

# A structural model of first-year students' strengths use, deficit improvement, fit with study course and engagement

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## COMMENTS

The reader is reminded of the following:

- The editorial, style as well as the references referred to in this mini-dissertation, follow the format prescribed by the Publication Manual (6<sup>th</sup> edition) of the American Psychological Association (APA). This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University (Potchefstroom) to use the APA style in all scientific documents as from January 1999.
- The mini-dissertation is submitted in the form of a research article. The editorial style specified by the South African Journal of Industrial Psychology (which agrees largely with the APA style) is used, but the APA guidelines were followed in constructing the tables.

## DECLARATION

I, Gabrielle van Niekerk, hereby declare that this dissertation titled “**A structural model of first-year students' strengths use, deficit improvement, fit with study course and engagement**” is my own work. The views and opinions expressed in this research study are my own and relevant literature references as shown in the reference list.

Furthermore, I declare that the contents of this research study will not be submitted for any other qualification at any other tertiary institution.

A handwritten signature in black ink, appearing to read 'G. van Niekerk', with a stylized, cursive script.

GABRIELLE VAN NIEKERK

December 2014

## DECLARATION FROM THE LANGUAGE EDITOR

I hereby declare that the dissertation titled “**A structural model of first-year students' strengths use, deficit improvement, fit with study course and engagement**” by Gabrielle van Niekerk, was edited by me.

December 2014

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## Language Editor's Certificate

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## SUMMARY

### **Title:**

A structural model of first-year students' strengths use, deficit improvement, fit with study course and engagement

### **Keywords:**

Students' strengths use, students' deficit improvement, fit with study course, student engagement

Although student enrolment in South African universities has significantly increased, the retention and graduation rates remain low. One reason for the low student success is the lack of engagement in their studies. It is therefore very important for universities to determine the various predictors of student engagement. The aim of this study is to establish whether proactive behaviour towards strengths use, proactive behaviour towards deficit improvement and fit with study course have an impact on engagement. Universities need to focus on creating an environment in which students can actively use their strengths and develop their weaknesses for improved study fit and enhanced levels of engagement.

The general objective of this research study was to test a structural model of proactive behaviour towards strengths use (PBSU), proactive behaviour towards deficit improvement (PBDI), fit with study course and engagement amongst first-year students, and to test the mediating effect of study course between PBSU/PBDI and engagement. This study was conducted in order to gain more knowledge and a better understanding of the antecedents of engagement amongst first-year students in South African.

The Mplus and SPSS programmes were utilised for the statistical analysis of the data. A cross-sectional research design was used with a sample of 692 first-year students of a higher education institution in South Africa. The hypothesised model was tested by performing structural equation modelling. The bootstrapping method was used to identify possible mediating effects of fit with study course.

The results confirmed a significant positive relationship between PBDI and engagement but no direct significant relationship between PBSU and engagement (although the significant

levels were close to 0.05). The results also indicated a significant positive relationship with PBDI and engagement. PBDI was also found to be positively related to engagement. Furthermore, fit with study course fully mediated the relationship between PBSU and engagement and partially mediated the relationship between PBDI and engagement.

After conclusions for the study had been drawn recommendations for the institution, students, as well as for future research were made.

## OPSOMMING

### **Titel:**

'n Strukturele model van eerstejaarstudente se pro-aktiewe gedrag ten opsigte van hul gebruik van sterkpunte, die ontwikkeling van tekortkominge, pas met studiekursus en betrokkenheid.

### **Sleutelwoorde:**

Studente se pro-aktiewe gedrag ten opsigte van die gebruik van sterkpunte, student se pro-aktiewe gedrag ten opsigte van die ontwikkeling van tekortkominge, pas met studiekursus en betrokkenheid.

Hoewel studentegetalle van Suid-Afrikaanse universiteite aansienlik gestyg het, bly die gradueringspersentasie en behoud van gradueringskoers laag en die uitsaksyfer hoog. Een rede vir die lae vlakke van studentesukses is die gebrek aan betrokkenheid by hul studies. Dit is dus vir universiteite belangrik om die verskillende voorspellers van studente se betrokkenheid te bepaal. Die mikpunt met dié studie is om te bepaal of pro-aktiewe gedrag by die gebruik van sterkpunte, pro-aktiewe gedrag by die ontwikkeling van tekortkominge, en pas met die studiekursus impak op betrokkenheid het. Universiteite moet daarop fokus om 'n omgewing te skep waarin studente aktief gebruik van hul sterkpunte kan maak en hul tekortkominge kan ontwikkel om gepastheid by hul studies te verbeter wat tot hoër vlakke van betrokkenheid kan lei.

Die algehele doelwit van hierdie navorsing was om 'n strukturele model van studente se pro-aktiewe gedrag te bepaal ten opsigte van die gebruik van sterkpunte (PBSU), studente se pro-aktiewe gedrag ten opsigte van die ontwikkeling van tekortkominge (PBDI), pas met studiekursus en betrokkenheid te toets, asook die bemiddelende effek van pas by die studiekursus tussen PBSU / PBDI en betrokkenheid. Die studie is uitgevoer om meer kennis en beter begrip van die uitkomstes van betrokkenheid onder eerstejaarstudente in Suid-Afrika te verkry.

Die MPlus- en SPSS-programme is gebruik met die oog op statistiese analise. Dwarssneevorsingsontwerp is gebruik met 'n beskikbaarheidsteekproef van 692 studente van 'n hoër onderwysinstelling in Suid-Afrika. Die LVB model is getoets deur die uitvoering van

strukturele vergelykingsmodellering. Die Opstarten-metode is gebruik om moontlike bemiddelende effek van pas met kursus te identifiseer.

Die resultate het bevestig dat daar 'n beduidende positiewe verband is tussen studente se pro-aktiewe gedrag ten opsigte van die ontwikkeling van tekortkominge (PBDI) en betrokkenheid, maar geen beduidende verband tussen studente se pro-aktiewe gedrag ten opsigte van die gebruik van sterkpunte (PBSU) en betrokkenheid nie, hoewel die beduidende vlakke naby aan 0,05 was. Die resultate dui op 'n beduidende positiewe verhouding met PBDI en betrokkenheid; PBDI is ook positief verwant aan betrokkenheid. Die resultate het verder gedui dat pas met kursus die verhouding tussen PBSU/PBDI en betrokkenheid bemiddel. Hierdie bevinding is deur vorige navorsing ondersteun wat afkomstig is van die werk en studentekonteks.

Nadat gevolgtrekkings gemaak is, is aanbevelings vir die universiteit, studente en ook vir toekomstige navorsing gedoen.

