 251).



**Figure 2.6. Expectancy-value theory of motivation (Wingfield & Eccles, 2000)**

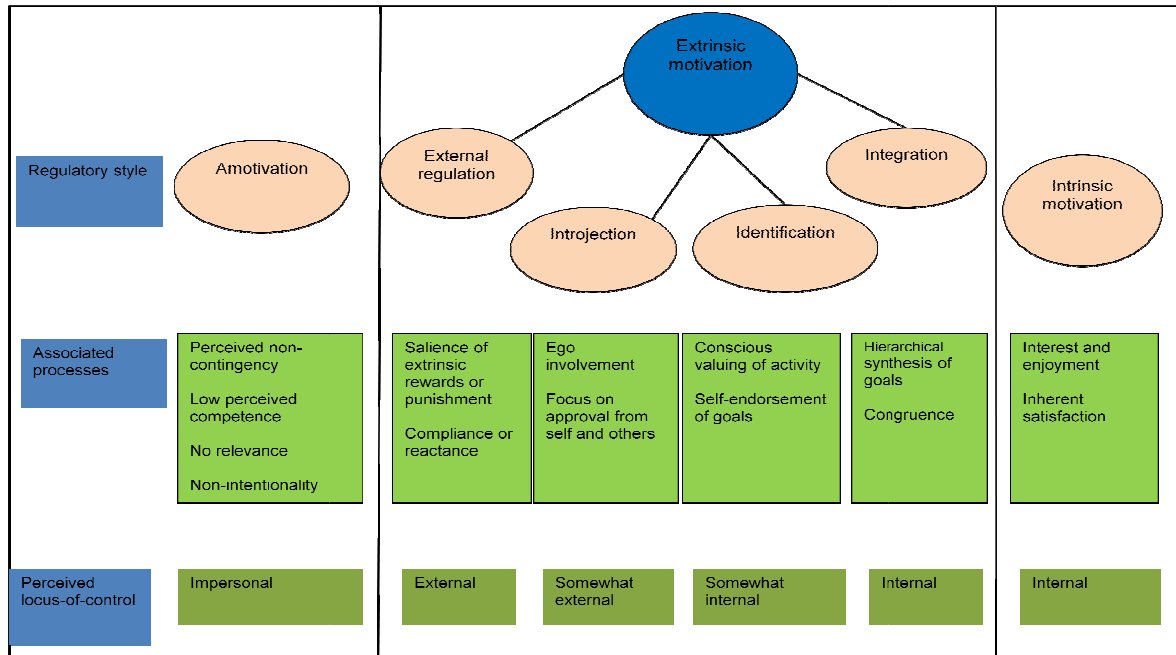
According to Wingfield (1994, p. 94), the expectancy-value theory is used to explain motivation for achievement tasks and provides insight into the concept of achievement motivation. Achievement motivation as referred to here by Wingfield (1994) is based on ‘needs theory’ which states that ‘individual motivated behaviour is substantially driven by the strength of various intrinsic needs (in other words, achievement, affiliation, autonomy, and dominance)’ (Geiger & Cooper, 1995, p. 251). Our focus is on achievement motivation which is the drive to excel academically (Busato, Prins, Elshout, & Hamaker, 2000). Achievement motivated students are driven by success (the pull action) and the avoidance of failure (the push action) (Haugen, Ommundsen & Lund, 2004; Haugen, Lund, & Ommundsen, 2008).

According to Ryan and Deci (2000, p. 54), motivation refers to being driven to do something. The definition by Ryan and Deci suggests a difference in the level of motivation, thus how motivated a person is on a dimension ranging from unmotivated to motivated, for example. Ryan and Deci (2000, p. 54) suggest that people do not only differ on the level of their

motivation, but also on the different kinds of motivation. The different kinds of motivation are usually referred to as motivational orientation, or the *why* of doing something. Triandis unpacks motivational orientation in his definition of motivation: ‘...the study of motivation is concerned with why people initiate, persist, and terminate actions in particular circumstances’ (1995, p. 13). According to Ryan and Deci (2000), motivation orientations play an important role in an educational context.

Self-determination theory proposes two distinctive motivation orientations based on essential attitudes and goals, namely an ‘intrinsic’ or ‘extrinsic’ motivation orientation (Elliot & Harackiewicz, 1994, p. 968; Ryan & Deci, 2000, p. 55). Motivation orientation points to the reason for doing a task, thus intrinsic motivation suggests that a person is doing a task because he or she enjoys doing it or finds the task interesting. Extrinsic motivation, on the other hand, suggests that a person is doing a task because he or she is expecting to achieve a valued outcome. Students who are extrinsically motivated tend to show competence in the task by the setting and achieving of performance standards and comparing one’s performance with that of others (Elliot & Harackiewicz, 1994, p. 970; Lindenberg, 2001). According to Busato et al. (2000, p. 1058) achievement motivation is regarded as a component of an extrinsic motivation orientation.

Ryan and Deci’s taxonomy of motivation provides a comprehensive explanation on the different motivation orientations and further differentiates between different types of extrinsic motivation. The taxonomy further differentiates between the reasons for performing a task and perceived locus of causality when performing the task (Ryan & Deci, 2000, p. 61).



**Figure 2.7. Ryan and Deci's taxonomy of human motivation** (Ryan & Deci, 2000, p. 61)

According to the taxonomy of human motivation (in an educational context specifically) a person can have either an unmotivated, extrinsic or intrinsic motivational style with associated reasons or the perceived influence from the environment. According to the 'Organismic Integration Theory' (OIT) which incorporates the taxonomy of motivation, there are six different types of motivation, ranging from being apathetic ('amotivation') to being intrinsically motivated (Ryan & Deci, 2000, p. 61). A student who is apathetic has no intention or commitment to work toward the attainment of a goal and there is no causal influence from the environment or from the person self. According to research, amotivation is the result of having no value for the task, feeling incompetent to do the task (low self-efficacy), or expecting that the outcome will not be achieved regardless of the effort expended on the task (Ryan & Deci, 2000, p. 61).

Extrinsic motivation is sub-divided in four regulatory styles. The first 'external regulation' refers to doing a task because of causal influence from the environment. The influence

could be an external punishment or a reward. The second 'introjection' refers to doing a task to maintain personal levels of self-esteem. The causal influence is still regarded as external because the person does the task to avoid anxiety or to establish superiority over another person (see Nicholls, Patashnick, Cheung, Thorkildsen & Lauer, 1989, p. 1880).

The third 'identification' refers to doing a task because the person has recognised the importance of the task to achieve valued outcomes. The causal influence is thus more personal. The fourth 'integrated regulation' refers to tasks that have been recognised as important and have been fully incorporated into the valued outcomes of the person. This is slightly different from intrinsic motivation where a task is done for the pure enjoyment thereof, and because the valued outcome is regarded as something separate from the behaviour (Ryan & Deci, 2000, p. 62). A study by Phinney et al. (as cited in Rodgers & Summers, 2008, p. 178) determined that an internal form of extrinsic motivation was indicated as the reason of many students to enrol for higher education, thus integrated regulation.

A study conducted by various researchers in Rodgers and Summers (2008, p. 178) on the OIT indicates that African students more frequently indicate helping their family and to prove that they can succeed academically as reasons for attending higher education, in contrast to white students. The African students are thus more extrinsically motivated and according to the researchers this could be related to the socio-economic status of African students in general. The research however shows that 'introjected regulation' as displayed by African students can support learning behaviour. In general, introjected regulation is positively associated with effort, but the research also indicated a positive association with anxiety and poor coping skills for failures (Ryan & Deci, 2000, p. 63). Research by Pintrich and De Groot (1990, p. 34) suggests that students with high anxiety levels are usually ineffective learners and have been associated with people with an extrinsic motivation orientation (Pintrich & Garcia, 1991). The research also suggests that the more autonomous or intrinsic the extrinsic motivation orientation becomes, the more it is likely to be positively related to engagement, academic achievement, persistence, quality of learning and psychological well-being (Ryan & Deci, 2000, p. 63).



According to Ryan and Deci (2000, p. 55), the majority of tasks in an educational context is not intrinsically motivated, but extrinsically motivated. High levels of intrinsic achievement motivation would be similar to having *integrated regulation* and high levels of extrinsic achievement motivation would then be similar to having external regulation. According to Wingfield et al. (2004) there is some association between the utility value of a task and extrinsic motivation (see Ryan & Deci, 2000). The intrinsic value of a task refers to the pure enjoyment of a task. There is also some association between the intrinsic value of a task and intrinsic motivation.

Research on expectancy theory suggests that expectancy was positively associated with students' academic marks after controlling for preparation time, historical grades and perceived ability (Geiger & Cooper, 1995). Within-persons studies also found that individual effort levels and academic achievement are closely related to valence decisions. The research also indicated the value of an outcome to be more motivational than the perceived expectation of attaining the outcome, regardless of the differences in effort expended on the task (Geiger & Cooper, 1995). According to Tinto (1993), highly motivated students are willing to commit themselves fully to the attainment of valued goals and expend effort and resources to do so. Bandura states that value and expectancies of success (achievement motivation) affect task performance indirectly through their influence on goal acceptance, rather than having a direct influence on performance (Bandura, 1986, p. 473; Elliot & Harackiewicz, 1994, p. 977; Nicholls et al., 1989, p. 1880).

According to Sternberg and Grigorenko (2002, p. 8), achievement motivation plays an important role in activating various skills, such as planning and self-evaluation skills, as well as learning and thinking skills. Schunk (1991) shows in his research how motivation is related to self-regulated learning through four processes that provide feedback information that influences motivation.

