A model of student engagement: identifying engagement triggers in Dutch higher vocational education

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Brian P. Godor MA

A Model of Student Engagement:

Identifying Engagement Triggers in Dutch Higher Vocational Education

Doctorate in Education

Wednesday, 26 October 2011
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Abstract

Increasing student engagement remains a challenge for educators: although there is large volume of research studies and published articles, the choice of successful pedagogical interventions with the aim of increasing student engagement remains difficult. The purpose of this study was to improve our understanding of student engagement and the factors that activate and prompt students to put effort into their studies. An online Student Satisfaction Survey was administered in which 4,992 or 24.4% of the total student population at Avans University of Applied Sciences returned useable responses. These led to the identification of engagement types and specific engagement triggers. Significantly different engagement types and engagement triggers were found among full-time and part-time students, first-year and upper-level students, as well as students from differing faculties. These findings hold a number of implications. Administrators need to take into account student engagement as one of the possible strategic focal points in the palette of university initiatives in attempting to increase student retention. Durkheim’s work on suicide and Bourdieu’s theory of social capital are explored to broaden the understanding student retention: Durkheim’s four types of suicide as possible analogues and Bourdieu’s theory of social capital as a possible variable for students’ academic success. Therefore, university policies surrounding student engagement should not focus solely on the student’s behaviour, but also on the interaction between students and the university. Furthermore, educational policies regarding the pedagogical climate within the university need to support student engagement.
Acknowledgements

At the beginning of this dissertation, I feel it prudent to mention the various parties that have assisted me during this journey. First, I would like to start with my university and the colleagues that supported me there, then my supervisor John Richardson and finally my family. Obviously, similar to Oscar speeches, there is no room to mention everyone in this section. However, I will do my utmost best to point out to those who have greatly helped me along the way.

At Avans, there are too many people to refer to individually. However, there are a few colleagues that warrant special acknowledgment. The management team of the Learning and Innovation Centre (LIC): Rien, Ellen and Jan. Without the backing and confidence of these three, completing this research project would have never been possible. Receiving the time and freedom to order the resources as needed have a sparring partner when needed and explore all relevant avenues concerning my research has given me the opportunity to manifest the best possible results.

Also, the different teams within the LIC have done their best to support this research: the numerous books ordered with high priority, the several digital article requests, access to and training for the digital survey system, and the help and support with the statistical analysis. A special acknowledgement is in order for my fellow consultant team members. The support and encouragement in the form of venues to discuss my work, using the results of this research in their own projects as well as providing me the space to develop as a researcher; a new and challenging aspect in our team. The board of governors at our university, in the form of their support staff, also played a key role in this research. Initially, it was their idea to add new
research questions to the existing survey instruments. Simply stated, without this addition, there would be no dissertation.

Without the watchful eye of a mentor, a plebe has no chance. Success is built upon blood, sweat and tears, most of which stem from that watchful eye. While this might not seem too complimentary, it is meant so. The struggles I have met along the way have been consciously and scrupulously turned into “educational moments” for me. My supervisor has introduced me to key nodes in the academic world and thus strengthened me as an actor in my newly formed network as well as modelling the behaviour and paradigm of a serious and highly professional educational researcher.

The unsung heroes in this dissertation deserve to be praised. While my name is on the cover of this dissertation, it is only the support of my family that allows me to do so. The long nights behind the computer, the weekends working, and the 25+ hours per week EdD work above a “normal” busy job have certainly laid many demands on me that were not of my asking. This long and harrowing trip is soon over; let’s hope we can reap the benefits that have been so long in coming.
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1 INTRODUCTION

1.1 Context of Current Research

Avans University of Applied Sciences is a large higher education institute in the southern part of the Netherlands. Its mission is primarily to serve the students from the province of Brabant. Avans strives to be a strong partner with the local industries in the socio-cultural and economic development of Brabant. With three locations in Breda, 's Hertogenbosch (Den Bosch) and Tilburg, it has 19 faculties which offer 83 different majors. Some of these majors are offered at both the Breda and Den Bosch locations (e.g. marketing, management, accountancy, international business, and fine arts). Initially, both of these locations were independent universities of applied sciences, but in 2001 they merged along with the location in Tilburg, which provides mainly vocational programmes such as civil engineering and architecture.

In 2010, Avans was the eighth largest university of applied sciences among the 39 in the country (The Netherlands Association of Universities of Applied Sciences, 2010a). As of 2009, Avans had approximately 1400 full-time staff, with close to 65% of these posts reserved for teaching staff (The Netherlands Association of Universities of Applied Sciences, 2010a). In 2010, Avans reached its highest student population: 23,711.

Avans has endeavoured to create a cutting edge educational vision that would both serve as a beacon of light for our teaching and support staff and inspire students. In its educational vision Avans states:
Students, lecturers, professors and education professionals together form a lively network within our educational institution. Knowledge and competency development is the driving force and the connecting factor behind this. Our varied and modern learning environment enables each student to develop his or her skills and ambitions to their maximum potential. (Avans Hogeschool, 2008a, p. 3)

This vision also contains the foundations of social constructivism. Evidence of this can be seen in passages such as “learning is an active and constructive process,” “knowledge is created during the learning process,” and “creating meaning for actual problem solving” (Avans Hogeschool, 2008a, p. 10). Also, contained within the educational vision is Avans’s vision concerning the learning environment. Avans ventures to provide a rich learning environment by offering a modern university with a diverse set of learning spaces. Examples of these diversities are: the use of Blackboard as a virtual learning environment, the multimedia rich library called “Xplora,” workspaces for individual and small groups, and large modern comfortable and media friendly lecture halls. Additionally, Avans maintains that diversity, ambition, authenticity, and continual development are the core characteristics of the students it seeks to serve (Avans Hogeschool, 2008b). Equally asserted is that teaching staff possess the core characteristics of diversity and ambition.
1.2 Background of Current Research

With attrition rates in the Netherlands ranging from 16% for all students leaving higher education in the first year, to 30% for the first-year students leaving specific higher education institutions (The Netherlands Association of Universities of Applied Sciences, 2010b), the need to understand the origins and causes of attrition is crucial.

Once a year, Avans University of Applied Sciences executes a “Student Satisfaction Survey” (SSS) (Student Tevredenheidsonderzoek). This is administered online every spring and is available in both English and Dutch. The students have several weeks to complete the survey. They receive an initial invitation via their student email with a link to the survey and a reminder two weeks prior to the survey being closed. This survey is anonymously filled in; all personal information received is deleted by the company (Evasys) responsible for the conducting the survey and a “non-identifier” dataset is sent to the university’s Research and Analysis Department. This department falls under the Learning and Innovation Centre, the support service where I am employed. For the SSS 2009, 5183 questionnaires were submitted from a total Avans student population of 22,262, thus achieving a 24% response rate for this survey.

In 2009, the issue of attrition was named as one of the key strategic agenda points for the universities of applied sciences in the Netherlands (The Netherlands Association of Universities of Applied Sciences, 2008). In response to this strong focus, the board of Governors of Avans assembled a team of managers and educational specialists and formed the
project “HippoCampus” to lead both university wide and faculty specific initiatives. The scope of this project ranges from creating usable management information for identifying which students actually dropout and the exact number of the drop-outs to designing initiatives for dropout prevention and staff professionalization activities. One of the HippoCampus initiatives was to collect student feedback. This led to the introduction of an open question in the SSS 2009 concerning study effort. The question was: “When do you put more effort into your studies?” The question had three possible fields for answering; three text boxes were available for “one word”, “short explanation”, and “long explanation.” The question’s aim was to gain insight, from the students’ perspective, into what they perceived as a challenging education. The board of governors’ strategic staff from HippoCampus decided the best approach would be to ask students about the reasons they put more effort into their studies. The notion underlying this approach was that if Avans could identify those reasons then it would be able to pinpoint which programmes were perceived as challenging as well as signal possible best practices to disseminate throughout the university. There was the supposition within HippoCampus that challenging education could be measured by the reason students put effort into their studies. The board of governors agreed that Avans could truly identify challenging education by determining the reasons for student effort. However, the relationship between a goal and effort is much more complex, regardless of whether or not the goal is perceived as challenging. According to Csikszentmihalyi (1991), too much challenge can lead to anxiety when one’s skill level is too low for the task or activity. Flow (Csikszentmihalyi, 1991) is achieved when the combination of one’s skill level and task challenge are both at a high level. Therefore, only measuring the reasons for effort says little about the perceived level of challenge. Later in this dissertation, the concept of engagement will be introduced and
the current study will be placed in the theoretical framework of student engagement and separated from the notion that these answers tell a story about our education in regards to its level of challenge.

HippoCampus arranged for the data to be analysed internally by our Research and Analysis Department, but due to budgetary constraints and differing priorities, the Research and Analysis Department was unable to perform the analysis. I was approached by the project coordinator of HippoCampus to assist the Research and Analysis Department with the initial start of the analysis. However, the idea was to start the analysis and leave its completion to others. When I began I realised that this research in itself could be a valuable contribution to our university, and thus decided to complete the analysis and embark on a full literature review to help support and strengthen this study.

1.3 Research Objectives

The purpose of this study was to expand the understanding of student engagement and the factors that activate and prompt students to put effort into their studies. More specifically, the study aimed to achieve the following research objectives:

- To identify student engagement triggers.
- To develop a model of student engagement.
- To determine if engagement triggers were similar across faculties, disciplines and study year.
• To determine if reported study behaviour was related to specific engagement triggers.

This study contributes to the literature since it identifies those specific engagement triggers that activate students. The identification of the triggers has led to the creation of a model of student engagement for Avans University of Applied Studies. When applying this model, significant differences were found in reference to engagement triggers across study years, as well as reported study behaviour. Additionally, engagement triggers were also significantly different among students attending different faculties.
2 THEORETICAL BACKGROUND

2.1 Introduction

In this section, I will be outlining how the notion of engagement has evolved. I begin with Dewey’s ideas on interest and effort in relation to education and engagement. Dewey attempts to define a sort of wholesome engagement through sound moral educational principles. After that, I will review Tyler’s work on selecting and creating educational goals as well as his concept of time on task. Next, Astin’s student involvement theory will be examined and engagement will be considered though the concepts of physical and psychological energy. Subsequently, engagement will be investigated using Tinto’s interactionalist approach which asserts that engagement occurs when students are able to integrate into the academic community. Tinto’s work is based on Durkheim’s work on suicide. Durkheim asserted that if a person is unable to integrate into a community, they will leave that community by committing suicide. This idea is metaphorically used in Tinto’s work to explain why students prematurely depart college. Engagement is then seen through the concept of orientations to study developed by Taylor, who tries to explain the attitudes of students towards studying. The next evolution in engagement that will be examined is Pace’s quality of student effort. Pace augments the notion of engagement by adding a qualitative element to student effort. Next to be examined is Bowen’s assertion that there are four foci for student engagement: with the learning process, with the object of study, with the contexts of the subject of study, with the human condition. This model gives educators four specific areas to take into consideration when trying to enhance student engagement. The last perspective to be examined is the work of Kuh. Kuh (and his partners) have been working on identifying activities that students
participate in that are educationally productive. This work has led to the development of the National Survey of Student Engagement.

2.2 The Evolution of Engagement as an Educational Concept

Given the fact that engagement has been in the literature for more than seventy years, the meaning of engagement has evolved over time (Kuh, 2009). From Tyler’s concept of “time on task,” (Tyler, 1949), Astin’s “student involvement” (Astin, 1975), “social and academic integration” from Tinto (1975), to Kuh’s notion of “student engagement” (Kuh, 2009), engagement has been widely discussed in the literature. However, in the literature several definitions of engagement can be found (Astin, 1975; Chapman, 2003; Kuh, 2009b; Harris, Bolander, Lebrum, Docq, & Bouvy, 2004; Taylor, Morgan, & Gibbs, 1981; Tinto, 1975). Kuh(2009) states:

The engagement premise is straightforward and easily understood: the more students study a subject, the more they know about it, and the more students practice and get feedback from faculty and staff members on their writing and collaborative problem solving, the deeper they come to understand what they are learning and the more adept they become at managing complexity, tolerating ambiguity, and working with people from different backgrounds or with different views. (p. 5)
2.2.1 John Dewey

In the article “Interest as related to will,” Dewey (1899/1981) pins the two notions of interest and effort against each other in relation to education and engagement. Dewey dissects both of these notions (interest and effort) and illuminates the disadvantages of these notions. Dewey endeavours to get to the heart of “moral education” by trying to identify the wholesome engagement through sound moral educational principles.

On the one hand, we have the doctrine that interest is the keynote both of instruction and of moral training, that the essential problem of the teacher is to make the material presented so interesting that it shall command and retain attention. On the other hand, we have the assertion that the putting forth of effort from within is alone truly educative; that to rely upon the principle of interest is to distract the child intellectually and to weaken him morally. (p. 423)

Dewey discovers error with what he calls the “theory of interest.” He asserts that when the teacher begins to present materials in the “wrappings of attraction” (p. 425), the teacher is actually distracting the student from the essence of said material. “Putting a fringe of fictitious interest around it does not bring the child any nearer to it than he was at the outset” (p.425).

Equally, Dewey finds fault with effort. His summary of the theory of effort includes ideas such as “Life... is full of things not interesting,” and “situations have to be dealt with” (p. 424).

He believes that just engaging in a task through effort results in
the narrow, bigoted man who is obstinate and irresponsible save in the line of his own preconceived aims and beliefs; or else we get a character dull, mechanical, unalert, because the vital juice of the principle of spontaneous interest has been squeezed out of it. (p. 424)

The opposite side of both these notions forms what Dewey calls “moral training.” True interest in an object, according to Dewey, comes from viewing that object without combining any “fictitious interest” with that object. The object “has to be faced in its own naked character sooner or later” (p. 425). If students are engaging with the fictitiously interesting object, then according to Dewey, they are “engaged in acquiring the habit of divided attention” (p. 426). This division is the external goals of the education and the students’ own goals. If the student is interested due to the creation of an interesting object, the student will engage or put just enough effort into that object, but will also reserve mental energy for the student’s own real interests, thus dividing their attention.

Dewey defines sound engagement and moral educational principles as when students are overcome by the “propulsive” (p. 429) nature of their interests in the actual object (devoid of any fictitious interest wrappings) and find pleasure in exerting effort in the tasks surrounding that object. In the following sections, we will see both of these ideas being developed by other theorists. For example, self-determination theory (Vansteenkiste, Lens, & Deci, 2006) will develop the notion of internal goal framing akin to Dewey’s notion of interests. However, much of the following literature review will expound the idea of effort. Not so much the moral
motives (as outlined by Dewey) behind the effort, but more focused on the amount of physical effort (Tyler, 1949), the amount of psychological effort (Astin, 1975) and the quality of that effort (Pace, 1984).

2.2.2 Ralph Tyler and Time on Task

In *Basic principles of curriculum and instruction*, Tyler (1949) asserts that there are two “screens” (p. 34) for choosing the correct learning objectives. Tyler's notion of screen can be likened to a filter, a methodological way to choose different options. First there is the “philosophy of the school” and secondly “knowledge of the psychology of learning.” The first screen is the educational and social philosophy adopted by the school. This should be the first screen that removes any unwanted objectives that might be in contradiction to the school’s philosophy.

When a school accepts these values as basic the implication is that these are values to be aimed at in the educational program of the school. They suggest educational objectives in the sense that they suggest the kinds of behavior patterns: that is, the types of values and ideals, the habits and practices which will be aimed at in the school program. Objectives that are consistent with these values will be included. (p. 34)

Tyler's assertion that the school's philosophy shapes the desired outcomes of its students has far reaching implications. Success for students is then predicated on a good match between the student and school -- in academic aspects, but then also in a social one as well. It could be
asserted that there is no real distinction between these two in Tyler’s view. Since academic objectives stem from the social philosophy of that school, a student then also needs to adapt, accept and assimilate to those social norms and values that are perpetuated by the school’s philosophy and incorporated within the learning objectives. Later in this dissertation, the concept of social integration will be presented again from the perspective of Durkheim’s (2006) theory of suicide and its theoretical foundations in Tinto’s (1975) work on student persistence.

In relation to engagement, by the screening of goals through the educational and social philosophy of the school, Hence, academically strong students might actually fail to attain certain learning goals, not due to a deficiency in learning the required formal curriculum, but due to their inability to integrate themselves into the school community due to the social philosophy of the school. Consequently, a factor in student engagement is the conformity of the student’s personal educational and social philosophy with that of the school. If we accept Kuh’s(2009) definition of engagement that was quoted above (“the more students study a subject, the more they know about it,” p. 5) then if a student is not studying a subject, it could be due to the lack of educational or social philosophical conformity.

The second screen that Tyler stresses is “the knowledge of the psychology of learning.” Any educational objectives that are not in line with the “conditions intrinsic to learning” are “worthless.” He lists and illustrates several approaches to describe the manners in which psychology can help educators. At the lowest level is the ability to distinguish expected changes in behaviour as a result of the learning process from those expectations which are not
attainable. Interesting in this assertion is that he places the student as the central focal point of the curriculum development process. Tyler asserts: “Young children can learn to channel their physical reactions in more socially desirable directions as a matter of learning, but it is not possible through learning to inhibit physical reaction altogether” (p. 38). This emphasis can be seen throughout Tyler’s work. He was a self proclaimed progressive and raised major concerns about the quality and relevance of educational goals created by “essentialist or subject specialists.” He believed that curriculum developers should inventory the “needs” and “interests” of students as potential source of educational objectives. Tyler states:

A good deal of controversy goes on between essentialists and progressives, between subject specialists and child psychologists, between this group and that school group over the question of the basic source from which objectives can be derived. The progressive emphasizes the importance of studying the child to find out what kinds of interests he has, what problems he encounters, what purposes he has in mind. The progressive sees this information as providing the basic source for selecting objectives. The essentialist, on the other hand, is impressed by the large body of knowledge collected over many thousands of years, the so-called cultural heritage, and emphasizes this as the primary source for deriving objectives. The essentialist views objectives as essentially the basic learning selected from the vast cultural heritage of the past. (p. 4)
The pitfall for the subject specialist, according to Tyler, is that they tend to create technically too specific learning objectives and it assumes that students are going to continue to study that specific subject. Tyler believes that the subject specialist should answer the following question: "What can your subject contribute to the education of young people who are not going to be specialists in your field; what can your subject contribute to the layman, the garden variety of citizen?" (p. 4). Again Tyler puts the student central to the curriculum development process.

Once appropriate learning objectives are chosen, the process of turning those chosen goals into learning objectives begins. Tyler emphasizes the need for learning objectives to contain two important criteria: "indication of the kind of [desired] behavior" as well as "content aspects" (p. 46). Tyler states:

Education is a process of changing the behavior patterns of people. This is using behavior in the broad sense to include thinking and feeling as well as overt action. When education is viewed this way, it is clear that educational objectives, then, the kinds of changes in behavior that an educational institution seeks to bring about in its students. (p. 6)

It is not enough to simply state a list of course goals or subject-specific topics that will be dealt with during the course. These "content aspects" need to be combined with desired behavioural aspects that students need to attain. In other words, subject specific content needs to be combined with the desired manner of thinking about or acting upon that subject, the certain
way procedures might be applied to that subject or the desired feeling or emotional component
attached to that subject. A change in the learner’s behaviour is the end to be attained by
education. Leading this notion is, for Tyler, the creation of sound and correctly constructed
learning objectives.

However the process of developing objectives does not end with the creation of well-formed
learning objectives. As educators,

We next are to consider the question of how these ends can be attained.

Essentially, learning takes place through the experiences which the learner
has; that is, through the reactions he makes to the environment in which he is
placed. Hence, the means of education are educational experiences that are
had by the learner. (p. 6)

Not only does Tyler outline which learning objectives should be chosen and which criteria
should be used in that decision process, he also draws attention to the fact that educators need
to consciously choose how students should attain those goals, which are the “educational
experiences to be provided.” More specifically, student’s experiences are central in the
learning process. However, the concept of experiences provided is not defined by what the
teacher does, but “refers to the interaction between the learner and the external conditions in
the environment to which he can react. Learning takes place through the active behavior of the
student; it is what he does that he learns” (p. 6). Essentially, a sound curriculum allows
students to actively react to “real life problems” set up in situations in which these problems
would “usually arise in life” (p. 6). However, in order to avoid “isolated bits” of information, students should be allowed to gain knowledge in situations that are part of the “total process of problem solving.”

Although Tyler never used the term engagement, inherent in the notion of having students active in their studies was the responsibility of curriculum developers to take into consideration the needs of students and the action of teachers in creating opportunities for appropriate learning experiences in which students can react and actively solve problems.

2.2.3 Alexander Astin and Student Involvement Theory

Astin (1975) used the term “student involvement” and defined it as “the amount of physical and psychological energy that the student devotes to the academic experience” (p. 518). Student involvement resembles “closely what the learning theorists have traditionally referred to as vigilance or time-on-task” (1984, p. 518). Astin also asserts that student involvement has two aspects, physical and psychological:

Involvement has both quantitative and qualitative features. The extent of a student’s involvement in academic work, for instance, can be measured quantitatively (how many hours the student spends studying) and qualitatively (whether the student reviews and comprehends reading assignments or simply stares at the textbook and daydreams). (p. 519)
Astin's "student involvement" can be likened to Tyler's "desired active student behaviour." However, Astin makes the separation between physical and psychological energy more distinct. While there was no explicit mention in Tyler's work about out-of-classroom experiences, Astin certainly opens up the possibility of students expending "energy" regardless of the location. "The objects may be highly generalized (the student experience) or highly specific (preparing for a chemistry examination" (p. 519). Including the student experience augments the concept of student involvement or engagement.

If curricula "must elicit sufficient student effort and investment of energy to bring about the desired learning and development," the question needs to be raised about what objects students should be putting effort into, as well as the quality of those objects. Astin(1984) equates engagement with Freud's notion of "cathexis (Besetzung, p. 518)." Astin notes that he learned this term during his career as a clinical psychologist. The Freudian term "Besetzung" can be defined as "occupation," coming from the Greek "katechein" (to hold fast, or occupy). According to Izard (1977), it was Brill who first introduced the term "cathexis" in 1938 as a translation for Freud's Besetzung.

However, the word "occupation" is used in a very specific way here: the object occupies the attention of the observer. By putting the focus on the objects that must elicit effort, Astin directs attention to the quality of those objects. What is interesting in Astin's work is that, on the one hand, his approach desires to quantitatively and qualitatively gauge student involvement and, on the other hand, prominently brings learning objects into the discussion surrounding student involvement. There is a strong interplay between students who need to
"cathect" and teachers who need to create, develop, and decide on appropriate learning situations to bring about their learning and development.

Astin (1984) states that "the most precious institutional resource may be student time" (p. 522). The implications of this statement for student involvement is that educators need to be cognizant that student time is finite and that educators are "competing with other forces" in the lives of students. That being said, educators need to keep in mind that institutional policies can affect the manner in which students spend their time (i.e. class schedules and attendance policies).

What informs Astin's broad perspective of student involvement is his previous work on student drop-out (Astin, 1975). In this longitudinal study, 240,000 freshmen who entered college in 1968 were followed and eventually 101,000 students were included in the follow-up survey four years later. This survey covered tens of different variables that could potentially explain student drop-out. A statistical model was built from evidence based on highly complex regression analyses of student drop-out. Later on he incorporated many of these variables into his theory of student involvement.

Since this study was based in the United States where many students live on campus, Astin looked at residential status as a possible indicator for student involvement. "Living on campus substantially increases the student's chances of persisting and of aspiring to a graduate or professional degree." (Astin, 1984) These academic gains are mainly due to higher levels of student friendships, participation in leadership and athletic programmes. What is noteworthy
in this study is the quantified correlation between these “social” activities and formal academic success. However, prior to 2010, no university of applied sciences in the Netherlands had a residential campus (“first residential college”, 2010). Avans has university-owned residential facilities, but these are located either in city centres a few kilometres from the university or adjacent to the university. These facilities cannot be characterized as providing a typical campus experience since they contain no social or academic facilities (e.g. student clubs, sports provisions, or academic support activities).

Building upon the above social factors in student involvement, Astin also explored the effect of frequent student–faculty interaction. This proved to be a strong positive indicator for student development and student satisfaction.

Frequent interaction with faculty is more strongly related to satisfaction with college than any other type of involvement or, indeed, any other student or institutional characteristic. Students who interact frequently with faculty members are more likely than other students to express satisfaction with all aspects of their institutional experience, including student friendships, variety of courses, intellectual environment, and even the administration of the institution. (Astin, 1977, p. 223)

Once again, Astin is able to correlate typically non-academic activities with student involvement. The picture of student involvement is beginning to emerge as one comprising numerous activities, many of which fall outside the formal curriculum.
2.2.4 Tinto’s Interactionalist Approach

Tinto (1975) employs an interactionalist approach for “student persistence.” For a student to persist in their studies, according to Tinto, they need to become integrated into the academic and social life of the university. Through the employment of an interactionalist approach, both the student’s role in persistence and the institution’s effect on student behaviour are brought into a different light. Tinto’s model of student persistence has three phases: pre-entry attributes, goal commitment, and institutional experiences. Tinto asserts that these three facets of student’s experience “affect departure indirectly through their effect upon the continuing formulation of individual intentions and commitments regarding future educational activities” (Tinto, 1993, p. 115).

For Tinto, student persistence is a recurrent process of sustained commitment to one’s education. Tinto’s ideas demonstrate a sharp change in the discussion, from relevant experiences leading to higher learning to perpetual steadfastness in continuing current educational activities. However, the literature today reveals a continuing focus upon student characteristics such as gender, age, and grade-point average (Carini et al., 2006; Jansen & Bruinsma, 2005; Pascarella, Seifert, & Whitt, 2008; Pascarella & Terenzini, 1991) or parenting practices and expectations (You & Sharkey, 2009). Tinto’s model concentrates not only on the student and his/her commitment, but also on the effect of the institution and the interaction between these two parties. Porter(2006a) states: “Less attention has been paid as to how and why institutional structures should affect student behaviour” (p. 524).
Pre-entry attributes in institutional departure form the basis for the perception of educational experiences. However, not only the pre-entry attributes stemming from one's social surroundings, You and Sharkey (2009) reported that the student's concurrent social network can play a role in engagement. Students who knew someone who dropped out had lower levels of engagement. Conversely, "Students who reported their friends have high academic value had higher levels of student engagement" (2009, p. 680). McInnis (2000) also notes that experiences with family and fellow students can influence social integration "in sometimes complex ways" (p. 30). While having a disability might not directly affect your academic performance, negative institutional experiences of such students could indirectly affect their commitment to earning their degree. Other pre-entry attributes such as gender, age, and socio-economic status have been reported to affect students' success (Astin, 1984; Carini, Kuh, & Klein, 2006; Jansen & Bruinsma, 2005).

As opposed to Tyler's and Astin's work where the level and quality of the educational effort is examined, Tinto analyses the level to which a student has integrated into the academic and social community. Therefore it is not only the quality of the curriculum, teaching staff, and/or university that has an effect on student engagement; it is also the creation, according to Tinto (1988), of a feeling of "membership" in a group. Tinto's approach emphasizes the quality of the institutional experiences that lead to integration built upon the tension and drives that arise from desiring to become a new member in a group.

Tinto's theoretical foundation for "institutional experiences" is rooted in the social theory of the French philosopher and sociologist Émile Durkheim. Prior to exploring Tinto's ideas
concerning student departure in detail, an outline of Durkheim’s theory of suicide will be presented. This will provide the necessary theoretical foundation for Tinto's work.

2.2.5 Durkheim's Theory of Suicide

Durkheim undertook a European-wide study of suicide which culminated in his 1897 classic book *Suicide (Le suicide)*. Durkheim suggested that there are two forces that influenced suicide: the level of individualism and the level of regulation (Durkheim, 2006).

Figure 1 Four Suicide types and related forces

When these forces are imbalanced, the chance of specific types of suicide for each imbalance becomes probable. Above in figure 1, it is shown the four types of suicide, according to Durkheim, combined with the two social forces (individualism and regulation).
2.2.5.1 Individualism as a Social force and its effect on Suicide

According to Durkheim (1897/2006), the social force of individualism is best demonstrated by comparing the suicide rates among two religions in Europe; Catholicism and Protestantism. In similar social-geographical areas, the suicide rate of Protestants was structurally higher than those of Catholics. Durkheim notes that, since both religions “prohibit suicide with equal emphasis” and “penalize it morally with great severity,” a difference in attitude towards suicide cannot be a cause for either a higher or lower suicide rate (p. 157). However, these two religions (Durkheim often makes reference to both religions as “cults”) hold different views with regard to the amount of “free inquiry” allowed. Protestantism permits personal inquiry and open interpretation, but Catholicism does not.

The Protestant is far more the author of his faith. The Bible is put in his hands and no interpretation is imposed upon him. The very structure of the reformed cult stresses this state of religious individualism. (p. 111)

However, the disadvantage for this open approach to religion is that the sense of being bound to a community by common beliefs and rituals is lost. This would be an example, according to Durkheim, of weak integration. This weak integration rooted in the individual freedom of inquiry makes a conscious departure from that community (i.e. suicide) easier. In Thompson’s (2002) commentary on Durkheim’s major works, he notes that egoistic suicide stems from the following factors.
Rates of interaction in egoistic groups were low, and so values, beliefs, traditions, and sentiments were not held in common by all members...The individual lost the beneficial effects of group membership, such as support and revitalization, and consequently found little meaning in group life. (p. 88)

Since Catholicism has a much stricter interpretation of the Bible and allows for less free inquiry, "All variation is abhorrent to Catholic thought... None the less, the Catholic accepts his faith readymade, without scrutiny. He may not even submit it to historical examination since the original texts that serve as its basis are proscribed" (Durkheim, 1897/2006, p. 111). Between these two religions stands a great deal of difference in reference to personal autonomy regarding biblical interpretation and rituals. Catholic communities, in Durkheim's study, had lower suicide rates. He attributes this to a greater sense of community or stronger integration.

The more numerous and strong these collective states of mind are, the stronger the integration of the religious community, and also the greater its preservative value. The details of dogmas and rites are secondary. The essential thing is that they be capable of supporting a sufficiently intense collective life. (p. 111)

It is obvious from the above quote that the collective state of mind replaces individual needs and wants. When in balance, these forces act to keep continuity and a sense of belonging.
When this social force of individualism becomes imbalanced, two types of suicides can appear: in strongly individualist societies, egoistic suicide; and in weakly individualistic societies, altruistic suicide.

Egoistic suicide can be described as a result of low interactions "so values, beliefs, traditions, and sentiments were not held in common by all members." (Thompson, 2002) This state comes about due to people's seeking knowledge and thus his "religion becomes disorganized" (p. 111). At the heart of the idea of egoistic suicide is a lack of cohesion or integration. Stated otherwise, the individual has no real community to integrate into, thus leaving him/her devoid of any social cohesion.