# **CHAPTER 1**

## **INTRODUCTION**

The purpose of this mini-dissertation is to determine the relationships between proactive behaviour towards strengths use (PBSU), proactive behaviour towards deficit improvement (PBDI), fit with study course and engagement amongst first-year students in a higher education institution and to determine the mediating effect of fit with study course between PBSU/PBDI and engagement. Student engagement conceptualised according to literature and possible predictors which could influence student engagement are discussed. This study will specifically focus on students' proactive behaviour towards strength use (PBSU), students' proactive behaviour towards deficit improvement (PBDI), fit with study course and engagement.

This chapter provides the problem statement and a discussion of the research objectives. The research methodology is explained and an overview of the chapters is given.

### **1.1 PROBLEM STATEMENT**

Universities and educators in higher education are facing tremendous challenges by the government to contribute to national economic growth. One of these challenges is to encourage student success by accumulating participation in education, resulting in enhanced levels of graduating rates and entering the employment world with a positive attitude. Current results from the Department of Education indicate that South African student retention rates have decreased whilst the opposite effect in terms of dropout rates occurred (Du Plessis & Gerber, 2012). The severity of the current situation becomes even clearer when the dropout rate is interpreted against actual student numbers. A Human Science Research Council (HSCR) survey of 34 000 students indicated that 14 000 students graduated and 20 000 students dropped out of university in their first or second year of study. These results clearly indicate that the majority of students lost every year to South African educational institutions are first-year students. Several studies showed that adequate information on students' first-year experience can assist universities in being successful in the high-school-to-tertiary-transition in retaining students during their tertiary studies (Krause, Hartley, James & McInnes, 2005) and providing educational policies for academic

success (Kuh, Kinzie, Schuh, Whitt & Associates, 2005; Upcraft, Gardner & Barefoot, 1989).

Engagement has become an important topic for students in higher education institutions. Research regarding this phenomenon in students seems not only relevant but also necessary considering the fact that these young people are the future employees of South Africa (Van der Merwe, 2003). Research on student engagement was recently introduced by Schaufeli and his colleagues based on employee engagement (Schaufeli, Martínez, Pinto, Salanova & Bakker, 2002). Engagement can be measured on an individual's initiative by trying to take personal responsibility for their behaviour and to be actively involved with self-effort and positive emotion (Reeve, Jang, Carell, Jeon & Barch, 2004). Schaufeli, Salanova, González-Romà and Bakker (2002, p. 75), defines engagement as "...a positive, fulfilling, and work-related state of mind that is characterised by vigour, dedication and absorption". This study will focus on two of the three dimensions of engagement namely vigour and dedication. Schaufeli, Salanova et al. (2002), defines vigour as "high levels of energy and mental resilience while working and by the willingness and ability to invest effort in one's work". Dedication is defined as "experiencing meaning and satisfaction in one's work and to be eager and motivated" (Schaufeli, Salanova et al., 2002). Even though engagement has been researched significantly nationally and internationally; limited research has been conducted in the engagement of students.

Student engagement is increasingly being recognised as an important factor for quality education in higher institutions (Australian Council for Educational Research, 2008). Student engagement can be associated with a students' adjustment to the university and their academic achievement (Horstmanshof & Zimitat, 2007). Skinner, Wellborn and Connell (1990) developed the achievement and engagement model. This model is recognised as an outcome for universities in providing students with an interactive environment in which they can feel confident/capable, independent and connected (Connell & Wellborn, 1991; Skinner, Furrer, Marchand & Kindermann, 2008) which leads directly to performance and student engagement (Salanova, Schaufeli, Martínez & Bresò, 2010). Recent studies also concluded that engaged students will be able to perform academically better (Schaufeli, Martínez et al., 2002) which can result in high levels of meaning towards their studies (Stoeber, Childs, Hayward & Feast, 2011).

Student engagement can also be recognised as a predictor of satisfaction and success; which can help students to be successful in their chosen study course (Strydom, Kuh & Mentz, 2010). Engaged students are able to preserve, learn and enjoy more educational activities than disengaged students (Dowson & McInerney, 2001; Hancock & Betts, 2002; Lumsden, 1994; Voke, 2002).

A study in a tertiary student context, concluded that students who are confronted with many obstacles (i.e., deadlines, exams, tight class schedules) in their study course experience higher levels of exhaustion due to limited support and resources from the university (Van der Merwe & Rothmann, 2003). Proactive and preventive coping strategies could assist first-year students in enduring less stress and higher levels of energy and satisfaction (Gan, Yang, Zhou & Zhang, 2007). In addition to the statements by Gan et al. (2007), being proactive will promote students physical and psychological well-being by solving and making decisions independently, which in turn can reduce stressors (Kathiravan & Kumar, 2012). Proactive behaviour will also provide students with the skills and abilities to plan for the demands of their study course and future problems (Greenglass, 2002).

Crant (2000, p.436) defines proactive behaviour as "...an individual who seeks for opportunities to improve or create new circumstances rather than accept and adapt the current conditions". Various types of proactive behaviour were identified including seeking feedback (Ashford, Blatt & Van de Walle, 2003), looking for opportunities (Frese & Fay, 2001), building relationships with others (Ashford & Black, 1996), information-seeking (Morrison, 1993), assisting others (Organ, 1988), taking responsibility (Morrison & Phelps, 1999), and job crafting (Ashford & Black, 1996; Wrzesniewski & Dutton, 2001). Recently, two new types of proactive behaviour have been identified by Van Woerkom and her colleagues' namely proactive behaviour towards strength use (PBSU) and proactive behaviour towards deficit improvement (PBDI). PBSU is defined as "...an individual's self-starting behaviour towards using their strengths in the workplace", while PBDI can be defined as "...an individual's self-starting behaviour towards improving their deficiencies in the workplace" (Van Woerkom, Mostert, Els, Rothmann & Bakker, in process).

The concepts of PBSU and PBDI were developed from the well-known positive psychology movement. Positive psychology refers to the positive behaviour and unique qualities of an individual, as well as the resources (i.e. growth opportunities) provided by organisations

(Duckworth, Steen & Seligman, 2005; Seligman & Csikszentmihalyi, 2000; Seligman, Steen, Park & Peterson, 2005). This positive movement focuses on the optimal functioning and well-being of an individual (Duckworth et al., 2005). The positive psychology movement focuses on individual strengths rather than exclusively focusing on the developmental areas of an individual (Cameron, 2003; Carr, 2004).