Self-regulated learning is regarded as a very important component in any learning task (Pintrich & De Groot, 2000):

- The first is 'self-observation' of a person's own behaviour. This provides information as to how the person is doing in relation to their goals. It helps to indicate gaps and allows for goals to be changed where necessary. Self-observation thus provides the impetus to plan and monitor goals (see Bandura, 2006, p. 165; Maddux, 2002, p. 282). The observation should, however, be timely, frequent and focus on the correct behaviour that needs to be monitored.
- The second, according to Schunk (1991), is 'self-evaluation' of current performance based on set goals. Evaluation judgements are made based on the standards used, the type of goals that were set (performance or mastery), the importance or value of reaching the goal, as well as the causal attributions of success. These judgements are seen as influencing motivation indirectly through feedback of actual performance (Bandura, 1986). The third is 'attributions' about the causal influence of performance which has an effect on success expectancy, behaviour, and affective reactions toward the task (most prominently anxiety). The last is 'self-reaction' about reaching the goals. Self-reaction is highly related to causal attributions and self-efficacy (Schunk, 1991, p. 90; Bandura, 2006, p. 165).

The commonly held notion about achievement motivation is that students who are high in achievement motivation set challenging goals and students who are low in achievement motivation set low performance goals. Sternberg and Grigorenko (2002, p. 7) state that achievement motivators set moderately high goals that are challenging enough with a high likelihood of attaining the goal in an area where they are able to excel in (subject-specific). In contrast to this perspective the relationship does not reflect low or high level goals, but the setting of a different type of goal. High achievement motivators usually set performance goals (achieving 75% in a test), while low achievement motivators set mastery goals, thus valuing competence and task involvement (Elliot & Harackiewicz, 1994, p. 977).

The following motivation related construct will be discussed in the following sections:

#### **2.4.1.2. Self-efficacy theory**

Bandura's theory of self-efficacy is defined as '...peoples' judgments of their capabilities to organize and execute courses of action required to attain designated type of performances' (Bandura, 1986, p. 391). In an academic environment self-efficacy refers to a belief in one's ability, based on past experiences to perform academically and to achieve set goals within a domain-specific context (Bean, 2005; Bean & Eaton, 2000). Ayayee defines self-efficacy as '...learners' beliefs in their capabilities and what is required of them to do well' (2008, p. 169). From Bandura's definition, perceived self-efficacy is a judgment of what one is capable of doing according to one's own set of standards. It focuses on performance capabilities rather than actual personality variables (Zimmerman, 2000, p. 82).

Zimmerman states that self-efficacy judgements indicate if a person expects to be able to do the task and does not indicate how well a person will do on the task (Zimmerman, 2000, p. 84; Maddux, 2002, p. 278). According to Wingfield and Eccles' expectancy-value theory, Bandura differentiates between '...efficacy expectations, or the individual's belief that he or she can accomplish a task, and the outcome expectation, or the belief that a given action will lead to a given outcome' (2000, p. 70-71). Bandura argues to a difference between the 'judgments' regarding the behaviour and the outcome of the behaviour, which is a consequence of the behaviour (see Jacobs, Prentice-Dunn & Rodgers, 1984). Self-efficacy judgments refer to how well one is able to the task, while the outcome is the anticipated result of completing or executing the act.

The reasoning that Bandura follows is that '...outcomes flow from actions. Hence, how one behaves largely determines the outcomes one experiences' and '...the types of outcomes people anticipate depend largely on their judgments of how well they will be able to perform in given situations' (Bandura, 1986, p. 392). Although distinct from each other, they are highly correlated with each other as is evident from the expectancy-value theory (Bandura, 1986, p. 392; Jacobs et al., 1984; Wingfield & Eccles, 2000, p. 70).

According to Bandura (as cited in Wingfield & Eccles, 2000, p. 71), efficacy expectations are better predictors of performance and task choice than outcome expectations (see Jacobs et al., 1984; Zimmerman, 2000, p. 82).

Bandura thus defends his theory against the then developed expectancy-value theory. Bandura (1986, p. 391) describes self-efficacy as the 'trigger' that sources the necessary skills (cognitive, social and behavioural) and incorporates it in planned action. Accordingly, success is only achieved after evaluating what has been learned, in relation to one's goals and making the necessary changes to one's learning strategies to achieve one's goals.

Zimmerman describes self-efficacy as a multidimensional disposition, because there are certain factors that influence self-efficacy judgements that lead to uncertainty in what people perceive to be able to do and their actual behaviour. Zimmerman refers to differentiations in context and differences in the domain content or subject field as factors influencing self-efficacy judgements (2000, p. 83). Some people, however, only judge themselves to be able in specific focus areas, thus domain-specific. These domain-specific contexts have different levels of difficulty that influence performance (Zimmerman, 2000, p. 83). Solving domain-specific problems, even elementary ones, does not always have clear outcomes and therefore it requires various cognitive abilities.

Even sound efficacy judgements at the beginning of an academic year will lower after continuous failures, especially if the failures occur early in a student's first year. The students with accurate high self-efficacy judgements are however more likely to look at other reasons for failure (causal attribution) than ability, such as insufficient effort or poor learning strategies. 'The extent to which people will alter their perceived efficacy through performance experiences will depend upon, among other factors, the difficulty of the task, the amount of effort they expend, the amount of external aid they receive, the circumstances under which they perform, and the temporal pattern of their successes and failures' (Bandura, 1986, p. 401). Thus indicating a recursive feedback loops among the factors of the expectancy-value theory and the achievement outcomes.

Schunk (as cited in Ayayee, 2008, p. 169) indicates that results on academic achievement are not clear-cut. Students with low efficacy judgments do not necessarily have low academic achievement and high achievers do not necessarily have high self-efficacy judgments. This could be due to disconnectedness between the outcomes that one expects and the efficacy judgement of achieving the outcomes (Bandura, 1986, p. 393). As mentioned earlier, efficacy judgements about expected outcomes have a regulatory influence on behaviour. According to Bandura, dissociation will occur when 1. taking no action will produce the desired outcome; 2. external influences have an effect on the desired outcome; 3. the outcome is not associated with the level of performance (expectancy-value theory).

In an educational context, the second and third points of dissociation are important. Students who are pressured by their parents to study a specific degree (external influence) will not be motivated to pursue the outcome when the proposed degree does not fit their interests, regardless of high efficacy judgements. Students who perform poorly due to external influences and not due to a lack of skill, regardless of consistent effort, will not necessarily have poor efficacy judgements. Bandura summarises these external influences as a lack of incentives, inadequate financial or material resources and physical or social constraints.

Schunk (1991) does not only show a relationship between efficacy judgement and effort, but also to the levels of persistence (behaviour regulation to acquire expected outcome). Students with high self-efficacy levels will increase their effort and work more persistently to reach their goals (Bean & Eaton, 2000, p. 53). Bean and Eaton (2000) differentiate between efficacy in a social and an academic context. Students who for instance believe that they are able to make friends are more likely to become socially integrated into the social system of the institution. Similarly, students who believe that they will be able to perform academically and actually achieve their outcomes are more likely to become academically integrated into the academic system of the institution. In both cases, having high efficacy judgements for social and academic situations affect students' levels of integration and persistence. 'A strong sense of self-efficacy with regard to the particular events and situations that compose campus life enables a

student to gain confidence in his or her ability to survive and adapt' (Bean & Eaton, 2000, p. 53). Levels of self-efficacy are also dependent on positive feedback from behaviour in a specific context (Bean, 2005).

According to Bandura the relationship between intellectual tasks and positive outcomes, for example academic achievement, is highly positive for people with high levels of self-efficacy judgments. People who do not have confidence in their abilities, thus with a low level of self-efficacy, will expect poor performance and possibly not continue with the task at hand (Bean & Eaton, 2000, p. 52). People with low self-efficacy judgements do not persist with their self-regulatory behaviour when their initial attempts prove to be lacking (Bandura, 1986). This corresponds with the propositions of expectancy-value theory.

A study with children and their perceived learning ability by Salomon (as cited in Bandura, 1986, p. 395) shows that children who regard the work to be learned as easy will exert less effort learning the material compared to children who regard the material as challenging, self-efficacy being high in both cases. This applies to skills that have been acquired and are being implemented. The children who spend more effort because of the perceived difficulty of the material doubted their abilities. Bandura states that self-doubt might lead to increased effort but it might actually hinder the use of previously learned skills when engaging in learning tasks (Bandura, 1986, p. 395). Self-doubt can either impede or be the impetus for sustained effort. This indicates a relational link between efficacy judgements and effort.

Racial differentiation on self-efficacy judgements by Rodgers and Summers (2008, p. 177) indicates that African-American students that attend Historically White Institutions have lower levels of perceived efficacy judgements than students who are enrolled at Historically African Institutions. The reason for this, according to Rodgers and Summers, is possibly due to the efficacy expectations, especially vicarious experiences and social persuasion as proposed by Bandura (1986). Through vicarious experiences, African students are able to model people from similar racial and cultural background.

Social persuasion is a form of establishing relationships with other African students whereby they can support and motivate one another. Through vicarious learning and social persuasion, African students incorporate the group's expectations and efficacy judgements (see Triandis, 1995). There are usually less opportunities for African students to model people from similar racial backgrounds in a Historically White Institution and therefore the lower perceived levels of efficacy.

#### **2.4.1.3. Achievement goal theory**

Goals specify valued outcomes of students, educational and occupational, toward which activities are directed and reflect both aspiration and expectations (Locke, 2002; Schunk, 1991, p. 85; Tinto, 1993). According to Pintrich (2000, p. 93), there are three general perspectives on goals, each at a specific levels of analysis. At the first level are target goals which specify a specific level of performance by which a person can evaluate performance (see Bandura, 1986; Harackiewicz & Sansone, 1991, p. 21). On the second level are more general goals that indicate the reason for pursuing a task (purpose goals) and could apply to all areas of life (see Harackiewicz & Sansone, 1991, p. 21). At the third level are achievement goals that incorporate target and purpose goals, but used specifically when an achievement task, like higher education, is pursued. 'Given this general definition, current achievement goal constructs address the issue of the purpose or reason students are pursuing an achievement task as well as the standards or criteria they construct to evaluate their competence or success on the task' (Pintrich, 2000, p. 93). Achievement goal theory, as explained by Pintrich, shows that achievement goals are not just a combination of target and purpose goals, but also indicates beliefs about ability, competence, success and effort. Pintrich proposes an integrated approach to achievement goal theory and motivational constructs.