Altruistic suicide is the opposite continuum of individualism. While egoistic suicide has high levels of individualism, altruistic has very low or none. This can be characterized by too much integration into a social group or community.

The individual absorbed and controlled by the group had an under-developed and so undervalued sense of individuality. Such a person could not resist the pressure to sacrifice the self for the group's interests, even if it meant committing suicide. (Thompson, 2002, p. 89)

Although this type of suicide is generally characterized by older traditional societies in relation to suicide of the young, old and sick, it is also seen in modern societies in the military as well as suicide bombers (Alexander & Smith, 2005).
2.2.5.2 Regulation as a Social Force and its Effect on Suicide

The second continuum in Durkheim's theory of suicide is social control or regulation. When the social force of regulation becomes imbalanced, two types of suicides can appear: in weak regulation societies, anomie suicide; in strong regulation societies, fatalistic suicide. These two types of suicide are not mentioned in the student departure literature. However, I strongly feel that these two types of suicide can add greatly to our understanding of student departure.

Anomic suicide results when individuals experience a loss of outside control. "Anomie" comes from the Greek meaning lack or absence of laws or norms. Durkheim asserts that restraints are needed in society to balance or maintain man's "craving fulfilment."

No living being can be happy or even exist unless his needs are sufficiently proportioned to his means. In other words, if his needs require more than can be granted, or even merely something of a different sort, they will be under continual friction and can only function painfully. (Durkheim, 1897/2006, p. 237)

The social force of regulation keeps desires in check by creating resistance to man's insatiable capacity for more "wellbeing, comfort or luxury." Durkheim believed that if there is not any resistance to these desires, they will atrophy: "Movements incapable of production without pain tend not to be reproduced" (p. 237). In society, there exists, for Durkheim, a precarious balance between no resistance (Anomie) and too much resistance (Fatalism).
Additionally, Durkheim adds that these norms in society act not only to limit man's(sic) desire, but also to limit man's goals. He asserts "that human activity naturally aspires beyond assignable limits and sets itself unattainable goals" (p. 237). This resistance functions to give individuals more attainable goals, which are also desired by that society or community. Without this "agreed social value", individuals would experience a "weak culture that failed to define the goals of human endeavour, leaving only insatiable greed, and the meaninglessness that led to despair and suicide, rather than crime and deviance" (Thompson, 2002, p. 97).

The fourth type of suicide is fatalistic, which is the result of an imbalance of regulation in societies that have an overabundance of laws or norms: "fatalistic suicide can be characterized as the impossibility of internalizing norms which are too constraining or illegitimate" (Alexander & Smith, 2005, p. 71). Fatalistic suicide was only mentioned in a footnote by Durkheim. Acevedo (2005) notes: "It is fair to say that Durkheim did not dismiss the concept simply out of neglect but rather because of his perception that fatalistic suicide lacked a certain measure of empirical relevance" (p. 76). Durkheim describes fatalistic suicide as follows: "It is the suicide deriving from excessive regulation, that of persons with futures pitilessly blocked and passions violently choked by oppressive discipline... To bring out the ineluctable and inflexible nature of a rule against which there is no appeal..." (Durkheim, 2006, p. 2000). This type of suicide is at the opposite end of the continuum of regulation from anomie suicide.

Lockwood (1992) remarks: if "anomie means that horizons become abruptly widened so that aspirations know no bounds, fatalism refers to hopes so narrowed and diminished that even
life itself becomes a matter of indifference” (p. 38). Durkheim compares this type of suicide to the suicides of slaves. While in higher education there are no “slaves” or “un-married barren women” (two examples used by Durkheim), I do believe that attempts at integration into a new academic community with a dominant over-regulating culture could lead to students from non-traditional educational backgrounds feeling that their futures are “pitilessly blocked and passions violently choked by oppressive discipline” (Durkheim, 2006, p. 239).

2.2.5.3 Tinto’s Model of Institutional Departure

“Egotistical suicide provides the analogue for our thinking about institutional departure from higher education” (Tinto, 1993, p. 103). Tinto justifies his assertion by explaining that egoistic suicide serves an analogue

not so much because voluntary leaving may be thought of as a form of educational suicide, but because it highlights the ways in which the social and intellectual communities that make up a college come to influence the willingness of students to stay at that college. (p. 104, emphasis in original)

As the above quote demonstrates, most of the theoretical foundations of student departure are built upon Durkheim’s work on egoistic suicide. While this may help explain some student departures, I would like to outline in the following paragraphs not only how suicide can help explain student departure, but also that Durkheim’s notion of “integration” can add a new dimension to our understanding of student departure. Despite the fact that this is not an explicit element of the current research, I do feel it is relevant and might add a deeper understanding to possible disengagement, which I believe precedes formal student departure.
“Indeed, there is now a considerable amount of research evidence to show that the engagement or disengagement of students in higher education depends upon the quality of their formal and informal interactions both with faculty and with other students” (Richardson, Long & Woodley, 2003). Since the interaction with the staff and the university can affect disengagement, then finding the causes of disengagement rooted in low levels of integration but not stemming from a lack of perceived “values, beliefs, traditions, and sentiments...held in common by all members” (Thompson, 2002) could shed light on other types of “suicidal” departure.

2.2.5.4 Integrating Socially and Academically

Tinto (1975) divides the institutional experience into two parts; academic and social. “Though institutions of higher education may often be thought of as small societies unto themselves, they are more bipolar in structure than society in general, being made up of distinct academic and social components” (p. 105). Tinto also injects Durkheim’s idea of integration, thus adding a dimension not found in earlier student departure literature. According to Tinto, it is not only the behaviour (Tyler, 1949) nor the quality of that behaviour (Pace, 1982) that matters, but also the student’s perception that he or she can join and become a member, or integrate into the new academic community.

Direct criteria for the concept of “integration” are difficult to find in Durkheim’s work (Clinard & Meier, 2008; Pope, 1976) J. H. Turner (1981) asserts: “Integration or, as he [Durkheim] phrased it, ‘social solidarity’ can be defined only by reference to what he saw as
'abnormal.' Anomie, egoism, lack of coordination, and the forced division of labor, all represented to Durkheim instances of poor integration.” Therefore, we can gain insight by reversing these “abnormalities.” Turner creates the following list:

1. Individual passions are regulated by shared cultural symbols
2. Individuals are attached to the social collective through rituals
3. Actions are regulated and coordinated by norms (p. 385)

The notion of shared cultural symbols is a complex Durkheimian social construct which underlies “concrete social relations” (Rawls, 2009, p. 16). Symbols are a medium for transmitting emotions within a society. There also exists in these collective representations a deeper level of meaning far beyond the surface structure. Symbols range from “Hercules” for the French revolution (Alexander, 1990) to a crucifix. A step in integration, as relating to student departure, can be seen as acceptance of these cultural symbols by the individual aspirant. Durkheim studied religious symbols, but analogous examples of symbols or icons can be found in academic communities as well: Bill Gates or Steve Jobs for business students, Mother Theresa or Elizabeth Kübler-Ross for social-work students, and Albert Einstein or Niels Bohr for physics students. An inability or unwillingness on the part of the aspirant to allow his passions (desires and drive) to be regulated by these symbols would certainly inhibit integration into this new community.

Rituals “have an underlying social purpose in creating group unity” (Rawls, 2009, p. 213). The distinction between symbols (cultural representations) and rituals is that the latter encompass a
behavioural aspect. Examples of behaviours that create group unity could include attending a house of worship, mealtime etiquette, or wearing a religious symbol. "Rituals in his [Durkheim's] formulation both express and reinforce collective representations and solidaristic emotions" (Alexander & Smith, 2005, p. 16). In academic communities, this can be seen in business students wearing business suits. The business student, as opposed to an art or physics student, will be more likely to wear business-like attire. This would be in line with Durkheim's idea of adopting and expressing a collectively agreed-upon representation. Each discipline also has an agreed-upon set of jargon to be used. Criminality for law students could be viewed as social deviance for the social-work student. Additional examples include affinity for reading and discussing certain newspapers or periodicals (e.g., the *Wall Street Journal*), academic journals, or the classics of the French renaissance; these too are an attempt to reinforce collective representations and solidaristic emotions.

Once collective representations have been agreed upon and societal behaviour appears that expresses and reinforces collective representations, then the last aspect of integration surfaces: reinforcing societal norms or, more strongly stated, the regulation of norms. However, these regulatory actions in society are rooted in the collective representations. S. P. Turner (1993) explains:

Because they are not merely cognitive representations: they are also normative representations. While they provide the individual with an image, a way of conceiving and seeing reality, they are also linked to value and
conduct parameters: they indicate how this reality must be evaluated and, consequently, how we must behave. (p. 142)

Akin to the mission statement or vision statement of a corporation, these social cognitive representations form a dominant paradigm in that society. The values of that society are created and through the dissemination and collective acceptance, they form the guidelines for conventional behaviour within the confines of that society. Durkheim proposes that there are two mechanisms in a society to realize these ends: negative and positive rites. For example, “public celebrations of defenders of individual rights” would be an example of a positive rite, while “the prosecution of those who would violate such rights” defines a negative rite (Alexander & Smith, 2005, p. 385).

In regards to student departure or more generally, the overall student experience, there are numerous examples of negative and positive rites being employed in the academic community. For example, the grading of exams or other coursework always entails the regulation of student behaviour by the dominant paradigm within that academic community. Displayed behaviour found to be in line with the collective representations will be graded more favourably, while less appropriate behaviour will be sanctioned with less favourable grades. Examples of behaviours which are in agreement with the collective representations could be: appropriate business attire during a final presentation (business students), caring and empathetic attitude towards patients (medical students/social workers), and the employment of the correct referencing convention in written academic work (psychology or education students). Instances of behaviours which are not in agreement with the collective
representations could be: referencing non-traditionally used sources such as gossip newspapers (history student) or the use of slang or profanity during an oral defence (education student).

Integrating into a new academic community is for students a complex psychological process. Surrounded by collective representations, which generally are mental symbols “that can call up a common sentiment” (Rawls, 2009, p. 39): students need to first discover these symbols in order to eventually be able to accept them. The next step is participating in common rituals. For the neophyte, this also means first discovering those rituals and then choosing to accept them. Finally, the student is subject to all the positive reinforcements earned by his/her displayed desired behaviour as well as potentially subjugated by negative sanctions for undesirable behaviour.

Differing student backgrounds can also form an obstacle in the transition to this new community or adoption of the community’s rituals and norms. Meyer (2005), referring to ethnographical studies of social ritual, states:

This transition however is often problematic, troubling, and frequently involves the humbling of the participant. “In order to do so, he or she must strip away, or have stripped from them, the old identity. Within educational settings it would appear that, on the part of the learner, there may be inability to achieve the new (transformed) status, occasioning a similar form of ‘mimicry’. (p. 376)
The central idea in altruistic suicide is killing oneself for the group. Could it be that if a transition is too difficult for students (especially those coming from non-traditional higher educational backgrounds) they will choose to leave the group (the new academic community) by the virtuous act of dropping out rather than causing harm to the group? "Every sort of suicide is then merely the exaggerated or deflected form of a virtue" (Durkheim, 2006, p. 2000).

My assertion here, in regards to student departure, is that students who have difficulties integrating into an academic community could experience a sensation of being overwhelmed and thus unable to see the agreed-upon social values. Their perception of the new academic community might be one lacking any focus, or in plain words, they just might feel lost without any real guidance from those norms. With a growing focus on the first year experience in research (Brinkworth, McCann, Matthews, & Nordström, 2008, McInnis, 200, Jamelske, 2008), the notion of regulation and its equilibriums experienced by students should be taken into consideration when trying to find reasons or causes for student departure.

As stated above, Tinto claims that student persistence is a continual process of committing oneself to one's future educational activities. Tinto asserts that there are two types of commitment: institutional and goal commitment. Institutional commitment is the level of attachment that a student has for graduating from a specific institution. This could stem from a family history with a particular institution (Tinto, 1993). Pascarella & Terenzini(1980) report that higher levels of institutional commitment are positively correlated with graduating from that institution. "Goal commitment refers to a person's commitment to personal educational
and occupational goals. It specifies the person’s willingness to work toward the attainment of those goals” (Tinto, 1993, p. 43). The positive correlation between goal commitment and student persistence has been well documented (Pascarella & Terenzini, 1979, 1980; Tinto, 1975).

2.2.6 Orientation to Study

Taylor, Gibbs, & Morgan (1981); see also Taylor, 1983) present the idea of an “orientation” as “all those attitudes and aims that express the student’s individual relationship with a course and the University. It is the collection of purposes which orientates the student to a course in a particular way” (p. 3). This work was done in the context of students attending both a traditional face-to-face university and a university specializing in distance education. Four types of orientation were identified: Academic, Vocational, Personal and Social.

The concept of orientation, as defined by Taylor, encompasses many layers and stages of “attitudes and aims,” from “having a good time” to “receiving a qualification.” Having said that, the interviews in Taylor’s work centred on “orientations to learning” and explored the relationship between students and their studying. Taylor’s (1983) notion of academic orientation has two elements. These are defined as:

*Intrinsic orientation:* “These students already have some knowledge of the area they are to study and have come to university with the expressed aim to extend and deepen that knowledge”.

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Extrinsic Orientation: The main aim with this orientation is to advance through the educational system. (p. 132)

This significantly augments the scope of “engagement” to “studying” (attending university) in general and not specifically focusing on relationship with the material or context. Additionally, Nystrand & Gamoran (1991) concluded that there were two types of engagement, procedural and substantive. Procedural is defined as “classroom rules and regulations” and substantive is described as “sustained commitment to the content and issues of academic study.” It is unfortunate that the work of Taylor does not seem to have been further developed or used by other researchers, demonstrated by the fact that there is little reference to these ideas in current academic journal articles.

2.2.7 Pace’s Quality of Student Effort

If Astin can be viewed as shifting the focus to student involvement, then Pace should be seen as focusing in on the quality of that involvement. Pace (1982) asserts: “Surely the students are also accountable for the amount, scope, and quality of effort they invest in their own learning and development, and specifically, in using the facilities and opportunities that are available in the college setting” (p. 3). Pace not only adds a quality dimension to student involvement, but also includes the use of learning facilities in qualifying that effort. Here are the seeds that Pace develops into his idea of “relevant experiences.”

The relevant experiences are ones that stem from events and conditions and facilities which the college makes possible, and which are intended to
facilitate student learning and development. The most salient of these events and experiences are clustered around a number of fairly common behavior settings. A behavior setting is a place, a physical setting, in which certain types of activity typically occur. Obvious examples of such facilities in a college or university are classrooms, libraries, laboratories, cultural facilities, student unions, athletic and recreational facilities and residence units. (p. 2)

Pace views the use of facilities that incorporate a high "level of cognitive effort" as contributing to greater attainments in learning. Pace defines the "quality dimension" of effort as "not simply reading the required textbooks, but going beyond the minimal requirements and seeking additional information, discussing ideas with classmates instead of just taking notes about a subject and/or not just studying in the library," but seeing the library as a "resource offering exciting avenues for exploration... following up on various references... looking for materials under different headings... and taking out something because it looked interesting" (p. 3). Pace augments Tyler's idea of desired behaviour; however, Tyler had added behaviour to learning objectives that stemmed from formal classroom activities. Additionally, Pace qualifies Astin's notion of involvement (student time as a resource) by investigating the quality of that effort.

However, Pace not only includes quality of effort for facilities, but also allows for many additional activities:
Then there are other events and experiences which are not necessarily connected with a specific facility, but are nevertheless important opportunities for personal and social development. Obvious examples are contacts with faculty members, involvement in clubs and organizations, experiences in writing, the breadth and depth of student acquaintances, opportunities related to self-understanding, and the general nature and level of student conversations. (p. 2)

Pace also injects a quality dimension to these activities. In particular, contact with faculty members also needs to include an additional effort from the student: "From fairly routine and casual—asking for information about assignments, or just saying hello or visiting informally after class—to more serious contacts such as... inviting critic [sic] and even discussing personal problems or concerns" (p. 2). The distinction, for Pace, between these casual and serious contacts is: "To do these latter things requires more initiative" (p. 2). It is clear that the minimal everyday activities do not qualify for Pace as being a high quality relevant experience; these are only accomplished through extra effort, initiative and a high level of cognitive exertion on the students’ part.

Pace developed the College Student Experiences Questionnaire which had three sections: two investigating the quality of effort for facilities and socio-personal aspects and one that measured self-reported gains. (Pace, 1984) The section concerning usage of the library, ICT, and athletic and recreational activities strongly mirrors the above description of relevant experiences in relation to facilities. The socio-personal questions investigated participation in
fraternity/sorority activities, student acquaintances, and experiences with faculty. The self-reported gains consisted of "eighteen statements of fairly typical and important objectives, such as vocational training, a broad general education, writing clearly and effectively, ability to think analytically and logically" (Pace, 1984)

Pace (1984) notes that in past studies "commonly utilized variables have contributed as much as they can to explaining achievement" (p. 18) leading to a coefficient of determination between .24 and .34 of achievement (i.e., explaining between 24% and 34% of the variation in achievement). However, if one adds the quality of effort scales, "one can now explain from 39% to 47% of the performance" (p. 18). Pace (1984) then asserts:

The new conclusion is this: granted the importance of all the elements that influence who goes where to college, once the students get there what counts most is not who they are or where they are but what they do. (p. 43)

2.2.8 Bowen's Four Foci for Engagement

Bowen (2005) asserts that there are four foci for engagement: engagement with the learning process, engagement with the object of study, contexts of the subject of study, and the human condition. Engagement with the learning process can be likened to Astin's notion of student involvement. Teachers need to "successfully compete with all the other forces impinging on the consciousnesses of children, adolescents, and young adults" (p. 4). Engagement with the object of study is defined by Bowen when "students are asked to directly examine, characterize, analyze, and evaluate the object of study so they may build knowledge in
response to it" (p. 5). This type of engagement reflects the ideas of active learning and experiential learning. The third type of engagement is engagement with contexts. Bowen asserts that without this type of engagement, students' experiences could be “intellectually stimulating from a detached, abstract perspective” (p. 6), thus devoid of any social, civic and ethical contexts. Engagement with the human condition allows the student to place his/her learning in a “social, cultural, and civic dimension.” Stemming from a social-constructivist view of knowledge, Bowen asserts that all knowledge is “highly influenced by the social context of its construction... [and] it would follow that understanding necessarily depends on knowledge of the sociocultural context” (p. 6).

2.2.9 National Survey of Student Engagement

Kuh(2009) defines engagement as the “quality of effort and involvement in productive learning activities.” Kuh helped develop the National Survey of Student Engagement (NSSE). It has as its focus self-reported student behaviour:

First, it asks students questions about their participation in dozens of educationally purposeful activities, such as interacting with faculty and peers, the amount of time they spend studying or participating in cocurricular or other activities, including work on or off the campus. (Kuh et al., 2008, p. 11)

In 1998, Peter Ewell (National Center for Higher Education Management Systems (NCHEMS)) convened a design team to develop an instrument gauging student engagement which consisted of among others, Alexander Astin, George Kuh, and input from C. Robert
Pace (Kuh et al., 2001). At the heart of this instrument, are 20 questions relating to “college activities.” These items are, according to Kuh, “consistent with the behaviors that previous research has linked with good educational practice” (p. 12). Obviously, with input from Astin and Pace, the focus begins at student involvement and evolves into aspects of quality of effort. Stemming from a four-factor analysis, Kuh identified four components in the NSSE: “student–faculty and student–student active learning, engaging and educationally meaningful conversations, cooperative communication among students, especially through technology, academic challenge” (p. 12).

Yet, in this focus on behaviours that previous research has linked with good educational practice, two main ideas are not addressed: why students choose to engage in these activities and whether there is a link between these engagement scales and actual performance. “The first [objective]... is to provide high-quality, actionable data that institutions can use to improve the undergraduate experience” (Kuh, 2009, p. 9). While giving a solid overview as to the behaviours thought to be linked to achievement, insight can only be gained as to which student behaviours could be increased, but why students are choosing or not choosing to engage at that particular institution is not identified.

Additionally, with the “widespread popularity” of first-year programmes in the U.S. aiming to increase student retention/persistence, the question needs to be raised as to the effectiveness of these programmes and which interventions are being employed to potentially increase student persistence. And, in relation to the NSSE, are the activities offered the same as the desired
educationally relevant experiences as defined in the NSSE? These questions are far beyond the scope of the current study; even so, a few remarks in order.

An inventory of behaviour does produce information as to the intentions, motivation or desires of those participating in the behaviours. It can be argued that that it is impossible to attribute intentions, motivation or desires strictly by observation. Wittgenstein (1973) draws a similar conclusion when making the analogy of playing chess and learning language. He states that we can learn the rules of chess by observing players behaviour, but it becomes difficult for the novice to separate the correct moves from the incorrect ones. However, he asserts that there are also signs in the players’ behaviour that give clues as to the correct moves, thus we can gain insight into the rules of chess. Wittgenstein (1973) explains:

One learns the game by watching how others play. But we say that it is played according to such-and-such rules because an observer can read these rules off from the practice of the game—like a natural law governing the play.——But how does the observer distinguish in this case between players' mistakes and correct play?—There are characteristic signs of it in the players' behaviour. Think of the behaviour characteristic of correcting a slip of the tongue. It would be possible to recognize that someone was doing so even without knowing his language (p. 27).

However, for student engagement, it is neither the identification of participation in educationally relevant experiences nor the gaining insight into the rules of the game that can illuminate either students’ motivation in participating in certain activities or the logical underpinnings of the rules.
Secondly, the link between the NSSE indicators and student achievement also needs to be explored. Kuh describes the NSSE items as “process indicators for learning outcomes... [since] actual measures of student learning” are not included in the survey (Kuh et al., 2001, p. 9). However, the link to student achievement has been described from “significant overall positive association” (Pascarella et al., 2008) to “only very loosely related to student outcomes.” (Gordon, Ludlum, & Hoey, 2007) Both studies recommended using individual NSSE items as predictors of student success instead of the NSSE benchmarks of indicators for student success.

2.3 Influences on Engagement

Further than just quantifying a student’s engagement level by reference to their reported behaviour, educators need to understand those factors that influence whether students are engaged or disengaged. Some student characteristic factors, such as gender, age, disablement, and socio-economic status (Astin, 1984; Robert M. Carini, Kuh, & Klein, 2006b; Jansen & Bruinsma, 2005; Pascarella & Terenzini, 1979; Richardson, Long, & Woodley, 2003) are not able to be changed and therefore engagement may be less of a choice. However, there are many other factors that can influence student engagement.

2.3.1 Expectations and Engagement

The interrelationship between the student and the institution forms the basis of all causal factors affecting engagement. However, both the student and the institution have particular
characteristics that play a role in the level of student engagement. Cole, Kennedy & Ben-Avie (2009) describe the student characteristics that affect student engagement:

Students do not enter college tabula rasa. They come with a variety of high school academic experiences, exposure to college information, and family socioeconomic and educational influences, all of which help shape expectations and attitudes of what it is like to be an enrolled college student.

(2009, p. 55)

The culmination of those factors plays a central role in determining engagement and eventually comes to form the expectations that students hold in reference to attending higher education as well as studying. Konings, Brand-Gruwel, van Merrienboer, & Broers (2008) assert that expectations influence "investment of effort in learning" (p. 536). These expectations begin prior to entry into higher education and continue throughout students' educational career. That expectations matter, the central premise for collecting data from students prior to starting fall semester classes, is also grounded in educational research. We have expectations for just about every situation we encounter, regardless of whether the situation is new or very familiar (Cole et al., 2009). Cole et al. also assert that student expectations should be viewed in the framework of Astin's "Input–Environment–Output" model as inputs "in that they are the personal characteristics that students bring with them to campus" (p. 59). Having said that, the important effect that expectations have on engagement greatly shapes the first-year experience in higher education. "The existence of a gap between
students’ expectations and experiences of university life has been consistently identified as an aspect of the first year experience” (McInnes et al, 2000a p. 29).

2.3.2 Non-Traditional Students and Engagement

2.3.2.1 Social Capital and Engagement

Beside the general effect of expectations on engagement, as outlined in the previous paragraphs, non-traditional students (e.g., working class, minority ethnic and adult learners) face other specific obstacles in both entering and performing in higher education. The obstacles that impede these students’ integration can, in part, stem from their social world. Social world is defined by Bourdieu (1986) as “accumulated history” (p. 46).

Accumulated history is the collection of the practices, beliefs and rituals experienced by an individual. This history can greatly differ between traditional and non-traditional students. For example, Bamber and Tett (2011) note: “For conventional students, passing through HE [higher education] can be a relatively smooth, integrative process involving confirmation of what they already know and hold to be true” (p. 59). However, non-traditional students generally feel a sense of “otherness” and, due to this sense, experience university life quite differently from their traditional counterparts (Read, Archer, & Leathwood, 2011). Hockings, Cooke, & Bowl (2007) note that non-traditional students remarked that:

they wanted to be recognized and respected as people with something to offer... They also expected university teachers to treat them fairly, equally, and as adults. Probing deeper, it became clear that some students did not feel they had been treated equally or
fairly at school or college, and some talked of their experiences of bullying or exclusion.

(p. 727)

“For non-traditional students, however, the passage is more likely to be characterised by uncertainty and the need to critically examine and change some of the underlying assumptions on which their lives have been built” (Bamber & Tett, 2011, p. 59). These underlying assumptions form, in part, Bourdieu’s notion of capital. He describes social capital as:

the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words, to membership in a group – which provides each of its members with the backing of the collectively-owned capital, a ‘credential’ which entitles them to credit, in the various senses of the word. These relationships may exist only in the practical state, in material and/or symbolic exchanges which help to maintain them. They may also be socially instituted and guaranteed by the application of a common name (the name of a family, a class, or a tribe or of a school, a party, etc.) and by a whole set of instituting acts designed simultaneously to form and inform those who undergo them; in this case, they are more or less really enacted and so maintained and reinforced, in exchanges. (Bourdieu, 1986, p. 51)

As demonstrated in the above quote, it is not only the university that poses possible sources for difficulties in non-traditional students. Students’ social capital also plays a role in forming the social world of students. This can be demonstrated by the following quote:
As we have seen, a number of students described how friends or family members expressed negative opinions about their application to university, highlighting how socially dominant discourses of the 'normal' student are culturally prevalent and contribute to a student's self-conception of 'otherness'. (Read et al., 2011, p. 267)

When the potential transition to university, or at a more fundamental level, the application process encounters such negativity, the sense of non-belonging must be great. This sense can greatly contribute to early withdrawal (McInnis, Hartley, Polesel, & Teese, 2000). Equally relevant for students' expectations and perceptions concerning attending university is whether or not the student's parents or near relatives have attended university. If one does not take into consideration the social world or social capital surrounding middle-class students, any assumption concerning a "traditional" status for students in terms of attending university is precarious. For example, in a study by Reay(1998), middle-class students whose parents would be able to financially support them attending college but had never attended university themselves were "quite unsure about the whole process" of attending university (p. 522). However, in that same study, students whose parents were university educated but lacked the financial ability to support their children going to university had a greater sense that it was obvious that they would attend university.

Gofen(2009) explores successful first-generation higher education students. He notes that "previous analyses had often portrayed them as succeeding despite their family background. This research suggests that although they face many challenges, their families are often
facilitators of their success" (p. 104). Social capital, in this example, actually helped the students succeed despite the parents' educational level. Gofen also observes:

How families in which the parents did not attain college degree and who lived in rural areas or urban neighborhoods succeeded in creating a better future for their children highlights the importance of the nonmaterial resources of a family. These resources include families' habits, priorities, belief systems, and values. (2009, p. 106)

Gofen's definition of nonmaterial resources strongly mirrors Bourdieu's notion of social capital: "aggregate of the actual or potential resources which are linked to possession of a durable network" (Bourdieu, 1986, p. 51). Gofen identifies three resources that are potentiated in these successful families: attitude toward education, interpersonal relationships and family values. These three resources are elements identified by successful students as important aspects of their success. As noted above (McInnis, Hartley, et al., 2000; Read et al., 2011, p. 267), if the social capital is not conducive to attending university, the chance for early withdrawal increases.

Examples of Gofen's three nonmaterial resources are:

*Attitude Towards Education*

Repetition of certain sayings to the children and stated priorities in various aspects in life (such as economic decisions) translated an attitude toward education into day-to-day life. Specific evidence included the fact that children were driven to distant schools; received
positive feedback when they succeeded in school; and despite difficult financial conditions
never lacked books, notebooks, and even tutors (Gofen, 2009, p. 110).

*Interpersonal Relationships*

This category, which includes issues of relationships among family members, stressed the
concept of sacrifice: parents gave up a lot, in many facets of life, for the benefit of their
children. From the parents’ point of view, the children were the centre of attention, and their
well-being took precedence over all else. The parents expressed firm belief in their children’s
abilities, at times opposing the school system (p. 112).

*Family Values*

The third category in the breakthrough strategy concerns the family values with which the
children were raised. Unlike the other two categories, values were usually addressed explicitly
by the interviewer, asking them to retrospectively describe the main values with which they
were raised. Some of the values included independence, honesty, responsibility, giving,
caring, and having a choice. However, three values appeared repeatedly in the interviews:
family solidarity, respect for parents, and achievement and ambition (p. 113).

2.3.2.2 Social Capital and Integration

Durkheim asserts that if a person is unable to integrate in to a community, they are more likely
to leave that community by committing suicide. Durkheim’s model contains two forces that
influence suicide: the level of individualism and the level of social control. Durkheim’s notion
of integration is rooted in the collective state of mind of a society. “The more numerous and
strong these collective states of mind are, the stronger the integration” (Durkheim, 1896/2006, p. 111). All causes of suicide are due to the individual not being able to integrate into that dominant collective culture. Durkheim outlines two forces and four subsequent types of suicide, but he does not explore possible reasons for not being able to integrate beyond those two forces: individualism and social control. What remains unanswered in this approach is what constitutes those obstacles in the integration process? By combining Durkheim’s work on suicide and Bourdieu’s idea of social capital, more insight can be gained into student drop-out.

When the question “What role does social capital have in student integration?” is raised, a new perspective on student drop-out can arise. The focus is then not only on “lack of integration” or “imbalance of regulation” but underlying student factors (social capital) that may impede integration into an otherwise normal community that does not have an imbalance of regulation or individualism. Students’ social capital might be such that the sense of alienation (lack of “belonging”) stems from other issues than regulation or individualism.