The emphasis on strengths has increased dramatically over the last decade. Research related to the use of strengths has been a growing interest. Over the course of the last thirty years, Gallup researchers have conducted hundreds of studies related to some aspects of strength development (Clifton & Harter, 2003). Linley (2008, p. 9) defines a strength as "...a pre-existing capacity for a particular way of behaving, thinking or feeling that is authentic and energising to the user and enables optimal functioning, development and performance". According to Seligman (2002) signature strengths can be referred to as achievements and talents; positive personality traits attributed to each individual based on their unique character.

Furthermore, research shows that, when individuals are able to improve and apply their strengths in their environments, it leads to positive emotional and growing outcomes (Biswas-Diener, Kashdan, Minhas, 2011; Linley, Nielsen, Wood, Gillet, Biswas-Diener, 2010) which in turn can lead to high levels of vitality and fulfilment (Govindji & Linley, 2007; Linley et al., 2010). Minhas (2010) stated that strengths use can also increase employees' self-esteem which can result in them experiencing more satisfaction and happiness in their work (Govindji & Linley, 2007; Linley et al., 2010). An employee's happiness levels will increase when he/she is able to use his/her strengths in work tasks (Seligman, 2002). This finding is congruent with the happy-productive worker thesis (Stienstra, 2010) which argues that employees who are happy in their work are able to perform better than unhappy employees (Cropanzo & Wright, 2001). It can therefore be argued that proactive strengths use can lead to better job performance (Clifton & Harter, 2003) and engagement.

Although focussing on strengths use is important in the tertiary educational environment, it is not ideal to exclusively focus on strengths and disregarding other influencing factors. Some employees are confronted with tasks that fall outside their areas of strength, which can be called an area of weakness. These weaknesses can hinder an individual's

performance at work. However, with development and training programmes an individual can improve his/her deficits to be more productive at work. Thus, a deficit can be described as a disadvantage or impairment in an individual's performance (Merriam-Webster Dictionary, 2012). In practice performance appraisals are the most common tool used by organisations to identify employees' deficits and provide targeted training and development programmes to improve their areas of weaknesses (Glen, 1990; Santos & Stuart, 2003). Training and developing employees' deficits can result in increased personal success, competence and reduced effects of burnout (Maslach, 2006; Schaufeli & Peeters, 2000). Employees will experience more positive behaviours and satisfaction from their work when opportunities for development are provided (Bakker & Geurts, 2004). It can therefore be argued that both individual strength use and deficit improvement could be related to the optimal development of an individual (Kaiser & White, 2009), high levels of emotional and cognitive well-being (Govindji & Linley, 2007), and also positive work outcomes such as engagement.

The concepts of PBSU and PBDI were developed in an organisational context. However, these constructs can also be relevant in and applicable to the educational environment. In the university context most of previous educational views focussed on students' weaknesses (Clifton, Anderson, & Schreiner, 2006; Clifton & Nelson, 1992; Shushok & Hulme, 2006). However, recent research showed that strengths-based learning practices and comprehensive communication regarding these practices can be associated with the relationship between commitment to building student strengths and engagement (Lopez, 2011). Equipping students with academic skills and knowledge can assist them in using their strengths to make valued academic contributions (Park & Peterson, 2006a). Thus, to promote student engagement and success, universities should focus on how students can build on their strengths rather than exclusively focus on their deficiencies (Upcraft, Gardner & Barefoot, 2005). Students who are not able to utilise their strengths and develop their weaknesses on a daily basis feel detached from their studies, resulting in lower personal achievements (Greenberg, Domitrovich, & Bumbarger, 2001).

A study conducted on a sample of honours students of a university in the United States, found that students' psychological well-being (i.e. engagement) is predicted by academic demands (i.e. deficiencies) and academic resources (i.e. social support from the university). For example, student engagement can be predicted by the ability of a student that either

enhance or hinder their academic performance (Walker, 2012). It is therefore expected that when universities equip first-year students with the necessary resources to proactively use their strengths and develop their deficiencies, they may become more engaged. The focus on strengths use and deficit improvement can create a favourable learning environment for first-year students, which can increase the fit with the study course.

The concept of fit with study course is established on the theoretical framework of person-job fit. The congruence between an employee's unique skills, knowledge and abilities and the requirements of their job, or the needs/desires of an employee and what the job offers, can be referred to as person-job fit (Edwards, 1991, O'Reilly, Chatman & Caldwell, 1991). Person-job fit has several positive outcomes. Edwards (1991) showed that job satisfaction, low levels of job stress, motivation, attendance, retention and performance are outcomes of person-job fit. When fit between an individual and his/her environment occurs it can encourage well-being and add value to an individual's feeling of personal accomplishment, confidence and fulfilment (Edwards & Rothbard, 1999; Gilbreath, 2004; Kristof, 1996; Moos, 1988).

Research has indicated that individuals experience a sense of satisfaction with their jobs and adapt easily when their jobs match their personality types (Spokane, 1985; Tinsley, 2000). Person-job fit may in turn increase work engagement through positive, meaningful work by matching the employee's self-concept with job tasks and behaviour (Hamid & Yahya, 2011, Scroggins, 2008). Previous studies indicated that an individual's performance and adjustment at work is positively related to person-job fit (Caldwell & O'Reilly, 1990).

First-year students should also be able to match their skills and knowledge to their study course. Student engagement is likely to increase when they experience their study course as meaningful (Hancock & Betts, 2002; Williams, 2002). Similarly both a students' engagement and confidence in his/her academic abilities can be linked to meaningful and challenging educational environments. Students' confidence in their unique academic abilities (i.e. strengths) and expectations for academic achievement have been directly related to student engagement and the effect of the individual's emotional state to be successful in their studies. For example, when students are unable to match their skills to their academic tasks (Abu-Hilal, 2000; Bandalos, Yates & Thorndike-Christ, 1995; Harter, 1992; Hembree, 1988) it can lead to demotivation and unwillingness to invest effort in

academic tasks (Atkinson, 1964; Eccles, Adler, Futterman, Goff, Kaczala, Meece, Midgley, 1983; Skinner, Wellborn & Connell, 1990; Skinner, Zimmer-Gembeck, & Connell, 1998) which can result in feelings of disinterest or dissatisfaction in their study course. The match between a students' abilities and the requirements of the study course is important to ensure motivation towards successful course completion and engagement amongst first-year students.