Pintrich (2000) states that there is some concern regarding the theoretical and operational definitions of the construct. There also seems to be some overlap in relationship between the goal orientations and outcomes. The reason for the performance becomes measurable by the expected outcome. Various researchers in Pintrich (2000, p. 95) show a positive relationship between 'outcomes such as attributes, self-efficacy, levels of cognitive engagement and self-regulation, affect, interest,

persistence, and choice behaviours...’ and mastery goals and to a lesser extent a positive relationship with performance goals.

According to Pintrich’s (2000, p. 94) achievement goal theory, target goals are used as specific criteria to evaluate performance (see Schunk, 1991). According to Harackiewicz and Sansone (1991, p. 21), target goals guide behaviour and influence the performance of a person. Bandura (1986, p. 473) argues that various conditions apply that affect performance on various tasks. Bandura (1986) reasons that goals should firstly be clear by indicating the type and amount of effort required. Secondly, the goals should be set at a challenging level, but not be entirely unattainable (Bandura, 1986; Schunk, 1991). When goals are clear in terms of what performance is needed to accomplish the goal, it heightens the attainability of the goal. When a goal, especially a challenging goal, is attained it increases efficacy judgements and motivation to continue with the task. Thus, supporting a cyclical interaction effect among goals, self-efficacy, expected difficulty of the task and the achievement behaviour, such as increasing effort to reach a valued outcome (Wingfield & Eccles, 2000).

According to Harackiewicz and Sansone (1991, p. 21), purpose goals indicate the reason for behaviour and influence the way a person will approach a task and how one will evaluate one’s performance in an achievement context (see Pintrich, 2000, p. 94). Pintrich (2000) suggests that mastery and performance goals indicate the reason for performance. In this instance, mastery goals lead to the development and attainment of skills or mastering the content of a subject. Performance goals lead to the attainment of some performance standard and showing competence in relation to other people according to some set standard (Bandura, 1986, p. 476; Elliot & Harackiewicz, 1994, p. 970).

A further differentiation of dichotomous constructs such as mastery and performance goals in approach and avoidance goals seems to provide richness to interpretations of goals and outcomes. Performance goals can be sub-divided in what Elliot and Harackiewicz (as cited in Pintrich, 2000, p. 95; Rodgers & Summers 2008, p. 181) call



'performance-approach' and 'performance-avoid' goals. Students who have performance-approach goals strive to be the best achiever in their class, relative to others in the class. Students who have performance-avoidance goals try to avoid being the worst achieving student in the class, relative to others in the class. According to research in Pintrich, performance-approach goals can have positive correlations with actual achievement, while performance-avoidance goals are negatively correlated with interest and actual achievement.

Pintrich (2000, p. 99) suggests that mastery goals can also be differentiated in approach and avoidance goals. According to research in Pintrich, mastery goals are associated with interest in the task or content, thus mastery-approach goals refer to a focus on mastering the task through standards of improvement and setting standards to aid a deep understanding of the task. Mastery-avoidance goals refer to avoiding not to learn or to misunderstand through standards on what not to do to do the task incorrectly. Mastery-avoidance goals seem to be only the inverse of mastery-approach goals.

Research in Pintrich (2000, p. 101) indicates that a third type of goal 'work avoidant' goals could be used to explain mastery-avoidance goals. 'In this case, it may be that an avoidance of mastery reflects an avoidance of work and effort, just as an approach to mastering the task will involve higher levels of effort and involvement in the work of the task' (Lathan & Locke, 1991; Pintrich, 2000, p. 101).

The motivational constructs of expectancy-value theory are goals, self-efficacy and evaluations of the difficulty of the task. Bandura comments specifically on the relationship between task difficulty and goal setting by reference of Atkinson and Locke. Firstly, there is not necessarily a linear relationship between task difficulty and goal setting. A curvilinear relationship is proposed by Atkinson (as cited in Bandura, 1986, p. 473). This implies that '...hard goals have a low success expectancy but high value, easy goals have a high success expectancy but low value...' (Bandura, 1986, p. 473). This implies that effort and consequent performance will be higher for goals of

intermediate difficulty. Expectancy-value theory, as mentioned in Bandura (1986), indicates a negative linear relationship between goal difficulty and performance.

Contrary to Atkinson, Locke (as cited in Bandura, 1986, p. 473; also see Lathan & Locke, 1991) proposes a strong positive relationship between the setting of goals and performance. The relational effect between the setting of goals and performance is that more challenging goals lead to more effort which leads to higher performance. This is however only applicable when goals are strongly valued by the individual and according to this research, goals that are regarded as unattainable will be discarded by the individual. Research by Erez and Zidon (as cited in Bandura, 1986) however indicates that many individuals will persist with unrealistic goals even when there is ample information or feedback that indicates to the contrary. This research thus indicates that long-term goals could stimulate effort in such a way that even though goals seem unattainable now they could be reached with continuous effort over a long period of time.

Bandura (1986, p. 476) argues that the mere setting of goals will have little impact on future behaviour when there is little personal commitment to the goals (also see Tinto, 1993). Bandura indicated that people who set their own goals and who are committed to a valued outcome will be more inclined to increase effort to reach the goals and be more intrinsically motivated (Locke, 2002; Wingfield & Eccles, 2000). It is, however, not always necessary for people to make their own goals for them to be committed toward them. Bandura (1986, p. 477) argues that goals set by external parties can be internalised by committing oneself fully to those goals. Bandura theorises that committing oneself to external goals has certain consequences, social and personal, when the goals are abandoned. One will therefore exert the necessary effort to accomplish these goals in an attempt to maintain self-esteem (Ryan & Deci, 2000).

Bandura (1986, p. 474) differentiates between 'proximal' and 'distal' goals. Proximal goals refer to short-term goals that can be used to benchmark performance and to set new short-term goals. Short-term goals have a regulatory function that enables a person to achieve distal goals. Distal goals are seen as long-term goals or aspirations. A

student studying a Bachelors of Commerce (Accounting Sciences) usually aspires or hopes to become a Chartered Accountant. The student however has to master the curriculum over a number of years before becoming a Chartered Accountant. The student should however plan and set short-term goals during the programme to regulate his effort, learning strategies, and behaviour, and achieve the required performance levels in order to achieve the student's distal goal.

According to Bandura (1986), people who procrastinate are unlikely to achieve their long-term goals due to not setting short-term goals that regulate behaviour such as increasing effort, planning and self-evaluation of progress in relation to current levels of effort. 'Those who set no goals for themselves achieve little change in performance, those who set goals to sustain their level of effort make modest improvements, while those who set themselves goals to better their past attainments accomplish large performance gains' (Bandura, 1986, p. 475). Bandura's theory indicates the positive correlation between self-regulated learning as discussed by Pintrich and De Groot (1990, p. 34) and intrinsic motivation, mastery goals and self-efficacy, which leads to increased effort and increases the likelihood of reaching challenging goals (Bandura, 1986; Locke, 2002).

According to Nolen (as cited in Meece, 1991), goal orientation is associated with different learning strategies. People with task oriented goals (mastery goals) will more likely make use of deep learning strategies, while students with ego oriented goals (performance goals) will more likely use surface learning strategies. Joubert (2002) indicates an association between a person's motivational orientation and learning strategy. Intrinsic motivators are more likely to have deep learning strategies because they set mastery goals, while extrinsic motivators are more likely to have surface learning strategies because of performance goals. According to Elliot and Harackiewicz (1994, p. 977), motivation orientations are associated with goal orientations. Intrinsic motivators usually set mastery goals and extrinsic motivators usually set performance goals.

#### **2.4.1.4. Attribution theory**

Bean and Eaton's (2000) model indicates that attributions are important factors as students enter the institution. Attribution theory provides a theoretical framework to understand why events occur (Weiner, 1972, p. 203) and how this relates to thinking and behaviour (Attribution Theory, B. Weiner, n.d.). According to Weiner (as cited in Ayayee, 2008, p. 169) attribution theory refers to the factors that have a perceived influence on academic success or failures. Attribution theory has been used extensively in an educational context and has been used to explain the difference between high and low achieving students (Attribution Theory, n.d.).

According to Weiner (as cited in Rodgers & Summers, 2008, p. 180) there are three causal dimensions to which students can attribute their academic outcomes: 'locus (internal versus external), controllability (controllable versus uncontrollable) and stability (stable versus unstable)'. Causes of success or failure that relate to locus indicate origins of factors within the person (internal) or the environment (external). Students who believe that the cause of success or failure is stable believe that the outcome will be the same when performed at a later time, while students who believe the cause is unstable will believe the outcome will be different each time. Those students who believe that the cause is controllable believe that they can change the factors that cause success or failure (see Henson, 1976). Factors that are believed to be uncontrollable cannot easily be changed (Attribution Theory, n.d.). The combination of causal dimensions generally lead to an optimistic (positive) or a pessimistic (negative) style of attribution (Haugen, Ommundsen, & Lund, (2004); Haugen, Lund, & Ommundsen, 2008).

Weiner (as cited in Attribution Theory, B. Weiner, n.d.) identified four factors affecting attributions for achievement: ability, effort, task difficulty and luck. These four factors are usually used to attribute the reasons for success or failure in an academic context and are influenced by the students' attribution style (Haugen et al., 2004; Haugen et al., 2008).