Most students entering the new world of the academy are in an equivalent position to those crossing the borders of a new country—they have to deal with the bureaucracy of checkpoints, or matriculation, they may have limited knowledge of the local language and customs, and are alone. (Mann, 2011, p. 11)

The higher the discrepancy between students’ social capital and the new academic “country,” the greater the chance for students to feel alienated. When adding Durkheim’s notion of
regulation to this particular analysis, a deeper understanding of student drop-out can be revealed. For example, when the academic community is experienced by students as having high regulation and the students' social capital is rooted in the "collectively-owned... credential" (Bourdieu, 1986, p. 51) of being able to solve problems without much help and support, difficulties will arise in students' integration. However, this potential suicide is not wholly certain. If the same students' social capital is rooted in obedience and compliance, then when the academic community is experienced by students as having high regulation, this social capital might actually facilitate integration. This alienation is not only in social terms; Mann (2011) asserts that the feeling of alienation can arise in students in connection to their academic work.

The work that is undertaken by students is not usually done for the good of the group of learners or other community, but in order to satisfy the requirements of the teacher and the institution, and for the mark that may be obtained. (p. 13)

When students' expectations arising from their social capital are different that notion of the nature of academic work as cited above, a sense of alienation from one's work could arise. "The 'object', that is, what is produced, for example, the essay, no longer belongs to the student, but, because it is part of a system of exchange" (Mann, 2011, p. 13). Mann likens this system of exchange in education to Marx's notion of labour in capitalism. The labour of engaging in the educational process is exchanged for a sufficient mark from the teacher.
Workers are said to be deprived of, and hence 'alienated' (separated) from their products; they stand in an 'alien' (hostile) relation to the environment in which they work, and they experience the labor they perform as 'alien' to them (indifferent or inimical to their natural human desires and aspirations). (Wood, 2009, p. 3)

If this accurately describes the educational process, then students' might unwittingly have differing expectations as to the personal attachment to one's work. For example, if a student's social capital is formed by a blue-collar work ethic rooted in pride in one's work, then this may be in stark contrast to the academic work as described above. The combination of Durkheim and social capital might be as follows: the student may not be able to integrate into the academic community due to excess individualism stemming from the academic community's lack of individualism as described above.

The implications of type of alienation on pedagogical activities are momentous. If the focus of students becomes one on outcomes rather than on the process of education, educators might strongly consider their effect on students' learning process rather than wondering why students seem unmotivated.

One can also argue, as part of this, that the learner is sundered from their own learning process—what one could call the learner's own intrinsic autonomous learning tasks—by the imposition on the student by lecturers of the choice of the timing, content and process of learning tasks. It is not the learners who own the learning process, but the teachers. With the current emphasis on assessment of outcome and performance, and
with the tendency for the tasks that lead to this assessment to be owned and controlled by those other than the student, it may be possible for some students to feel themselves alienated from their very selves, struggling to find a voice and a path through which their own learning desire can be expressed and pursued. (Mann, 2011, p. 14)

Mann also asserts "It is not the learners who own the learning process, but the teachers" (p. 14). This might be seen in Durkheimian terms as a situation with an imbalance of regulation, thus should lead to suicide. However, not all students in this situation choose to drop-out. Even stronger, there are students who are successful in this imbalanced situation. Do these students have a better fitting social capital?

In closing this section, both the positive and negative effects of social capital on student engagement have been discussed. These effects can be seen on university activities as early as the application process. Terms such as "middle class" that are often used in predicting student success can be mediated by certain aspects of students' social capital. Additionally, the addition of social capital to Durkheim's notion of suicide can add new perspectives concerning why student are struggling to integrate into the academic community. It was discussed that an imbalance in one of the two social forces (regulation and individualism) outlined by Durkheim can also be mediated by students' social capital.
2.3.3 Institution and Engagement

The culture of an institution also plays a large role in student engagement. Not only is the formal culture within the walls of the institution, of importance but also what Thomas (2002) describes as "institutional habitus." This notion stems from Bourdieu's notion of habitus:

To put it briefly, the habitus is a product of conditionings which tends to reproduce the objective logic of those conditionings while transforming it. It's a kind of transforming machine that leads us to "reproduce" the social conditions of our own production, but in a relatively unpredictable way, in such a way that one cannot move simply and mechanically from knowledge of the conditions of production to knowledge of the products....The habitus is a principle of invention produced by history but relatively detached from history: its dispositions are durable...(Bourdieu, 1994, p. 87)

Thomas (2002) describes this concept as consisting of "relational issues and priorities, which are deeply embedded and sub-consciously informing practice" (p. 431). This habitus forms the basis of all interactions between the institution and the student. Thomas goes further to state: "Educational institutions are able to determine what values, language and knowledge are regarded as legitimate, and therefore ascribe success and award qualifications on this basis"(p. 431). This is in line with Tinto’s idea of membership as related to Durkheim’s’ theory of suicide. Lack of integration into an institution’s membership can lead to isolation. “Egotistical is that form of suicide which arises when individuals are unable to become integrated and establish membership” (Tinto, 1993, p. 101).
Differing student backgrounds or educational experiences can form an obstacle in the transition to this new community. If the institutional habitus is non-inclusive, aspirants desiring to join this community will feel the need to either let go of their old identity or engage in mimicry of behaviours held within the institution’s habitus (Meyer & Land, 2005).

However, Thomas (2002) states:

I want to argue that if an institutional habitus is inclusive and accepting of difference, and does not prioritize or valorize one set of characteristics, but rather celebrates and prizes diversity and difference. Students from diverse backgrounds will find greater acceptance of and respect for their own practices and knowledge, and this in turn will promote higher levels of persistence in HE [higher education]. (p. 432)

Not only can the formal and informal culture within an institution influence engagement, but individual subjects and disciplines seem to have an impact on student engagement. Humanities and social sciences are what Ahlfeldt, Mehta, & Sellnow (2005) describe as naturally “expressive areas of study” which highly encourage engagement. “It is more challenging to achieve higher levels of engagement in mathematics and science classes as compared to arts and humanities classes” (Ahlfeldt et al., 2005, p. 17). I was unable to find any mention in the literature of limitations or disciplines requiring more effort on either the student’s or the institution’s part in achieving a high level of engagement. There is no indication in the work of Astin, Tinto, and many others that the level or ease of engagement would vary by discipline.
However, there are certain pedagogical choices that can greatly encourage engagement, irrespective of the discipline that chooses to employ them.

### 2.3.4 Pedagogy and Engagement

In the light of self-determination theory, Assor, Kaplan, & Roth (2002) describe three basic categories of behaviours for educators: autonomy-support, competence-support (structure) and relational-support (interpersonal involvement). By focusing on the relevance of students’ coursework in relation to their personal goals educators can develop the student’s autonomy, thus encouraging engagement:

> Behaviours that clarify the relevance of schoolwork for students involve educators’ actions that help students to grasp the contribution of schoolwork to the realisation of their personal goals, interests, and values. Those relevance-clarifying actions are viewed as autonomy-supportive because, due to the understanding of the contribution of schoolwork to the attainment of personal goals, students feel more autonomous while studying. (Assor et al., 2002, p. 263)

The pedagogical characteristics that encourage engagement include: activating learning environments (Severiens & Schmidt, 2009); high quality learning environments (Reid & Solomonides, 2007); adapting to the diverse backgrounds of students (Severiens & Schmidt, 2009); perceived teacher quality by providing clear expectations, contingent responses, and
strategic help (Skinner & Belmont, 1993); frequent contact in active and collaborative learning activities (Umbach & Wawrzynski, 2005); perceived support from teachers (You & Sharkey, 2009); the suitability of instructional methods, quality of instruction, the lecturer's role in problem solving and the value of the course in terms of employment purposes (McInnis, Hartley, et al., 2000).

Friesen (2010) reported her findings from the Alberta Initiative for School Improvement in combination with the Galileo Educational Network on the transition of over 12,800 students from 26 elementary and secondary schools to disciplinary-based inquiry. Friesen noted that: “that classrooms and schools became places where knowledge creation and deep understanding were sought and celebrated, students routinely created work that was personally significant and made a contribution to the larger community” (2010, p. 1).


Ahlfeldt, Mehta, & Sellnow (2005) studied the effect that engaged teaching had on student engagement. Engaged teaching was defined in this study as teaching in a problem-based learning (PBL) curriculum. They found a significant correlation between student engagement and class size. One of the characteristics of PBL is that students work in small groups, generally five to eight students. Additionally, they reported a significant correlation between
student engagement and PBL classes. In these classes, teachers use more engaged teaching practices, thus having a positive effect on student engagement. They also found a significant correlation between the study year and engagement. The higher the study year was, the higher the student engagement. However, Ahlfeldt et al. noted that "upper-division classes tend to be smaller and faculty tend to use more engaged teaching methods in these courses." Nonetheless, since the majority of student departure occurs in the first year, the benefits of PBL, as reporting in this study, could help reverse this trend. As Ahlfeldt et al. noted:

However, all students deserve this same level of engagement in all their classes, regardless of level or size. Because of many factors, including staffing and classroom space, large classes may always be a part of college education. This does not mean, however, that instructors cannot work to implement engaged teaching into all courses including introductory lecture halls. (p. 18)

Self-determination theory (SDT), in general, proposes that individuals have an "inherent orientation towards growth and development" and that there are three psychological needs: autonomy, competence, and relatedness (Niemiec et al., 2006). SDT characterizes the need for autonomy as "experiencing a sense of choice, endorsement, and volition with respect to initiating, maintaining, and terminating behavioural engagement" (Niemiec et al., 2006). Furthermore, Skinner & Belmont (1993) define autonomy as "the amount of freedom a child is given to determine his or her own behavior" (p. 573). Teaching behaviours that could support this need are choice in assignments and "encouraging self-initiation, minimising the
use of controls, and acknowledging the other’s perspective and feelings” (Assor et al., 2002, p. 261).

The psychological need for “competence” is defined by Niemiec et al. (2006) as: “The need for competence concerns the feeling of effectiveness in interacting with the social or physical world” (p. 273). Steinberg & Silverberg (1986) assert that the need for competence becomes increasingly more for individuals entering middle childhood as opposed to in their earlier years when autonomy was the focus of concern. Teaching behaviours that could support this need are choice, mentor programmes and activities that allow students to gain work experience (e.g. work placements) (Lerner & Steinberg, 2004). In line with SDT, if teachers through their curriculum can increase the chance of feeling competent in their students, then student motivation should also increase.

The primary goal for teachers is to create an environment where students feel supported by experiencing a sense of autonomy through choice and linking to personal interests. Self-determination theory calls this intrinsic goal framing (Vansteenkiste et al., 2006).

Based on SDT, we expected that future intrinsic goal framing would positively affect learning, academic performance, and persistence at similar activities afterwards, because future intrinsic goals are more likely to result in a deep engagement with the study material compared to future extrinsic goals. (Simons, Vansteenkiste, Lens, & Lacante, 2004, p. 132)
Additionally, self-determination theory posits the notion that intrinsic interest or internalized importance can have a positive effect on performance and effort. However, goals framed in terms of extrinsic motives generally are associated with control motives (Vansteenkiste et al., 2006). These external control motives are clearly identified in this trigger. However, external control motives diminish the amount of autonomy in individuals and noted above, the higher autonomy the more likely the student will employ a deep learning strategy. Conversely, student who have framed their goals in terms of extrinsic motives are more likely to employ a surface approach to learning. Intrinsic goal framing induces a different quality of motivation (Vansteenkiste et al., 2006).

2.4 The Benefits of Engagement

The benefits of students being engaged in their studies have been well documented. A review of the literature surrounding engagement shows the positive effects of student engagement: a higher level of academic success (Astin, 1984; Carini et al., 2006a; Tinto, 1988; You & Sharkey, 2009); a greater sense of being part of the classroom discourse (Reid & Solomonides, 2007); a reduced likelihood of a premature exit from higher education (Kuh, 2009); a greater sense of pride and satisfaction, higher grades and higher scores on standardized tests of achievement (Skinner & Belmont, 1993); an increased tendency to employ a deep approach to learning (Horstmanshof & Zimitat, 2007; Jansen & Bruinsma, 2005); and increased success in later years of study (Severiens & Schmidt, 2009).
However, the focus of engagement research is one generally towards identifying “productive learning activities” (Kuh, 2009, p. 6) or quantifying “student involvement” (Astin, 1984, p. 517). This focus does not help educators in explaining why students engage or fail to engage in their studies. For example, the National Survey of Student Engagement (NSSE) poses numerous questions about student’s participation in “educationally purposeful activities” (Kuh, 2009a) but does not explore the underlying reasons why those students are participating in those activities or why they are not. If educators fail to take into consideration students’ motivating factors, they may try to present educationally purposeful activities to students who are unable to engage in those activities (e.g. because of their social status or their disabilities) or to students who find no value or motive for engaging in that activity. For example, students who are academically oriented towards their studies (Taylor et al., 1981) may find it more difficult to engage in activities whose main focus is vocational in nature.

### 2.5 Important Gaps

Notwithstanding the great work that so many researchers have been conducting in relation to student engagement, departure, involvement, and persistence, I do believe that there are some issues that still need to be addressed. The most difficult, in my opinion, is connecting reported participation in educationally relevant experiences to actual performance. There seems to be indirect evidence tying certain first year experience programmes to increased grade point averages (Pike, Hansen, & Lin, 2010); however, until large scale research is done with both the NSSE indicators and actual earned student results, the relationship between NSSE results and students’ academic achievement will remain in question.
2.6 Background of the Study

In order to decrease student attrition and increase student success, a campus-wide initiative was formed: HippoCampus. This initiative, funded and supervised by the University’s board of governors, has as its goal to both research the problem and to contribute to university policy in regards to student retention and success.

This study differs from the existing research in that it attempts to present, in the students’ words, their intentions, motivation or desires as they have reported them for engaging in their studies. This research does not focus primarily on reported behaviour, rather on the catalysts for putting more effort into their studies that students identified. In the initial phase of this investigation, the data was coded by using a thematic approach, specifically an inductive manifest analysis (Braun & Clarke, 2006). Once the coding was finalized, a model was developed and quantitative analyses were conducted. Tashakkori and Teddlie (2002) label this type of research “sequential intermethod mixing” (p. 304), since it combines qualitative data collection and then uses the results to inform a subsequent quantitative data analysis. Mickelson, Wroble, Helgeson (1999) employed a similar sequential intermethod approach in developing their questionnaire as to the parental perception of causes for their children’s’ special needs. Similar mixed-methods research can also be found in healthcare research (Ostlund, Kidd, Wengstrom, & Rowa-Dewar, 2010) and in social science research (Munoz, 2010). Since this study was also part of a larger study, additional questions are included here on self-reported behaviours; study hours, use of facilities and satisfaction.
2.7 Development of Research Objectives

It now becomes prudent to re-examine the intended research objectives in order to attune these to the above reviewed literature.

The purpose of this study was to expand the understanding of student engagement and the factors that activate and prompt students to put effort into their studies.

While this literature does not specifically contain a "model of engagement," there are many aspects of engagement that should be incorporated into this research project. In the following paragraphs, I will review each research objective separately and explain the manner in which the literature can be incorporated into and augment the research objectives.

To identify student engagement triggers.

The goal of this research objective is to identify, from the students' own perception, catalysts that trigger (activate) students' engagement in their study. The interest in a subject, according to Dewey (1899/1981), needs to be based on the "naked character" (p. 425) of that subject. In other words, Dewey is asserting that sound engagement stems from students' interest in a subject that is devoid of the "wrappings of attraction" (p. 425). When teachers make a subject more interesting, it is actually distracting the student from the essence of said material. "Putting a fringe of fictitious interest around it does not bring the child any nearer to it than he was at the outset" (p. 425). Building on Dewey's idea of interest, it is essential that students' interest in subject matter be identified.
Tyler (1949) asserts that the school’s philosophy shapes the desired outcomes of its students. Success for students is then predicated on a good match between the student and school; in academic aspects, but also in a social one as well. If the catalysts for students’ engagement can be identified, then the school has the opportunity to incorporate these catalysts in their “philosophy of the school” and “knowledge of the psychology of learning” (p. 34). According to Tyler, academic objectives stem from the social philosophy of that school. If the social philosophy of a school does not encompass the students’ catalyst for engagement, then the envisaged educational aims will be difficult to adopt by students. Avans strives to create an educational environment that inspires our teaching and support staff and students. Avans’s mission states: “Our varied and modern learning environment enables each student to develop his or her skills and ambitions to their maximum potential” (Avans Hogeschool, 2008a, p. 3). In order to allow students to maximally develop, the social philosophy of Avans needs to be inline and incorporate students’ engagement triggers. The identification of our students’ engagement triggers will help Avans create a social philosophy, thus allowing the creation of appropriate educational aims that match our students.

To develop a model of student engagement.

The research objective to develop a model of student engagement can now be put in the light of the reviewed literature. However, this remains a difficult task. The majority of literature surrounding student engagement addresses the issue of the benefits of students’ engaging in their studies (Astin, 1975; Carini et al., 2006b; Pike & Kuh, 2005) and which behaviours they demonstrate (Pascarella & Terenzini, 1983, 1991) during engagement. However, the aim of this research is to identify triggers that students have reported for engaging in their studies.
This is a step before the above mentioned perspectives. This research objective is most similar to the work of Taylor et al. (1981) as well as Taylor, (1983). However, the scope of Taylor’s work is broader. The notion of “orientation” was investigated and is defined as “all those attitudes and aims that express the student’s individual relationship with a course and the University. It is the collection of purposes which orientates the student to a course in a particular way” (1981, p. 3). The scope of this research is more narrow since it focuses on the reasons for students engaging in their studies and not specifically the relationship with the university, as held within Taylor’s work.

**To determine if engagement triggers were similar across faculties, disciplines and study year.**

One of the main potential impacts of this research, for educational practice, is the possibility that student engagement differs across disciplines. By investigating this aspect of student engagement, it would allow educators from the 19 faculties, to have “high-quality, actionable data that institutions can use to improve the undergraduate experience” (Kuh, 2009, p. 9). Interestingly enough, the NSSE began reporting differences among majors in 2010. There is an emphasis in the 2010 report on “how participation in high-impact practices varies according to specific majors” and “distinct engagement patterns” (National Survey of Student Engagement, 2010, p. 10) in four reported majors. The question that this research objective strives to answer is: Are “educationally purposeful activities” (Kuh et al., 2008, p. 11) similar among disciplines?
To determine if reported study behaviour was related to specific engagement triggers.

This research objective is an amalgamation of the two main ideas found in the literature about student engagement and student success. In the theoretical background section of this dissertation, a strong link has been demonstrated between certain study behaviours and academic success (Astin, 1984; Carini, Kuh, & Klein, 2006a; Tinto, 1988; You & Sharkey, 2009). This research objective aims to link students' self-reported engagement triggers to constructive study behaviour. Elements of Tinto's model of student persistence such as formal and non-formal academic integration and educationally purposeful activities stemming from the NSSE were contained in the data collection instrument. These were combined with the current research questions. This unique combination allows for a new perspective on student engagement. For example, the NSSE identifies certain study behaviours, but it is devoid of any data as to why these students perform those behaviours. This is also true of the various elements in Tinto's model; students could be more academically integrated, but the reasons or motivations of those students are not addressed. On the other hand, Dewey (1899/1981), Astin (1975) and Vansteenkiste, Lens, & Deci (2006) explore engagement in terms of effort, interest and goal setting. And while these notions can deconstruct engagement as a phenomenon, they nevertheless do not offer any insight into the actual behaviours of engagement. The goal of this research objective is to merge these two ideas, thus gaining new insights into the reasons students engage in their study and which study behaviours they report.
3 METHODS

3.1 Ethical Considerations

3.1.1 Introduction

Since this research was conducted in the Netherlands, I feel that a review of this ethical context and the guidelines that are relevant in the Dutch context are worth discussion. I will first review the ethical code for researchers in the Netherlands and then I will specially discuss their application in this research. Since this research has been conducted as a component of a doctorate programme at the UK Open University, I will also discuss the relevant code of practice that guides researchers at that university in relation to the Dutch code of conduct.

3.1.2 Ethical Context

The Netherlands Code of Conduct for Scientific Practice (Association of Universities in the Netherlands, 2004) was established in 2004. In the preamble, the reason for drawing up this document

stems from the generally shared conviction that (employees of) institutes that fulfil a societal role are held to a proper exercise of their duties. Rules that establish correct practice should be entrusted to paper to provide common ground and, if necessary, ground for admonishment. (p. 3)

The Association of Universities in the Netherlands sees the role of its universities as a societal one. However, this code does not apply to all conduct and practices within a University but is limited to “scientific practice, which is understood to include scientific teaching and research.
at all universities in the Netherlands” (Association of Universities in the Netherlands, 2004). The aim of this code is to provide guidelines for individual practitioners and not for university administration. The code of conduct specifically presumes that each individual university has in place “safeguards” for ensuring the balance between academic freedom and the established educational and research framework of that university. Also, each university must ensure that this code is discussed in academic communities and should be a curricular element in the “teaching of aspiring scientists” (p. 4).

The code of practice for the UK Open University is a university specific code “for all those who do or support research in the University’s name, including staff, students, and other individuals working on University premises or using University facilities” (UK Open University, 2008, p. 1). This code strives to ensure that the conducted research conforms to national research bodies and standards.

In the Netherlands, the university’s research programme is viewed as having stakeholders that are outside the university: the government, society and businesses. Therefore, it is honesty and truthfulness that must be at the core of good scientific practice. “The integrity of each scientific practitioner is an essential condition for maintaining stakeholders’ faith in science. Integrity is the cornerstone of good scientific practice” (p. 3). In other words, one of the goals of the process of scientific inquiry is “maintaining stakeholders' faith in science” through adhering to these general principles as well Dutch and international laws. The adherence to these guidelines is individual, collegial, and societal: research practitioners must observe these guidelines in their individual actions, among colleagues and towards society. However, the
adherence to the guidelines is an individual responsibility as demonstrated by the following quote: “Every scientific practitioner must (be able to) demonstrate how he puts these principles into practice” (p. 4). Furthermore, the code of conduct contains guidelines for desirable behaviour that are described in terms of best practices. Thus, there are no sanctions listed for undesirable behaviour. Sanctions and complaint procedures are outlined by the National Committee for Scientific Integrity Regulations (Association of Universities in the Netherlands, 2004).

3.1.3 Principles Contained in the Codes of Practice

The Dutch code has five principles: scrupulousness, reliability, verifiability, impartiality, and independence. As noted above, each of these principles is described in terms of best practices. Below, each principle will be briefly described and related to this research. The UK Open University’s code has seven principles: respect, adherent to ethical standards, integrity, accuracy, safety, acknowledgement, managing conflicts of interest. In the following section, the Dutch principles will first be discussed and then the related UK principles will be discussed in that same sub-section.

Table 1
Comparison of UK and NL Codes of Conduct

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<thead>
<tr>
<th>Principle</th>
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<td>scrupulousness</td>
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3.1.3.1 Principle: Scrupulousness

"Scientific activities are performed scrupulously, unaffected by mounting pressure to achieve”

(Association of Universities in the Netherlands, 2004, p. 5).

While there are 11 best practices outlined for scrupulousness, the two most relevant points for this principle concern conducting research and publishing that research. “Scrupulousness is expressed through precision and nuance in providing scientific instruction and conducting scientific research and the publishing of results thereof” (p. 6).

On conducting research in relation to the principle of scrupulousness, the concept of risk and privacy are central:

Every scientific practitioner demonstrates respect for the people and animals involved in scientific teaching and research. If research on humans or animals poses any kind of risk, the significance of the research must justify taking that risk. Research on human subjects is only permitted upon their freely given informed consent and if there are no or just the slightest of risks. The privacy of subjects involved is sufficiently protected. (p. 6)

In the UK Open University’s code of practice the first principle is: “Treat all those associated with their research with respect” (2008, p. 1)
3.1.3.2 Scrupulousness Applied to the Current Research

There was no risk of direct physical harm or injury by participating in this research. Students could freely choose to fill out this anonymous online questionnaire. Reminders were sent to the students, but these were computer automated reminders that the system automatically generated. However, concerns of retribution were raised nationally, to this annual questionnaire. This discussion is almost an annual national event. Student interest groups were concerned that if the information was not anonymous and certain aspects of the questionnaire's outcomes were not seen as favourable, either universities or individual faculties could take action against individual students that were seen to contribute to these favourable outcomes. These actions could be seen as potential harm or injury to participants if these actions led to disciplinary measures that would put the student's study progress in jeopardy, thus creating monetary injury in the sense of additional tuition for the extra study time or injury in potential loss future professional career possibilities. Taking this into consideration, the university decided to conduct this research devoid of any specific individual information such as name or student number. However, other information was included such as year of study and the specific faculty and programme in which the student was enrolled.

Since each student received an individual-specific invitation to fill-in the questionnaire, additional information was added to the dataset automatically by the questionnaire system. However, user specific information such as student name, email, and student identification number was not added to any dataset. In accordance with the Netherlands code of conduct for the use of personal information (Association of Universities in the Netherlands, 2005), this
newly combined dataset was checked to ensure that no personal data was included after the combination of these two datasets.

Specifically for this research, an additional question was introduced into the survey with the intention to ask students about challenging education. Students were informed on the questionnaire as to the university's intentions and scope concerning this data. These were, as stated in the questionnaire, “structural improvement of the quality... reduction of study delay... and a reduction of a high drop-out rate” (Avans Hogeschool, 2009).

The second aspect of scrupulousness concerns publishing results. This is meant not specifically as a duty to publish, but to publish in an open and transparent manner. “Accurate source references serve to ensure that credit is awarded where credit is deserved. This also applies to information gathered via the Internet. Authorship is acknowledged. Rules common to the scientific discipline are observed” (p. 6). This can be specifically seen in the manner in which this dissertation is referenced as well as in all publications such as presentations, conference papers and other correspondences related to this research.

3.1.3.3 Reliability

“Science's reputation of reliability is confirmed and enhanced through the conduct of every scientific practitioner. A scientific practitioner is reliable in the performance of his research and in the reporting, and equally in the transfer of knowledge through teaching and publication” (Association of Universities in the Netherlands, 2004, p. 8).
In the Dutch code of conduct, the scientific practitioner has the responsibility to provide full and justifiable research reports. Inherent in this notion is the correct usage of statistical measures when analysing the data. “The selective omission of research results is reported and justified. The data has indeed been collected. The statistical methods employed are pertinent to the acquired data” (p. 8). In the UK Open University’s code of practice, the fourth principle is to: “ensure validity and accuracy in the collecting and reporting of data” (UK Open University, 2008, p. 1).

3.1.3.4 Reliability Applied to the Current Research

Specific to the present research, when issues such as non-significant results are not discussed, justification can be found through the presentation of those non-significant test results. However, contained in this dissertation are discussions of non-significant results when these results add a new perspective to the discussion. Additionally, the high level reliability of the analysis contained in this dissertation can be confirmed by the correct utilization and mix of non-parametric and parametric tests. A diligent approach was employed for both the analysis and reporting of this research’s data. One example of this diligence can be found in the employment of Kruskal-Wallis tests and subsequent Mann-Whitney U tests.

3.1.3.5 Verifiability

“Presented information is verifiable. Whenever research results are publicized, it is made clear what the data and the conclusions are based on, where they were derived from and how they can be verified” (Association of Universities in the Netherlands, 2004, p. 9).
Researchers have the responsibility to report on their work in a manner that can be verified. This has two elements: the development of the research question and methodology used to research that question need to be precisely reported; and the storage of the collected data in a manner that with the least of effort the data could be available to other researchers. Specifically with regard to research data and records, The UK Open University’s code states that: “research data and records should be accurate, and sufficiently detailed and complete in the context of the conventions of the relevant discipline to enable verification of research results and to reflect what was communicated, decided or done” (p. 4).

The methodology chosen and its subsequent reporting need to be in a manner that allows other researchers to gain exact insight into both how the research was conducted and the justification for that particular research methodology. “Research must be replicable in order to verify its accuracy. The choice of research question, the research set-up, the choice of method and the reference to sources studied is accurately documented” (p. 9).

3.1.3.6 Verifiability Applied to the Current Research

In the present research a mixed-methods approach was undertaken. For this reason, diligence is taken in the following methods section in outlining both the methods used as well as the theoretical justification for their employment. In particular, the step in the research moving from qualitative to quantitative was reviewed by a fellow researcher in order to appropriately transfer the data from one type of data set (quantitative) to the other (quantitative). As stated in the code of conduct: “The quality of data collection, data input, data storage and data processing is guarded closely. All steps taken must be properly reported and their execution
must be properly monitored (lab journals, progress reports, documentation of arrangements and decisions, etc.)” (p. 9).

As for data storage, Avans has a special secure server that only the research team can access. The code of conduct suggests that data needs to be “stored for at least five years” (p. 9). This is already a common practice at our university. “Raw research data are archived in such a way that they can be consulted at a minimum expense of time and effort” (p. 9). All data from the present research is catalogued and stored on the secure server.

3.1.3.7 Impartiality

“In his scientific activities, the scientific practitioner heeds no other interest than the scientific interest. In this respect, he is always prepared to account for his actions” (Association of Universities in the Netherlands, 2004, p. 10).

“Research is original investigation undertaken in order to gain knowledge and understanding and make this widely available” (UK Open University, 2008, p. 1).

“The choice of methods and criteria is guided solely by the goal of truth-finding and not by external goals such as commercial success or political influence” (UK Open University, 2008, p. 10). There are always external forces influencing the conduct and reporting of research. Fortunately, for this study, it was contained in a fairly independent and personal educational track. While the university has a vested interest in the results, it is certainly not the overwhelming reason for engaging in this research. I was able to freely choose the topic of the
study and engage in the research striving to answer those questions contained within. Certainly, the topic is highly relevant and absolutely endeavours to solve a real-life issue at our university. Due to the topic’s relevance, the study has gained university-wide attention. However, since that attention has come during the presentation of the results stage of the research, not much influence or undue pressure has come from the university during the choice of methods stage or even when publicising the results.

In the UK Open University’s code of practice, it is noted that a researcher needs to: “effectively and transparently manage conflicts of interest or potential conflicts of interest” (UK Open University, 2008, p. 1). It states:

a researcher has a potential conflict of interest in any circumstances where that person has a real, perceived or potential opportunity to prefer their own interests, or those of any other person or organisation, to the interests of the Open University...(p. 7)

3.1.3.8 Impartiality Applied to the Current Research

However, this principle of impartiality posed several difficulties for the researcher. In the first years of this study, it was a learning process to judge others’ work on the merits and methodology rather than the particular standpoint or possible implications of that work. A few strong remarks from my supervisor and hours of reflection thereon greatly help me to see others’ work as a part of the greater scientific discussion in which all proper perspectives should be welcomed. In fact, it has greatly helped my work seeing the merits of opposing viewpoints. This has allowed me to be open to other possible alternative methodologies and
sources of information. "A reviewer consults his conscience as to whether he can offer an impartial assessment of a manuscript" (p. 10). Impartiality, for me, now means being able to see others’ work while setting my personal convictions and viewpoints aside.