In the literature, there is a clear link between strengths use and engagement. A strengths-based approach (SBA) is an important construct of student wellbeing (Elias, Arnold & Hussey, 2003; Seligman 2008; Fox Eades 2008; Jimerson, 2001; Jimerson, Sharkey, Nyborg, Furlong 2004; McGrath & Noble, 2005; Noble & McGrath, 2008; Rhee, Furlong, Turner & Harari; 2001). The strengths-based approach form a significant part of the Positive Youth Development movement (Benson, 1997, 1999; Catalano, Berglund, Ryan, Lonczak, & Hawkins, 1999), a movement which focuses on the talents, strengths, interest and future potential of young individuals (Damon, 2004). Positive emotions, better performance and learning outcomes are a few of the psychological outcomes amongst students who are able to use their strengths in their study courses (Noble, 2000). Previous research also shows that students who are able to use their strengths, experience a sense of hope and optimism (Vickers & Vogeltanz, 2000) and high levels of vitality and wellbeing (Govindji & Linley, 2007; Linley et al., 2010) resulting in better performance (Linley et al., 2010). A recent study by Park and Peterson (2008) also concluded that a strengths approach resulted in higher success in students who experience behavioural, learning, or emotional challenges in their academic environment. Students who are able to use their strengths in their educational studies will experience feelings of accomplishment which, in turn, can lead to better academic performance (Austin, 2005, Park & Peterson, 2006a). Students will perform better and experience higher levels of engagement when given feedback on their strengths rather than just on their weaknesses (Spreitzer, 2008). Engaged students will be more aware of their strengths and will seek opportunities to demonstrate them which will lead to positive well-being, growth, development and ultimately graduation (Kuh et al., 2005). It is therefore expected that a positive relationship will exist between proactive behaviour towards strengths use and engagement.

Research show that people who believe in improving one's weaknesses will produce greater results (i.e. performance, motivation, and engagement) rather than placing the emphasis on

strengths use (Hodges & Clifton, 2004). Students who experience difficulty with academic challenges (i.e. areas of weaknesses) often have poor academic performance (Kahn, Nauta, Gailbreath, Tipps & Chartrand, 2002; Wortman & Napoli, 1996) which can result in low levels of engagement. Recent research also found that students are likely to experience burnout (opposite of engagement) when having to deal with overwhelming workloads and little or no support from academic staff (Salanova et al., 2010). To optimise student engagement the academic performance of each student must be optimal. This can be addressed by providing students with developmental programs and support to improve their deficits. Students will experience higher levels of motivation to learn when they feel valued and supported (Wentzel, 1997). Improvement and support in students' academic abilities can lead to reduced absenteeism and increased engagement (Connell & Wellborn, 1991; Croninger & Lee, 2001). Based on the above discussion it can be argued that, when university students are given opportunities to improve their deficits and they proactively pursue these opportunities, they may experience higher levels of engagement.

An individual's perceptions of having unique skills, knowledge and abilities (i.e. strengths) in different situations are also an indication of self-efficacy (Locke, McClear & Knight, 1996). In the literature no studies could be found that focus on the relationship between strengths use and person-job fit or students' fit with their study course. However, since self-efficacy is a related concept to PBSU (see Van Woerkom et al., in process) arguments that are used to explain the link between self-efficacy and person-job fit can also be applicable to explain the relationship between PBSU and course of study fit. Self-efficacy in an educational context refers to a students' perceptions to successfully perform given academic tasks in their study course (Schunk, 1991). Individuals with high self-efficacy will be better adjusted, experience positive emotions and feel confident in their own abilities (Judge, Erez, Bono & Thoresen, 2003), which results in higher person-job fit (Edwards, 1991; Kristof-Brown, Jansen & Colbert, 2002). Higher levels of person-job fit predict positive outcomes in work circumstances such as job satisfaction (Hoffman & Woehr, 2006; Vogel & Feldman, 2009). Moreover, person-job fit is also known as an intermediate outcome in that it affects career choice, occupational interests, extraversion and conscientiousness (Cable & Judge, 1996; Dineen, Ash & Noe, 2002; Ehrhart & Makransky, 2007; Gruman Saks & Zweig, 2006; Kristof, 1996; Teng, 2008).

The relationship between several fit factors (e.g. skill, knowledge, ability, or former achievements) and the performance thereof is mediated by a students' self-efficacy (Bandura, 2006; Pajares & Schunk, 2001). For example, when students feel academically competent to complete tasks it can result in academic performance and achievement. According to Pittman and Richmond (2007) students performed academically better when they are better adjusted to their environment and to their studies. However, students are likely to perform academically poorly because they feel exhausted and disinterested when they are unable to use their unique abilities in their study course. Students with a high perception regarding their unique skills, knowledge and abilities (i.e. strengths) are more likely to invest effort in their academic studies [Valle, Cabanach, Núñez, González-Pineda, Rodríguez & Piñero (2009)] leading to low levels of stress, better academic coping and adapting (Zajacova, Lynch & Espenshade, 2005), intrinsic and extrinsic motivation (Chowdhury & Shahabuddin, 2007; Prat-Sala & Redford, 2012; Reynolds & Weigand, 2010) resulting in successful completion of their study course (Ojeda, Flores & Navarro, 2011). When students are in a study course that is similar to their characteristics and goals, they may academically succeed and cope better with stress than students with poor study fit (Eagan & Walsh, 1995). Additionally Lent, Taveira & Singley (2009) showed that students who believe in their unique abilities and skills, showed better academic adjustment in their studies which increased their study fit. For example, when first-year students are able to use their strengths proactively in their study course they may experience more positive feelings relating to their studies, ultimately resulting in a better fit with their study course.

No relevant research has been found on the relationship between deficit improvement and students' fit with their study course. By providing university resources (student development programmes) to assist students in developing their deficits to better fit with their study courses (Pike, 2006) can lead to positive outcomes such as personal growth and performance in academic tasks (Boulter, 2002; DeStefano, Mellott & Peterson, 2001; Grant-Vallone, Reid, Umali & Pohlert, 2003-2004). Furthermore student support and development opportunities which focus on areas of weakness, can assist students in identifying their academic abilities accurately (Fenollar, Roman & Cuestas, 2007) leading to higher levels of effort towards their academic work, better academic grades, commitment to their studies and better study fit. It is therefore important for universities to create an environment where students are able to develop their weaknesses to become better equipped in their studies increasing their fit with their study course. Furthermore, when students demonstrate

proactive behaviour in developing their weaknesses it can lead to more personal growth because attempting and mastering challenging activities that falls outside your area of strength, could motivate individuals to develop themselves even further (Thoen & Robitschek, 2013).