According to Weiner (as cited in Attribution Theory, n.d.) the four factors can be analysed as followed:

- Ability is a relatively internal and stable factor over which a student does not have much direct control;
- Task difficulty is an external and stable factor which a student does not have much control over;
- Effort is an internal and unstable factor over which a student has much control over;
- Luck is an external and unstable factor which a student does not have much control over.

The causal dimension: controllability is seen as a distinct factor from locus and stability (Attribution Theory, n.d.). Even though an outcome can be perceived to be external and unstable, for instance caused by luck, a student can still control the outcome to an extent by putting more effort into the work. Weiner (1972, p. 204) postulates that failure is usually attributed to low ability and/or lack of effort.

Locus of control has been the most frequently studied construct and refers to attributing internal or external causal influences from past behaviour (Bean, 2005; Bean & Eaton, 2000). The initial attributions as mentioned in Bean and Eaton's model (2000), according to Rodgers and Summers (2008, p. 180), affect students' academic self-efficacy, which affects students' coping skills. Attributions are also strongly correlated with motivation (Attribution Theory, B. Weiner, n.d.; Joubert, 2002, p. 54; Rodgers & Summers, 2008, p. 173). According to Joubert (2002), a person with an internal locus of control usually has an intrinsic motivational orientation and *vice versa*. In both locus of control and motivational orientation there is a differentiation in the level of responsibility toward personal development by investing time and effort, as well as the level of flexibility by adjusting learning strategies according to the type of work that needs to be learned, planning study sessions by setting proximal goals for learning and monitoring by using feedback information.

According to Weiner (as cited in Bean & Eaton, 2000, p. 54), students who believe that they have control over the outcomes of a task will be more motivated to invest the necessary effort to achieve the outcomes. Studies conducted in the seventies indicate a strong relationship between locus of control and achievement (Ayayee, 2008, p. 170). According to the results, low achieving students were more likely to have an external locus of control, thus attributing their failures to factors out of their perceived control. Various studies in Bean and Eaton (2000, p. 54) indicate a positive correlation between locus of control and academic achievement. Joubert (2002, p. 54) states that the relationship between the meta-cognitive functions of planning and monitoring, which are associated with academic achievement, and locus of control is complex.

An internal locus of control for instance does not necessarily activate the meta-cognitive functions to increase academic achievement. The strong association between motivation and meta-cognition could provide the impetus to achieve academically, because motivation to achieve could activate the meta-cognitive functions (Lemmens, 2005). According to the Organismic Integration Theory of Ryan and Deci (2000, p. 61), students' locus of control affects their motivational orientation. Locus of control therefore does not directly affect academic achievement, but indirectly through the motivational orientations.

Crocker and Major's paradoxical study (as cited in Rodgers & Summers, 2008, p. 180) indicates that African-American students are able to maintain a positive self-esteem even when they fail academically. Crocker and Major explain these findings based on three attribution patterns: firstly, 'attributional ambiguity' refers to African students who attribute their failure to internal and external factors. Uncontrollable factors such as race and gender are in some cases unequivocally associated with poor academic achievement and are accepted by the racial group.

Secondly, 'selective comparison' refers to students comparing their abilities with other specific student groups, such as African students comparing themselves with white students. Crocker and Major, however, argue that African students have high self-

esteem and academic self-concepts because they tend to make 'within' group comparisons, thus comparing themselves with other African students.

Thirdly, 'selective devaluing' usually occurs in cultural groups who accept biases in academic achievement by devaluing its importance. African-American students tend to devalue academic achievement because they perceive themselves to not have the ability to excel, thus using a protective mechanism to keep their self-efficacy judgements intact. Research by Van Laar (as cited in Rodgers & Summers, 2008, p. 180) indicates that African students make more external attributions for failure, thus having lower expectations for success which leads to lower academic achievement (Eccles, Wingfield, Flanagan, Miller, Reuman & Yee, 1989).

#### **2.4.1.5. Beliefs and values**

According to Bean and Eaton (2000, p. 50), a belief is a representation of a quality that is assigned to something. Bean and Eaton allude to assigning an attribute to something or evaluating something. 'Belief systems thus help to provide structure to life. Because personal identity and security become heavily invested in belief systems, they are not readily discarded once acquired' (Bandura, 1986, p. 36). Bentler and Speckart (as cited in Bean & Eaton, 2000, p. 50) defined normative beliefs as '...the individual's beliefs regarding whether those referents who are important to him or her think that he or she should perform a given behaviour'. These important people could be parents, siblings, friends or role models and it is proposed that these people play an important role in students' beliefs about the institution, their ability and the possibility of obtaining a degree and choosing a career (Herriot & Ecob, 1979).

Being affiliated with a sub-group within the institution enforces and strengthens the beliefs that are valued by that group. A person does not necessarily have to value the beliefs of the group upon entry, but could be fond of or be attracted to people they meet for the first time. Thus becoming part of this group could alter the choices of a person, for the good or to the detriment of the person. Bandura (1986, p. 35) provides the example of a religious cult that provides an ideology that gives 'purpose and meaning to

one's existence'. Social sub-groups at university can thus provide both the support to a student to persist until degree completion or to the other extreme to become involved in anti-social behaviour that leads to exclusion from the university. According to Bandura (1993), beliefs are able to provide direction or distort reality to the perceptions of the group. Reality is constructed according to beliefs about the environment, interpreted and acted on according to these beliefs. Low socio-economic status students typically do not have well developed 'meaning making' systems and therefore run the risk of withdrawal (Kuh & Love, 2000, p. 203). Their norms, values and beliefs are thus different to other students.

Values are regarded as conscious, cognitive and evaluative representations of that which is important to a person (Biernat, 1989). To be able to play an active role to achieve what one values requires the development of skills, high self-efficacy judgments and self-monitoring and self-regulation (Bandura, 1986, p. 38). According to Bandura (1986, p. 38), these personal resources enable a person to become an active participant in the choice of his or her own life course, by 'selecting, influencing and constructing their own circumstances' (see Biernat, 1989). Bandura however states that individuals as active role players in their own destiny are dependent on social support to help overcome life's challenges. Social support also provides the values and belief systems that provide structure and direction during life's journey.

Higher education institutions as social micro-systems do not always provide the necessary support for the challenges that students from under-represented cultural groups face. Van Laar (as cited in Rodgers & Summers, 2008, p. 178) found that African-American students value higher education equal or more than white students upon entering a university. African students however lower their overall value of education near the end of their first year.

The expectancy-value model of Eccles et al. (as cited in Rodgers & Summers, 2008, p. 178) was used to understand the value system of African-American students. According to the research, African students tend to believe that the cost of attending a



Historically White Institution is to dissociate themselves from their cultural background (Rodgers & Summers, 2008, p. 178). As stated earlier, the African students lower their expectancies for economic and academic success and start to believe that pursuing the degree is not worth the cost of dissociation. 'As a protective mechanism, these students begin to make more external attributions for failure and lower their perceived value of the outcome associated with academic achievement in college' (Rodgers & Summers, 2008, p. 180).

Further research in Rodgers and Summers shows that the perceived influence of factors external to the person on educational or occupational outcomes can have a negative correlation with effort and academic achievement. The external factors that Rodgers and Summers highlight are related to racism. The students who however strongly value their cultural background are able to safeguard against the effects of external factors, for example racism. This possibly shows that external factors such as racism have a negative effect on effort and academic achievement, but the students who are able to understand the system and who value their culture can buffer the negative effects of these and other external factors (Sedlacek, 2004).

#### **2.4.1.6. Coping strategies**

According to Bean (2005), 'approach' and 'avoidance' behaviour are ways in coping with an environment to reduce the stress and anxiety that the environment creates. Approach and avoidance behaviour seem to be the actual behaviour that is associated with academic success. These behaviours provide feedback to students and have the potential to increase or decrease a person's feeling of self-efficacy and could lead to various attitudes toward persistence (Bean, 2005). Approach behaviours are regarded as proactive behaviour to reduce the perceived stress from the institutional environment and avoidance behaviours are regarded as passive behaviour to avoid the institutional environmental stressor (Bean & Eaton, 2000, p. 53).

According to Rodgers and Summers (2008, p. 173), '[A]n effective coping process is shown to lead to stress reduction and increases confidence....'. Coping strategies are

used to change the circumstances or solving the problem. If this is not possible, coping strategies can be used to change perception, accepting the circumstance or avoiding the problem (Brown, et al., 2009). According to Lazarus, Folkman and Antonovsky (as cited in Brown et al., 2009, p. 451), coping strategies are important in the coping process and students who are successful at coping are more likely to be integrated academically and socially and are less likely to withdraw from their studies (Bean & Eaton, 2000, p. 51).

#### **2.4.1.7. Personality traits**

According to Feist (as cited in Sternberg, 1995, p. 596), personality refers to traits, dispositions or characteristics of an individual that are relatively stable over time and between contextual situations. McAdams and Pals (as cited in Strümpher, 2007, p. 504) proposed a three-faceted taxonomy of personality. The first relates to dispositional or trait-like factors that provide broad information about people without specifying a specific context. These traits are seen to be stable over time and in different contexts. Traits answer the question 'What kind of person is this?' (Strümpher, 2007, p. 504).

The second relates to 'characteristic adaptations' that have clear conditions and are context specific. 'These include, for instance, values, motives, goals, strategies, developmental tasks, schemas, self images, and mental representations of others' (Strümpher, 2007, p. 505). Unlike personality traits, the characteristic adaptations are state-like and are therefore likely to change over time and from one context to another. In summary, characteristic adaptations answer the question 'Who is this person?' (Strümpher, 2007, p. 505).

The third level relates to 'narrative identity' that develops from the way a person constructs his life and gives meaning and importance to events (Strümpher, 2007, p. 506). According to McAdams and Pals (as cited in Strümpher, 2007, p. 506), narrative identity helps to shape behaviour, establish identity, and integrate individuals into a socio-cultural environment. It also provides a person with a sense of purpose and meaning to life (Strümpher, 2007). In summary, narrative identity answers the question 'Who am I?' (Strümpher, 2007, p. 506).