3.1.3.9 Independence

"Scientific practitioners operate in a context of academic liberty and independence. Insofar as restrictions of that liberty are inevitable, these are clearly stated" (Association of Universities in the Netherlands, 2004, p. 11).

The management of the Learning and Innovation Centre, had "no influence on the research results" (Association of Universities in the Netherlands, 2004, p. 11). The one and only condition that the commissioning party (my manager) had was that the research question must be developed from a real-life issue at the university, thus the topic must be relevant for Avans University.

Whenever a scientific practitioner is commissioned to provide instruction or conduct research, he is allowed - once the parameters have been defined - to execute the assignment without interference by the commissioning party. The research question is of interest to science, aside from the commissioning party's particular concern. The method employed is scientifically valid. (p. 11)
There are four principles in the UK Open University’s code of practice that have not been discussed in the above section. Below are these four principles and a brief discussion of each one. A researcher needs to:

- “understand and adhere to ethical standards in research”
- “engage in research activity that supports and enhances the reputation of the OU by its rigour, honesty and integrity”
- “Ensure the safety of all those associated with the research”
- “Ensure that all work presented as their own complies with protocols for acknowledging the contribution of others and acknowledges all source materials”

(UK Open University, 2008, p. 1)

The ethical standards can be a national research council or guidelines laid down by professional organizations. OU research needs to be such that it does not harm the reputation of the OU. This is characterized by rigour, honesty and integrity. The safety of research participants also needs to be ensured. Besides physical safety, no other harm should come to participants. This can be ensured by proper adherence to data protection and privacy concerns. The last principle is one of transparency in regards to authorship. The UK Open University’s code of practice explicitly places a focus on authorship by defining authorship through three elements:

For a person to be recorded as an author of a publication requires that he or she is directly involved in the creation of the publication by:

- conceiving it, analysing and interpreting the data on which it is based;
• writing or revising the intellectual content; and
• giving final approval of the version to be published

(UK Open University, 2008, p. 5)

In conclusion, both the Dutch and UK principles for conducting research have been strictly adhered to in this dissertation. Great effort has been taken to ensure that participants' privacy remains secure, employed methods are consistent with those used in the literature, these methods have also been explained in a transparent manner in order to allow the best possible discussion of this work, and it has been endeavoured to acknowledge those who have contributed to this research by the utmost care in using and citing references.

3.2 Data Collection and Population

3.2.1 Introduction

The data for this study was collected during the yearly “Student Satisfaction Survey” (SSS) (Student Tevredenheidsonderzoek). This is an online survey every spring and is available in both English and Dutch. All students registered in the 2008–2009 academic year received an initial invitation via their student email with a link to the survey. The survey was available for four weeks and a reminder email was sent two weeks prior to the survey being closed. Incentives to increase student response were three iPods. After the survey was closed, three winners were chosen at random from the students who participated in the survey.
3.2.2 Background of Instrument

Prior to the 2001 merger of the three universities of applied sciences located in the southern Dutch province of Brabant, each university was responsible for executing a yearly survey to address issues such as satisfaction and any other issues that said university deemed important enough to place in their surveys. Generally this was done at the faculty level. In the years following the merger, the board of governors resolved that this survey be centrally administered so as to bring some consistency into the questionnaire.

The development and execution of this new questionnaire was the responsibility of the Learning and Innovation Centre (LIC) and in particular the research and evaluation team. The survey used for my research was the 2009 version. Until 2010, all SSSs were developed and executed in-house. Surveys were designed and entered into our system and the data collection was also completed through our online survey system. This system is a secure server system and in accordance with Dutch law, the results are stored for 5 years. Since this survey was completely controlled by Avans, there were no difficulties in inserting additional questions to the survey. Equally, retrieving datasets or sub-datasets of these surveys poses no difficulties for authorized personnel.

For the academic year 2010, the Dutch Ministry of Education, Culture and Science decided to amend the current national version of the SSS (Muskens, Pass, & van den Broek, 2010). Avans decided to participate in this national survey for the academic year 2010–2011. The cost advantages as well as the possibility of national benchmarking greatly outweighed the advantages of administering the survey in-house.
3.2.3 Structure of Survey

Since my EdD research was a part of a larger project, the dataset contained not only the questions concerning my research, but also the overall questions from the complete 2009 SSS. The complete instrument can be found in the appendix. This instrument was developed by Avans and contains several different sections. Besides the additional questions added by the project Hippocampus, the rest of the survey instrument was developed by my colleagues at the LIC. I did not have any input into the design of the 2009 SSS. These sections range from personal information such as age and type of previous education, frequency of visits to different study facilities, study effort per week, and a section for assessments. Of course, the main interest in this instrument was the students' reported satisfaction. There is an entire separate section for answering questions concerning one's satisfaction with teachers, the programme, Avans in general, study schedules and career orientation. Since most of this data was used in the analysis, it is then prudent to present the main points of the survey instrument.

3.2.3.1 Personal Data

This section allows students to report basic demographic information such as age, type of previous education, entrance year to university, and which programme they follow. Having this data to combine with my research allowed me the opportunity to gain a deeper insight into students' engagement. Many of these students' characteristics will be later reported on with their results. All questions, unless otherwise stated, were presented with response alternatives on a 5-point Likert scale with anchors of strongly disagree and strongly agree.
3.2.3.2 General

(11 questions, 5-point Likert scale; anchors: strongly disagree and strongly agree)

1. I am generally satisfied with the programme.
2. I am satisfied with the contents of the programme.
3. The programme is sufficiently focused on vocational orientation.
4. I am satisfied with my lecturers.
5. I am satisfied with the testing and assessment methods.
6. I receive sufficient information from the institute.
7. I am satisfied with the timetables.
8. I am being involved sufficiently in the improvement of the programme.
9. I am satisfied with the study facilities.
10. I am satisfied with the other facilities.
11. I am satisfied with the study load.

(Avans Hogeschool, 2009, p. 1)

The rest of the instrument is designed in such a way that the subsequent sections give students
the chance to report on specific details of these topics.

3.2.3.3 Programme Contents

(8 questions, 5-point Likert scale; anchors: strongly disagree and strongly agree)

In this section, specific issues are investigated that concern the programme's pedagogical
content.
1. The programme is of a sufficiently high standard.
2. The programme adequately takes into account the latest developments.
3. The curriculum is sufficiently coherent.
4. The programme adequately links up to my previous education.
5. The methods deployed are sufficiently varied.
6. The study material is of a sufficiently high substantive quality.
7. The educational career counsellors provide me with sufficient support in my studies.
8. The programme leaves sufficient room for choice.

(Avens Hogeschool, 2009, p. 2)

3.2.3.4 Career Orientation

(4 questions, 5-point Likert scale; anchors: strongly disagree and strongly agree)

Since Avans is a university of applied studies, our focus is more on guiding students to a specific career, rather than a traditional research university. Therefore the students' perception and satisfaction of how their future career plays a role in our education is crucial.

1. The programme adequately prepares me for professional practice.
2. The programme brings me in sufficient contact with professional practice.
3. The programme is sufficiently practice-oriented.
4. The placements adequately link up to the rest of the programme.

(Avens Hogeschool, 2009, p. 3)
3.2.3.5 Lecturers

(4 questions, 5-point Likert scale; anchors: strongly disagree and strongly agree)

How students value our teaching staff is very important to our university. Unfortunately, there were only four questions for this topic in 2009. In the current SSS-2011 (NSE 2011), this section is more expanded and now contains 9 items (Stichting studiekeuze123, 2011).

1. My lecturers are sufficiently informed of professional practice.
2. My lecturers have demonstrated sufficient substantive knowledge.
3. My lecturers have sufficient didactic qualities.
4. My lecturers are generally sufficiently available.

(Avans Hogeschool, 2009, p. 3)

3.2.3.6 Tests and Assessments

(3 questions, 5-point Likert scale; anchors: strongly disagree and strongly agree)

In this section there are three questions concerning assessment. One of the questions concerns the actual content and the other two focus on procedural aspects of the assessments. These last two are important since Dutch law (Ministry of Education, Culture and Science, 1992) has specific requirements that need to be closely monitored: the assessment goals are clearly communicated and the feedback needs to be in a timely fashion. Both of these questions address those issues.

1. I am informed clearly beforehand about the relevant assessment criteria.
2. The exams adequately address the contents of the degree programme.
3. My results are published on time.

(Avans Hogeschool, 2009, p. 3)

3.2.3.7 Information Flow

(3 questions, 5-point Likert scale; anchors: strongly disagree and strongly agree)

Here general questions are posed to assess whether students are receiving proper and timely information concerning the programme and their academic progress.

1. I am kept adequately informed about the contents of the programme.
2. I am kept adequately informed about the rules and procedures.
3. I am kept adequately informed about my academic progress.

(Avans Hogeschool, 2009, p. 4)

3.2.3.8 Timetable

(4 questions, 5-point Likert scale; anchors: strongly disagree and strongly agree)

Dutch law (Ministry of Education, Culture and Science, 1992) also has strict regulations for publishing both examination and class schedules. In this section, these are monitored by three questions.

1. The timetable is published on time.
2. The exam timetable is published on time.
3. Timetable changes are announced on time.
4. The timetable enables me to spend my time efficiently
3.2.3.9 Quality Assurance

(4 questions, 5-point Likert scale; anchors: strongly disagree and strongly agree)

In this section, students can report their satisfaction on issues such as how the university handles complaints and the communication of the semester evaluations.

1. Student evaluations are carried out with sufficient frequency.
2. I am kept adequately informed about the results of evaluations.
3. The results of student evaluations are sufficiently integrated in the programme.
4. The school adequately handles and responds to complaints and problems.

(Avans Hogeschool, 2009, p. 4)

3.2.3.10 Study Facilities

(3 questions, 5-point Likert scale; anchors: strongly disagree and strongly agree)

Three general questions are posed here concerning study facilities. The first question is raised about the library (Xplora) in general. This is examined later in a separate section.

1. I am satisfied with the library/multimedia centre.
2. I am satisfied with the classrooms.
3. I am satisfied with the ICT facilities.

(Avans Hogeschool, 2009, p. 5)
3.2.3.11 Study Load

(2 questions, 5-point Likert scale; anchors: strongly disagree and strongly agree)

In the 1990s the focus in Dutch higher education was on the student’s ability to complete his/her studies in a timely fashion. In the Dutch context, this is called “studyability” [studeerbaarheid]. In 1996, the Inspectie van het Onderwijs [Educational Inspection] instructed Dutch higher educational institutes to improve this aspect of their educational programmes; hence these two questions.

1. The study load is spread evenly over the year.

2. The programme takes up an appropriate amount of time.

(Avans Hogeschool, 2009, p. 6)

3.2.3.12 Challenging, Motivating and Attractive Education

This section of the questionnaire was the basis for this research. In the section “3.2.4 Student Engagement Question” below, a full explanation will be provided concerning the development and rationale for these questions.

3.2.3.13 Additional Questions About Avans (20 questions)

This section consists of two parts: a section focusing on pedagogical aspects of the study and a section comprised of nine questions called the “report card” in which the students can give a mark from 1 to 10.

Pedagogical Aspects
1. **How many hours do you spend on your studies per week on average?** (Average all your study activities like work placements, exam weeks, class weeks.) (open question)

2. **Does/did the study programme in Year 1 give you a good idea of the rest of the study programme?**

3. **Do the teaching methods and classroom activities stimulate independent and active study?**

4. **What do you think of the number of weekly contact moments (meaning direct contact between teacher and student(s), such as lectures and training sessions)?**

5. **Do your teachers/tutors give you sufficient and useful counselling with regard to your study methods (your learning process)?**

6. **Do you think your teachers are inspiring, in general?**

7. **Are you satisfied with the opportunities for inspecting and getting feedback on your exams after each examination period?**

8. **Are you satisfied with the grades overviews of Osiris?**

9. **Are you satisfied with Osiris as a system to register for exams?**

10. **Are you satisfied with Osiris as a system to register for exams?**

(Avans Hogeschool, 2009, p. 7)
The Report Card

(9 questions, 10-point scale)

1. What mark would you give Xplora?

2. What mark would you give Blackboard?

3. The overall mark which I want to give my study programme is:

4. The mark which I want to give the quality of the content of my study programme is:

5. The mark which I want to give the quality of the teachers of my study programme is:

6. The mark which I want to give the atmosphere in my study programme is:

7. The mark I give my fellow students is:

8. The mark which I want to give the facilities at Avans Hogeschool is:

9. The overall mark which I want to give Avans Hogeschool is:

(Avans Hogeschool, 2009, p. 8)

3.2.3.14 Questions About Xplora

Since Xplora is a vital element of the student experience, Avans chooses to monitor this facility separately from the rest of the facilities. Specifically for this research, reported scores and behaviours from this section were used in the analysis of the engagement types and triggers.
3.2.3.15 Frequency and Length of Visits

(2 questions, partially ordered scale: never, hardly ever, on average once a month, on average once a week, on average a few times a week, almost daily)

1. How many days a week do you visit Xplora?
2. How much time a day do you spend in Xplora?

(Avans Hogeschool, 2009, p. 9)

3.2.3.16 Reasons for Visits

(2 questions, categorical scale, multiple responses possible)

1. When I visit Xplora, this is usually: (choose one of the five possibilities)
2. I go to Xplora to:
   - I never visit Xplora.
   - study: individually (self-study).
   - study: in a group (group work).
   - consult online information on using Xplora and its facilities.
   - borrow books or return them.
   - read printed books or magazines.
   - consult digital databases.
   - work on an Xplora PC (so not on your own laptop).
   - work on your own laptop.
   - use the multimedia studio.
   - speak with a teacher.
   - ask a question of Xplora-multimedia workers

(Avans Hogeschool, 2009, p. 10)

3.2.3.17 Questions About Blackboard

This section of the questionnaire asked students about their experiences of our virtual learning environment and what they do in that environment. Specifically for this research, reported
scores and behaviours from this section were used in the analysis of the engagement types and triggers.

### 3.2.3.18 Frequency and Experience of Visits

(3 questions, (1) partially ordered scale and (2) 5-point Likert scale; anchors: totally disagree and totally agree)

1. How many hours do you spend in Blackboard on an average school day?
2. The availability of Blackboard is good.
3. Blackboard is easy to use.

(Avans Hogeschool, 2009, p. 11)

### 3.2.3.19 What Do You Use in Blackboard?

(4 questions, categorical scale, multiple responses possible)

1. What do you use in Blackboard?
2. For what purpose do you use Blackboard?
3. Blackboard should be used more intensively by my faculty for information supply regarding study affairs.
4. How do you usually log in to Blackboard?

(Avans Hogeschool, 2009, p. 11)

### 3.2.3.20 Questions about communication

(16 questions, mixed answer possibilities, such as open test field, 5-point Likert scale, 10-point Likert scale)
This section of the questionnaire asked students about which Avans communication media they were familiar with and which ones they actually used. Topics such as the frequency that students read the school newspaper (digital or paper version) and which articles they find interesting are investigated.

3.2.4 Student Engagement Question

3.2.4.1 Development of Questions

The improvement of our education combined with the increasing focus on quality assurance programmes such as national accreditation led to the introduction of the section on “challenging, motivating, and attractive education” in this survey. In order to identify the factors that influence students’ study behaviour, thus furthering our understanding of student engagement, an additional question was introduced into the SSS 2009: Waardoor span jij je echt extra in voor je opleiding? “[For what reasons do you put more effort into your studies?]”

These questions were developed by the project group HippoCampus. The original goal was to identify, in the students’ own words, what aspects of our education were challenging. The underlying idea held by the project group was that if our education was more challenging, then students would perform better. This assumption was not based on the literature, but rather a common “feeling” in the project group. Additionally, there was no “piloting” of this question prior to its use in the SSS. However, regardless of the lack of support for its theoretical assumptions, the value of the question in regards to its relevance to the discussion surrounding student engagement is demonstrated in this dissertation.
3.2.4.2 Rationale of Questions and Answer Possibilities

The point of departure of this question is three-fold: a focus on the catalysts of student effort, the use of the students’ own words, and a rich and accumulative answer set. The notion that more student effort leads to better academic performance has been discussed above. In its assumptions, the project group identified “challenging” as their focus point. However, when I began my analysis of the data and reported back to the project group, I noticed that underlying their assumption of “challenging” was the notion of effort. And in fact, when directly asked, the project group agreed that their assumption was that if students are challenged, they will put more effort into their studies.

The choice was also made to use an open question. This was consciously chosen in order to openly explore the students’ notion of challenging, motivating, and attractive education. The approach allowed for an inductive analysis of the data. This was beneficial in the sense that this inductive approach allowed for a model to be created from our students. Often, research and literature originate from other countries. The question that often arises is: is this also applicable to my student population, which has a different language, school system and culture?

The question had three text fields for answering; “one-word response,” “short explanation,” and “long explanation.” Students had the opportunity to fill in this question twice. However, this study only focuses on the first answer from each student. This was decided since with the large response, over 5000 students, it was thought first prudent to fully analyse this data. While there might be additional insight gained from the comparison of the different responses
for individual respondents, this was both out of the scope of this research and a lesser priority, since the aim of this study was to investigate student engagement in our student population.

The raw data from the first text box ("one-word" answer) was used to create a list of keywords for potential themes from the data set. This semantic or manifest approach was performed to "first identify all the unique words in a text and then count the number of times each occurs" (Ryan & Bernard, 2003, p. 96). This list produced the indication of possible themes, but was too general and lacked any context since it was generated from a one-word answer. The initial list included words such as "teacher," "students," "profession," and "assessments," but their significance and/or meaning could not be determined from this data list.

A set of responses from a random subset of 300 students was selected. This new data set was analysed using only the second answer text box. This was a short explanation of the students' answer. A "key words in context" (KWIC) approach was used to identify common theses in the data set. As Ryan & Bernard (2003) state:

> In this technique, researchers identify key words or phrases and then systematically search the corpus of text to find all instances of each key word or phrase. Each time they find an instance, they make a copy of it and its immediate context. Themes get identified by physically sorting the examples into piles of similar meaning. (p. 97)
From this analysis, 11 themes were initially identified. A second researcher reviewed the list and the sub-dataset and eventually a list of 10 themes was agreed upon. To verify the stability of this list, a second sub-dataset of 300 random answers was extracted and reviewed by first by myself and then the second researcher. No changes in the list of 10 themes were deemed necessary.

3.2.5 **Respondent Information**

The population for this study consisted of higher vocational education students registered at our university in academic year 2008. This included all full-time and part-time students, undergraduate and master’s students. A list of the complete current student population was generated by our administration department. A survey was sent to 21,262 students, and 5,183 completed surveys were received. Surveys that were not fully completed (191) were eliminated from the study thus leaving 4992 fully useable surveys.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Demographic Profile of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2824</td>
</tr>
<tr>
<td>Female</td>
<td>2156</td>
</tr>
<tr>
<td>Missing Data</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Previous Education</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior general secondary education</td>
<td>2447</td>
<td>49.0</td>
</tr>
<tr>
<td>University preparatory education</td>
<td>660</td>
<td>13.2</td>
</tr>
<tr>
<td>Secondary vocational education</td>
<td>1448</td>
<td>29.0</td>
</tr>
<tr>
<td>Other</td>
<td>437</td>
<td>8.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study year</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>1930</td>
<td>38.7</td>
</tr>
<tr>
<td>Year 2</td>
<td>1195</td>
<td>23.9</td>
</tr>
<tr>
<td>Year 3</td>
<td>917</td>
<td>18.3</td>
</tr>
<tr>
<td>Year 4</td>
<td>695</td>
<td>13.9</td>
</tr>
<tr>
<td>Year 5+</td>
<td>255</td>
<td>5.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Study</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Major (Full time)</td>
<td>4153</td>
<td>83.2</td>
</tr>
<tr>
<td>Part-time</td>
<td>732</td>
<td>14.7</td>
</tr>
<tr>
<td>Double Major (Full-time)</td>
<td>107</td>
<td>2.1</td>
</tr>
</tbody>
</table>
Table 2 provides a demographic profile of the respondents who participated in the study. The sample was slightly dominated by male respondents; however, this percentage accurately reflects the student population of academic year 2008–2009. The response rate for Year 1 students is higher and so they are over-represented in this study: 38.7% as opposed to 16.7% of the student population. Approximately 85% of the respondents were studying full-time.

3.3 Measuring the Research Objectives

As demonstrated above, the data collection instrument had a wide scope. In order to relate this instrument to the specific research objectives of this dissertation, the following account will examine each research objective and explain exactly how the relevant data were collected to address that objective.

*The purpose of this study was to expand the understanding of student engagement and the factors that activate and prompt students to put effort into their studies.*

Specifically for this objective, the additional student engagement question was added to the SSS 2009. This was to identify the factors that activate and prompt students to put effort into their studies.

*To identify student engagement triggers and develop a model of student engagement.*

The additional student engagement question had three text fields for answering: “one-word response,” “short explanation,” and “long explanation.” This allowed the researcher to identify
triggers, from the data, as reported by the students. This qualitative approach also allowed for the development of a model. The coding process was inductive, thus allowing the free development of a model instead of trying to fit the data into a pre-existing framework.

To determine if engagement triggers were similar across faculties, disciplines and study year.

The demographic information contained in the survey allowed the engagement triggers to be analysed by faculty, and study year. Additional information such as "disciplines" were added later at a programme level. This was necessary since faculties at our University often include several varying programmes. Additionally, we have several faculties that offer the same programme, although these faculties and programmes are located in different cities.

To determine if reported study behaviour was related to specific engagement triggers.

The additional engagement question was contained in a larger survey which contained several questions concerning study behaviour. This approach allowed for the specific engagement triggers to be linked with reported study behaviour. Additionally, mean reported study behaviour could be analysed against engagement triggers.

3.4 Research Methodology

For this study, a mixed method design was employed. A qualitative then quantitative approach was used; the data set was first analysed using a thematic analysis approach to identify themes. Once these themes were identified they were scrutinized by established criteria (Braun &
Clarke, 2006; Darlington & Scott, 2002; Patton, 2002; Ryan & Bernard, 2003; J. Smith & Firth, 2011, 2011) for judging the quality of such a coding process. After this process was completed, the quantitative phase was undertaken. The model that emerged was studied through both parametric and non-parametric tests. The results of this process can be found in the statistical analysis section of this work.

Thematic analysis can be described as “a method for identifying, analysing, and reporting patterns (themes) within data” (Braun & Clarke, 2006, p. 12). The key idea here is the identification of patterns in the data.

Thematic analysis ... minimally organises and describes your data set in (rich) detail...Thematic analysis is widely used, but there is no clear agreement about what thematic analysis is and how you go about doing it...Thematic analysis differs from other analytic methods that seek to describe patterns across qualitative data. (p. 7)

However, the essential question then arises: what constitutes a theme? While this process of looking for patterns and identifying them may seem logical, Opler (1945) sets out very definitive criteria for themes. By using these criteria, one can identify themes that can describe the data set in rich detail (Braun & Clarke, 2006). Opler’s principles for themes are threefold; themes need to be expressed in a culture; themes can be expressed in various “manners” (Opler, 1945, p. 199); themes need to be important to that culture. There are also three criteria
for judging the importance of a theme: expression in many contexts; sanctions when a theme is violated, and societal restraining mechanisms for excessive expression in that society.

"The expression of a theme of course aids us in discovering it" (Opler, 1945, p. 199). Obviously, if there is no expression of something, it would be impossible to identify it. For example, if a company believes in "green energy" and there are no traces of that to be found in any of its day-to-day functioning, then one could argue that this theme is non-existent since there is no expression of that theme. However, themes can be expressed in many ways in a society. Expression is not predicated purely on explicit behaviour. Opler contends that expression can be formal, informal, symbolic, material, or nonmaterial (p. 200). This is the second criterion for themes: they can be expressed in various manners. "Formal" expression "refers to activities, prohibitions of activity, or references which have become fixed in time or place and to which everyone to whom they apply must respond without significant variation" (Opler, 1945, p. 199).

Symbolic expressions "may be defined as substances, gestures, ideas, or figures of speech not necessarily logically related to themes but which have become recognized vehicles for their representation" (Opler, 1945, p. 200). A symbolic expression for bureaucracy and the futility of trying to fight the government can be seen in the cultural verbal expression "you can't fight city hall." The expression has now become a container holding in the historical theme of fighting a losing battle (which is also a symbolic representation). To take another example, the symbolic gesture of chivalry as expressed by allowing women to pass first through a doorway
has now become antiquated and may actually be offensive to modern women who see this as a symbolic cultural expression against the present-day themes of equality of men and women.

Whether formal or informal, symbolic or literal, overtly or covertly expressed, themes need to recur to be considered valid in a society. Themes “must be expressed quite a few times in the cultural round” (Opler, 1945, p. 200). There needs to be an element of pervasiveness to a theme in a society. If something is expressed only once, it might be deemed that it does not occur enough to be identified as a patterned expression in the data. However, this expression might be so unique, thus breaking the pattern otherwise found in the data, that is should be identified as a theme. This is the flexibility found in qualitative analysis (Braun & Clarke, 2006). Furthermore, the more a theme is expressed in a culture and in different contexts, the more this expression can shape that culture.

Another rough indication of the importance of a theme is the degree to which a group shows concern when its terms are violated (Opler, 1945, p. 200). Sanctions for breaching cultural expressions come in various forms; from a simple look (a child not listening to his/her mother), a speeding ticket (driving too fast), and the death penalty (for heinous crimes). This adds an interesting dimension to themes: not only the expression of a theme in terms of encouraging or prohibiting behaviour, but also the cultural maintenance and defence of those themes by attaching sanctions for non-conformity to those themes. Following this logic, it is reasonable to believe that if a neophyte to the academic community is found to be not conforming to certain themes, sanctions in the form of lower marks for assignments will impede their integration into this new community. This is in line with Durkheim's notion of
shared cultural symbols. In order to integrate into a community, one must accept that their passions will be regulated by these cultural symbols and that actions within that community will also be regulated and coordinated by the collective norms, agreed upon by that community, and rooted in the shared cultural symbols of that community (J. H. Turner, 1981).

Opler's last criterion is similar to Durkheim's idea of regulation. The social force of regulation keeps desires in check by creating resistance to people's insatiable capacity for more "well-being, comfort or luxury" (Durkheim, 1896/2006, p. 208). There needs to be a mechanism in society that keeps thematic expressions in balance. Opler (1945) focused on "extreme and unimpeded expression" (p. 201) in societies. Implicit in this approach is the concern for overexpression of themes; however, the danger needs to be recognized, as Durkheim points out, of oversuppression of thematic expressions. Combining these two ideas, "extreme and unimpeded expression" would result in a lack of individualism and over regulation, thus fatalistic suicide, while its opposite, non-expression or impeded expression would lead to a too high level of individualism, thus resulting in anomie suicide.

The demarcation and validity of one theme's limits in relation to other themes can be judged by two criteria: internal homogeneity and external heterogeneity (Patton, 2002). Internal homogeneity is defined by Patton as "the extent to which the data that belong in a certain category hold together or "dovetail" in a meaningful way". Furthermore, Patton defines external heterogeneity as "the extent to which the differences among categories are bold and clear" (p. 462). This is the leading idea when searching for the lines of demarcation in themes:
how strong do these grouped data items together represent a unique theme or pattern and how robust are the differences between this group of data items and other grouped items?

In the identification of themes, two methodological choices face the researcher: an inductive or deductive approach. Otherwise stated, do the identified themes come from the data or is there an existing framework applied to the data? Inductive analysis can be defined as "a process of coding the data without trying to fit it into a pre-existing coding frame, or the researcher's analytic preconceptions" (Braun & Clarke, 2006, p. 12). A deductive approach has as its aim "testing an existing theory" (Darlington & Scott, 2002, p. 153).

In this study, an inductive approach was employed. This method was employed in order to analyse the data set inductively and at a manifest level. The aim of this study was to create a model of student engagement at Avans University of Applied Sciences that stemmed from our own student population. Most of the work on engagement has been conducted in English-speaking countries (Astin, 1975, 1977, 1984; Berger & Milem, 1999; Brunsden, Davies, Shevlin, & Bracken, 2000; Harris et al., 2004; Mannan, 2007; C McInnis, Hartley, et al., 2000; McQueen, 2009; Pascarella & Terenzini, 1980, 1983, 1991; Richardson & Long, 2003; Tinto, 1975, 1988, 1993), but I felt it necessary and prudent to inductively analyse this data. There were two major reasons for this decision. First, the university experience in the United States (and often in the United Kingdom as well) is generally characterized by a residential campus and is thus not applicable to our Dutch non-residential, often commuter, student university. Second, the cultural context of higher education differs greatly from one country to another. Cultural expressions, such as social activities (fraternities and student government), allegiance
to a certain institution, and on-campus employment are often discussed in the literature but are not expressed in the Netherlands.

The content of the themes can also be analysed from two different epistemological approaches: essentialist/realist or constructionist. An essentialist approach “reports experiences, meanings and the reality of participants” while a constructionist approach “examines the ways in which events, realities, meanings, experiences and so on are the effects of a range of discourses operating within society” (Braun & Clarke, 2006, p. 14). This study employed an essentialist/realist approach to the data, since the aim was to create a model of engagement from students’ experiences and not to identify the possible social context that help form the reported reasons for engagement.

Additional to the epistemological approaches for analysing the content of the data set, the nature of the content and the level that content will be analysed also need to be addressed. The two levels are: manifest and latent. Potter and Levine-Donnerstein (1999) define manifest content as data that is explicitly observable and on the surface. Examples are specific words, but gestures can also be manifest content. Latent content has a deeper meaning that cannot be derived from simple observation but from the inferences “assumptions and conceptualizations” (Braun & Clarke, 2006, p. 5). A manifest analysis of the data set was performed in this study. Specific instances or occurrences were clustered by theme. While a deeper meaning could possibly be extracted from the data by employing a latent analysis, the aims and goals of this study were such that the approach generated enough rich analysis to create the intended engagement model.
To summarize the methodology employed in this research, a collection of expressions was gathered via a survey on students' self-reported reasons for engaging in their studies. Themes were identified by manifest semantic patterns that emerged during the data analysis. These patterns emerged largely due to the pervasive occurrence of certain repeated expressions (answers). The themes identified did generally reflect those identified in other research. These themes were examined for both internal homogeneity and external heterogeneity. Once the proper demarcation of the identified themes was established, the complete data set was coded using the identified themes. In short, this study employed an essentialist-manifest-inductive thematic approach. Once the data was qualitatively analysed, the data was then subject to quantitative analysis.
4 QUALITATIVE RESULTS

4.1 Engagement Types and Triggers

Through the qualitative analysis of the data, four categories of engagement type were identified: vocational, academic, personal, and external. Each engagement type contains specific catalysts called, “triggers.” These triggers are the self-reported reasons as to why students engage. The similarities of the engagement triggers allowed the clustering into engagement types. For example, some triggers concerned external validation and organizational issues while others centred on practice based interest and future career concerns. Comparable engagements triggers were clustered into engagement types.