Seeking new opportunities towards their personal development could energise individuals and increase their persistence when facing difficult tasks (Locke & Latham, 2002) which might result in enhanced personal growth and a better fit with their study. For example, students' proactive behaviour towards deficit improvement can lead to high levels of energy and perseverance in difficult academic tasks. Evidence for the effectiveness on deficit improvement emerged from research on mastery education. Research found that mastery education benefits students' academic performance, engagement on education tasks, students' academic self-concept, grade expectations, and attitudes towards the study course (Guskey & Pigott, 1988). Students with a mastery orientation will invest effort in their academic tasks to improve their skills, knowledge and abilities (Dowson & McInerney, 2001) which can lead to increased motivation towards their studies. Although working on deficiencies can be draining and challenging at times, it is expected that students are willing and motivated to work on their shortcomings in order to be successful in their studies, which can increase their fit with their study course.

Research has found that a good fit between an individual and the environment can result in better work outcomes such as performance (Payne, Lane & Jabri, 1990). According to Cable and DeRue (2002) performance is a direct outcome of person-job fit. For example, poor person-job fit can result in low levels of interest, energy and effort in their job. When employees are able to match their abilities to the job task requirements it results in person-job fit and increased work engagement (Hamid & Yahya, 2011; Scroggins, 2008). Employee engagement is an outcome of the fit between and employee and their job (Lloyd, 2004; MacDonald, 2002).

The theory of planned behaviour by Ajzaen (1991) can also be used to define the person-job fit relationship with work outcomes such as engagement. This theory states that employees who have certain skills and abilities will be able to manage their job demands more effectively (Hamid & Yahka, 2011) leading to increased motivation and proactive behaviour in the development of a meaningful job (Bakker, 2010). As a result employees may feel

more engaged and perform well on work tasks (Hackman, 1980). However, feelings of dissatisfaction can occur if there is a poor match between the person and his/her job. (Maslach, Schaufeli & Leiter, 2001). A study by Wheeler, Gallagher, Brouer and Sablynski (2006) found that individuals with poor person-job fit show increased job satisfaction and high levels of the intent to leave the organisation due to better job opportunities that match their needs. Thus, when employees are able to match their skills, abilities and knowledge to the job, they are likely to experience high levels of energy and meaning.

The concept of person-job fit can also be applicable to an educational context; this will give an indication on how students can fit their abilities to the requirements of their study course. Research indicates that students' perception of fit with their study course relates strongly to their academic performance and satisfaction (Furrer & Skinner, 2003; Westerman, Nowicki & Plante, 2000). Students' views about their abilities and skills in their studies have been directly related to their levels of engagement and their behaviour that can either promote or hinder their ability to perform successfully in their study course. For example, if students view themselves as academically incapable (lack of certain academic abilities) they tend to be more anxious and less confident in their academic environment and studies (Abu-Hilal, 2000; Bandalos et al., 1995; Harter, 1992; Hembree, 1988). Further evidence for the study fit concept has shown that students who experience a sense of belonging with their studies will experience positive feelings such as energy and dedication. When students' abilities and interests are matched with their academic environment it will lead to higher levels of motivation (Komarraju & Karau, 2005) and better academic performance increases (Gardner, 1983; Sternberg, Torff, & Grigorenko, 1998a) which can result in engagement. When first-year students' abilities are congruent with the requirements of their study course, it can result in engagement. Therefore, to enhance student engagement a good fit or match is important.

This study will provide detailed insight into the effects of PBSU and PBDI on study fit and engagement among first-year students in a higher education institution in South Africa. Exploring students' proactive behaviour towards strength use and deficit improvement can help to enhance a better fit with their study course and contribute towards enhanced levels of student engagement. This study will also assist students, lecturers and universities on how to provide a positive development climate for students on how to use their strengths and develop their deficits proactively in their study course, which can increase students'

performance and engagement levels. This can lead to a better student pass rate, student retention and return on investment for higher education. Furthermore these young students are the future employees of South Africa. Young graduates are often overwhelmed by the transition from university to the workplace and lack the knowledge, skills and experience to deal with a variety of demands in their work. Research has shown that young employees are more likely to experience higher levels of disengagement and increased physical and psychological well-being (Maslach, Jackson & Leiter, 1996; Schaufeli & Salanova, 2007; Schaufeli & Enzmann, 1998). Therefore it seems that proactive behaviour, person-job fit and work engagement are not solely related to factors in the workplace (as explained above) but that it is also applicable to first-year student experiences during their higher education studies, which may affect their future work-related wellbeing.

Studies showed that students' achievement plans and behaviour during their study course affect future work engagement (Salmela-Aro & Nurmi, 2007; Salmela-Aro, Tolvanen & Nurmi, 2009). This study could therefore also contribute to the working environment by helping young graduates to be proactive, innovative, take initiative, continuously learn and develop their skills, knowledge and abilities for a better person-job fit. These proactive behaviour concepts could easily be incorporated into any training interventions which can focus on the optimisation of young employees person-job fit and wellbeing in the workplace. It is therefore important to understand the reasons for this study, to understand and be able to explain the concepts, antecedents and outcomes of proactive behaviour towards strength use, proactive behaviour towards deficit improvement, study fit and engagement, and to be able to teach future graduates techniques to enhance their engagement in work.

From the above discussions, there is a need to investigate student engagement and its possible predictors in the South African educational context. Based on the above discussions it is argued that PBSU and PBDI have a direct impact on student engagement. In addition PBSU and PBDI increase students' perception of fit with their study course. It is also argued that perceptions of fit with study course will lead to higher levels of engagement and that fit with study course could mediate between students' PBSU, PBDI and engagement. As this mediating effect has never been tested before in research, this study will investigate this gap. The hypothesised structural model (shown in Figure 1) is tested to investigate the hypotheses below.