## 2.4.2. Personal and Demographic Characteristics

### 2.4.2.1. Gender

Gender differences in attitudes about learning may be explained by the identity development differences of male and female students (Chee, Pino & Smith, 2005; Harris & Lester, 2009, p. 100). Harris and Lester discuss two distinct theories on gender identity development, namely 'feminist poststructuralism' and the 'social constructionist' model. The assumption of both these models is '...that gender is not a fixed characteristic, but rather one that is produced, negotiated, and reinforced within social structures' (Harris & Lester, 2009, p. 107).

The 'feminist poststructuralism' model argues that female identity development occurs due to the social relationships of females (Harris & Lester, 2009). Research by Chodorow's (as cited in Chee et al., 2005) psychoanalytic feminist theory and Gilligan's (as cited in Chee et al., 2005) theory of women's development and social capital theory confirm the importance of social relationships in the development of female identity. Gilligan (as cited in Chee et al., 2005) hypothesises that both men and women's academic achievement is largely determined by their social capital. Feminist poststructuralism proposes that identity development is fluid, contextual and subjective (Harris & Lester, 2009). According to Harris and Lester (2009), social relationships use 'language' to express societal norms and values. The 'message' that society promulgates about females is one that places females in lesser positions below males. 'Specific contexts alter the messages of gender thus affecting identity development' (Harris & Lester, 2009, p. 105). Institutional 'messages', from the academic or social communities about gender could affect the development of an academic identity of male and female students differently. Male-dominated courses, for instance the sciences and engineering, send out the 'message' those female students do not fit the profile of the course and have traditionally not been associated with these types of career.

Women who have constructed their identities around these messages have in part succumbed to what Steele (as cited in Sedlacek, 2004, p. 43) calls the 'stereotype threat', which refers to internalised biased beliefs about a group that negatively

influences the intellectual functioning and identity development of an individual belonging to that group (Rypisi, Malcolm, & Kim, 2009, p.125). Research in Sedlacek (2004) and Rypisi et al. (2009) indicates that African-American and female students are usually negatively influenced by stereotype threat. A female student who believes not to be able to study engineering just because women are not regarded as good engineers, have developed an identity that engineering is not a fitting career for a woman (see Biernat, 1989).

Harris and Lester (2009) argue that a female student can have many identities, relating to race, socio-economic status, and family background and that all these identities meet at any given point in different situations. The argument by Harris and Lester (2009) could imply that messages from one social context such as the institution or the fraternity will not be internalised if opposing messages from other social contexts have already crystallised the academic identity of the female student. A family background of female engineers, for example, will enforce academic values and form an identity that females are good engineers, regardless of messages from the engineering fraternity that are opposed to female engineers (Biernat, 1989).

The 'social constructionist' model explains that male identity is developed through learned roles and behaviours that are reinforced through social relationships (Harris & Lester, 2009, p. 107). The assumptions that male identity is developed through social interaction are similar to the identity development of female students. Socialising also takes place in specific situations and contexts. The difference in gender identity development is that female students tend to develop multiple identities and male students develop fewer identities (Harris & Lester, 2009).

Males are required to conform to narrowly defined masculine behavioural norms that are regarded as socially acceptable and therefore have fewer identities than females. 'Female college students take on multiple identities while in college that are often-times related to their involvement in campus activities and organizations' (Harris & Lester, 2009, p. 101). Male students, on the other hand, have to develop specific identities, such

as being emotionally stable, being physically strong, and showing sexual dominance over females (Whitson as cited in Harris & Lester, 2009, p. 108).

Student identity issues result in both male and female students, largely because of the influence of socialisation. Male students have to conform to narrowly defined norms and behaviour that sometimes lead to male gender role conflict (Harris & Lester, 2009, p. 102). These role conflicts, according to research in Harris and Lester (2009) lead, among other, to substance abuse, poor coping strategies, depression, and obsession with success.

Gilligan's (1982) research indicate that male student have higher grade point averages (GPA) largely because they tend to care more about individual achievement and place more value on extrinsic rewards than female students. Women's higher GPAs probably result from the benefits of their social relationships (in other words, social capital) that contribute to socialising and channelling their attitudes and behaviours to facilitate learning. Harris and Lester (2009) indicate that female students are more engaged in purposeful academic activities than male students. Female students develop multiple identities that are related to the different activities that are involved on campus. When conflicts occur in any of these identities, female students tend to develop psychological stress and show physical stress (Harris & Lester, 2009, p. 101). It is these feelings of stress with the accompanied physical symptoms that influence academic success negatively.

Studies conducted by De Lange, Waldmann and Wyatt (as cited in Du Plessis, Müller, & Prinsloo, 2005, p. 687) found three distinct differences between male and female students on academic achievement for an introductory accounting module. According to the results, male students are more likely to achieve distinction marks, whereas female students are more likely to achieve high distinction marks and credit grades compared to male students. Thirdly, female students are more likely to fail the module, compared to male students. Nourayi and Cherry (as cited in Du Plessis et al., 2005, p. 687) indicated no statistical significant difference between male and female students on academic

achievement for an accounting module. Du Plessis et al. (2005, p. 696) in their own study showed that male students achieved significantly better academically than female students on an accounting science module.

Research in Nora, Barlow and Crisp (2005, p. 145) shows a difference in the persistence rates of male and female students. Female students tended to have higher persistence and graduation rates than male students. Harris and Lester (2009) indicate that in the year 2000, 56% of the enrolled students were female and female students have higher graduation rates than male students. Nora et al. (2005) hypothesise that social and academic networks probably lead to the difference in male and female withdrawal behaviour. It also has to do with the way the identity conflicts of male and female students present themselves and how they are dealt with that determine identity development (Harris & Lester, 2009).

Another reason for female withdrawal or failure relates to acquiring 'cultural capital'. Bourdieu (as cited in Rypisi et al., 2009, p. 124) defined cultural capital as a set of standards and evaluations that a set up by a dominant group in an institution and are imposed upon a minority group. Female and minority groups such as African-American students are usually required to conform to the standards and evaluations of a white, male student and faculty body. In order for female students to advance within such a system, they have to comply with the set of standards prescribed by the dominant group (Rypisi et al., 2009). These standards, consisting of values, norms and behaviour are set in such a way that hardly any student from the minority group will ever reach these standards. These standards are quite frequently set up in the curriculum, the methods used to lecture and the modes of assessment (Rypisi et al., 2009).

#### **2.4.2.2. Race and cultural background**

Broadly speaking, culture consists of '...shared ideas, which are learned and affected by experience, and which constitute a system of knowledge expressed in social interaction and in patterned behaviour' (Van Heerden, 1997). According to Van Heerden the 'social interaction' wherein knowledge is expressed takes place in various 'fields of activities'

which constitute a 'network of relationships' with unique 'artefacts or material goods'. The important fields of activities are the 'domestic field, the field of the neighbourhood, that of kinship, occupation, politics, religion, and the field of university' (Van Heerden, 1997). This network of relationships with its 'artefacts' and 'languages', unique to each field of activity, indicates the complexity of the society a person of a particular race or ethnic background is part of.

Van Heerden published an ethnographic study in 1997 on the influences of socio-cultural circumstances on learning approaches prior to 1994. Van Heerden (1997) summarises various socio-cultural and psycho-social factors that influenced the academic performance of students from ethnic backgrounds studying at an open and distance learning institution (UNISA). The socio-cultural factors are for instance the economic circumstances, domestic environment and school education. The students participating in Van Heerden's ethnographic study indicated that their parents were of low socio-economic status and mostly illiterate or semi-literate.

The domestic environment of African students also proved to be limiting in terms of the artefacts that are necessary to stimulate learning and development of children, which is said to be necessary for the school environment and later for university performance (Van Heerden, 1997). The school environment was seen as foreign in terms of the concepts and ideas that were taught. The language of tuition was either in Afrikaans or English and many learners found the language difficult, especially understanding foreign concepts and ideas in a foreign language. Schools were mostly poorly equipped and quite frequently the teachers emphasised rote learning. The African students in the study also indicated a lack of good study habits and an inability to plan their studies. The students were also not fluent enough in the languages of instruction at the university.

Prior to 1994 one can make the deduction that there was a great distance between the cultures of the African student and the culture of a Historically White Institution (HWI). Practically it became a challenge for African students to persist and graduate at HWI's due to the 'distance' between the two cultures (refer to Chapter 1 for the national and

institutional graduation and failure rates, Scott et al., 2007). The research cited in Rodgers and Summers (2008) could shed some light on the phenomenon experienced in South African universities.

According to Grantham and Ford (as cited in Rodgers & Summers, 2008, p. 182), African-American students and many minority student groups face both psycho-social (self-perceptions and perceptions of interactions with others) and social-cultural (perceptions of interactions with others with respect to ethnicity or race) challenges in higher education. Rodgers and Summers (2008) strongly indicate that African-American students have to develop what they call a 'double consciousness' in order to persist at a HWI. Birman (as cited in Rodgers & Summers, 2008, p. 182) termed double consciousness as 'biculturalism' and refers to the ability to function in two individual cultures (Rendón, Jalomo & Nora, 2000, p. 133).

Rodgers and Summers reason that African-American students should '...establish a sense of biculturalism, maintaining an identity with their ethnic group as well as developing an identity as a member of the larger, predominantly White campus climate' (Rodgers & Summers, 2008, p. 182). Tinto (1993) revised his initial proposition of integration of African-American students to the institutional culture by demonstrating biculturalism. Research in Van Heerden (1997) shows that irrespective of the perceived disharmony of functioning in two individual cultures where contradictory ideas and activities exist, the individual chooses the ideas and activities and might not be in conflict with each other. Kuh and Love calls the difference between the culture of the individual and that of the institution 'cultural distance' (2000, p. 204).