The 10 triggers are: Future Career Orientation, Level of Challenge, Organizational Issues, Personal Interest, Practice Based, Quality of Programme, Social Aspects, Strategic Approach, Teacher and Support, and Validation. Upon review of the themes from the notion of external heterogeneity, these 10 triggers were grouped into four engagement types: Vocational, Academic, Personal and External (see Figure 1 and Table 3).

The engagement type Vocational contains the triggers Practice Based and Future career orientation. The second engagement type created was Academic and contains the triggers Strategic Approach and Teacher and Support. The next engagement type created was Personal and contains the triggers Personal Interests and Level of Challenge. The last engagement type to be created was External and contains the engagement triggers Organizational Issues, Quality of Programme, Social Aspects, and Validation.
Figure 1 presents the 4T model of Student engagement. This model is built on 10 engagement triggers and 4 engagement types. The 4T stands for the 4 engagement types in this model.

Figure 2 The 4T Model of Student Engagement
<table>
<thead>
<tr>
<th>Trigger</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice Based</td>
<td>Education that is perceived by the student to be related to the day-to-day practice of a profession; emphasis on perceived real-life issues.</td>
<td>“I really want to see more of the profession”</td>
</tr>
<tr>
<td>Future Career Orientation</td>
<td>The idea of this trigger has elements of future ideas, either in a specific sector or their anticipated job.</td>
<td>“I want to have a good job in the future”</td>
</tr>
<tr>
<td>Strategic Approach</td>
<td>This trigger involves direct rewards; “I’ll do this for something”, but this something is not future oriented, but rather instant or quick.</td>
<td>“Your grades are important, no?”</td>
</tr>
<tr>
<td>Teacher and Support</td>
<td>How teachers operate in the educational setting; also the amount of support that the student perceives.</td>
<td>“When the teacher is engaged”</td>
</tr>
<tr>
<td>Personal Interest</td>
<td>What is important to the student or what the student perceives as being connected to or in agreement with their personal interests</td>
<td>“When the assignment is related to my interest”</td>
</tr>
<tr>
<td>Level of Challenge</td>
<td>This trigger has the elements of the perceived level of challenge.</td>
<td>“The more challenge, all the more easier to motivate myself”</td>
</tr>
<tr>
<td>Quality of Programme</td>
<td>This trigger covers issues relating to aspects of the education at the faculty/department level.</td>
<td>“Working in Projects”</td>
</tr>
<tr>
<td>Validation</td>
<td>This trigger can be described as extrinsic social recognition generally from family and friends.</td>
<td>“Letting others see what I can do”</td>
</tr>
<tr>
<td>Organizational Issues</td>
<td>The trigger is related to organizational issues related to the university itself, all issues that can be seen in the central services.</td>
<td>“A decent class schedule helps with motivation”</td>
</tr>
<tr>
<td>Social Aspects</td>
<td>This trigger puts an emphasis on the social context of learning;</td>
<td>“Extra drive from enthusiastic fellow students”</td>
</tr>
</tbody>
</table>
Table 4
Percentage of Engagement Types and Related Triggers

<table>
<thead>
<tr>
<th>Engagement Type</th>
<th>Engagement Trigger</th>
<th>Percentage of Total Population</th>
<th>Percentage of Type</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>Future Career Orientation</td>
<td>28.0</td>
<td>33.0</td>
<td>460</td>
</tr>
<tr>
<td></td>
<td>Practice Based</td>
<td></td>
<td>67.0</td>
<td>936</td>
</tr>
<tr>
<td>Academic</td>
<td>Strategic Approach</td>
<td>25.5</td>
<td>58.5</td>
<td>839</td>
</tr>
<tr>
<td></td>
<td>Teacher and Support</td>
<td></td>
<td>41.5</td>
<td>595</td>
</tr>
<tr>
<td>Personal</td>
<td>Level of Challenge</td>
<td>25.3</td>
<td>31.5</td>
<td>384</td>
</tr>
<tr>
<td></td>
<td>Personal Interest</td>
<td></td>
<td>68.5</td>
<td>835</td>
</tr>
<tr>
<td>External</td>
<td>Organizational Issues</td>
<td>22.3</td>
<td>12.7</td>
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<tr>
<td></td>
<td>Quality of Programme</td>
<td></td>
<td>32.2</td>
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<tr>
<td></td>
<td>Social Aspects</td>
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<td>43.9</td>
<td>414</td>
</tr>
<tr>
<td></td>
<td>Validation</td>
<td></td>
<td>11.1</td>
<td>105</td>
</tr>
</tbody>
</table>

4.2 Academic Engagement Type

The engagement type “Academic” parallels Taylor’s academic orientation, for its triggers stem from the need for grades and “educational advance” (Taylor, 1983; Taylor et al., 1981). Taylor describes an academic orientation as “to do with the academic side of university life” (p. 132). For this study, the academic engagement type more closely mirrors Taylor’s academic extrinsic orientation since there is no expressed desire to deepen knowledge; rather, it reflects an aspiration to progress through the study programme or course.
Table 5  
Descriptions of engagement triggers for academic engagement type

<table>
<thead>
<tr>
<th>Engagement Trigger</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Approach</td>
<td>“Your grades are important, no?”</td>
</tr>
<tr>
<td></td>
<td>“To get the best result”</td>
</tr>
<tr>
<td></td>
<td>“for test and reports, since they get marks”</td>
</tr>
<tr>
<td></td>
<td>“to get study points”</td>
</tr>
<tr>
<td></td>
<td>“for sufficient grades”</td>
</tr>
<tr>
<td></td>
<td>“for extra study points”</td>
</tr>
<tr>
<td></td>
<td>“if I can see an effect on my grades”</td>
</tr>
<tr>
<td></td>
<td>“when the test deadlines comes”</td>
</tr>
<tr>
<td></td>
<td>“work hard for good marks”</td>
</tr>
<tr>
<td></td>
<td>“during exam week”</td>
</tr>
<tr>
<td>Teacher and Support</td>
<td>“When the teacher is engaged”</td>
</tr>
<tr>
<td></td>
<td>“for motivated teachers”</td>
</tr>
<tr>
<td></td>
<td>“when the effort of the teacher is clear”</td>
</tr>
<tr>
<td></td>
<td>“good academic counselling”</td>
</tr>
<tr>
<td></td>
<td>“enthusiastic teachers”</td>
</tr>
<tr>
<td></td>
<td>“variation in teachers methods”</td>
</tr>
<tr>
<td></td>
<td>“when the teacher is part of the learning process”</td>
</tr>
<tr>
<td></td>
<td>“inspiring teachers”</td>
</tr>
<tr>
<td></td>
<td>“when the teacher gives out useful information”</td>
</tr>
<tr>
<td></td>
<td>“if the teacher is strict”</td>
</tr>
</tbody>
</table>

The Academic Engagement type contains elements of Nystrand & Gamoran's (1991) procedural engagement: following the rules, but not engaging in the content and issues of academic study. The triggers Strategic Approach and Teacher and Support are contained within this type and form 25.3% of the students. Table 5 shows examples of students' responses for both the triggers Strategic Approach and Teacher and Support.
4.2.1 Strategic Approach Trigger

This trigger involves direct rewards and can be defined as a "quid pro quo" approach to engagement. Students engage due to pending assessments or to gain the best result. Examples from the study are: "Je cijfers zijn toch belangrijk" [Your grades are important, no?], "beoordeling vergt inspanning" [Assessments require effort], "om het bestere sultaat te halen" [To get the best result]. There is no mention of the content of the study, future job aspirations, or possible interests in the profession. Additionally, there is no element of future orientation; this engagement trigger appears to have a short-term focus. The trigger is extremely extrinsic in nature since the foci reported all involve elements of external rewards: grades and assessments. There are no intrinsic components to be found in this trigger since there is no reported intent to engage in the study solely for the enjoyment of participating.

4.2.2 Teacher and Support Trigger

This theme can be described as having aspects coming from how teachers operate in the educational setting as well as the amount of support that the student perceives. Examples for the study are: "Wanneer de docenten werkelijk betrokken" [When the teacher is really engaged], "meer interactie tussen studenten en docenten" [More interaction between students and teachers], "Meer persoonlijk aandacht van docenten" [more personal attention from the teacher].

The effect of teaching on engagement and support has been well documented in the literature: engaged teaching practices (Ahlfeldt et al., 2005), autonomy-support, competence-support
(structure) and relational-support (Assor et al., 2002), modifying or redesigning curricula (Meyer & Land, 2005), as well as frequent course-related interactions (Umbach & Wawrzynski, 2005).

4.3 Vocational Engagement Type

This type contains all the engagement triggers that are perceived to be related to the substance the profession. This consists of the two triggers “Future Career Orientation” and “Practice Based” and represents 28.0% of the total students. The “Vocational” engagement type stems from the notion of substantive engagement, since students who reported this trigger indicated “sustained commitment to the content and issues of academic study” (Nystrand & Gamoran, 1991). Table 6 shows examples of students’ responses for vocation engagement type and the triggers “Future Career Orientation” and “Practice Based.”

Table 6

<table>
<thead>
<tr>
<th>Engagement Trigger</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Career Orientation</td>
<td>Future ideas, either in a specific sector or their anticipated job.</td>
<td>“I want to be an accountant”</td>
</tr>
<tr>
<td>Practice Based</td>
<td>Education that is perceived by the student to be related to the day-to-day practice of a profession; emphasis on perceived real-life issues.</td>
<td>“I really want to see more of the profession”</td>
</tr>
</tbody>
</table>
4.3.1 Future Career Orientation Trigger

The idea of this theme has elements of future ideas, either in a specific sector or in their anticipated job. Examples from the study are: “Om later een goed beroep te krijgen” [I want to have a good job in the future], "Veel mogelijkheden in het latere beroepsveld" [More possibilities in my future profession], "Inspannen om later beter je werk te kunnen doen” [Work harder so later I can do a better job]. There are clearly elements of Nystrand & Gamoran’s (1991) notion of substantive engagement, but in this context it is augmented by the addition of a temporal element, looking towards the future. Simons, Vansteenkiste, Lens, & Lacante(2004) report a significant correlation between a time perspective and student performance:

Research indicated that positive outcomes are likely when people foresee the future consequences of their behavior by themselves and when contexts orient people toward those future consequences. Thus, an increased perceived instrumentality is associated with more optimal functioning with regard to both quantitative outcomes (such as persistence, effort-expenditure, and overall motivation) and qualitative outcomes (such as deep level learning, intrinsic motivation, and task orientation) (p. 135)

However, from that same study it is noted that this relationship is not straightforward. It appears that, depending on the agent that is encouraging a future time perspective; one could “forestall people’s conceptual learning, performance, and persistence”.
Instructors focusing on the future extrinsic benefits of people’s present behavior, such as gaining approval from others, being financially successful, or attaining the right look or physical appearance, are likely to forestall people’s conceptual learning, performance, and persistence. In contrast, socializing agents, who point out the future intrinsic instrumentality, are likely to produce the opposite, positive effect. (p. 135)

Simons et al. suggest that teachers should, with diligence, offer students the chance to see that the importance of future goals is in line with their need for autonomy and not solely offer the benefits of instrumentality.

McInnis (2000), reporting in relation to goal commitment, states that if students feel that the current course is not assisting the student towards their future goals, that student may withdrawal from that programme or institution. For students who report a future career orientation, the ideas of Simons et al. and McInnis are of crucial importance. The instrumentality of connecting present behaviour with future achievement needs to be replaced and combined with connecting their desires, their sense of choice and their future goals.

4.3.2 Practice Based Trigger

In the literature there are a many terms that describe the relationship between learning and the day-to-day practice of a profession: an emphasis on perceived real-life issues; authentic learning (Murphy et al., 2006), disciplinary-based inquiry (Friesen, 2010), or experiential learning (Huerta-Wong & Schoech, 2010). Examples from the study are: “Ik zou graag meer
van het beroepspraktijk willen zien" [I really want to see more of the profession], "Al zie ik succesvolle ondernemers stimuleert mij dit" [When I encounter successful business people], "Als de lesstof te combineren is met de praktijk" [If the materials are able to be combined in practice] (see Table 6).

### 4.4 Personal Engagement Type

Taylor (1983) describes a "personal-intrinsic" orientation as "challenge, interesting material" and "self-improvement." This is an accurate description of the "Personal" engagement type in the model. Contained in this engagement type are the triggers "Level of Challenge" and "Personal Interest", and together these form 25.3% of the students. Table 7 shows examples of students' responses for personal engagement type and the triggers "Level of Challenge" and "Personal Interest."

<table>
<thead>
<tr>
<th>Engagement Trigger</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Challenge</td>
<td>The perceived level of challenge.</td>
<td>&quot;The more challenge, all the more easier to motivate myself&quot;</td>
</tr>
<tr>
<td>Personal Interest</td>
<td>Important to the student or what the student perceives as being connected to or in agreement with their personal interests.</td>
<td>&quot;When the assignment is related to my interest&quot;</td>
</tr>
</tbody>
</table>
4.4.1 Level of Challenge Trigger

Academically difficult educational activities seem to elicit higher levels of engagement when students view these activities as challenging (Jansen & Bruinsma, 2005). Examples from the study are: “Hoe meer uitdaging, des te makkelijker ik me kan motiveren” [The more challenge, all the more easier to motivate myself], "Als je uitgedaagd wordt om iets te onderzoeken" [If I am challenged to figure out something], “Als de opdracht voor me zelf een uitdaging is” [If the assignment is a challenge for me].

Additionally, in their own study, Jansen & Bruinsma (2005) report that these “students used more deep information processing strategies” (p. 248). When the right level of challenge for individual students can be combined with appropriate educational tasks that optimize students’ skills, students have the highest chance of entering into a state of “flow” (Csikszentmihályi, 1991). If the situation is perceived as too challenging and students do not possess the necessary skills, then they will become anxious; however, if the situation is perceived as not challenging and students do possess the necessary skills, their experience will be one of boredom.

“Academically Challenging and Supportive” also describes one of the ways in which institutions can be engaging (Kuh et al., 2001; Kuh, 2009, 2009; Pike, 2006; Pike & Kuh, 2005). This has the following characteristics:

Faculty set high expectations and emphasize higher-order thinking in traditional ways. Little active and collaborative learning is required. At the
same time, students support one another and view the campus as supportive.
A generally friendly and congenial place to be an undergraduate interested in

Individual sections that comprise the Academically Challenging type are Course Challenge,
Writing, Higher-Order Thinking, Active Learning, and Collaborative Learning (Pike & Kuh,
2005). In the NSSE, this type of engagement also includes supportive environment. In line
with the NSSE, in this study this trigger was grouped within the academic engagement type.

4.4.2 Personal Interest Trigger
This engagement trigger is closely linked to the feeling of autonomy as discussed above in
relation to self-determination theory. Examples from the study are: “Wanneer een opdracht
aansluit bij mijn interesse” [When the assignment is related to my interest], “Als het een high-
tech aspect binnen mijn vakgebied is” [If it is a high-tech issue within my field of interest],
“wanneer de stof aantrekkelijk is, motiveert dat” [If it is a fun and interesting activity] (see
Table 7). Closely tied to the engagement trigger of teacher and support, this engagement
trigger comes from the student’s perception of what is personally interesting. In the
description of the engagement trigger teacher and support, the primary goal for teachers is to
create an environment where students feel supported by experiencing a sense of autonomy
through choice and a link to their personal interests. For this engagement trigger (Personal
Interest), the personal interest already exists, and teachers need to link that to the students’
autonomy and desires.
4.5 **External Engagement Type**

The "external" engagement type is not found in Nystrand & Gamoran's model and only slightly found in Taylor's model under the "academic-intrinsic" orientation as "stimulating lectures." However, this type, as defined in the above model, encompasses other aspects of student engagement: the explicit role of teaching staff, extrinsic motivation in the form of validation from others, and the sociability and character of the environment. This type is 22.3% of the students. Table 8 shows examples of students' responses for external engagement type and the triggers "Organizational Issues," "Quality of Programme," "Social Aspects," "Validation."

<table>
<thead>
<tr>
<th>Engagement Trigger</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Issues</td>
<td>Organizational issues related to the university itself, all issues that can be seen in the central services.</td>
<td>&quot;A decent class schedule helps with motivation&quot;</td>
</tr>
<tr>
<td>Quality of Programme</td>
<td>Aspects of the education at the faculty/department level.</td>
<td>&quot;If the study offers enough depth of knowledge&quot;</td>
</tr>
<tr>
<td>Social Aspects</td>
<td>Emphasis on the social context of learning</td>
<td>&quot;Cooperation in a group for one assignment&quot;</td>
</tr>
<tr>
<td>Validation</td>
<td>Extrinsic social recognition generally from family and friends.</td>
<td>&quot;Letting others see what I can do&quot;</td>
</tr>
</tbody>
</table>
4.5.1 Social Aspects Trigger

This theme puts an emphasis on the social context of learning; through other student’s motivation, effort, and enthusiasm. Examples from the study are: “Extra drive door enthousiaste medestudenten” [Extra drive from enthusiastic fellow students], “samenwerken binnen een groep; een product” [Cooperation in a group for one assignment], “Als projectgenoten zich inzetten dan doe ik dat ook” [When my fellow student’s also work, I will too].

4.5.2 Quality of Programme Trigger

This theme covers issues relating to aspects of education at the faculty/department level. Issues that are under the control of the students own faculty or department. Examples from this study are: “Projectmatig werken” [Working in Projects], “Door afwisseling is een opleiding intressanter” [Variation within the programme makes it more interesting], “Als de studie diepgang bied” [If the study offer enough depth of knowledge].

4.5.3 Organizational Issues Trigger

The theme is related to higher organizational issues related to the university itself, issues that can be identified with the services that an institution provides. Examples from the study are: “Eendegelijk rooster zorgt voor hogere motivatie” [A decent class schedule helps with motivation], “per projectgroep een aparte ruimte” [Each project group has a separate room], “genoeg pc's en stop contacten” [Enough computers and outlets].
4.5.4 Validation Trigger

This theme can be described as extrinsic social recognition, generally from family and friends. Examples from the data: “Vrienden en familie” [Friends and family], “een compliment kan motiverend werken” [A complement can motivate], “dat ik hun laat zien wat ik kan” [Letting others see what I can do] (see Table 8).
5 QUANTITATIVE RESULTS

5.1 Previous Education

In the Dutch educational system, there are three national levels of education that are traditional entry points into higher vocational education: senior general secondary education, university preparatory education, and secondary vocational education. Senior general secondary education (HAVO) generally last five years and allows students entry to universities of applied sciences (HBO). University preparatory education lasts six years and allows student entrance to research universities (WO). Secondary vocational education lasts for 2-4 years and may also allow students entry to universities of applied sciences (HBO). A fourth category of previous educational level can be found within our student population. This includes diplomas from foreign countries, miscellaneous certificates and credit for prior learning. In this study, these are all assigned to the category of “other previous education.” Figure 3 shows the three traditional entry points into higher vocational education.

Figure 3 Traditional entry points for Dutch Higher education
The distribution of engagement triggers was found to be related to previous education ($\chi^2 = 59.30$, df = 27, $p < .001$). Post hoc z tests (protected by Bonferroni adjustment) were used to compare the proportions of pairs of triggers and types between different groups. The results of these tests were significant at the .05 level. This significance is due to the engagement trigger "Teacher and Support." Students from the previous education group "other" have a significantly higher percentage of this trigger. Students with a university preparatory education were significantly different from those with other previous education ($\chi^2 = 9.20$, df = 3, $p = .027$). Students with a secondary vocational education showed a significantly higher percentage (27.5%) of the engagement type "Personal" as compared with 19.9% for the group "other" (see Table 9).

Table 9

<table>
<thead>
<tr>
<th>Engagement Trigger Types</th>
<th>Senior general secondary education</th>
<th>Secondary vocational education</th>
<th>University preparatory education</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>27.5</td>
<td>27.8</td>
<td>25.3</td>
<td>27.7</td>
</tr>
<tr>
<td>Academic</td>
<td>27.1</td>
<td>26.6</td>
<td>28.0</td>
<td>31.2</td>
</tr>
<tr>
<td>Personal</td>
<td>23.7</td>
<td>27.5</td>
<td>22.4</td>
<td>19.9</td>
</tr>
<tr>
<td>External</td>
<td>18.1</td>
<td>15.7</td>
<td>19.5</td>
<td>17.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Engagement Triggers</th>
<th>Future Career Orientation</th>
<th>Level of Challenge</th>
<th>Organizational Issues</th>
<th>Personal Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9.6</td>
<td>7.4</td>
<td>2.4</td>
<td>17.2</td>
</tr>
<tr>
<td></td>
<td>9.3</td>
<td>7.3</td>
<td>2.7</td>
<td>16.2</td>
</tr>
<tr>
<td></td>
<td>8.6</td>
<td>10.2</td>
<td>1.7</td>
<td>18.0</td>
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<td></td>
<td>7.8</td>
<td>7.1</td>
<td>2.7</td>
<td>13.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Practice Based</th>
<th>Quality of Programme</th>
<th>Social Aspects</th>
<th>Strategic Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18.9</td>
<td>5.4</td>
<td>9.0</td>
<td>17.5</td>
</tr>
<tr>
<td></td>
<td>17.3</td>
<td>6.6</td>
<td>8.6</td>
<td>16.9</td>
</tr>
<tr>
<td></td>
<td>19.8</td>
<td>6.1</td>
<td>6.7</td>
<td>16.2</td>
</tr>
<tr>
<td></td>
<td>20.8</td>
<td>8.5</td>
<td>5.9</td>
<td>13.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Teacher and Support</th>
<th>Validation</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10.5</td>
<td>2.0</td>
<td>2.6</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>12.6</td>
<td></td>
<td></td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>11.1</td>
<td></td>
<td></td>
<td>18.8</td>
</tr>
</tbody>
</table>

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5.2 Full-Time or Part-Time Enrolment Status

When comparing the engagement types reported by full-time and part-time students, a significantly different distribution was found ($\chi^2 = 53.14$, df = 3, $p < .001$). Post hoc z tests (protected by Bonferroni adjustment) were used to compare the proportions of pairs of triggers and types between groups. These tests were significant at the .05 level. Part-time students reported higher vocational and academic types while full-time students scored higher on the personal and external types (see Table 10). This might be explained by the overwhelming majority of part-time students being employed full-time; indeed, some part-time students are following required courses to continue their employment. In other words, some of our students have been required, by their employers, to follow a certain program as part of their professional development. If these students are not successful, they risk losing their job.

| Table 10 |
|-----------------|--------|--------|
| Percentage of engagement types and triggers by enrolment status | Full-time | Part-time |
| Engagement Trigger Types | | |
| Vocational | 25.8 | 31.8 |
| Academic | 26.9 | 32.1 |
| Personal | 24.6 | 18.5 |
| External | 19.1 | 13.8 |
| Engagement Triggers | | |
| Future Career Orientation | 8.9 | 8.3 |
| Level of Challenge | 7.6 | 6.4 |
| Organizational Issues | 2.5 | 1.3 |
| Personal Interest | 17.0 | 12.1 |
| Practice Based | 16.9 | 23.5 |
| Quality of Programme | 6.0 | 5.9 |
| Social Aspects | 8.5 | 5.5 |
| Strategic Approach | 16.0 | 16.8 |
| Teacher and Support | 10.9 | 15.2 |
| Validation | 2.2 | 1.1 |
Further analysis also reveals significantly different distributions between full-time and part-time students for the engagement triggers ($\chi^2 = 53.24$, df = 9, $p < .001$). For part-time students, the engagement triggers “teacher and support” and “practice based” had significantly higher percentages than for full-time students. Conversely, for full-time students, the triggers “validation,” “social aspects” and “personal interests” were significantly higher than for part-time students. One explanation of this is that part-time students are generally employed and their emphasis is one on improving in their current function or preparing to make an employment step to a mid-level management function. Additionally, the curriculum for part-time studies is highly case-based and the teachers are overwhelmingly professionals who only teach one day a week at Avans. This arrangement is to ensure that the teachers are constantly up to date with the current practices of their field and can use their current business situation in their lessons.

5.3 Gender

The distribution of engagement types is significantly different between men and women ($\chi^2 = 10.57$, df = 3, $p = .014$). Post hoc z tests (protected by Bonferroni adjustment) were used to compare the proportions of pairs of triggers and types between groups. These tests were significant at the .05 level. A higher percentage of women (29.6%) than men (26.2%) reported an academic engagement type. When analysing engagement triggers, a significant difference between men and women is also revealed ($\chi^2 = 20.85$, df = 9, $p = .035$). This can be partially attributed to the practice based engagement trigger (men = 19.1%; women = 16.7%) and to the teacher and support engagement trigger (men = 10.4%; women = 12.9%) (see Table 11).
However, when analysing the distributions of both engagement types and engagement triggers for male and female full-time students, a marginally significant result was revealed for engagement types ($\chi^2 = 7.66$, df = 3, p = .054) and a significantly different distribution was revealed for engagement triggers ($\chi^2 = 17.18$, df = 9, p = .046). Post hoc z tests (protected by Bonferroni adjustment) were used to compare the proportions of pairs of triggers between groups. These tests were significant at the .05 level. A higher percentage of women (12.9%) than men (10.4%) reported higher percentages for the engagement trigger teacher and support. Conversely, a higher percentage of men (19.1%) than women (16.7%) reported higher percentages for the engagement trigger practice based. Additionally, the distributions for engagement types and engagement triggers for male and female part-time students were not significantly different: engagement types ($\chi^2 = 3.62$, df = 3, p = .306), engagement triggers ($\chi^2 = 8.16$, df = 9, p = .518).

Table 11
Engagement types and triggers by gender

<table>
<thead>
<tr>
<th>Engagement Types</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>27.9</td>
<td>25.6</td>
</tr>
<tr>
<td>Academic</td>
<td>26.2</td>
<td>29.6</td>
</tr>
<tr>
<td>Personal</td>
<td>24.3</td>
<td>22.6</td>
</tr>
<tr>
<td>External</td>
<td>17.6</td>
<td>19.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Engagement Triggers</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Career Orientation</td>
<td>8.7</td>
<td>8.9</td>
</tr>
<tr>
<td>Level of Challenge</td>
<td>8.0</td>
<td>6.6</td>
</tr>
<tr>
<td>Organizational Issues</td>
<td>2.4</td>
<td>2.2</td>
</tr>
<tr>
<td>Personal Interest</td>
<td>16.3</td>
<td>15.9</td>
</tr>
<tr>
<td>Practice Based</td>
<td>19.1</td>
<td>16.7</td>
</tr>
<tr>
<td>Quality of Programme</td>
<td>5.5</td>
<td>6.3</td>
</tr>
<tr>
<td>Social Aspects</td>
<td>7.6</td>
<td>8.5</td>
</tr>
<tr>
<td>Strategic Approach</td>
<td>15.8</td>
<td>16.7</td>
</tr>
<tr>
<td>Teacher and Support</td>
<td>10.4</td>
<td>12.9</td>
</tr>
<tr>
<td>Validation</td>
<td>2.0</td>
<td>2.1</td>
</tr>
</tbody>
</table>
5.4 Year of Study

Comparing engagement types and year of study revealed significantly different distributions between Year 1 students and Year 2+ ($\chi^2 = 14.38$, df = 3, $p = .002$). The study years 2, 3, 4, 5+ have been grouped together since there were no significant differences in their distributions among those study years ($\chi^2 = 31.95$, df = 9, $p = .234$). 31.3% of Year 1 students reported academic engagement type as opposed to 27.1% of Year 2+ students. Post hoc $z$ tests (protected by Bonferroni adjustment) were used to compare the proportions of pairs of triggers and types between groups. These tests were significant at the .05 level.

Specifically analysing engagement triggers and year of study revealed three triggers that had significantly different distributions: future career orientation, strategic approach and practice based ($\chi^2 = 64.05$, df = 9, $p = .001$). Year 1 students had significantly higher percentages for the future career orientation and strategic approach triggers and Year 2+ had a significantly higher percentage for practice based triggers.

An explanation for the significantly different distribution between Year 1 and Year 2+ can be found by analysing two specific engagement triggers: “strategic approach” (“Academic” engagement type) and “practice based” (“Vocational” engagement type). Further analysis reveals a significantly different distribution when testing study year for Year 1 and Year 2+ and the triggers strategic approach and practice based ($\chi^2 = 49.04$, df = 1, $p = .001$). As seen in Figure 3, the strategic approach engagement trigger significantly decreased in year 2. Equally, the practice based engagement trigger significantly increased in Year 2.
This could partially be explained by the manner in which the Dutch educational system is organized. Students beginning a programme need to earn a "Year 1 certificate" within 2 years of starting that programme. Held within this regulation is the existence of a binding study advice (BSA). The law states that an institution is allowed to terminate the studies of a student if they have not met certain well communicated criteria. This procedure is fully open in the sense that institutions are free to make their own criteria as long as they are communicated to students prior to beginning their studies. Generally, the key criterion is a certain number of study credits from the first-year programme. The Dutch higher education system has 240 ECTS for a bachelor degree; 60 credits per year. In practice, the BSA is a certain percentage of the 60 Year-1 ECTS. If students fail to meet the criterion, a negative BSA is given and the student cannot enter into the second year and cannot follow that programme in any other university for three years. Therefore, the significantly higher levels of the engagement trigger "strategic approach" can be explained by the focus on earning the Year-1 certificate.

Figure 3. Strategic Approach and Practice Based triggers in Year 1 and Year 2+
Table 12

<table>
<thead>
<tr>
<th>Engagement Trigger Types</th>
<th>Year 1</th>
<th>Year 2+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>24.7</td>
<td>28.3</td>
</tr>
<tr>
<td>Academic</td>
<td>30.1</td>
<td>26.1</td>
</tr>
<tr>
<td>Personal</td>
<td>22.8</td>
<td>24.0</td>
</tr>
<tr>
<td>External</td>
<td>18.7</td>
<td>17.9</td>
</tr>
<tr>
<td>Future Career Orientation</td>
<td>10.3</td>
<td>8.0</td>
</tr>
<tr>
<td>Level of Challenge</td>
<td>6.7</td>
<td>7.8</td>
</tr>
<tr>
<td>Organizational Issues</td>
<td>2.4</td>
<td>2.3</td>
</tr>
<tr>
<td>Personal Interest</td>
<td>16.1</td>
<td>16.1</td>
</tr>
<tr>
<td>Practice Based</td>
<td>14.4</td>
<td>20.4</td>
</tr>
<tr>
<td>Quality of Programme</td>
<td>5.6</td>
<td>6.0</td>
</tr>
<tr>
<td>Social Aspects</td>
<td>8.3</td>
<td>7.8</td>
</tr>
<tr>
<td>Strategic Approach</td>
<td>19.7</td>
<td>14.0</td>
</tr>
<tr>
<td>Teacher and Support</td>
<td>10.4</td>
<td>12.1</td>
</tr>
<tr>
<td>Validation</td>
<td>2.3</td>
<td>1.8</td>
</tr>
</tbody>
</table>

5.5 Previous Education Types

When comparing the engagement triggers of Year 1 and Year 2+ students, significant differences were found at each level of prior education (senior general secondary, $\chi^2 = 25.06$, df = 9, $p = .003$; university preparatory, $\chi^2 = 22.57$, df = 9, $p = .007$; secondary vocational, $\chi^2 = 42.30$, df = 9, $p = .001$; and other $\chi^2 = 24.27$, df = 9, $p = .004$). In each case except for students with a senior general secondary education, Year 2+ students showed a significantly higher percentage of practice based triggers than Year 1 students.