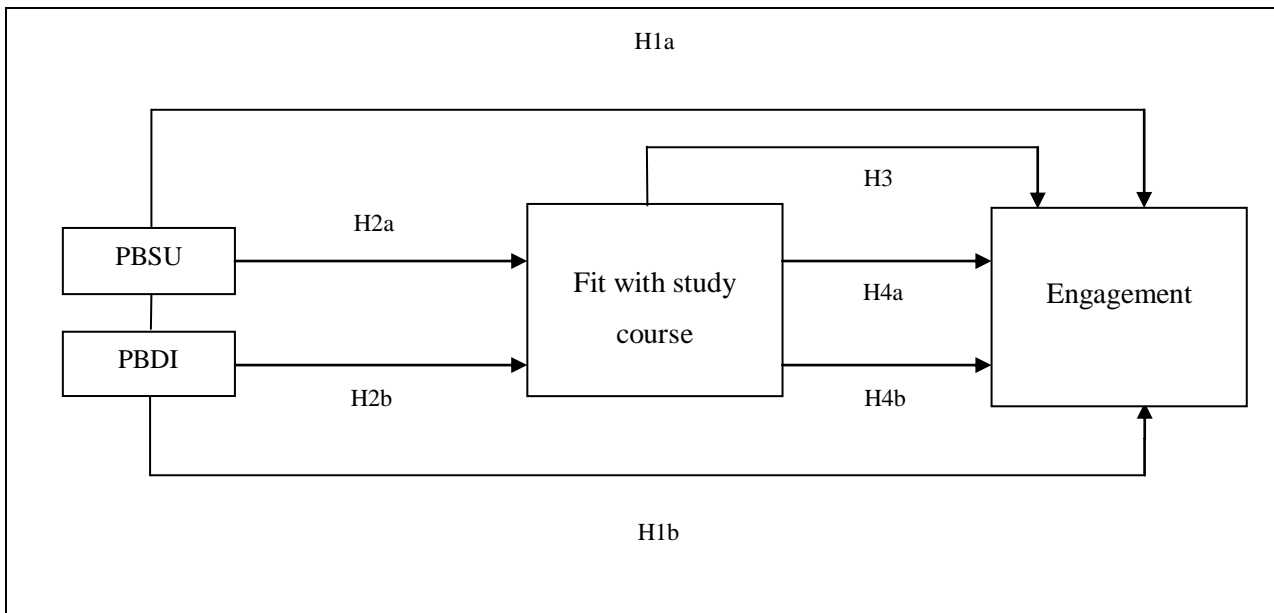


Figure 1: A structural model of students' proactive behaviour towards strengths use (PBSU), students' proactive behaviour towards deficit improvement (PBDI), fit with study course and engagement.

Based on the above statement of the research problem the following research questions are formulated:

- How is student PBSU, PBDI, fit with study course and engagement conceptualised in the literature?
- What is the relationship between students' PBSU, PBDI, fit with study course and engagement amongst first-year university students?
- Can a structural model be tested that includes students' PBSU, PBDI, fit with study course and engagement?
- Does fit with study course mediate between PBSU/PBDI and engagement?
- What recommendations can be made for future research and practice?

## **1.2 RESEARCH OBJECTIVES**

The research objectives are divided into general and specific objectives.

### **1.2.1 General objective**

The main objective of this research is to test a structural model of PBSU, PBDI, fit with study course and engagement amongst first-year students, and to test the mediating effect of study course between PBSU/PBDI and engagement.

### **1.2.2 Specific objectives**

The specific objectives of this research are:

- To conceptualise student PBSU, PBDI, fit with study course and engagement in the literature.
- To determine the relationship between PBSU, PBDI, fit with study course and engagement amongst first-year university students.
- To test a structural model that includes students' PBSU, PBDI, fit with study course and engagement.
- To determine whether fit with study course mediates the relationship between PBSU/PBDI and engagement; and
- To make recommendations for future research and practice.

## **1.3 RESEARCH HYPOTHESES**

H1a: There is a positive relationship between students' proactive behaviour towards strengths use (PBSU) and engagement.

H1b: There is a positive relationship between students' proactive behaviour towards deficit improvement (PBDI) and engagement.

H2a: There is a positive relationship between students' proactive behaviour towards strengths use (PBSU) and fit with study course.

H2b: There is a positive relationship between students' proactive behaviour towards deficit improvement (PBDI) and fit with study course.

H3: There is a positive relationship between fit with study course and engagement.

H4a: Fit with study course mediates between PBSU and engagement.

H4b: Fit with study course mediates between PBDI and engagement.

## **1.4 RESEARCH METHOD**

The research method consists of two phases namely a literature review and an empirical investigation. The results are presented in the form of a research article.

### **1.4.1 Literature review**

A complete literature review of student engagement and its predictors is done. Different databases such as Academic Search Premier, Business Source Premier, PsycInfo, EbscoHost, GoogleScholar, Google Books, Emerald, ProQuest, SACat, SAePublications and Science Direct is used. The keywords used are the following: strengths use, deficit improvement, proactive behaviour, person-job-fit, fit with study course and engagement.

### **1.4.2 Research participants**

For the purpose of this study a sample of first-year students on all campuses of the participating university is collected. All the students receive the same chance to be included in the sample. The sample group is represented by different genders, academic years, languages, ages and racial groups. One of the requirements is that the participants have to be a student at the university. The participants should have a good command of English to be able to complete the questionnaire in a successful manner.

### **1.4.3 Measuring instruments**

The following study questionnaires are used in the study:

*Biographical Questionnaire:* A biographical questionnaire is used to determine the participant's biographical characteristics. Characteristics that are used include gender, age, race, home language, name of campus, name of faculty, academic year and historical year.

*Students' proactive behaviour towards strength use (PBSU) and proactive behaviour towards deficit improvement (PBDI).* PBSU and PBDI are measured by means of a new questionnaire [Strengths Use and Deficit Improvement Questionnaire (SUDIQ) developed by Van Woerkom et al. (in process)]. These scales are scored on a 7-point Likert type scale ranging from 0 (never) to 6 (almost always). Eight items (e.g. "In my studies; I use my

strengths proactively”) is used to measure PBSU ( $\alpha = 0.91$ ) (Van Woerkom et al., in process) and another eight items (e.g. “In my studies. I concentrate on my areas of development.”) will be used to measure SDI ( $\alpha = 0.92$ ) (Van Woerkom et al., in process).

*Student Engagement.* The UWES-S is used to measure the engagement levels of students. Items are scored on a seven-point Likert-type scale ranging from 0 (never) to 7 (every day). Vigour is measured with five items (e.g. “When I study, I feel like I am bursting with energy”). Dedication is also measured with five items (e.g. “I am enthusiastic about my studies”). The validation of the UWES-S has been done internationally (Schaufeli, Salanova et al. 2002). In South Africa Pienaar and Sieberhagen (2005) found internal consistencies of 0.77 for vigour and 0.85 for dedication. A Cronbach alpha was found of 0.70 for vigour and 0.78 for dedication (Mostert, Pienaar, Gauché & Jackson, 2007).

*Students’ fit with study course.* To measure fit with study course in this study the person-job fit perceptions questionnaire developed by Saks and Ashforth (1997) is used. The items are adjusted to a student context. This scale is scored on a five-point Likert-type scale ranging from 1 (to a very little extent) to 5 (to a very large extent). Fit with study course is measured by five items (e.g. “To what extent do your knowledge, skills, and abilities match the requirements of your study course?”). A Cronbach alpha of 0.83 for the person-job fit perceptions scale was reported by Saks and Ashforth (1997).

#### **1.4.4 Research procedure**

The data intended for use in this study was gathered over the course of three months. Permission to do the research was obtained from the university by writing a letter to the campus registrar and explaining the goals and value of the study to the university. Permission was also obtained from the university’s ethical committee to acquire the academic records of the students. The data is gathered by having the students complete the questionnaires online on a secure website. The students are assured that participation is voluntary and that the information is confidential. The students sign an informed consent form prior to answering the questionnaire.