The greater the distance between the values, norms and ideas of the individual and institution's culture, the more difficult it will be for the student to become integrated into the dominant culture or sub-cultures of the institution. Cultural distance would then also be associated with a minority student's ability to demonstrate biculturalism. Cultural distance is by default dependent on the socio-cultural circumstance of an individual because the socio-cultural circumstance of an individual determines the various



resources available for students to be successful at university and the value the students places on earning a higher education degree (Kuh & Love, 2000, p. 203).

According to Rodgers and Summers (2008), ethnic identity might be a stronger predictor for retention than the 'psychological processes' (for example self-efficacy and motivation) as mentioned in Bean and Eaton's model (as cited in Bean, 2005). Sedlacek (2004) indicated that the 'understanding of racism' as one factor together with the other psychological factors are better predictors of retention and academic success for African-American students than for white students (see Tracey & Sedlacek, 1989, p. 638). The factor 'understanding of racism' refers to '...the ability to understand the role of the system in life and to develop a method of assessing the cultural or racial demands of the system and respond[ing] accordingly/assertively' (Sedlacek, 2004, p. 51).

According to research in Sedlacek (2004), African-American students who understand racism and are prepared to address it have higher academic achievement and are more able to adjust to a HWI than those who do not. Steele (as cited in Sedlacek, 2004, p. 43) defines the 'stereotype threat' as internalised biased beliefs about a group that negatively influences the intellectual functioning and identity development of an individual belonging to that group (Rypisi et al., 2009, p. 125). Research in Sedlacek (2004) and Rypisi et al. (2009) indicates that African-American and females students are usually negatively influenced by 'stereotype threat'.

Research by Steele (as cited in Sedlacek, 2004, p. 43) on the stereotype threat indicates that African-American students who internalise the biased beliefs about academic achievement of their culture will have poorer test results than their white counterparts. Quaye, Tambascia, and Talesh (2009), referring to Steele, indicate that African students who are in their primary phase of developing an academic identity will more likely react negatively to stereotypes regarding their cultural group. The primary phase refers to identifying with the education institution and feeling a sense of belonging at the institution. Minority students who are able to identify with the institution and feel a sense

of belonging have higher levels of self-efficacy and reject the cultural stereotypes (Quaye, et al., 2009, p. 165).

Motivation, according to Van Heerden (1997), is regarded as an important component that influences academic achievement of African students. Cultural background or racial grouping is perceived to influence the motivation orientation of a student based on the causal attributions and the type of goals different cultural group set. African students from the collectivist culture usually have an external locus of control and focus on achieving collective goals. The family as a whole usually decide what the student should study and the student is required to conform to the wishes of the family to maintain group dynamics. Students from the collectivist culture thus predominantly have an external motivation orientation.

An external motivation orientation is not exclusively associated with a collectivist culture or African students only. White students from 'Calvinistic' background had to conform to the expectations of their parents without questioning their decision (Van Heerden, 1997). In general, students from individualistic cultures have the freedom to choose their own educational goals with the purpose of self-development, pleasure or to reach independence from their parents (Van Heerden, 1997).

The socio-economic shift of a large number of African people due to Affirmative Action and Employment Equity policies over the last decade in South Africa has arguably led to a shift in the cultural perspective of African students to accommodate the principles of an individualistic culture together with their own ethnic culture (Morris, 2006), thus becoming 'biculturally oriented' (Rodgers & Summers, 2008, p. 182) and consequently showing an ability to 'handle the system' (Sedlacek, 2004). The rise in socio-economic status of more African people indicates that the artefacts that are necessary to stimulate learning and development of children are now part of the domestic environment, supported by greater access to quality schools, with active role models from the same cultural background means that the stereotype threat can be diminished (Rodgers and Summers, 2008).

A reason for higher African-American withdrawal and failure rates compared to white students relates to the disparities in acquiring 'cultural capital'. Bourdieu (as cited in Rypisi et al., 2009, p. 124) defined cultural capital as a set of standards and evaluations that are set up by a dominant group in an institution and are imposed upon a minority group. Minority groups such as African-American students are usually required to conform to the standards and evaluations of a white, male dominated student and faculty body. In order for African students to advance within such a system, the minority students have to comply with a set of standards (Rypisi et al., 2009).

These standards consisting of values, norms and behaviour are set in such a way that hardly any student from the minority group will ever reach these standards. These standards are quite frequently set up in the curriculum, the methods used to lecture and the modes of assessment (Rypisi et al., 2009). This implies that minority students such as African students in a HWI will have a negative learning experience because the standards set up in the curriculum, the methods used to lecture and the modes of assessment are core to the academic performances of students and their learning experience in general.

#### **2.4.2.3. Family background**

Tinto refers to the work of authors like Weidman (1985) and Bean and Vesper (1990) to show how the 'external communities' influence persistence (Tinto, 1993, p. 62). The relationship between the intentions or goals and the external communities has the following pattern of interaction: students who have weak intentions to stay at university and poor goals could be influenced positively by external communities where these communities motivate the student to persist.

The external communities could influence the persistence behaviour negatively in terms of a lack of support (Stage & Hossler, 2000, p. 179). Based on these premises, Tinto made a hypothesis that students from communities with high academic non-involvement (first-generation students) are more at risk for withdrawal (see Furr & Elling, 2002). The

reason is that the home or community social groups do not necessarily understand the transition that the student has to make and that the student is ‘...forced to at least partially reject membership in communities that have been part of their upbringing’ (Tinto, 1993, p. 62).

Just as parental influence for first-generation students have a negative effect on persistence, it can have a positive effect too. Authors like Jones et al. (2008) and Johnston (2000) show that first-generation students are actually more likely to persist because of high levels of motivation. Parents, for example, can provide additional motivational support to students. Motivational support from parents could however, if too forceful, actually lead to students withdrawing rather than persisting. According to Tinto (1993, p. 63), this tension between parental support being too demanding or being totally uninvolved is particularly intensely experienced by first-generation students.

Family responsibilities have been associated with lower levels of academic success and higher withdrawal levels (Cabrera, Burkum & La Nasa, 2005, p. 170). The research in Cabrera et al. indicates that students from lower socio-economic status (SES) levels are slightly more likely to have family responsibilities due to falling pregnant than high SES students. In general, being part of a family structure or community away from campus could assist persistence.

#### **2.4.2.4. Financial pressures**

According to Schuh (2005, p. 279), students and institutions find it challenging to secure funds for students to access higher education and for institutions to provide higher education. Students, according to Schuh, usually pay for higher education through savings, their parents, bursaries or loans. The impact of finances was regarded as very straight forward by many researchers, but Tinto argues that there are unresolved questions on the ‘how’ and ‘why’ finances has an effect on persistence (Tinto, 1993, p. 65). According to Tinto, the greatest effect of family finances is seen at or before entry to university. Students with financial difficulty will have to decide on the type of institution and which degree to enrol for if additional support in the form of loans or bursaries is not

available, or not to study at all. According to Astin (1975, p. 53), parental financial support increases the probability of a student persisting at a higher education institution (see Bean, 2005, p. 235).

Astin (1975, p. 35) shows a direct relation between the financial income of parents and withdrawal rates. According to the results of Astin, the effect of parental income becomes insignificant in a regression analysis with other variables. This indicates that other variables influence the effect of parental income and withdrawal. 'The greater dropout-proneness of students from low-income families is attributable to their less educated parents, lesser ability and lower motivation, and greater concern about finances' (Astin, 1975, p. 35). According to Astin and Oseguera (2005), the educational level of both parents contributes to students completing their degrees. Parental education level is most often associated with the socio-economic status (SES) of the family (Astin, 1975; Furr & Elling, 2002).

This means that students coming from socio-economically disadvantaged families are more likely to withdraw from their studies than students from socio-economically advantaged families. Cabrera, Burkum and Nasa (2005, p. 156) confirm that students from low socio-economic status families tend to have parents who are less involved in the students' school education and are less informed about how to pay and plan for higher education. Socio-economically deprived students are usually also less prepared for higher education and have less knowledge of what to expect at university than higher SES students (Kuh & Love, 2000, p. 203).

Cabrera et al. (2005) provide evidence from research that although socio-economically deprived students are less prepared for higher education, they show similar levels of involvement with the institution in general as higher SES students. The research by Cabrera et al. (2005) indicates that lower SES students work longer hours at their work with less involvement in the academic and social communities, resulting in greater improvement of critical thinking skills than higher SES students. Regardless of the improvements of low SES students when entering a supportive environment, Cabrera et

al. (2005, p. 157) still indicate higher withdrawal levels for low SES students than for higher SES students. According to Cabrera et al. (2005, p. 158) the main reason for the lower persistence rates of low SES students is because of them being academically unprepared in general. Further research however indicates that some low SES students with minimal academic resources and who enter a four-year degree do show resilience to complete a degree in spite of the odds against such students. Resilience is defined as an ability to adapt under difficult circumstances (Masten & Reed, 2002).

Various researchers (as cited in Schuh, 2005, p. 281) indicate that students from lower SES families are more sensitive to changes in tuition fees and lowered financial aid than middle and high SES family students. Students from low income households are more likely to withdraw from studies when there are fluctuations in financial resources (St. John, Cabrera, Nora & Asker, 2000, p. 42). Bean (2005) indicated that African-American students specifically shy away from loans in general and according to Schuh (2005) lower income families are at risk for not being able to repay loans.

In South African contact universities the majority of students who withdraw from their studies are students from low-income households and in many cases these households face additional social difficulties like domestic violence and teen pregnancy that contribute to increased attrition rates at higher institutions (Macgregor, 2007). At one of the historically disadvantaged universities in South Africa, 82% of the students who withdrew from their studies were from low-income households. On average, 70% of the students that withdrew from the seven participating universities were from low-income households (Macgregor, 2007).