For students with a senior general secondary education, those in Year 1 showed a significantly higher percentage for the strategic approach engagement trigger than those in Year 2+. However, those in Year 2+ showed a significantly higher percentage for the level of challenge trigger than those in Year 1 (see Table 13). For this type of student, earning the Year-1
certificate is essential; it is generally their first programme in higher education, they are traditionally younger (aged around 16–17), and if they fail to earn their Year-1 certificate, the qualifications earned with their previous education diploma can only lead to low-level entry positions with generally no possibility of advancement.

For students with a university preparatory education, the social aspects and personal interest triggers constitute the two most common engagement triggers in Year 1, whereas in Year 2+ the practice based trigger is reported significantly more often. These students are eligible to attend a scientific university but have chosen to come to a university of applied sciences. This in itself is remarkable since their previous education is of a scientific nature and thus generally much more difficult than a senior general secondary curriculum. Additionally, our university is known for its use of problem based learning (PBL) and its strong ties to the professional field. This could influence university preparatory education students’ choice: between scientific and traditional lessons or a PBL versus a subject-based approach.

Table 13

<table>
<thead>
<tr>
<th>Engagement Triggers</th>
<th>Previous Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>senior general</td>
</tr>
<tr>
<td></td>
<td>secondary</td>
</tr>
<tr>
<td>Future Career Orientation</td>
<td>Year 1 2+</td>
</tr>
<tr>
<td>Level of Challenge</td>
<td>Year 1 Year 2+</td>
</tr>
<tr>
<td>Organizational Issues</td>
<td>Year 1 Year 2+</td>
</tr>
<tr>
<td>Personal Interest</td>
<td>Year 1 Year 2+</td>
</tr>
<tr>
<td>Practice Based</td>
<td>Year 1 Year 2+</td>
</tr>
<tr>
<td>Quality of Programme</td>
<td>Year 1 Year 2+</td>
</tr>
<tr>
<td>Social Aspects</td>
<td>Year 1 Year 2+</td>
</tr>
<tr>
<td>Strategic Approach</td>
<td>Year 1 Year 2+</td>
</tr>
<tr>
<td>Teacher and Support</td>
<td>Year 1 Year 2+</td>
</tr>
<tr>
<td>Validation</td>
<td>Year 1 Year 2+</td>
</tr>
</tbody>
</table>
For students with a secondary vocational education, the future career orientation and strategic approach engagement triggers were reported significantly more often in Year 1 while in Year 2+ the practice based engagement trigger was reported significantly more often.

5.6 Disciplines

The distribution of engagement types was also significantly different across students from different disciplines ($\chi^2 = 103.22$, df = 24, p = .001) (see Tables 14 and 15). Post hoc z tests (protected by Bonferroni adjustment) were used to compare the proportions of pairs of triggers and types between groups. These tests were significant at the .05 level.

Only 12.1% of fine arts students exhibited the vocational engagement type as opposed to Financial Management students (33.8%) and Education students (38.4%). For the personal and external engagement types, the fine arts students reported these engagement types more often (32.2% and 26.5%) as opposed to Financial Management students (20.1% and 12.4%) and Education students (22.6% and 18.8%).

When investigating the different disciplines and engagement triggers, significantly different distributions were revealed ($\chi^2 = 273.99$, df = 72, p = .001) (see Table 15). Post hoc z tests (protected by Bonferroni adjustment) were used to compare the proportions of pairs of triggers and types between groups. These tests were significant at the .05 level (see Table 16).
Financial management students reported a significantly higher percentage of future career orientation engagement triggers than students from five other disciplines: Fine Arts, Business, Communication and Media, Engineering and Technology, and Health Sciences. Law students also reported a significantly higher percentage of future career orientation triggers than three other disciplines: Fine Arts, Communication and Media, and Health Sciences.

For the strategic approach engagement trigger, financial management students reported a significantly higher percentage than five other disciplines: fine arts, communication and media, health sciences, education, and social work. Fine arts and communication and media students reported a significantly lower percentage for this trigger (strategic approach) than five of the seven other disciplines. Only education and social work students did not differ significantly when compared with fine arts and communication and media students.

Conversely, for the practice based engagement trigger, fine arts and communication and media students reported a significantly higher percentage than five of the seven other disciplines: financial management, business, engineering and technology, health sciences, and law.
Table 14

Engagement types per discipline

<table>
<thead>
<tr>
<th>Engagement Triggers</th>
<th>Financial Management</th>
<th>Fine Arts</th>
<th>Business</th>
<th>Communication and Media</th>
<th>Engineering and Technology</th>
<th>Health Sciences</th>
<th>Law</th>
<th>Education</th>
<th>Social Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>33.8</td>
<td>12.1</td>
<td>28.9</td>
<td>20.6</td>
<td>26.8</td>
<td>27.2</td>
<td>27.9</td>
<td>38.4</td>
<td>29.2</td>
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<tr>
<td>Academic</td>
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<td>29.2</td>
<td>29.1</td>
<td>25.4</td>
<td>27.1</td>
<td>26.4</td>
<td>32.9</td>
<td>20.8</td>
<td>29.2</td>
</tr>
<tr>
<td>Personal</td>
<td>20.1</td>
<td>32.2</td>
<td>22.5</td>
<td>27.5</td>
<td>27.7</td>
<td>26.9</td>
<td>27.5</td>
<td>22.6</td>
<td>22.7</td>
</tr>
<tr>
<td>External</td>
<td>12.4</td>
<td>26.5</td>
<td>19.6</td>
<td>26.5</td>
<td>18.3</td>
<td>19.5</td>
<td>11.7</td>
<td>18.2</td>
<td>18.8</td>
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</tbody>
</table>

Table 15

Post hoc z tests results for comparisons of column proportions

<table>
<thead>
<tr>
<th>Engagement Triggers</th>
<th>Financial Management (A)</th>
<th>Fine Arts (B)</th>
<th>Business (C)</th>
<th>Communication and Media (D)</th>
<th>Engineering and Technology (E)</th>
<th>Health Sciences (F)</th>
<th>Law (G)</th>
<th>Education (H)</th>
<th>Social Work (I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>B</td>
<td>D</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B D</td>
<td>B</td>
</tr>
<tr>
<td>Academic</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Personal</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>A C</td>
<td></td>
</tr>
<tr>
<td>External</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A G</td>
<td>A G</td>
</tr>
</tbody>
</table>

Results are based on two-sided tests with significance level .05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion. Tests are adjusted for all pairwise comparisons within a row of each innermost sub-table using the Bonferroni correction.
### Table 16
Engagement triggers per discipline

<table>
<thead>
<tr>
<th>Engagement Triggers</th>
<th>Financial Management</th>
<th>Fine Arts</th>
<th>Business</th>
<th>Communication and Media</th>
<th>Engineering and Technology</th>
<th>Health Sciences</th>
<th>Law</th>
<th>Education</th>
<th>Social Work</th>
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</thead>
<tbody>
<tr>
<td>Future Career Orientation</td>
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<td>3.5</td>
<td>9.8</td>
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<tr>
<td>Validation</td>
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<td>4.9</td>
<td>37.5</td>
<td>3.4</td>
<td>17.2</td>
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<td>6.8</td>
<td>2.6</td>
<td>8.1</td>
</tr>
<tr>
<td>Level of Challenge</td>
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<td>47.5</td>
<td>5.0</td>
<td>11.7</td>
<td>13.3</td>
<td>1.7</td>
<td>4.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Organizational Issues</td>
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<td>7.9</td>
<td>35.3</td>
<td>4.7</td>
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<td>13.7</td>
<td>4.8</td>
<td>3.1</td>
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<tr>
<td>Personal Interest</td>
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<td>11.1</td>
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<td>Practice Based</td>
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<td>38.2</td>
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</tr>
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<td>Quality of Programme</td>
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<td>Social Aspects</td>
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<td>6.1</td>
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<tr>
<td>Strategic Approach</td>
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<td>4.7</td>
<td>2.7</td>
<td>12.8</td>
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<td>Teacher and Support</td>
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</table>

### Table 17
Post hoc z tests results for comparisons of column proportions

<table>
<thead>
<tr>
<th>Engagement Triggers</th>
<th>Financial Management</th>
<th>Fine Arts</th>
<th>Business</th>
<th>Communication and Media</th>
<th>Engineering and Technology</th>
<th>Health Sciences</th>
<th>Law</th>
<th>Education</th>
<th>Social Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Career Orientation</td>
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<td></td>
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<td></td>
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<td>Validation</td>
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</tr>
<tr>
<td>Level of Challenge</td>
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<td>Organizational Issues</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Personal Interest</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic Approach</td>
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<td></td>
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</tr>
<tr>
<td>Teacher and Support</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Results are based on two-sided tests with significance level .05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion.

Tests are adjusted for all pairwise comparisons within a row of each innermost sub-table using the Bonferroni correction.
5.7 Location

Avans University of applied sciences has three locations in the Netherlands: Breda, Tilburg and Den Bosch. Between these three locations, significantly different distributions were found for both engagement types ($\chi^2 = 21.98$, df = 6, $p = .001$) and engagement triggers ($\chi^2 = 56.24$, df = 18, $p = .001$). Students studying at Den Bosch were more likely to report academic trigger types, while students studying at Tilburg and Breda were more likely to report vocational trigger types. When specifically analysing the engagement triggers, students at Tilburg were more likely to report organizational issues triggers, whereas students at Den Bosch were more likely to report strategic approach triggers (see Table 18).

Table 18

<table>
<thead>
<tr>
<th>Engagement types and triggers by location</th>
<th>Breda</th>
<th>Tilburg</th>
<th>Den Bosch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement Trigger Types</td>
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<td></td>
</tr>
<tr>
<td>Vocational</td>
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</tr>
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<td>23.4</td>
<td>24.0</td>
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<td>External</td>
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<td>17.5</td>
<td>17.7</td>
</tr>
<tr>
<td>Engagement Triggers</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Future Career Orientation</td>
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<td>8.9</td>
<td>8.9</td>
</tr>
<tr>
<td>Level of Challenge</td>
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<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Organizational Issues</td>
<td>2.3</td>
<td>4.7</td>
<td>2.0</td>
</tr>
<tr>
<td>Personal Interest</td>
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<td>15.9</td>
<td>16.6</td>
</tr>
<tr>
<td>Practice Based</td>
<td>19.1</td>
<td>23.7</td>
<td>15.8</td>
</tr>
<tr>
<td>Quality of Programme</td>
<td>6.4</td>
<td>3.6</td>
<td>5.6</td>
</tr>
<tr>
<td>Social Aspects</td>
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<td>6.7</td>
<td>8.4</td>
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<td>Strategic Approach</td>
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<td>12.8</td>
<td>19.1</td>
</tr>
<tr>
<td>Teacher and Support</td>
<td>12.2</td>
<td>8.4</td>
<td>11.1</td>
</tr>
<tr>
<td>Validation</td>
<td>2.2</td>
<td>2.5</td>
<td>1.8</td>
</tr>
</tbody>
</table>

The exact reasons for the differences among locations can be partially explained by the fact that some disciplines are only offered at one location. As previously discussed, there are significant differences among disciplines for both engagement types and triggers. However, there are a few programmes that are offered in two locations. Interestingly, no significant
differences were revealed when similar programmes at different locations were analysed in terms of engagement types or triggers.

5.8 Reported Behavioural Differences

5.8.1 Usage of Study Facilities: Xplora

Study facilities play a central role in helping students succeed in their studies. Since the educational vision of our university is one based upon social constructivism and steeped in group work, there exists within our university a dynamic study centre called Xplora. This library and media centre offers group work rooms, computer facilities and a full multimedia production studio. It serves as the heart of our university. Included in the SSS were specific questions as to how students used these facilities.

A Kruskal-Wallis test (KWT) was conducted to evaluate differences among the four engagement types for median visits to Xplora. Table 19 shows an overview of reported visits to Xplora for each engagement type. The test yielded significant results: \( \chi^2(3, N = 4987) = 16.0947, p = .001 \). Additionally, Mann-Whitney U tests were conducted to evaluate pairwise differences among the four engagement types and median changes in visits to Xplora. Students having a personal engagement indicated significantly less frequent visits to Xplora than the other three engagement types: academic engagement type (\( U = 810751.5; n_1 = 1217, n_2 = 1433, \ p = .001 \)); vocational engagement type (\( U = 810751.5; n_1 = 1217, n_2 = 1396, \ p = .001 \)); external engagement type (\( U = 810751.5; n_1 = 1217, n_2 = 941, \ p = .001 \)).
A KWT was also performed for the engagement triggers and visits to Xplora. This also revealed significant results: \( \chi^2(9, N = 4987) = 45.17, p = .001 \). When specifically analysing the engagement triggers teacher and support and validation, students with the validation engagement trigger reported significantly more frequent visits to Xplora; \( U = 26632.5; n = 699; p = .015 \). Pairwise differences also were revealed for the practice based and strategic approach engagement triggers; students with the strategic approach engagement trigger reported significantly more frequent visits to Xplora \( U = 364913; n = 1775; p = .009 \) than those with the practice based engagement triggers (see Table 19).

Table 19

<table>
<thead>
<tr>
<th>Engagement types and triggers and reported frequency of Xplora visits</th>
<th>Never/A</th>
<th>Almost</th>
<th>Infrequently</th>
<th>Frequently</th>
<th>Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement Triggers Types</td>
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<td></td>
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<td></td>
</tr>
<tr>
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<td>47.14</td>
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<td>47.62</td>
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</table>

5.8.2 Usage of Study Facilities: Databases

Additionally, there was a trend for students with different engagement types to show differences in their use of the digital databases in Xplora. Students with an academic
engagement type reported a more use of digital databases (30.9%) while students with a personal engagement type reported a less database usage (26.4%). However, this trend was not significant according to a chi-squared test: $\chi^2 = 5.42$, df = 3, $p = .155$. Similarly, there was no significant difference among students with different engagement triggers in their database usage: $\chi^2 = 8.85$, df = 9, $p = .364$). (Chi-squared tests were used for these comparisons since students had to indicate either yes or no for using digital databases within Xplora.

5.8.3 Usage of Study Facilities: Blackboard

Besides Xplora, the virtual learning environment (VLE) (Blackboard) plays a central role in distribution and communication of curricular material. The VLE is intensively used and has now become fully integrated in every faculty. Reported use of the VLE showed significant differences in terms of studying responding “I never use Blackboard, Yes/No.” Students with a vocational engagement type reported significantly less use of Blackboard than students with the other three engagement types. This option was presented twice in the current survey in two different contexts: “What do you use in Blackboard?” and “Why do you use blackboard?” Both questions revealed the same pattern of significantly different distributions Q16-4a ($\chi^2 (3, N = 4831) = 20.65$, $p = .001$) and Q16-6a ($\chi^2(3, N = 4831) = 14.42$, $p = .002$) between vocational engagement type and the other three engagement types (see Table 20).

There were also significant differences among the engagement triggers in terms of blackboard usage: $\chi^2 (9, N = 4831) = 46.94$, $p = .001$. The teacher and support engagement type showed the highest level of non-usage of Blackboard (6.2%) while the practiced based engagement type (1.3%) reported the lowest level of non-usage (see Table 20).
Table 20
Percentage of students indicating no Blackboard usage by Engagement type

<table>
<thead>
<tr>
<th>Engagement Types</th>
<th>What do you use in Blackboard?</th>
<th>Why do you use blackboard?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>1.4</td>
<td>2.0</td>
</tr>
<tr>
<td>Academic</td>
<td>3.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Personal</td>
<td>4.2</td>
<td>4.2</td>
</tr>
<tr>
<td>External</td>
<td>4.0</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Table 21 presents the reported hours of Blackboard use for each engagement type. The external engagement type showed a high percentage of reported "no hours" but also had the highest percentage of "more than three hours" In fact with 2.7% of students reporting more than three hours, the external engagement type had more than twice as many for this category than the vocational engagement type (1.3%). However, a KWT yielded nonsignificant results ($\chi^2$ (3, N =4983) = 5.96, p = .556) among the engagement types for the reported amount of hours per day students use Blackboard.

Table 21
Engagement Types and Reported daily hours of Blackboard Use

<table>
<thead>
<tr>
<th>Engagement Types</th>
<th>None</th>
<th>One Hour or Less</th>
<th>Two to Three Hours</th>
<th>More than Three Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>5.4</td>
<td>77.8</td>
<td>15.6</td>
<td>1.3</td>
</tr>
<tr>
<td>Academic</td>
<td>7.0</td>
<td>76.8</td>
<td>14.7</td>
<td>1.5</td>
</tr>
<tr>
<td>Personal</td>
<td>8.6</td>
<td>76.1</td>
<td>13.6</td>
<td>1.6</td>
</tr>
<tr>
<td>External</td>
<td>8.6</td>
<td>74.2</td>
<td>14.6</td>
<td>2.7</td>
</tr>
</tbody>
</table>
Among the engagement triggers, a KWT revealed significant differences in the reported use of Blackboard; \( \chi^2 (9, \text{N} = 4983) = 26.55, p = .002 \). Both the organizational issues engagement trigger and the teacher and support engagement showed higher levels of “no hours” per day for Blackboard usage. For the strategic approach engagement trigger, these students reported higher levels for “two to three hours.”

5.8.4 Reported Study Behaviour

A one-way analysis of variance (ANOVA) was used to compare the reported hours of study among the four engagement types. Since a 95% confidence interval was used for all ANOVA test in this dissertation, the reporting of the ANOVA test results will follow the structure: (M=mean, [lower confidence limit, upper confidence limit]). Reported hours of study differed significantly across the four types, \( F(3, 4897) = 6.18, p = .001 \). Tukey post-hoc comparisons of the four types indicate that students with the external engagement type (M = 28.39, [27.55, 29.22]) reported significantly more hours of study than the students with both the academic engagement type (M = 26.55, [25.87, 27.22]), p = .003 and the vocational engagement type (M = 26.71, [26.09, 27.34]), p = .010.

Table 24

<table>
<thead>
<tr>
<th>Engagement Types</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>1370</td>
<td>11.81</td>
<td>26.71</td>
</tr>
<tr>
<td>Academic</td>
<td>1406</td>
<td>12.89</td>
<td>26.55</td>
</tr>
<tr>
<td>Personal</td>
<td>1204</td>
<td>12.67</td>
<td>28.15</td>
</tr>
<tr>
<td>External</td>
<td>921</td>
<td>12.95</td>
<td>28.39</td>
</tr>
</tbody>
</table>

A second one-way ANOVA was used to compare the reported hours of study among the ten engagement triggers. Reported hours of study differed significantly across the engagement
triggers; $F (9, 4891) = 3.11, p = .001$. Tukey post-hoc comparisons of the ten engagement triggers revealed that students reporting a personal interest engagement trigger ($M = 28.48, [27.59, 29.38]$) reported studying for significantly longer than students with both the practice based engagement trigger ($M = 26.33, [25.59, 27.08]$) and the strategic approach engagement trigger ($M = 26.25, [25.37, 27.13]$).

### 5.8.5 Reported Satisfaction

One-way ANOVA tests were performed to compare the level of reported satisfaction among the four engagement types. Students were asked several questions concerning different aspects of their study experience at Avans. All responses were collected on a 5-point Likert scale with varying anchors: strongly disagree and strongly agree, no, absolutely not and yes, absolutely, and not enough and too many. Table 25 contains the satisfaction questions that revealed significant differences.

<table>
<thead>
<tr>
<th>Question</th>
<th>Between Groups</th>
<th>Within Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sum of Squares</td>
<td>df</td>
</tr>
<tr>
<td>Do you receive enough and useful guidance from your teachers and mentors in reference to how to study?</td>
<td>12.421</td>
<td>3</td>
</tr>
<tr>
<td>Do you find your teachers generally inspiring?</td>
<td>7.841</td>
<td>3</td>
</tr>
<tr>
<td>What grade would you give the study climate within your programme?</td>
<td>49.554</td>
<td>3</td>
</tr>
<tr>
<td>What grade would you give your fellow classmates in your programme?</td>
<td>28.049</td>
<td>3</td>
</tr>
<tr>
<td>To what level do you feel the programme has the correct level?</td>
<td>7.628</td>
<td>3</td>
</tr>
</tbody>
</table>
For the question "Do you receive enough and useful guidance from your teachers and mentors in reference to how to study?" Tukey post-hoc comparisons indicated that students with the vocational engagement type (M = 3.38, [3.34, 3.43]) reported significantly higher levels of satisfaction than student with the academic engagement type (M = 3.26, [3.21, 3.31]), p = .002 and students with the external engagement type (M = 3.28, [3.22, 3.34]), p = .035.

For the question "Do you find your teachers generally inspiring?" Tukey post-hoc comparisons indicated that students with the vocational engagement type (M = 3.44, [3.39, 3.48]) reported significantly higher scores than students with the academic engagement type (M = 3.33, [3.28, 3.38]), p = .019.

For the question "What grade would you give the study climate within your programme?" Tukey post-hoc comparisons indicated that students with the vocational engagement type (M = 7.56, [7.50, 7.63]) reported significantly higher levels of satisfaction than students with the academic engagement type (M = 7.35, [7.28, 7.42]), p = .001.

For the question "What grade would you give your fellow classmates in your programme?" Tukey post-hoc comparisons indicated that students with the vocational engagement type (M = 7.39, [7.33, 7.46]) reported significantly higher levels of satisfaction than students with the academic engagement type (M = 7.24, [7.17, 7.31]), p = .009.

For the question "What grade would you give for the amenities at Avans?" Tukey post-hoc comparisons indicated that students with the vocational engagement type (M = 6.92, [6.85,
reported significantly higher levels of satisfaction than students with the academic engagement type ($M = 6.77, [6.69, 6.84])$, $p = .018$.

For the question "*If you had to choose again, would you choose Avans?*" Tukey post-hoc comparisons indicated that students with the academic engagement type ($M = 1.53, [1.48, 1.59]$) reported significant higher levels of satisfaction than students with the vocational engagement type ($M = 1.43, [1.38, 1.48]$) $p = .039$.

To summarize the above quantitative results, it was demonstrated that students with different engagement types and triggers differed with regard to previous education, full-time or part-time enrolment, gender, first-year or upper-level students, and location. Additionally, behavioural differences were also revealed for students with different engagement types and triggers. These differences were revealed for reported study behaviour, Blackboard usage, reasons for using Blackboard, database usage and visits to Xplora. Differences were also revealed in reported levels of satisfaction among students with different engagement types and triggers.

Perhaps most interesting was the differences among disciplines. As discussed earlier in this dissertation, engagement is generally described as a student activity without reference to any differences of discipline. This study has demonstrated that students from differing disciplines have significant distributions of both engagement types and engagement triggers.
6 DISCUSSION, EVALUATION AND CONCLUSION

6.1 Addressing the Research Objectives

The purpose of this study was to further the understanding of student engagement and the factors that activate and prompt students to put effort into their studies. More specifically, the study aimed to achieve the following research objectives:

- To identify student engagement triggers.
- To develop a model of student engagement.
- To determine if engagement types were similar across faculties, disciplines and study year.
- To determine if reported study behaviour was related to specific engagement types.

This study differs from most engagement research in that it attempts to present, in the students' words, their intentions, motivation or desires – as they have reported them – for engaging in their studies. Therefore, this research does not primarily focus on reported behaviour, rather on the catalysts for putting more effort into their studies that students identified. This is in contrast to previous engagement research, which historically focuses mainly on self-reported behaviours (Astin, 1984; Pace, 1982, 1984; Pike & Kuh, 2005; Tinto, 1975, 1988, 1993; Tyler, 1949); this study tries to unlock the motivations underlying those behaviours.

The following paragraphs will individually reflect on the results of the specific research objectives and how they relate to the theoretical framework.
The purpose of this study was to expand the understanding of student engagement and the factors that activate and prompt students to put effort into their studies.

Much of the work on student engagement focuses on the behaviours that students “engage” in during their studies (Astin, 1984; Pace, 1982, 1984; Pike & Kuh, 2005; Tinto, 1975, 1988, 1993; Tyler, 1949). Having said that, this research complements the engagement literature in the sense that it explores and answers the question “why do students engage in their studies?”

For example, Astin (1984) describes the physical and psychological effort that students put into their studies, but does not mention triggers or catalysts for that effort. Also, Tinto (1975) defines the concepts of integration (academic and social) but does not mention possible reasons or motivations for that integration. This research adds to the current literature in as much as it provides complementary insights into the types and triggers of student engagement.

6.2 Implications of Engagement Types and Triggers

In the following section, a summary of pros and cons for the individual engagement types and triggers will be presented. This summary will be based upon the analysis between the engagement types and triggers and the self-reported behaviour in the survey responses.

6.2.1 Academic Engagement Type

An academic approach to studying as defined in this study is generally related to a superficial or surface mode of studying. This is characterized by a students’ focus on successful passing of tests and putting effort into academic assignments only when formal credit might be earned. However, it needs to be strongly noted that the notion of academic engagement, as it is used in this research, is not fully synonymous with the notion of an approach to study (Entwistle,
2001; Entwistle, Hanley, & Hounsell, 1979; Laurillard, 1979; Tickle, 2001) or an orientation to study (Taylor, 1983; Taylor et al., 1981). In other words, if a student is an academic engagement type, will such a student necessarily adopt a surface approach to their studies? The results from this research do not permit a straightforward answer to this question.

However, there are some contradictory findings arising from this study concerning students reporting an academic engagement type. The reported study hours of students reporting academic engagement are significantly lower in comparison to students reporting external engagement. Additionally, students with academic engagement indicated the lowest mean hours per week for studying. Students with academic engagement reported more frequent visits to Xplora and also reported more frequent use of digital databases (30.9%) while students with personal engagement reported less frequent database usage (26.4%).

Students reporting academic engagement also report lower levels of satisfaction than other students. When comparing students with academic engagement with students with the three other engagement types, significant results were revealed. Students with academic engagement reported having a less favourable perception of:

- the support from teachers about how to study
- their teachers as less inspiring
- the study climate
- the amenities at our university.
Despite this reported dissatisfaction, students reporting academic engagement report significantly higher scores when asked if they would choose our university again in the future.

The picture of these students is not clear cut. Nevertheless, there are some indications concerning these students. Knowing that these students report engaging in their study due to external factors (i.e. tests and study points) qualitatively lower levels of learning and performance can be expected (Vansteenkiste et al., 2006). This might be in part due to students framing their goals in terms of extrinsic motivators. There already exists a focus in the literature concerning the experiences of Year 1 students (Brinkworth et al., 2008; Jamelske, 2008; Kuh et al., 2001; McInnis, 2001; Reason, Terenzini, & Domingo, 2006). Many of these first-year initiatives focus on academic competencies, or rather the inventorization of behaviours that are believed have an impact on the growth and development of academic competence. Knowing that first-year students, in this population, have a high percentage of academic engagement type, it might be more effective to help these students adopt an intrinsic-goal framing approach to their studies rather than an inventorization of behaviours that they most likely do not participate in. The work of Richardson (Price, Richardson, & Jelfs, 2007; Richardson, 2006; Richardson, Dawson, Sadlo, Jenkins, & McInnes, 2007; Richardson & Woodley, 2001) which combines the CEQ (Ramsden, 1991) and the RASI (Entwistle, Tait, & McCune, 2000) might serve as a good alternative in assessing students’ first year experiences.
6.2.2 *Personal Engagement Type*

Less frequent visits to Xplora were reported by students with personal engagement type as opposed to all the other engagement types. Also noteworthy is that students with this type of engagement type were most likely to report that they never or almost never visited Xplora. However, these students do report significantly more hours of study. Students with personal engagement were most likely to report studying “more than 20 hours per week”. More specifically, students with personal engagement reported significantly more hours per week studying than students with academic or vocational engagement reveal significant differences. As for the satisfaction indicators, results concerning personal engagement only revealed one significant result: students with personal engagement reported significantly lower levels of satisfaction with their programme.

In-line with self-determination theory (SDT), students who choose to engage due to personal interests and seeking a challenge, will display a qualitatively different type of motivation. In this study, students with a personal engagement type reported more hours of study. It is also asserted (Niemiec et al., 2006; Simons et al., 2004; Steinberg & Silverberg, 1986; Vansteenkiste et al., 2006) that these students will frame their goals in terms of intrinsic motivators (personal interests) and thus be more likely to adopt a deep-approach to learning.

6.2.3 *External Engagement Type*

When students choose to engage due to external factors such as social recognition, the quality of the social context of learning, and organizational issues, it generally undermines their sense of autonomy (Niemiec et al., 2006; Vansteenkiste et al., 2006). This has important
consequences for the students’ well-being as well as learning process. According to SDT, extrinsic motivating factors are perceived as controlling and thus make it more difficult to link curriculum goals to the individual’s goals. As a result of this inability to link these goals, it is highly improbable that one could perceive a connection between present behaviour and future goals. This present behaviour, for students, includes study behaviour. SDT also asserts that extrinsic goal framing may actually prevent student from engaging in their studies, thus eliciting a surface approach to study tasks (Simons et al., 2004).

However, we see in this study that students with external engagement reported more hours of study; yet a significantly higher percentage of students with this type of engagement (9.7%) reported “Never/Almost Never” visiting Xplora. In other words, these students are studying, just not in Xplora. It is interesting to note that in traditional engagement surveys, these students’ scores for usage of library facilities might lead one to conclude that these students were not engaged.

6.2.4 Vocational Engagement Type

When students choose to engage due to an orientation to a future career or the perception that educational activities are rooted in real-life issues concerning a profession, it generally increases their sense of autonomy and enhances their sense of well-being. This being said, vocational engagement increases the chance that students will be able to link participation in educational activities (present behaviour) with their own future goals (future intrinsic goal framing). Once this link is made, the benefits of framing current activities within future intrinsic goals become apparent: deeper engagement in educational activities, thus deeper level
learning (Simons et al., 2004). In this study, students with vocational engagement reported significantly more visits to Xplora and a significantly lower percentage reported “Never/Almost Never” visiting Xplora (6.7%). However, those with vocational engagement reported significantly fewer hours of study. Students with different engagement types also differed in their choice of the option “I never use Blackboard.” Students with a vocational engagement type were significantly less likely to choose this option that students with any of the other three engagement types.