### 1.4.5 Statistical analysis

Structural equation modelling (SEM) methods is implemented with Mplus 7.2 to analyse the data (Muthén & Muthén, 2014). The reliability of the constructs is measured by means of the Cronbach alpha coefficients. Omega coefficients are also calculated as an additional measure of reliability due to the recent criticism regarding the value of alpha coefficient in psychological research (Raykov, 2012; Revelle & Zinbarg, 2009; Sijtsma, 2009). The relationships between variables are determined by product-moment correlations coefficients. The effect sizes are used to determine the practical significance of the results (Steyn & Swanepoel, 2008). The cut-off points for the practical significance of the correlation coefficients is set at 0.30 (medium effect) and 0.50 (large effect) (Cohen, 1988). The statistical significance of the variables is measured by a confidence interval level of 95% ( $p \leq 0.001$ ). Latent variables in the structural model are created by using the individual items as indicators. Therefore item parcelling methods is not applied in this study (Bandalos & Finney, 2001). The maximum likelihood (ML) estimator is implemented. The input type of the estimation is the covariance matrix.

The traditional chi-square ( $\chi^2$ ) statistic, the Comparative fit index (CFI), the Tucker-Lewis index (TLI), the Root mean square error of approximation (RMSEA) and the standardised root mean square residual (SRMR) is used to test the goodness-of-fit of the models, even if the cut-off values for adequate fit has little agreement (Lance, Butts, & Michels, 2006). The conformist process is used in this study, in which the model fit is considered adequate when the CFI and TLI values are larger than 0.90 (Byrne, 2010; Hoyle, 1995). The RMSEA value is used to determine the model fit; values below 0.05 indicate a good fit and values between 0.05 and 0.08 indicate a moderately good model fit (Browne & Cudeck, 1993).

The indirect effect is estimated by means of a mediation analysis (Rucker Preacher, Tormala & Petty, 2011). The mediation is tested through the means of a bootstrapping method. According to Preacher and Hayes (2008) bootstrapping is a non-parametric resampling method which can be used to test the indirect effects of variables; it is also the most preferred method to use the compared to Baron and Kenny's traditional methods (Hayes, 2009; MacKinnon, Lockwood, & Williams, 2004). The bootstrap method is set to resample 5 000 draws (Hayes, 2009). The bootstrap confidence interval level is set at 95% for this study. It is therefore being investigated whether the indirect effects would not cross zero at

that level. The effect of the independent variables (proactive behaviour towards strength use and deficit improvement) on the dependant variable (engagement) which is mediated by the mediating variable (fit with study course) is investigated in this study.

#### **1.4.6 Ethical considerations**

Fair and ethical research is conducted for this study to be successful. Important issues that need to be addressed are voluntary participation, informed consent, doing no harm, confidentiality and the maintenance of privacy (Salkind, 2009). A review of the research proposal is done by the North-West University's ethical committee.

### **1.5 OVERVIEW OF CHAPTERS**

The findings of the research objectives are discussed in the form of a research article in chapter 2 and the conclusion, limitations and recommendations of the research study is discussed in Chapter 3.

### **1.6 CHAPTER SUMMARY**

The problem statement and research objectives are presented in this chapter. The measuring instruments and the research method used were explained, followed by a concise overview of the chapters that follow.

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## **A structural model of first-year students' strengths use, deficit improvement, fit with study course and engagement**

### **ABSTRACT**

**Orientation:** Students' engagement has become a matter of concern given the high dropout rates in higher educational institutions. It is therefore important to investigate possible predictors of student engagement.

**Research purpose:** To determine the relationship between students' proactive behaviour towards strengths use (PBSU), students' proactive behaviour towards deficit improvement (PBDI), fit with study course and engagement, and to test the mediating effect of fit with study course between PBSU/PBDI and engagement.

**Motivation for the study:** The results could assist higher educational institutions to obtain knowledge and a greater insight of the effects of PBSU, PBDI, fit with study course and engagement amongst first-year students.

**Research design, approach and method:** A quantitative approach with cross-sectional research design was used. A sample of 692 students in a higher education institution in South Africa was used. A correlation matrix of the latent variables was used. The hypothesised model was tested by performing structural equation modelling. The bootstrapping method was used to identify possible mediating effects of fit with study course.

**Main findings:** The results indicated that only PBDI showed a significant relationship with engagement in the structural model. Furthermore fit with study course mediated the relationship between PBSU, PBDI and engagement.

**Practical implications:** Knowledge of proactively using strengths and improving deficiencies from a student perspective could assist universities in gaining better understanding of the relationship with fit with study course and engagement.

**Contribution/value-add:** The study contributes to the limited amount of research on predictors of engagement among first-year university students in South Africa.

**Keywords:** proactive behaviour, strength use, deficit improvement, fit with study course, engagement, first-year students; positive psychology.

## INRODUCTION

South African Universities show the lowest graduation rate of the world with a total graduation rate of only 15% (Lekseka & Maile, 2008). This result is a tremendous concern for student success in South Africa. Improving student success in higher education is important for individuals, institutes and societies, particularly in developing the economy of South Africa. One of the main challenges is the rate in student success and graduation of Higher Education Institutions (Strydom, Kuh & Mentz, 2010). Recent studies showed that only 27% of undergraduate students complete their studies and only half of the students in higher education eventually graduate (Council on Higher Education, 2013).

The need for higher retention and graduation rates in South African higher education is critical for students' success; it therefore provides strong support for the research in student engagement. Effective retention practices are generally learner-oriented based which focusses on student engagement and intellectual participation emphasising overall quality of educational programs and services. Students who are engaged in the classroom and in the university show higher achievement related outcomes, lower dropout rates, greater satisfaction and better performance (Fredricks, Blumenfold & Paris, 2004; Furrer & Skinner, 2003; Hughes, Luo, Kwok & Lloyd, 2008; Wefald & Downey, 2009).

A significant amount of student engagement research in the last few years came from the USA, UK and Australia (Kuh, 2001; Fredericks et al., 2004; Mann, 2001; Krause, Hartley, James & McInnis, 2005; Coates, 2005). However, little research is done in the South African higher educational context. Engagement is important in universities as it provides a behavioural way in which students' motivational state contribute to successful development and learning (Wellborn, 1991). Research shows that a significant predictor of student satisfaction and success is students' educational dedication (Kuh, Kinzie, Schuh, Whitt & Associates, 2005; Kuh, Kinzie, Cruze, Shoup & Gonyea, 2007; Pascarella & Terenzini, 2005). Pascarella and Terenzini (1991) found that the level of knowledge attainment and overall intellectual development would increase once students became more involved in academic work and experience of what university study demanded. Student engagement can also be seen as a willing desire and as a positive factor that contribute to students' academic

performance and determination (Law, 2010; Miller, Rycek & Fritson, 2011; Salanova, Schaufeli, Martínez & Bresò, 2010).