Jones et al. (2008) add that students from distant and rural areas face additional financial challenges that keep these students from applying to institutions. Paying application and registration fees is a problem for these students, not yet stating the challenge of paying for accommodation, food, textbooks or transport. According to Jones et al. (2008), students cannot be fully engaged academically or socially when they are

barely able to sustain their physical needs (see St. John et al., 2000, p. 40). Students who are not able to buy food or pay rent will not persist until graduation.

Jones et al. (2008) argue that the financial needs of disadvantaged students have a negative impact on their academic success and leads to social isolation. Having sufficient financial resources are necessary for academic and social integration (Tinto, 1993). Nora et al. (2005, p. 135) add that financial pressures also affect students' ability to engage in formal and informal academic activities, to stay committed to earning a degree and to eventually persist until degree completion (see Bean, 2005, p. 236; Furr and Elling, 2002).

#### **2.4.2.5. Work responsibilities**

The financial situation of the family affects students' decisions to work part-time to supplement the educational expenses and living costs while studying. Result from Schuh's (2005, p. 282) study indicates that it is the students from low-income and middle-income families that are more likely to work during the year – an average of 22.6 hours per week (see Macgregor, 2007; Tinto, 2008). Bean states that working more than 20 hours per week could have negative consequences for the academic and social life of the student (2005, p. 236). Working full-time, according to Schuh (2005, p. 282), is negatively associated with persistence. Thus working full-time lowers persistence levels.

The effect of work responsibilities is not always straight forward in terms of outcomes. Tinto states that work obligations, especially work off-campus that is not related to the academic programme will limit the time available for interaction with academic staff and peers (Tinto, 1993, p. 63). The reason for this is caused by the added responsibilities of commuter students, like family and work responsibilities. Astin (1975, p. 79) however indicates that part-time work facilitates persistence in some cases, because some students are able to spend time on work without suffering the negative consequences from a lack of lecturer and peer involvement. Students who work to earn money to pay for their studies are usually more motivated to complete their studies than the students who work to support their social expenditure (Bean, 2005, p. 236). Persistence levels increase by

13% for African students attending a predominantly white institution when African students have campus jobs (Astin, 1975, p. 75).

#### **2.4.2.6. Institutional residence**

Institutional residences are seen as an extension of the university environment and according to Astin (1975), living in university residences influences persistence. According to Astin and Oseguera (2005, p. 260), students who live in residence are more likely to complete their degrees (see Astin, 1975, p. 92). The research in Astin (1975) shows that living in university residences is associated with lower probabilities of withdrawal compared with living with parents or in private residences, irrespective of race or gender. Astin's theory on this research outcome is that students living at university residences are more involved with campus activities than commuting students. Research in Tinto (1993) confirms the advantages of being socially and academically integrated into the communities of the university.

Research in Astin (1975, p. 94) further suggests that living in a private residence, like an apartment or flat, rather than with parents is beneficial to male students but not so for female students. The reason according to Astin (1975) is the degree of difference in autonomy and independence between male and female students during the high school years. Astin reasons that male students have more freedom to be autonomous during high school years than female students and as a result '...women living away from home for the first time in a private room may not be able to handle the interpersonal peer pressure associated with such an acute shift in degree of independence' (1975, p. 94).

### **2.4.3. Cognitive Predictors**

#### **2.4.3.1. Academic ability**

Research indicates that academic achievement in high school is the best predictor of academic achievement in higher education (Astin, 1975; Astin & Oseguera, 2005;



Camara, 2005b; Sedlacek, 2004). High school academic achievement, however, seems to have mixed results as predictors of withdrawal behaviour (Astin, 1975, p. 30; Nora, Barlow & Crisp, 2005, p. 134). Some research in Nora et al. (2005) and in Astin (1975) shows that high school achievement does not have much influence on withdrawal behaviour, while other research shows that overall grade point average (GPA) is predictive of student withdrawal (Astin, 1975, p. 98; Nora et al., 2005, p. 134). Stage and Hossler (2000, p. 180) indicate that cognitive ability is a complex construct in some respects. The reason is that cognitive ability alone does not lead to good marks. Higher marks due to ability and effort subsequently lead to parental and lecturer support, which further increases belief about academic success and motivates students to achieve higher marks in future test and exams (Stage & Hossler, 2000).

In the American context, cognitive tests are regarded as important tests of ability and potential, for example the Scholastic Assessment Test (SAT) (Sedlacek, 2004). These tests measure general intelligence (g) or better known as the 'Intelligence Quotient' (IQ) (Spearman as cited in Gregory, 2000). According to Astin (1975, p. 33), college admissions tests like the SAT have less predictive power than high school academic achievement and less so among African-American students for academic achievement at a higher education institution (see Astin & Oseguera, 2005, p. 247). Research in Nora et al. (2005, p. 147) shows that SAT scores do not have much predictive ability for withdrawal behaviour.

The reason for the popularity of the cognitive test according to Sedlacek (2004) is first of all based on the idea that it can be used to assess all students regardless of their entry characteristics. The problem with cognitive tests is that the tests were predominantly developed with a specific group of people in mind, specifically to determine the ability of army personnel in the United States and also for assessing school readiness of white middle class learners (Sternberg, 2007). According to Sternberg (2007), the student population has become so diverse that it could be reasoned that these tests need to accommodate other variables that do not exclude students from non-traditional backgrounds. Ability tests are, however, still preferably used because they are easy to administer and provide numerical scores that can be compared to norm groups (norm-

referenced) or can be compared to students in an entry group (criterion-referenced) (Sedlacek, 2004).

#### **2.4.3.2. High school academic preparation**

Students who are academically and socially under-prepared for the challenges of the university are usually unable to make the transition to university and withdraw from their studies (Conley, 2005, 2007, 2009). These students are more frequently from under-resourced schools where students are taught to use surface learning strategies, like rote learning (Cabrera et al., 2005; Jones et al., 2008; Sternberg, 2007). Astin (1975, p. 32) indicated in his study that students' ratings of the quality of their high school was associated with withdrawal behaviour. According to Astin's study, the students were able to indicate with some accuracy the quality of their high schools. Students that rated their school poorly were more likely to withdraw from a higher education institution.

Students who are not fluent in the language of tuition also have difficulty to write scientifically and use critical thinking to engage with the literature (Jones et al., 2008). Wong and Chia (as cited in Du Plessis et al. 2005, p. 689) measured the impact of proficiency of English in non-English speaking countries. In this study it was found that students who were taught accounting science in English as their second language had poor performance in mathematics and accounting science. Bohlmann and Pretorius (as cited in Du Plessis et al. 2005, p. 689) also investigated the effect of English reading ability of English second and third language users on mathematical performance. Their study found that regardless of the language use (first or second users), the students' reading ability was of greater importance of success in a mathematical module. Du Plessis et al. (2005, p. 696) in their own study used Grade 12 English final examination marks as an indication of English proficiency. The results of the study showed no statistical significant difference between first and second language users. The important component of reading ability according to the Du Plessis et al. research project was comprehension or understanding of what is being read. The results indicated that more than half of what was read was not understood by the weak readers, irrespective of language use.

## **2.5. THE RELATIONSHIP BETWEEN WITHDRAWAL AND ACADEMIC ACHIEVEMENT**

Tinto (1993, p. 48) uses the term 'difficulty' to refer to students who struggle to be in good academic standing or are at high risk for failing. Furthermore, Tinto states that students that fall in the risk for failure group are likely to withdraw voluntarily, although some students do persist until they are involuntarily discontinued by the institution. Bean (2005, p. 224) agrees that the true reasons for withdrawal might not be academic ability, as measured by high school academic achievement, but due to other reasons. Some students decide to withdraw from their studies because they do not know how else to get out of the system with a valid excuse.

Both Tinto (1993) and Bean (2005) make a distinction between the association between ability in the form of prior school performance and voluntary and involuntary withdrawal. According to Tinto, students that are involuntarily discontinued are usually of lower ability, thus having lower academic achievement at school. Students that withdraw voluntarily do not necessarily have poor school performance. Bean states that even students with high academic performance in school might withdraw from an institution and therefore retention is based on more factors than only academic ability.

Tinto (1993) also adds the general comment that prior school performance is not highly correlated with withdrawal (Cronbach's alpha less than 0.50). Research in Astin (1975, p. 98) even of a seminal nature, suggests that high school academic achievement is directly related to withdrawal, independent of variations of entry characteristics. The research of Astin also shows that about 20% of top performing students withdraw from their studies even though it was predicted that they will not withdraw at all. Thus this implies that other factors contribute to withdrawal behaviour and that predicting academic achievement based on high school achievement alone is limiting (Bean, 2005, p. 226).

The other factors that contribute to withdrawal behaviour according to Tinto are associated with academic achievement and withdrawal behaviour, either directly or indirectly. Firstly, Tinto (1993) refers to having weak 'intentions' or 'goals' and how these culminate and show itself in poor academic achievement and then presumably leads to withdrawal, voluntary or involuntary. Secondly, Tinto states that high school achievement on its own is not a good predictor of the study skills necessary for success at university, nor is high school achievement a good predictor of the inter-personal skills necessary to become involved in the academic and social system of the institution. Thirdly, Tinto (1993) associates the development of study skills directly to the quality of school preparation and indirectly to the type of school and its effect on withdrawal behaviour. Based on this proposition, Tinto leans on other researchers to make a point that students of lower socio-economic status who are more likely to be enrolled in poorer quality or government schools are less prepared for university and are more likely to have poor achievement and have greater risk for withdrawal.