Students reporting academic engagement also report higher levels of satisfaction than other students. Tests reveal significant results in relation to vocationally engaged students feeling that they receive enough guidance and teacher support, levels of inspiring teachers, scores for the climate within the faculty, assessment of fellow students, evaluation of amenities, and feeling that the study programme is at the correct level.

It is not surprising that students with vocational engagement in this study displayed many of the traditionally inventoried engagement behaviours. Within this engagement type is the future career orientation engagement trigger. Additional to the previously discussed notions concerning future intrinsic goal framing and its effect on student engagement and performance, the general element of time perspective and more specifically future time perspective has been reported as a positive indicator for “academic orientation and academic application, and productive academic behaviours” (Horstmanshof & Zimitat, 2007).
6.3 What Variants of Student Engagement Can Be Seen?

As reported in this study, different engagement types and triggers are found in different disciplines. The engagement profile of business students is significantly different from those of students of fine arts or social work. This may seem logical, given that the content and future professions of these programmes are quite different. However, if we analyse instruments such as the NSSE, the supposition is that participation in "educationally purposeful activities" (Pike & Kuh, 2005, p. 202) can be judged equally across disciplines. Kuh (2009) states that one of the core purposes of the NSSE project "is to provide high-quality, actionable data that institutions can use to improve the undergraduate experience" (p. 9). Until 2010, there was no explicit mention of behaviours that might differ among disciplines. In the 2010 annual report, there is an emphasis on "how participation in high-impact practices varies according to specific majors" and "distinct engagement patterns" (National Survey of Student Engagement, 2010, p. 10) in four reported majors.

However, activities that are seemingly educationally purposeful might differ in terms of their relevance for each particular study programme. For example, in this study 69% of fine art students and 77% of graphic art students reported either never or almost never going to study in the library or media centre (Xplora). This was in contrast to 1.9% of international business students and 3.6% of business administration students who reported either never or almost never going to Xplora. However, when analysing the amount of time students spend using Blackboard, 74% of fine art students reported no hours per day while only 2.6% graphic art students reported no hours per day. When comparing just these two educationally purposeful activities, it is impossible to infer any meaning in reference to engagement or even about its
purposefulness. Oddly enough, internal attrition reports indicate that first-year attrition for the faculty of fine arts is, by far, the lowest in our university (Godor, 2010). This being said, the purposefulness of visits to Xplora, in relation to engagement for this sub-population, needs to be re-examined. The point is that educationally purposeful activities, as defined in the NSSE and many other research studies, are more or less purposeful depending on the student’s academic discipline.

The same argument can be made concerning engagement types and triggers. There seems to be no universal engagement profile that exists among the faculties at our university. The reported differences among the 19 faculties at our university are important: 19.5% of education students reported having an academic engagement type while business students reported 27.2% for that engagement type. A small percentage (12.1%) of fine arts students reported having a vocational engagement type while education students reported 38.4% for that engagement type.

However, students enrolled in similar programmes within Avans display a comparable composition or profile of engagement types and triggers. There seems to be a commonality of engagement triggers within a “discipline.” Or in other words, there are groupings of programmes that are statistically similar in regards to engagement triggers. For example, students following programmes offered within the domain of economics (i.e. marketing students and international business or business administration) do not have significantly different profiles.
Tests conducted to evaluate differences among the four engagement types for differences in the frequency of visits to Xplora yielded significant results. This was mainly due to pairwise differences of students having a personal engagement type and students having an academic engagement type. It seems logical that students who are personally motivated would be more engaged in purposeful activities. Also in line with this notion is the differences revealed for the practice based and strategic approach engagement triggers; students with the strategic approach engagement trigger reported significantly more visits to Xplora.

As already established above, there seems to be present dominant tendencies for student engagement types and triggers that are found by discipline and faculty. This being said, those disciplines and faculties whose students reported higher participation in what are normally regarded as educationally purposeful activities should indeed show lower levels of student departure. This is not be found in our student population. Fine Art students report lower levels of blackboard and database usage. Both of these activities are generally seen as signs of student engagement. However internal Avans documents show that Fine Art students actually are more successful in earning their Year-1 diploma that all the other faculties (Godor, 2011).

While the different previous education types did not differ when engagement types were analysed, analysis of engagement triggers revealed a significantly different distribution with 18.8% of students holding diplomas from foreign countries, miscellaneous certificates and credit for prior learning reported the teacher and support engagement trigger while 10.5% of students with senior general secondary education reported having a teacher and support engagement trigger. For level of challenge, 10.2% of students with university preparatory
education and 7.3% of students with secondary vocational education reported having this engagement trigger.

When comparing engagement in full-time students and part-time students, a significantly different distribution was found. Part-time students were more likely to exhibit the vocational and academic types while full-time students were more likely to exhibit the personal and external types. Further analysis also revealed significantly different distributions between full- and part-time students in terms of their engagement triggers. For part-time students, the "teacher and support" and "practice based" engagement triggers were significantly more common, whereas for full-time students, the "validation," "social aspects" and "personal interests" triggers were significantly more common.

6.4 Student Engagement Across the Study Years

The additional understanding as to how engagement changes throughout the study years must be viewed as a strong secondary contribution arising from this study. This study strongly suggests that there is a large difference between Year 1 and later study years in terms of engagement. However, there is no mention in this report of the same-year differences among the study years. As with the supposition that educationally purposeful activities are of equal relevance across disciplines, there seems to exist a similar conclusion that regardless of study year, educationally purposeful activities are of equal value for all study years. The question is "Are all educationally purposeful activities created equal?" If we look at Year 1 and later years of study, we see a significant difference with regard to engagement types and triggers.
If the engagement types and triggers are significantly different between these populations, then there are a number of possible explanations. First, educationally relevant activities might remain constant throughout the study years (as assumed in the NSSE), but the catalyst for students to participate in them changes. Using this logic, certain disciplines and faculties would have a constantly high engagement rate while other disciplines and faculties would have a constant low engagement rate. But this seems unlikely since we can see in our population that differing faculties participate in these activities to varying degrees. However, for the disciplines and faculties that do not participate in those activities throughout all the study years, student attrition rates could not be explained via participation in educationally purposeful activities. Or in other words, student attrition rates are inkable to traditional measures of student engagement. Additionally, the question would then arise, why would the engagement types and triggers change throughout the study years for the same activities? What could possibly be the explanation for the change in engagement triggers for studying in the library?

For some disciplines and faculties, this might be explainable: Year 1 students generally report academic engagement so they participate in certain activities to get good grades and in year 2 they participate in the same activities because that activity is personally interesting. We clearly see differences between Year 1 and later years of study in the research. Specifically analysing engagement triggers and year of study reveals three triggers that have significantly different distributions: future career orientation, strategic approach and practice based. Year 1 students were more likely to report the future career orientation and strategic approach triggers and Year 2+ students were more likely to report the practice based trigger. Also specific differences
were found when analysing the distributions of Year 1 and Year 2+ students and previous education. In Year 1, students with senior general secondary education (20.06%) were more likely to report the strategic approach engagement trigger than Year 2+ students (15.1%).

Secondly, educationally relevant activities might change throughout the study years, but the catalysts for students to participate in them remains constant. Nowhere in the literature have I found references to the changing of educationally purposeful activities throughout the study years. Additionally, we have seen that engagement triggers do change through the study years.

The most plausible explanation for educationally relevant activities differing among disciplines and faculties is that the catalysts for students to engage in them are based in the curriculum and thus contain, among other things, teachers' preferences for certain activities and activities that are relevant to the students' future career. We can see from this research that participation in certain educationally relevant activities greatly varies among disciplines and faculties. It cannot be that if students do not absolutely participate in specific activities, they are destined to drop out or structurally perform less. In certain contexts this may be the case, but it is far from applicable to all faculties. The simple example of visits to Xplora would certainly then exclude any fine arts students at our university from receiving a diploma. This is not the case.

I would first like to explore the idea that educationally relevant activities are different among disciplines and faculties. There is the supposition that both student involvement (Astin, 1975, 1977, 1984) and the quality of that effort (Pace, 1982, 1984) in certain general behaviours can
characterize engagement (Kuh, 2009; Kuh et al., 2008, 2001; Pike, 2006). But this approach does not make any interdisciplinary discrimination. Engagement, as a phenomenon, is supposedly similar across disciplines. While in theory this seems logical (performing certain behaviours must help student performance), the supposition is that these behaviours are universally applicable to all disciplines and study years.

For example, Ahlfeldt, Mehta, & Sellnow (2005) note the rise in student engagement in a PBL environment. A PBL methodology is generally characterized as informal and one having close student-teacher contact. Behaviours generally identified in the engagement literature such as out-of-class contact with faculty and as out-of-class discussions might be reported less by students in such a methodology. This could be partially explained by these behaviours being fulfilled as a requirement of the formal educational process, thus not experienced as "out-of-class." Indicators for these questions could reveal a low level of engagement, when quite the opposite could be true.

Additionally the universality of educationally relevant activities is predicated upon the idea that all curricula make use of the same activities. However, quite the opposite is true. The pedagogical methodology employed by the school of education at our university greatly differs that of the school of Finance and Accountancy. The school of education has a well-developed e-portfolio aspect that requires students to extensively utilize the features of the e-portfolio module in Blackboard. During the many work placements (from Year 1 to Year 4) students need to constantly update their portfolio. These updates can be in the form of text, pictures, self-made videos, or audio fragments. The content of the e-portfolio is not just a
checklist of required items; rather, students need to post relevant evidence of their gaining and mastering the desired and prescribed competencies. Students are also required to have both their school mentor as well as their workplace mentor participate in the postings by giving feedback and suggestions. The school of Finance and Accountancy does not use the e-portfolio module in Blackboard. Obviously, the e-portfolio module in Blackboard is a good instrument to increase student engagement, but if disciplines and faculties do not employ them, does that mean that their student are, necessarily, less engaged? Could it be that students are just engaged in different activities?

6.5 The University and Engagement

6.5.1 University Engagement Policy

Administrators need to take into account student engagement as a possible strategic focus in the palette of university initiatives in attempting to increase student retention. With attrition rates ranging from 16% to 30% in the Netherlands, university policy and interventions should be based on research which has strongly shown that engaged students are less likely to prematurely exit higher education (Kuh et al., 2001) and attain higher levels of academic success (Astin, 1984; Carini et al., 2006a; Pascarella & Terenzini, 1979; Tinto, 1988; You & Sharkey, 2009). However, as noted above, specific engagement behaviours still need to be identified by discipline and faculty. While there might be some universal activities that students engage in across disciplines and faculties, the universality of all activities cannot be taken for granted. The connection between pedagogy and engagement needs to be taken strongly into consideration. For example, the assumption that an electronic learning
environment is universally used across one institution cannot be made. If this activity is not
demanded by the curriculum, then it would be irresponsible to define student engagement in
terms of participation in that activity.

University policies surrounding student engagement should focus not solely on the student’s
behaviour but also on the interaction between students (Kuh et al., 2001; Pike & Kuh, 2005;
Tinto, 1975) and the “institutional habitus” of that university (Thomas, 2002). By analysing
the elements of the social forces in an institutional culture (as outlined by Durkheim), such as
regulation and individualism, clues may be revealed as to the ease with which new students
can enter into the academic community. Or more importantly, the effect an imbalance can
have on integration or metaphoric suicide. An imbalance in individuality can cause either
egoistic or altruistic suicide. At the heart of the notion of egoistic suicide is a lack of cohesion
or integration. Stated otherwise, the individual has no real community to integrate into, since
the community is only comprised of individuals with no real common values, expressions, or
rituals. This social state leaves the individual devoid of any possible social cohesion. Most of
the theoretical foundations concerning student departure are built upon Durkheim’s work on
egoistic suicide. While this may help explain some of student departures, I do feel that
Durkheim’s other types of suicide might add a deeper dimension to possible disengagement,
which I believe precedes formal student departure.

For example, altruistic suicide is the opposite of egoistic suicide. While egoistic suicide has
high levels of individualism, altruistic suicide has very low or none. This can be characterized
by too much integration into a social group or community. In relating altruistic suicide to
university policies, one could raise the question: *Could it be that if a transition is too difficult*
for students coming from non-traditional higher educational backgrounds they will choose to leave the group by the virtuous act of dropping out rather than causing harm to the group? “Every sort of suicide is then merely the exaggerated or deflected form of a virtue” (Durkheim, 2006, p. 2000).

Additionally, I would like to assert that anomic suicide could play a role in student departure. Students who have difficulty integrating into an academic community could experience a sensation of being overwhelmed and thus unable to see the agreed-upon social values. Their perception of the new academic community might be one lacking any focus or, in plain words, they just might feel lost without any real guidance by those norms.

Furthermore, fatalistic suicide could also play a role in student departure. This could result from an imbalance of regulation in the academic community which has an overabundance of laws or norms: “fatalistic suicide can be characterized as the impossibility of internalizing norms which are too constraining or illegitimate” (Alexander & Smith, 2005, p. 71). While in higher education there are no “slaves” or “un-married barren women” (two examples used by Durkheim) I do believe that attempts at integration into a new academic community with a dominant over-regulating culture could be experienced by students coming from non-traditional higher educational backgrounds as “pitilessly blocked and passions violently choked by oppressive discipline” (Durkheim, 2006, p. 239).

When university policies support student transition to university life and ease membership of this new community, student engagement increases and thus increases the chances for students
to "earn higher grades, score higher on standardized tests of achievement" (Skinner & Belmont, 1993), employ a deep approach to their learning (Horstmannshof & Zimitat, 2007; Jansen & Bruinsma, 2005), and be successful in their latter years of study (Severiens & Schmidt, 2009).

6.6 Recommendations for Practice

6.6.1 Pedagogical Climate and Engagement

Furthermore, educational policies that affect the university’s pedagogical climate need to support student engagement. For example, the ratio of contact hours to self-study (Vos, 1992, 1998) can greatly affect student engagement. Policies need to allow for the creation of activating learning environments (Severiens & Schmidt, 2009), high-quality learning environments (Reid & Solomonides, 2007), and frequent contact in active and collaborative learning activities (Umbach & Wawrzynski, 2005). Additionally, policies should allow space for teachers’ professional training so that teachers can provide clear expectations, contingent responses, and strategic help (Skinner & Belmont, 1993), suitable instructional methods, and quality instruction, and can promote the value of the course in terms of employment purposes (C McInnis, Hartley, et al., 2000).

Building on this model of student engagement, an inventory and clustering of pedagogical interventions was assembled by the Learning and Innovation Centre (LIC) at Avans that used as its focus the specific engagement triggers contained in the model. The aim of this initiative was to first amass an arsenal of potential pedagogical interventions, aligned with the specific
engagement triggers, and then introduce these interventions within the various faculties that had showed specific engagement triggers.

With a large number of students having "strategic approach" as an engagement trigger (16%), pedagogical interventions were selected that helped students with their basic academic competencies and organized the curriculum in a fashion that promoted a more constant study effort throughout the semester. Knowing that "the student’s peer group is the single most potent source of influence on growth and development during the undergraduate years" (Astin, 1977), a peer mentoring and tutoring programme was introduced at our university. This initiative was led by my colleagues from the LIC.

Students volunteered from individual academies to become a peer tutor. The aim of the programme was to enhance the academic competencies of Year 1 students. Taking into account the above quote from Astin (1977) that emphasizes the importance of students’ peers and the ideas from SDT that teachers who focus on encouraging a future time perspective have much less effect on students in contrast to other socializing agents, it was decided that fellow students should be the socializing agents in this change. Additionally, it was desired that the peer mentoring programme should help students in the potentially difficult transition (Meyer & Land, 2005) to higher education by creating opportunities for both informal and formal social and academic integration (Tinto, 1975).

Peer tutors received five workshops related to the following topics: introduction to peer tutoring, discussion techniques, evaluation techniques and pedagogy (learning psychology and
methodology). All workshops were both instructive and employed active training techniques such as role play and group discussions. Once a student completed all five workshops, he or she received a certificate of completion. These students then began the task of mentoring a group of students for a particular subject. These groups had generally from 5 to 8 students participating and ran for the complete semester. Initial evaluations revealed that students who participated in the programme greatly improved their grades. Unfortunately, the evaluation did not follow up these students after the initial semester. While the programme is still running, the longitudinal aspects of the evaluation were not completed. However, a research study is currently being undertaken in which five master’s students perform a work placement/project for three months. The present author is the project leader. Aspects of this study include length of participation, changes in grades pre- and post-programme, and an inventory of integration containing aspects of formal and informal social and academic integration. It is also the intention to survey students who did not participate in the peer mentoring programme to have a control group in order to assess the integration scales. The supposition is that students who have participated should show higher levels of integration.

Additionally, the scheduling for students in regards to number of contact hours versus self-study was analysed. Vos (1992, 1998) asserts that students have two means of arranging the completion of study tasks: personal time and instruction time. If the amount of instructional hours per week is too great, the study results will be lower since students will not have enough time for their self-study. An initiative surrounding assessment has been developed called the assessment scan. Individual assessments are analysed in term of their alignment to the learning goals and the learning activities. Also, their timing and frequency are analysed. In addition to
investigating the ratio between contact hours and self-study, the effect of exam dispersion, the regularity of exams during a semester, was scrutinized. In order to avoid study procrastination, Jansen (1996) advocates more frequent examinations during the semester. Bruinsma & Jansen (2005) also investigated study procrastination and found a negative relation between procrastination and success in obtaining a first year certificate in one year. A small scale study was conducted at Avans testing this procrastination scale in relation to reported study behaviour and GPA. While this project is still in the data analysis phase, initial findings show a strong negative relationship between the procrastination scale and reported hours of study.

6.6.2 Fostering Successful Teaching

The “teacher and support” engagement trigger was reported by more than 10% of students. However, the role of teachers in the “personal interest” and “practice based” engagement triggers should also be taken into account. Since student interests and the future profession need to form a crucial part of the study programme, teachers need to keep this in mind when choosing and developing material for lessons. This is also important to the extent that the future career profession is used as a backdrop in those lessons.

Since there is a large body of evidence demonstrating the connection between effective instruction and learning (Pascarella et al., 2008; Pascarella & Terenzini, 1991), several training programmes for teachers to improve their pedagogical skills were developed and implemented within our university. These programmes are offered to all teachers and are not mandatory for employment. For example, a full-year training programme for new teachers encompasses such topics as learning psychology, classroom management, didactics, and
assessment. In the learning psychology classes, teachers are instructed in using the principles of social constructivism in their lessons. The principles of this programme and its underlying theoretical foundations were presented at the 2007 conference of the European Association for Research on Learning and Instruction on Practice-Based and Practitioner Research (van Riel, van Tilburg, & Godor, 2007). The underlying idea is that, through employing a social constructivist approach to learning, learners will be given more freedom in their pursuit of problem solutions. By allowing more autonomy in classroom lessons, students should be able to make use of their personal interest and goals during formal contact as well as self-study (Assor et al., 2002).

6.7 Contributions of This Work

When investigating the theoretical foundations of Tinto's theory of student departure, it became necessary to review Durkheim's theory of suicide. During the reading of several primary as well as secondary sources, it became apparent that Durkheim's theory of suicide is much more complex than the way it is presented both in the academic work surrounding student attrition and in Tinto's work itself. Focusing only on egoistic suicide, while it may be relevant and useful as an "analogue" (Tinto, 1993, p. 103), greatly limits the applicability of Durkheim's theory to student attrition by ignoring three other possible analogues: fatalistic, anomie, and altruistic suicide types. Moreover, I believe that egoistic suicide, as an analogue for student attrition, does not actually fully encompass Tinto's notion of student attrition.
Dropout from the social system of the college would resemble those resulting in suicide in the wider society; insufficient interactions with others in the college and insufficient congruency with the prevailing value patterns of the college collectivity. (1975, p. 91)

In the above quote, Tinto asserts that there are two factors (insufficient interactions and insufficient congruency) for suicide. If one cannot integrate into a community, thus having insufficient interactions with that community, then egoistic suicide is a good analogue for student attrition. Equally if one holds values that are incongruent to the community’s values, then interactions with that new community would prove to be difficult, thus leading to insufficient interactions.

On the other hand, and perhaps more importantly, Durkheim also asserts that the regulation of norms also plays a role in suicide. It is not only if the held norms are congruent or not to the community, but also how these norms are regulated – or not – in that community. Fatalistic suicide stems from the perceived oppressive regulation of norms in a community. Stronger, anomie suicide stems from perceived lack of regulation of norms in a community. These two nuances to suicide are not contained in Tinto’s analogue for student departure. As stated above, I believe that both types of suicides, anomie and fatalistic, when combined with egoistic suicide and used as analogues for student attrition will add a deeper understanding to student departure.

The model of student engagement types and triggers has demonstrated that there are differences among students from various disciplines. As stated above, since 2010 this is now
reflected in the NSSE. I believe that engagement types and triggers as a discipline-specific phenomenon has been well demonstrated in this research. Additionally, educationally relevant activities (engagement behaviours) are also discipline-specific phenomena. Building on this notion, future researchers could concentrate efforts to identify potential discipline-specific engagement activities.

6.7.1 Year 1 Survey

In order to investigate some of the new theoretical insights I gained while following this doctorate programme, I have been developing a “Year 1 survey” for all incoming students. In 2011, we have been conducting pilots with this instrument to test some of the ideas found in the international literature concerning potential drop-out predictor variables. My university has given me full freedom and support for this project. This survey will not be anonymous, thus allowing for engagement types and triggers to be joined with academic results. My research team and I have developed, from the literature (mostly stemming from this research), several themes to be explored. In the following paragraphs, I will discuss the themes in terms why these were chosen, how they are going to be measured and the intended use of these measurements.

6.7.1.1 Engagement Types and Triggers

The same questions used in this research will be also used in the Year 1 survey. This will allow students’ engagement types and triggers to be combined with other data such as study behaviour and academic results. This permits an investigation into whether students with
certain engagement types and triggers perform better within a specific study programme or across disciplines.

6.7.1.2 Previous Education

This study demonstrated that there were significantly different engagement types and triggers for students coming from differing types of secondary education. With the addition of the students’ identifier number we can retrieve additional information as to the specific school and national secondary educational profile. The latter may be the most important item in this section. Students in secondary education must follow a specific national secondary educational profile. However, there are numerous profiles (over 30). To be able to track these students by profile with their academic results and engagement types and triggers should allow a deeper understanding of our students’ success.

6.7.1.3 Social Capital

In order to test Bourdieu’s ideas of social capital and its effect on student success, the Year 1 survey has a section that tries to measure students’ social capital. Elements in this section include educational level of parents/caretakers (received a higher education degree), general educational appreciation of the family (do they view education as a necessary option for a career?), engagement of parents/caretakers in students’ previous study (how often were grades discussed at home?), and familial motivations for supporting the student in their higher education endeavours (motivation to do better in life than themselves – parents – through higher education).
6.7.1.4 Student Study Behaviour

This research revealed that students with differing engagement types and triggers demonstrated different study behaviour. This section in the Year 1 survey was expanded by focusing on several aspects of student study behaviour. First, students were queried as to the study behaviour in general. Building on the work of Bruinsma cited above, a series of questions to determine possible student procrastination behaviour in relation to studying was employed. There are also general questions concerning study behaviour such as amount of general study hours, place of study, hours of employment per week, and familial care obligations.

6.7.1.5 Academic and Social Integration

Building on Tinto's work, several questions were included to assess students' level of academic and social integration. These enquired into the frequency of contact with teachers and fellow students in and outside the classroom, how often students discussed the class material outside the classroom, and the frequency with which students discussed career plans with teachers or career counsellors. The motives for including these types of questions are two-fold: first, to investigate whether the idea of academic and social integration, as it is traditionally researched, is applicable to Dutch higher education in general; and, second, whether it is specifically applicable to student departure in a Dutch higher educational context.

6.7.1.6 Self Determination Theory

As previously discussed above, SDT asserts that if one can view one's goals in terms of "future intrinsic goals" then the likelihood of success will increase. Additionally, SDT asserts
that individuals have a need for autonomy (having a sense of choice). The Year 1 survey includes several questions about the students’ study choice in general and their certainty of that choice, as well as the students’ perception of their future career by following this particular study programme. Specifically, there is a set of questions focused on academic freedom. The idea behind this set of questions is to inquire about students’ sense of autonomy and control in their academic success.

To summarize the Year 1 survey, several of the new theoretical insights gained from following this doctorate programme have been used to design a non-anonymous survey. Three pilots have already been implemented containing more than 1,000 first-year students. This is a great chance to test many of the concepts generally found in the international attrition literature in a Dutch higher educational context, coupled with actual academic results.

6.8 Limitations of the Study

6.8.1 Directly Related to the Study

This study is limited to undergraduate students studying in Dutch higher vocational education. In 2008, Avans did not offer any graduate programmes, thus limiting this study to undergraduate students. All faculties were represented and the gender distribution in this study (57% male, 43% female), reflects the general population well (56% male, 44% female). However, the response rate was somewhat low: 24%. Another limitation to this study was that it was not a longitudinal study. While comparisons were made between study years, they were not the same students. It might be argued that some of the conclusions might be different
regarding differences among study years due to the fact that these were two different populations.

Also each student had the opportunity to answer the engagement question twice. The data from the second answers were not used in this study due to time constraints and the scope of the study. Time constraints are generally not a proper excuse in scientific inquiry; however, since the dataset contained over 5,000 one-word answers and an equal amount of short answers (all of which needed to be analysed and coded) it was not possible in the time frame of the EdD programme to add an additional 10,000 qualitative answers to the data set for analysis. All the same, in future research, the comparison of the first reported engagement triggers and those in the second report might prove to add additional insight on this topic.

6.9 Future Research Directions

Additionally, there might be a large psychological gap between being triggered for engagement and actually engaging in that activity. The scope of this research was such that this aspect is not investigated. Important questions not covered by this research are explained below.

"If a student is triggered to engage in their studies, do they actually engage in their studies?"

Future research needs to investigate the relation between the potentiating force (the trigger) and whether or not it causes the student to remain in a potential state or elicit actual kinetic motion (behaviour) in the form of mental or physical effort in students.
"Is one engagement trigger enough to elicit mental or physical effort in students or do students need or desire more triggers?"

Future research also needs to investigate whether the utilization of a single dominant engagement trigger in a student population is sufficient or whether student engagement effectively increases when more triggers are used.

"How malleable are engagement types and triggers"

Future research also needs to investigate whether there are interactional effects between the student and teaching staff, the material subject, assessment procedures or the setting of the course that might act as a catalyst in students adopting new engagement triggers. For example, differences were found among the engagement triggers in different study years: is this due only to the students' progression through higher education or are there other underlying factors that can explain this change?

"How do students with different engagement types and triggers perform?"

To broaden this study in the future, access to student grade results could offer insight to how each type or trigger performs within the various faculties and across study years. For example, do students with a certain engagement trigger outperform students with other triggers?

6.9.1 Indirectly Related to the Study

There are many issues that have been raised in this dissertation that, while not directly related to this research project, do form and influence the discussion surrounding student departure
and engagement. Some of these topics need to be discussed in relation to possible future research.

"How far has the notion of engagement evolved as an educational concept and where does it need to go?"

As outlined in this dissertation, the notion of engagement has certainly evolved throughout the years. However, the notion of engagement still needs to be augmented in at least two ways thus allowing for 1) differences in study years and 2) variant profiles of students from different faculties. The assertion here is that reasons for engagement change throughout the study years. If this notion is not taken into consideration in the discussion around engagement, then pedagogical and institutional interventions aimed at increasing student engagement and retention specifically for Year 1 students might be less effective or even counterproductive. In other words, differentiating interventions based on the evidence that Year 1 and upper-level students do differ in their reasons for engagement will allow for the best chance of success since the most appropriate choice of types and triggers will be employed.

The second element that needs to be added to the notion of engagement is the variant profiles of students from different faculties. Similar to the argument concerning the augmentation due to study year differences, the notion that reasons for engagement do differ from faculty to faculty also needs to be an element in deciding the most appropriate pedagogical and institutional interventions aimed at increasing student engagement and retention. Interventions based upon a general idea of engagement might not be wholly applicable to specific students from differing faculties. For example, fine art students report higher levels of teacher and
support engagement. Obviously, in that context, the role of the teacher should ultimately be utilized. However, for financial management students, their triggers lie elsewhere. The effect of enhancing the role of teachers in that context is unknown. However, it could be argued that by utilizing a less relevant trigger, it might only have an effect of a small part of that population.

"Can Bourdieu's notion of social capital add more insight into student departure, and if so then how?"

The notion that the social world of a student can have an effect on the academic success has been discussed above. Generally, the literature on social capital investigates non-traditional students; however, I feel that the notion of social world or social capital can add an additional perspective for all students. It could be argued that in societies that are highly aggregated and have strong lines of demarcation, and thus a strong power structure between classes, that class – as a student success variable – could be a strong enough to be used for the prediction of academic success. The question is, how would class function in more egalitarian societies. It may be more prudent to explore certain characteristics of students' social world in terms of educational level and the appreciation of education. Way beyond the scope of the dissertation, but certainly worth mentioning, is the role of ethnicity. While I have not extensively explored the literature on this subject, students' coming from non-traditional ethnic backgrounds, do face challenges in higher education. However, this cannot be solely or perhaps in any part due to the fact that they belong to a certain ethnic background. Nevertheless, I do believe if the social capital of these students was investigated, that there might be other patterns revealed in that data other than a membership in a non-traditional ethic group. Additionally, patterns in the
data coming from traditional students who are not successful in higher education might also be revealed that are similar to non-traditional students in terms of social capital.

"Can Durkheim's theory of suicide add more insight into student departure, and if so then how?"

As noted above, the work of Tinto has greatly built upon the notion of integration stemming from Durkheim's theory of suicide. Central to Tinto's work is students' inability to integrate and thus drop out (commit suicide). This theoretical framework is based on Durkheim's notion of egoistic suicide. However, egoistic suicide is just one the four types of suicides outlined by Durkheim. Two of the other three, fatalistic and anomie, can add new insights to the discussion surrounding student drop-out. Specifically focusing on minority students, students with disabilities, and students having non-traditional previous education (credit for prior learning or non-university preparatory secondary education), greater insight can be gained by looking at their, generally higher, drop-out rates in terms Durkheim's notion of social regulation. It is quite possible that minority students may encounter difficulties in integration, but this might be more due to regulations experienced as overbearing or capricious, and not due to an imbalance in individualism. This nuance is not found in Tinto's work and can add a significantly new perspective on these students' inability to integrate. Also, the transition to university life is equally challenging for students coming from secondary education settings where there is less freedom in regards to class attendance or homework requirements. A perceived lack of rules (anomie) could hinder students in their integration. For example, it would be difficult to try and become part of a community whose rules are difficult to see.
Obviously, this perception is from the perspective of the new aspirant; however, it is their perception of the social situation that plays a role in their attempts to integrate.
7 FINAL THOUGHTS

All attempts have been made to present this dissertation in a coherent manner. At the first residential weekend, many former EdD students continually repeated the notion that the EdD, and especially the dissertation, is a story: one of your work and the process in achieving this degree. It must be stated that the transition from writing the mandatory periodic reports to actually sitting down and starting to write a dissertation was for me monumental. This could be due to my personal writing style and focus on practicing the art of academic journal article writing. I used a few of these progress reports to explore how to construct an article. This was a useful undertaking, but it led to the fact that, when starting to write the dissertation, I then needed to shift my style and aim for writing. This shift was difficult. Hopefully, the result now is a more coherent story that is easier to read, while still having the satisfaction that all my theoretical bases have been covered.