## **2.6. DEVELOPMENT OF A READINESS AND RETENTION MODEL**

The point of departure for this study is the development of a theoretical retention model that includes readiness for university education. To conceptualise the model, readiness theory (Conley, 2007), transition theory (Schlossberg et al., 1995; Tinto, 1993), the longitudinal model of student departure (Tinto, 1993), the psychological model of college student retention (Bean & Eaton, 2000), and the expectancy-value theory of motivation (Wingfield & Eccles, 2000) will be used.

The assumptions for the readiness and retention model are borrowed from Bandura (1986), Bean and Eaton (2000) and Conley (2007), namely:

- action precedes outcomes;

- cognitive processes such as evaluating, intending and monitoring precede behaviour;
- psychological processes lead to attitudes about one-self;
- behaviour, personal variables and the environment are in dynamic and in reciprocal interaction with each other; and
- the elements of readiness are neither mutually exclusive, nor perfectly nested in the model.

The readiness and retention model will focus predominantly on the characteristics that students present upon entering the institution and the contextual or environmental dimension in which the readiness characteristics are nested. Conley (2007) suggests a broad definition of readiness that includes cognitive strategies, acquiring content knowledge, academic behaviours, and contextual knowledge and skills to be included in a readiness model. The inclusion of additional theories, as discussed in this chapter, will ensure a broad definition of readiness and how these readiness characteristics interact with the institutional and environmental dimension to lead to the measured outcomes and behaviour, namely academic achievement and persistence, respectively.

The contextual or environmental dimension in this model can be sub-divided into four dimensions that together determine an individual's unique contextual situation. The four sub-dimensions are the institutional, parental, socio-cultural, and financial dimensions. The institutional dimension only starts to become applicable when a student has his first contact by gathering information about the institution, the programmes and choices that are available to the student. The bureaucratic interactions that Bean and Eaton refer to are part of the institutional sub-dimension. The extension of the institutional sub-dimension becomes relevant when the student is incorporated in the academic and social communities of the institution.

The parental sub-dimension incorporates the educational level of the parents or guardians and the level of support that this sub-dimension is able to provide to the student before entering and during the student life cycle at the institution. The socio-

cultural sub-dimension refers to the domestic environment where the student grew up and is extended in stereotypical behaviour due to socio-cultural influences and affiliations. Affiliations refer to being associated with an organization, party or system. The parental and socio-cultural dimensions will ultimately influence the quality of the interactions with the academic and social communities in the institutional sub-dimension (social capital). The financial sub-dimension refers to the socio-economic circumstance of the students. This sub-dimension is highly related to the parental and socio-cultural dimensions and can have a direct effect on decisions to withdraw. The financial sub-dimension also indicates the likelihood of a student to take up employment during their studies, which could have an indirect effect on failure and withdrawal.

The contextual dimension functions as the 'cradle' for the development of psycho-social and cognitive skills that are expressed in behaviour, thoughts and emotions of the personal dimension. The personal dimension will be divided into three distinct but connected sub-dimensions, namely the non-cognitive sub-dimension (for example, beliefs, values, and self-efficacy), cognitive sub-dimension (high school achievement) and the biological sub-dimension (race and gender).

The contextual or environmental dimension, unique to each student, influences what is valued. According to Bandura (1986, p. 35), that which is valued gives purpose and meaning to one's life and it also provides the standards against which one can measure behaviour. The socio-economic status of the family and the education level of the parents also influence the values and beliefs of students. Personal past experiences, especially ones related to academic achievement, influence perception of academic abilities and skills. High school achievement (cognitive sub-dimension) forms the base for the evaluations of cognitive ability.

High school achievement is a measure of the academic preparedness of students and consists of content knowledge that Conley (2007) deems to be important for readiness. The key cognitive strategies discussed in Conley are a reflection of the abilities and skills that students have gained at high school. Other factors like the evaluation of the quality

of the school environment also impact on perceived abilities and perceptions of preparedness for university. These factors subsequently influence perceptions of self-efficacy and locus of causality as well as the goals that students will set for future performance. Locus of causality is the perception of influence on the environment and has a direct influence on perceptions of self-efficacy (Bean, 2005).

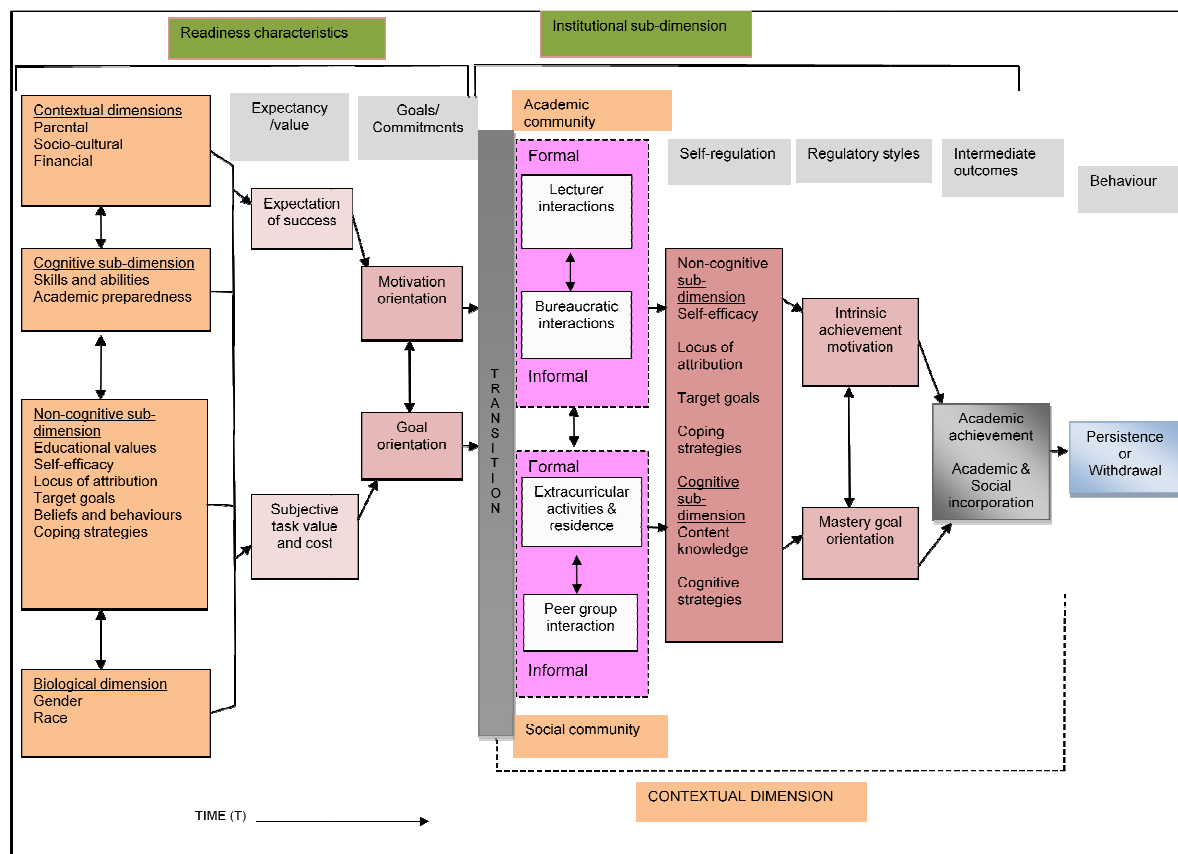
The self-efficacy judgements indicate future expectations of performance on tasks. Efficacy expectations refer to the ability to do the task and do not indicate how well a person will do on the task. Therefore it is important for students to set task-specific goals that are able to enhance performance and effort. When a goal is attained, especially a challenging goal, it increases efficacy judgements and motivation to continue with the task. In both these cases there is a cyclical effect between goals, self-efficacy and effort.

According to Wingfield and Eccles, expectations and task value of students in an educational context are influenced by self-efficacy, the perceived difficulty of different tasks, individuals' goals, educational values, and current evaluations of ability (2000, p. 69). The expectations and task values subsequently influence students' motivation and goal orientation. Motivation and goal orientation refers to the reason for achievement and influences the way a person will approach a task. High achievement motivators usually set performance goals (achieving 75% in a test), while low achievement motivators assign mastery goals, thus valuing competence and task involvement (Elliot & Harackiewicz, 1994, p. 977). In a sense the expectancy for achievement motivation is success, persistence or choice, and beliefs about the value of the outcome together with perceived causal attribution.

A student with a certain personal and contextual make-up has to make the transition from the known to the unknown institutional environment. The student however does not divorce himself from his personal and contextual dimension when entering the institution. The bureaucratic, academic, and social systems (institutional dimension) interact with the contextual or environmental dimension external to the institution, together with the personal dimension ('psychological processes'). There is reciprocal interaction between

the three dimensions which leads to subsequent expectancy-values of motivation that are determined from self-regulated behaviour. The result of the expectancies of motivation leads to what Bean and Eaton (2000) call 'intermediate outcomes' (academic and social incorporation and academic achievement). The intermediate outcomes lead to behaviour of withdrawal or persistence.

The personal and contextual dimensions give an indication of the students that are more likely to persist or withdraw (behaviour that is being measured). Students that show a more positive non-cognitive dimension and have the cognitive capabilities to excel academically, have mastered the content knowledge of the module and have a supportive contextual environment, will be more inclined to benefit from the academic environment and will be more likely to persist and achieve academically.



**Figure 2.8. Model of student readiness and retention for university education**



## 2.7. CONCLUSION

The concluding remarks revolve around the model of student readiness and retention for university education. A number of theoretical models, theories and perspectives were investigated to determine the readiness characteristics and explained in the context of a higher education environment. The possible output of this inter-relationship was also discussed. The model of student readiness and retention provides a possible conceptual framework to understand retention and success in terms of readiness for university education.

In the next chapter, various non-cognitive questionnaires will be discussed to identify further entry characteristics as well as possible items for the Academic Readiness Questionnaire (ARQ). The reader will be guided through a typical test development process as the ARQ was developed, translated and standardised.