There are sections in this dissertation that are highly theoretical in comparison to others. While these sections might seem a bit overdone in terms of depth and scope for an EdD dissertation, it was the goal of the researcher to fully investigate theses topics. Not only as an academic exercise, but for my own development as a researcher and, more specifically, a researcher focused on student drop-out or, better stated, student success. Also, as stated in the above section on future research, most of these theoretical explorations have given me a great insight into the totality of the problem when trying to combat student drop-out and many future research areas that are fully relevant to the current discourse surround this topic.
Since I work at a university of applied sciences instead of a traditional scientific university, the emphasis of my work must always be rooted in the practice of education. The one and only condition that my manager had was that the research question must be developed from a real-life issue at the university, thus the topic must be relevant for Avans University. Participating in the EdD programme allowed me to have the time and guidance to take this real-life problem (50% of our first year students depart in their first year) and delve into the literature for possible answers. Then out from the literature, I was able to bring recommendations to our university, thus completing a full cycle: from practice to theory and then from theory to practice.

However, this cycle does come with its difficulties. The first difficulty to encounter is the applicability of a study’s results to one’s context. This poses significant issues for Dutch researchers since most of literature concerning student drop-out is based on the first-year experience at an American residential university. However, there are variants now being explored such as applying Tinto’s model to non-residential universities, such as the UK Open University. That being said, students’ experiences within Dutch higher education are very different. For example, the overwhelming majority of universities are non-residential. These students do move to the city where their university is, but the “campus” experience differs greatly from that of students studying on an American campus. It could be argued that in such students social integration plays a very limited role in their decision to persist or drop-out. There are many situations where the literature offers a new and exciting insight, but the challenge is how to translate that idea into a new context? Another specific example from the Dutch context is that students need to earn their first-year certificate within the first two years.
of entering university. This poses some exclusive issues for students in Dutch higher education.

In the attempt to tackle some of these issues during the EdD programme, I was faced with many crucial methodological decisions as well. Not contained in this dissertation is the work I completed in the first year of the EdD programme. I began with another topic and was well on the way in that research when the current research project presented an opportunity I did not want to miss. I felt that the current topic was more relevant and would certainly assist my university. However, in that first year, there were several existing questionnaires to be used in that study that needed to be translated and verified in a Dutch context. There was little previously published research with these instruments in a Dutch setting. This meant a proper, academically sound process of translation and verification of the construct of the instrument. These methodological choices and process, while not presented in this dissertation, greatly helped in my development as a researcher.

As with any research, the current research also included some methodological choices. In the above sections there are clear justifications for those choices. However, what needs to be noted is the unique combination of methods employed for this research: a model was developed from quantitative data that was transformed from qualitative data. Implicit in this process is both a strong understanding on how to analyse qualitative data and a high knowledge of statistical analysis for acting on and processing quantitative data. Also equally of interest is the fact that the quantitative data needed to be analysed with both parametric and non-parametric tests since contained in the dataset were combinations of different measures.
This research was strongly rooted in the current literature concerning student drop-out. But it adds a new perspective since it explores the motivations for engagement and not solely the behaviours of engagement. In this aspect, this research is highly complementary to the current discourse. The main contribution of this study is the insight gained into students’ reasoning as to why they engage. This was demonstrated by the identification of the triggers that students identified as to why they engage in their studies and culminates into a model of student engagement. With the 10 engagement triggers and the 4 engagement types, educators and policy makers now have a tool to further their understanding of student engagement, aid in increasing student engagement, and assist in initiatives aiming to increase student persistence thus decreasing student departure. Equally important is also the demonstrated differences between Year 1 and upper-level students’ engagement. Since the majority of drop-out occurs within the first year of study, educators can now choose more appropriate engagement initiatives based on the year of study as well as the students’ faculty.

In judging the actual effect of this research on my university, one must take into account two factors: “Has the discourse within the university changed as a result of this research?” and “Has behaviour changed within the university in reference to preventing student drop-out?” The discussion within our university concerning drop-out has certainly changed. This can be evidenced by the focus of student retention initiatives centring now on increasing student engagement rather than demanding better performance. Two such examples are 1) a longitudinal pilot study tracking students’ engagement (in terms of engagement type and trigger) and academic performance and 2) workshops for teaching staff on engagement. Behaviour has also changed within our university. For example, taking the engagement
triggers into account one programme has redesigned the first year’s curriculum to improve student engagement. Pedagogical interventions such as more frequent testing and reformulating learning goals so that they are both clear about the content and level as well as better communicating these goals to students. These initiatives will also be monitored by end-of-semester review questionnaires focusing on student effort during that semester such as the frequency of certain engagement activities (e.g. visits to the library and hours of studying) and the distribution of study hours throughout the semester. Interestingly, some of the research performed in the first year of the EdD programme (mentioned above) that does not appear in this dissertation will also be used in the monitoring of these initiatives. Research such as students’ experiences within a course and how students approach their studies will be found in these questionnaires.

In judging the actual effect of this research on the academic community, one must also take into account two factors: “What does the academic community know of your work?” and “How has the academic community reacted to your work?” I have had the opportunity to present my research in numerous venues ranging small lectures, workshops and national and international conference presentations. Some examples are: lectures for the national committee for the determination of domain competencies for economic studies, lectures at teacher training activities at several Dutch institutes of higher education, presentation at the national 2011 research conference (ORD2011) and presentation at an international conference on student retention. Most of the activities listed above have come from the enthusiasm of my academic colleagues who have either read some of my work or have attended a lecture. For example, at the national research conference, one of the attendees of my presentation asked me
to submit an article for one of the Dutch research journals. He is on the editorial board and found my research both interesting as well as highly relevant for the current Dutch higher educational context.

What I have striven for in undertaking this research study and writing this dissertation is to develop myself into a critically reflective educational researcher. I have always considered myself a critically reflective educational practitioner, but the competencies gained by following this research programme have allowed me to make a step towards a critically reflective researcher. The success of this step can be demonstrated by many elements contained within this dissertation. One of the strongest elements in judging that success could be the scope and depth of the literature addressed in this dissertation. The desire to fully explore the theoretical underpinnings of the literature leads to an expansive literature review of engagement and many other topics. This demanded studying primary sources such as the educational philosophy of Dewey, Tyler, Astin and Tinto and then fully examining and scrutinizing Durkheim’s work. This was not limited to his work on suicide, but covered many of his works in order to best understand his notions on suicide in the context that he places them into and then to combine them with a good understanding of his philosophical framework.

The success of this step from a critically reflective educational practitioner to a critically reflective educational researcher should finally be judged in terms of the research’s contribution to the theory and practice of education. By acquainting myself with the theory concerning engagement and striving to choose each move in its accordance, I believe that the
findings and conclusions contained in this dissertation can add to and promote the discourse surrounding engagement. This research's contribution to the practice of education is demonstrated at my university by the alterations in both the manner in which student drop-out is discussed and actual changes in curriculum and teacher behaviour. The enthusiasm and interest in this research from other educational institutions should be seen as positive appraisal from the surrounding academic community.
8 References


# APPENDICES

## 9.1 Student Satisfaction Survey 2008-2009

![Student Satisfaction Survey 2008-2009](image-url)

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<th>Evaluation</th>
<th>Studententevredenheidsonderzoek, Student Satisfaction Survey 2009 Basis</th>
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<td>OSE</td>
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<td>LIC</td>
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Correction: Please follow the examples shown on the left hand side to help optimize the reading results.

### 1. Persoonlijke gegevens

#### Personal data

1. **Are you male or female?**
   - Male
   - Female

2. **Which study programme do you take?**
   - Hvor
   - Other

3. **In which year did you start your present study programme?**
   - 2002
   - 2003
   - 2004
   - 2005
   - 2006
   - 2007
   - 2008
   - 2009

4. **What is your last completed preliminary education?**
   - havo
   - vwo
   - vwo toel/egs examen
   - vwo eng
   - other
   - mbo

### 2. Algemeen

#### General

<table>
<thead>
<tr>
<th>Question</th>
<th>Rating Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am generally satisfied with the programme</td>
<td>strongly disagree, strongly agree, not applicable</td>
</tr>
<tr>
<td>I am satisfied with the contents of the programme</td>
<td>strongly disagree, strongly agree, not applicable</td>
</tr>
<tr>
<td>The programme is sufficiently focused on vocational orientation</td>
<td>strongly disagree, strongly agree, not applicable</td>
</tr>
<tr>
<td>I am satisfied with my lecturers</td>
<td>strongly disagree, strongly agree, not applicable</td>
</tr>
<tr>
<td>I am satisfied with the testing and assessment methods</td>
<td>strongly disagree, strongly agree, not applicable</td>
</tr>
<tr>
<td>I receive sufficient information from the institute</td>
<td>strongly disagree, strongly agree, not applicable</td>
</tr>
</tbody>
</table>

---

195
### 2. Algemeen

#### General [Continue]

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Scale</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7</td>
<td>Ik ben tevreden over de roosters, I am satisfied with the timetables</td>
<td>zeer mee</td>
<td></td>
</tr>
<tr>
<td>2.8</td>
<td>Ik word voldoende betrokken bij de verbetering van de opleiding, I am being involved sufficiently in the improvement of the programme</td>
<td>zeer mee</td>
<td></td>
</tr>
<tr>
<td>2.9</td>
<td>Ik ben tevreden over de studiefaciliteiten, I am satisfied with the study facilities</td>
<td>zeer mee</td>
<td></td>
</tr>
<tr>
<td>2.10</td>
<td>Ik ben tevreden over de overige faciliteiten, I am satisfied with the other facilities</td>
<td>zeer mee</td>
<td></td>
</tr>
<tr>
<td>2.11</td>
<td>Ik ben tevreden over de studielast, I am satisfied with the study load</td>
<td>zeer mee</td>
<td></td>
</tr>
</tbody>
</table>

### 3. Inhoud opleiding

#### Programme contents

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Scale</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>De opleiding is van voldoende niveau, The programme is of a sufficiently high standard</td>
<td>zeer mee</td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>De opleiding sluit voldoende aan bij actuele ontwikkelingen, The programme adequately takes into account the latest developments</td>
<td>zeer mee</td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>Er is voldoende samenhang in het onderwerp programma, The curriculum is sufficiently coherent</td>
<td>zeer mee</td>
<td></td>
</tr>
<tr>
<td>3.4</td>
<td>De opleiding sluit voldoende aan bij mijn vooropleiding, The programme adequately links up to my previous education</td>
<td>zeer mee</td>
<td></td>
</tr>
<tr>
<td>3.5</td>
<td>De opleiding biedt voldoende afwisseling in werkvormen, The methods deployed are sufficiently varied</td>
<td>zeer mee</td>
<td></td>
</tr>
<tr>
<td>3.6</td>
<td>Het studiemateriaal is van voldoende inhoudelijke kwaliteit, The study material is of a sufficiently high substantive quality</td>
<td>zeer mee</td>
<td></td>
</tr>
<tr>
<td>3.7</td>
<td>De studie loopbaanbegeleiding ondersteunt mij voldoende in mijn studie, The educational career counsellors provide me with sufficient support in my studies</td>
<td>zeer mee</td>
<td></td>
</tr>
</tbody>
</table>
3. Inhoud opleiding
Programme contents [Continue]

| 3.8 | Het programma biedt mij voldoende keuzemogelijkheden. The programme leaves sufficient room for choice. | zeer mee oneens strongly disagree | zeer mee eens strongly agree | nvt not applicable |

4. Beroepsorientatie
Career orientation

| 4.1 | De opleiding bereikt mij voldoende voor op de beroepspraktijk. The programme adequately prepares me for professional practice. | zeer mee oneens strongly disagree | zeer mee eens strongly agree | nvt not applicable |
| 4.2 | ik heb tijdens de opleiding voldoende contact met de beroepspraktijk. The programme brings me in sufficient contact with professional practice. | zeer mee oneens strongly disagree | zeer mee eens strongly agree | nvt not applicable |
| 4.3 | De opleiding is voldoende praktdgericht. The programme is sufficiently practice-oriented. | zeer mee oneens strongly disagree | zeer mee eens strongly agree | nvt not applicable |
| 4.4 | Stages sluiten voldoende aan bij het overige onderwijs. The placements adequately link up to the rest of the programme. | zeer mee oneens strongly disagree | zeer mee eens strongly agree | nvt not applicable |

5. Docenten
Lecturers

| 5.1 | Mijn docenten zijn voldoende op de hoogte van de beroepspraktijk. My lecturers are sufficiently informed of professional practice. | zeer mee oneens strongly disagree | zeer mee eens strongly agree | nvt not applicable |
| 5.2 | Mijn docenten zijn inhoudelijk voldoende deskundig. My lecturers have demonstrated sufficient substantive knowledge. | zeer mee oneens strongly disagree | zeer mee eens strongly agree | nvt not applicable |
| 5.3 | Mijn docenten hebben voldoende didactische kwaliteiten. My lecturers have sufficient didactic qualities. | zeer mee oneens strongly disagree | zeer mee eens strongly agree | nvt not applicable |
| 5.4 | Mijn docenten zijn in het algemeen voldoende bereikbaar. My lecturers are generally sufficiently available. | zeer mee oneens strongly disagree | zeer mee eens strongly agree | nvt not applicable |

6. Toetsen en beoordelingen
Tests and assessments

| 6.1 | Vooraf wordt duidelijk aangegeven waarop ik beoordeeld word. I am informed clearly beforehand about the relevant assessment criteria. | zeer mee oneens strongly disagree | zeer mee eens strongly agree | nvt not applicable |
### 6. Toetsen en beoordelen

**Tests and assessments** (Continue)

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.2 De toetsing sluit voldoende aan op de doelstellingen van het onderwijs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The exams adequately address the contents of the degree programme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.3 Mijn resultaten worden tijdig bekend gemaakt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My results are published on time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 7. Informatie

**Information**

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 Ik word voldoende geïnformeerd over de inhoud van de opleiding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am kept adequately informed about the contents of the programme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.2 Ik word voldoende geïnformeerd over regels en procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am kept adequately informed about the rules and procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.3 Ik word voldoende geïnformeerd over mijn studievoortgang</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am kept adequately informed about my academic progress</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 8. Rooster

**Timetable**

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1 Het lesrooster wordt tijdig bekend gemaakt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The timetable is published on time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.2 Het rooster voor de toetsing wordt tijdig bekend gemaakt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The exam timetable is published on time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3 Roosterwijzigingen worden tijdig bekend gemaakt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timetable changes are announced on time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.4 Het lesrooster maakt het mij mogelijk mijn tijd efficient te besteden</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The timetable enables me to spend my time efficiently</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 9. Kwaliteitszorg

**Quality care**

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1 Er vinden voldoende onderwijsaanspraken onder studenten plaats</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student evaluations are carried out with sufficient frequency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Kwaliteitszorg</td>
<td>Care quality [Continued]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.2 Ik word voldoende geïnformeerd over de uitkomsten van onderwijs-evaluaties</td>
<td>zeer mee oneens strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.3 De opleiding maakt voldoende gebruik van de uitkomsten van onderwijs-evaluaties The results of student evaluations are sufficiently integrated in the programme</td>
<td>zeer mee oneens strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.4 De opleiding reageert adequaat op klachten en problemen The school adequately handles and responds to complaints and problems</td>
<td>zeer mee oneens strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. Studiefaciliteiten</th>
<th>Study facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1 Ik ben tevreden over de bibliotheek/mediatheek I am satisfied with the library/multimedia centre</td>
<td>zeer mee oneens strongly disagree</td>
</tr>
<tr>
<td>10.2 Ik ben tevreden over de onderwijsruimten I am satisfied with the classrooms</td>
<td>zeer mee oneens strongly disagree</td>
</tr>
<tr>
<td>10.3 Ik ben tevreden over de ICT-voorzieningen I am satisfied with the ICT facilities</td>
<td>zeer mee oneens strongly disagree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. Overige faciliteiten</th>
<th>Other facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.1 Ik ben tevreden over de informatielab I am satisfied with the information desk</td>
<td>zeer mee oneens strongly disagree</td>
</tr>
<tr>
<td>11.2 Ik ben tevreden over de studentenadministratie I am satisfied with the student administration desk</td>
<td>zeer mee oneens strongly disagree</td>
</tr>
<tr>
<td>11.3 Ik ben tevreden over de restauratieve voorzieningen I am satisfied with the catering facilities</td>
<td>zeer mee oneens strongly disagree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12. Studielast</th>
<th>Study load</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1 De studielast is voldoende gespreid over het jaar The study load is spread evenly over the year</td>
<td>zeer mee oneens strongly disagree</td>
</tr>
</tbody>
</table>
12. Studielast

Study load [Continue]

12.2 De opleiding is te doen in de tijd die ervoor staat.

The programme takes up an appropriate amount of time.

- zeer mee eens
- onens
- strongly disagree
- strongly agree
- niet
- not applicable

13. Uitdagend, motiverend en aantrakkelijk onderwijs

Challenging, motivating and attractive education

Momenteel is in het Hoger Beroeps Onderwijs veel aandacht voor:
- Brede en structurele verhoging van de kwaliteit van het HBO onderwijs;
- Proberen om op enkele terreinen uitzonderlijk goed te worden (excelleren);
- Voorkomen of opvangen van studievertraging;
- Proberen te voorkomen dat iemand zonder diploma de hogeschool verlaat.

Mede daarom streeft Avans naar aantrekkelijke, motiverende en uitdagende leerprocessen. De vraag is nu welke leerprocessen dat zijn.

In Higher Vocational Education a lot of attention is being paid at the moment to:
- a comprehensive and structural improvement of the quality of Higher Vocational Education;
- the strive for excellence in certain areas;
- prevention or reduction of study delay;
- prevention or reduction of a high drop-out rate.

Also because of the things mentioned above, Avans Hogeschool strives to realize attractive, motivating and challenging learning processes.

The question is what learning processes these are.

Daarom de volgende vraag:

Wanneer of waardoor (*) span jij je echt extra in voor je opleiding? Waardoor of wanneer krijg je er echt lol in? Zat je een tandje bij?

(Vermeld in het antwoordblokje eerst één woord, en licht dat heel kort toe in het daarop volgende blokje)

(*) 'Wanneer of waardoor' kan van alles zijn: iets of iemand in je studie of daarbuiten, je eigen wensen, perspectieven

Hence the following question:

When or because of what (*) do you put in an extra effort for your studies? What makes studying more fun? When do you enjoy studying? What makes you work harder?

(First write one word in the answer block, and then briefly explain this word in the next block)

(*) 'When or because of what' could be anything: something or someone in your studies or outside you studies; your own wishes, perspectives.

13.1 1A (Max 25 characters)

Eén woord

One word

13.2 Korte toelichting 1A (Max 60 characters)

Short explanation 1A

13.3 1B (Max 25 characters)

Eén woord

One word
### 13. Uitdagend, motiverend en aantrekkelijk onderwijs

**Korte toelichting 1B (Max 60 characters)**

Short explanation 1B

---

**Korte toelichting 1C (Max 26 characters)**

Een woord

One word

---

### 14. Aanvullende Avansvragen

**Additional questions about Avans**

14.1 Hoeveel uren besteed je in een gemiddelde week (middel stages, toelaweken, lesweken etc uit) aan je studie?

How many hours do you spend on your studies per week on average? (Average all your study activities like work placements, exam weeks, class weeks.)

---

<table>
<thead>
<tr>
<th>14.2 Geef uugaf het propedeuseprogramma je een goed beeld van het vervolg van je opleiding? Does the study programme in Year 1 give you a good idea of the rest of the study programme?</th>
</tr>
</thead>
<tbody>
<tr>
<td>geen zeker niet</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>14.3 Stimuleer de lessen en andere werkzomen je voldoende tot zelfstandig en soepel studeren? Do the teaching methods and classroom activities stimulate independent and active study?</th>
</tr>
</thead>
<tbody>
<tr>
<td>geen zeker niet</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>14.4 Hoe beoordeel je het aantal wekelijkse contacturen? (Contacturen zijn momenten waarop docenten en studenten direct contact met elkaar hebben) What do you think of the number of weekly contact moments (meaning direct contact between teacher and student(s), such as lectures and training sessions)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>te weinig</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>14.5 Geven je docenten/tutors je voldoende en bruikbare begeleiding bij de aanpak van je studie (het leerproces)? Do your teachers / tutors give you sufficient and useful counselling with regard to your study methods (your learning process)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>geen zeker niet</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>14.6 Vind je je docenten over het algemeen inspirerend? Do you think your teachers are inspiring in general?</th>
</tr>
</thead>
<tbody>
<tr>
<td>geen zeker niet</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>14.7 Ben je tevreden over de inzage- en besprekingmogelijkheden na afloop van een toetsperiode? Are you satisfied with the opportunities for inspecting and getting feedback on your exams after each examination period?</th>
</tr>
</thead>
<tbody>
<tr>
<td>geen zeker niet</td>
</tr>
</tbody>
</table>
14.8 Ben je tevreden over de cijferoverzichten van Osiris? Are you satisfied with the grades overviews of Osiris?

Options: no, absolutely not □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ instructions do not apply...
### 14. Aanvullende Avansvragen

**Additional questions about Avans** [Continue]

1. Ik geef de voorzieningen van Avans Hogeschool het rapportcijfer.
   The mark which I want to give the facilities at Avans Hogeschool is
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - 9
   - 10

2. Ik geef Avans als geheel het rapportcijfer.
   The overall mark which I want to give Avans Hogeschool is
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - 9
   - 10

3. Als ik opnieuw zou mogen kiezen, zou je dan kiezen voor:
   - dezelfde opleiding aan deze hogeschool
   - dezelfde opleiding aan een andere hogeschool
   - andere opleiding aan een andere hogeschool
   - geen hbo-opleiding
   - geen andere opleiding

#### 15. Vragen over XpIora

**Questions about XpIora**

1. Hoe vaak bezoek je XpIora gemiddeld?
   How many days a week do you visit XpIora?
   - nooit
   - 1 x per week
   - on average once a week

2. Hoeveel tijd breng je per dag door in XpIora?
   How much time a day do you spend in XpIora?
   - nul uur
   - zero hour
   - 1 & 2 uur
   - between 1 and 2 hours
   - meer dan 4 uur
   - more than 4 hours
15. Vragen over Xplora

15.3 Als ik in Xplora kom dan is dat meestal (kies een van de vijf mogelijkheden)

When I visit Xplora, this is usually (choose one of the five possibilities)

☐ ik kom nooit in Xplora
I never visit Xplora

☐ omdat ik er expliciet toe aangezet word door de opleiding en/of docent
because my teacher and/or school explicitly urges me to do so

☐ omdat ik er zelf voor kies (om de groep waarin ik tijdelijk werk)
because I choose to do so myself (or because the group I am working in chooses to go there)

☐ NIET omdat ik er zelf voor kies (of de groep waarin ik tijdelijk werk)
BUT NOT because I choose to do so myself (or because the group I am working in chooses to go there)

☐ NIET omdat ik er expliciet toe aangezet word door de opleiding en/of docent MAAR OOK
NOT because my teacher and/or school explicitly urges me to do so AND ALSO

☐ omdat ik er zelf voor kies (of de groep waarin ik tijdelijk werk)
because I choose to do so myself (or because the group I am working in chooses to go there)
15. Vragen over Xplora

Questions about Xplora

[Continue]

15.4 Ik kom naar Xplora om (SVP aanvinken wat van toepassing is)
I go to Xplora. (Please tick the answers that apply to you)

- ik kom nooit in Xplora
- ik kom nooit in Xplora

- online informatie te raadplegen over het gebruik van Xplora en de aanwezige faciliteiten
to consult online information on using Xplora and its facilities

- digitale database's te raadplegen
to consult digital databases

- de multimedia studio te gebruiken
- to use the multimedia studio

- te studeren: individueel (zelfstudie)
to study: individually

- boeken te lenen of in te leveren
to borrow books or return them

- te studeren: in een groep (groepswerk)
to study: in a group

- gedrukte boeken of tijdschriften te lezen
to read printed books or magazines

- met een Xplora PC te werken (en niet je eigen laptop)
to work on an Xplora PC (so not on your own laptop)

- een docent te spreken
to speak with a teacher

- een vraag te stellen aan Xplora/ multimedia medewerkers
to ask a question of Xplora/ multimedia workers

16. Vragen over Blackboard

Questions about Blackboard

16.1 Hoeveel tijd breng je op een gemiddelde schooldag door in Blackboard?
How many hours do you spend in Blackboard on an average school day?

- nul uur zero hours

- 1 & 2 uur between one and two hours

- meer dan 4 uur more than four hours

16.2 De beschikbaarheid van Blackboard is goed
The availability of Blackboard is good

- geheel mee
totally agree

- geen ene
totally disagree

16.3 Blackboard is eenvoudig te bedienen
Blackboard is easy to use

- geheel mee
totally agree

- geen ene
totally disagree

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16.4 Wat gebruik je in Blackboard? (meerdere antwoorden zijn mogelijk)
What do you use in Blackboard? (more than one answer is possible)
☐ ik gebruik nooit Blackboard
I never use Blackboard
☐ Communities
Communities
☐ Opening pagina met informatie over opleiding en academie
Opening page with information about study programme and faculty
☐ De toegang naar Punt via de link/knop op de inlogpagina Blackboard
Access to Punt via the link/button on the login page of Blackboard
☐ anders namelijk: Zie vraag volgende vraag
Other, namely: see next question

16.5 anders namelijk (Max 60 characters)
Other, namely:

16.6 Waarvoor gebruik je Blackboard? (meerdere antwoorden zijn mogelijk)
For what purpose do you use Blackboard? (more than one answer is possible)
☐ ik gebruik nooit Blackboard
I never use Blackboard
☐ Raadplegen van informatie
Seeking information
☐ Communicatie (met medestudenten en docenten)
Communication (with fellow students and teachers)
☐ Delen van documenten (met medestudenten en docenten)
Sharing of documents (with fellow students and teachers)
☐ Werken aan en delen van mijn ePortfolio(s)
Working on and sharing my ePortfolio(s)
☐ Lezen van en/of leveren bijdrage aan ePortfolio van medestudenten
Reading and/or contributing to the ePortfolio of fellow students
☐ Afspraken maken l.v.m. groepsaanmeldingen bij opdrachten, projecten en
Making appointments for group activities for assignments, projects, etc.
☐ Maken naar groepen
Emailing to groups (fellow students and teachers)
☐ Afspraken maken l.v.m. groepsaanmeldingen bij opdrachten, projecten en
Making appointments for group activities for assignments, projects, etc.
☐ Raadplegen ‘oude’ courses l.v.m. herkomingen
Consulting ‘old’ courses with respect to reit exams
☐ Raadplegen van informatie
Seeking information
☐ Seminieringen (in projectkantoren)
Working together (in project offices)
☐ Intervenien van opdrachten
Handling in assignments
☐ Bewaren van documenten (zijn ook foto’s, video’s e.d.) in my content
Saving documents (can also be photos, videos etc.) in my content
☐ Bewaren van documenten (zijn ook foto’s, video’s e.d.) in my content
Saving documents (can also be photos, videos etc.) in my content
☐ Bewaren van documenten (zijn ook foto’s, video’s e.d.) in my content
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Saving documents (can also be photos, videos etc.) in my content
### 16. Vragen over Blackboard

**Questions about Blackboard**  [Continue]

| 16.7 Blackboard zou voor informatieverstrekking over studiezaken door mijn academie intensiever gebruikt moeten worden. Blackboard should be used more intensively by my faculty for information supply regarding study affairs. |
|---|---|---|---|---|
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

| 16.8 Op welke manier log je doorgaans in in Blackboard? (Een mogelijkheid aanvinken) How do you usually log in to Blackboard? (Only one answer can be ticked) |
|---|---|---|
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

### 17. Vragen over communicatie

**Questions about communication**

| 17.1 1 (Max 35 characters) Welke media van Avans ken je? (vijf mogelijkheden) What Avans media do you know? (five possibilities) |
|---|---|
|  |  |
|  |  |

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| 17.6 Lees je de papieren hogeschoolkrant 'Punt'? Do you read the hard copy of the Avans university paper 'Punt'? |
|---|---|
| Ja | Nee |

---

**SAMPLE**

---

27.02.2008, Page 13/15
17. Vragen over communicatie

17.7 Zo ja, hoe vaak per jaar?

If you do, how often per year?

17.8 Neem je de papieren Punt mee naar huis?

Do you take the hard copy of Punt home?

- ja
- nee

17.9 Laat je Punt weleens aan anderen zien?

Do you ever show Punt to others?

- ja
- nee

17.10Welk rapportcijfer geef je de papieren Punt?

What mark on a scale of 1-10 would you give the hard copy of Punt?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

17.11Wat vond je het leukeste artikel in de afgelopen tijd? (Max 40 characters)

What article did you like best of the last few editions of Punt?

17.12Lees je de digitale Punt?

Do you read the digital version of Punt?

- ja
- nee

17.13Zo ja, hoe vaak per maand?

If you do, how often per month?

17.14Welk rapportcijfer geef je de digitale Punt?

What mark on a scale of 1-10 would you give the digital Punt?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

17.15Zijn de artikelen in Punt aanleiding tot discussie tussen studenten?

Do the articles in the university paper lead to a discussion among students?

- ja
- nee

17.16Hoeveel procent van de studenten leest de papieren Punt naar jouw schatting?

According to your estimate, what is the percentage of students that reads the hard copy Punt

18. Wilt u een i-Phone?

Wilt u een i-Phone?

- ja
- nee

---

Sample
16. Win een I-Phone
Win a I-Phone [Continue]

16.1 Onder de deelnemers aan deze enquête worden meerdere prepaid I-Phones verloot.
    We are raffling off several prepaid I-Phones to the students who have completed the questionnaire. If you want to
    have a chance of winning one of them, please fill in your student ID (on your Avansa chipcard). Since the
    questionnaire is anonymous, the Student ID will not be used to trace the answers.

16.2 Vragen en/of opmerkingen (Max 80 characters)
    Questions/remarks

Je bent aan het einde van de vragenlijst.
Hartelijk dank voor het invullen!
This is the end of the questionnaire.
Thank you.