Several predictors of student engagement have been researched, including achievement, satisfaction, success and performance. However, little research focussed on the effect of proactive behaviour towards strength use (PBSU) and proactive behaviour towards deficit improvement (PBDI) on engagement among students at universities. Individuals can be described as proactive when they show initiative, are action-orientated, goal-driven, enjoy challenges and are determined to see obstacles through (Frese, Fay, Hilburger, Leng & Tag, 1997). Proactive behaviour can be defined as a "... proactive self-starting behaviour to overcome rising difficulties in the pursuit of a goal" (Frese & Fay, 2001, p. 134). In this study, we argue that students who proactively seek for opportunities to use their strengths and improve their deficits in their study course will be more engaged.

The study of human strengths and optimal functioning has become an immersing topic in positive psychology (Seligman & Csikszentmihalyi, 2000). Minhas (2010) found that, when people develop either their realised or unrealised strengths, work engagement increased. Previous research indicated that effective strengths-based learning practices and comprehensive communication regarding these practices can be associated with the link between commitment to building student strengths and engagement (Lopez, 2011). Therefore, to promote student engagement and success, universities could focus on how first-year students can build on their strengths (Upcraft, Gardner & Barefoot, 2005).

Although focussing on strengths use is important it is not optimal. Balancing the positive and the negative is necessary (Luthans & Youssef, 2007). Some researchers argued that one should not be occupied with only strengths or only deficiencies, but should rather concentrate on a focus of both strengths and deficits (Rust, Diessner & Reade, 2009). According to Mvulane (2007) a weakness can be referred to as a lack of talent, knowledge or skills that can hinder an individual's performance. Most of previous educational beliefs were directed toward developing students' weaknesses (Clifton, Anderson, & Schreiner, 2006; Clifton & Nelson, 1992; Shushok & Hulme, 2006). Clifton and Harter (2003) found that the focus on weaknesses/deficiencies may produce average performance, but when individuals use their talents, performance levels are likely to be far higher.

It is also important to study possible mediating effects between PBSU/PBDI and student engagement. One important mediator can be the students' perception of fit with his/her study course. Fit occurs when an individual's characteristics match his/her environment (Kristof-Brown, Zimmerman & Johnson, 2005). Fit shows positive relationships between students' sense of relatedness, student engagement, academic performance, and perceived control (Furrer & Skinner, 2003). Researchers suggest that person-job fit (P-J fit) can be a predictor of work engagement (Leiter & Maslach, 1999). The relationship between person-job fit and work engagement exists based on discussion of the above literature. When an employee is able to match his/her characteristics with those of the job, it is likely that he/she may experience high levels of positive emotion towards the job which is related to work engagement (Hamid & Yahya, 2011; Scroggins, 2008). It is therefore possible that students' perception of their fit with their study course could lead to engagement and mediates between PBSU/PBDI and student engagement.

The main objective of this study is to determine the relationship between PBSU, PBDI, fit with study course and engagement and to investigate if fit with study course mediates between PBSU/PBDI and student engagement.

## **LITERATURE REVIEW**

### **Proactive behaviour towards strengths use and deficit improvement**

Proactive behaviour is defined as "... taking advantage of daily challenges rather than accepting things as is in order to improve current circumstances" (Crant, 2000, p. 436). Proactive behaviour concepts have been categorised at individual level, team level and organisation level (Ashford & Tsui, 1991; Simard & Marchand, 1995; Kickul & Gundry, 2002). This study will focus on the individual level of proactive behaviour. Individual proactive behaviour is a self-initiated and future-oriented action which focuses on changing and improving one's situation (Crant, 2000; Unsworth & Parker, 2003). Proactive behaviour is the continuous search for opportunities to learn and activities that create a sense of optimism (Frese, Kring, Soose & Zempel, 1996; London & Mone, 1999). Recent studies found that proactive behaviour is significantly related to work engagement (Warshawsky, Havens & Knafl, 2012).

In the literature, different types of proactive behaviour is discussed which includes seeking feedback (Ashford, Blatt & Van de Walle, 2003), grasping opportunities (Frese & Fay, 2001), meeting new people (Ashford & Black, 1996), seeking information (Morrison, 1993), being of assistance to others (Organ, 1988), taking responsibility (Morrison & Phelps, 1999), and restructuring work (Ashford & Black, 1996; Wrzesniewski & Dutton, 2001). In a recent study conducted by Van Woerkom, Mostert, Els, Rothmann and Bakker (in process) two additional types of proactive behaviour in the work context have been distinguished – proactive behaviour towards strengths use (PBSU) and proactive behaviour towards deficit improvement (PBDI). Proactive behaviour towards strengths use can be defined as “...when employees take the initiative to use their strengths in the workplace”, while proactive behaviour towards deficit improvement refers to “when employees’ take the initiative towards improving their deficiencies in the workplace” [Van Woerkom et al. (in process)].

First-year students should also be able to develop and apply proactive strategies to cope more effectively with the demands of their academic environment (Clark, 2005; Terenzini, Rendon, Upcraft, Millar, Allison & Gregg, 1994). Adopting proactive behaviour and coping skills can assist first-year students in overcoming challenges. Being proactive will enable students to be independent in solving problems and making informed decisions which in turn can promote their overall well-being and ultimately reduce stressors (Kathiravan & Kumar, 2012). Thus, students who are able to apply a proactive approach and cope effectively with stressors are more likely to be successful in their social and academic environments.

Greenberg, Domitrovich and Bumbarger (2001) stated that students who apply their strengths while still focusing on their deficit improvement were more likely to show high levels of meaning and attachment towards their study course, better self-reported achievement and a decrease in misbehaviour than students who do not apply their strengths and develop their deficits. Providing students with the skills, knowledge and abilities needed in their studies can help them to make valued academic contributions (Park & Peterson, 2006a). Students may feel detached from their study course when they are unable to apply their strengths and develop their weakness on a daily basis, which can result in lower personal achievements (Greenberg et al., 2001). Furthermore, when students are able to use their strengths and improve their weaknesses in academic tasks it can lead to high levels of motivation, better academic performance (Epstein, Harniss, Robbins, Wheeler, Cyrulik,

Kriz & Nelson, 2003), appropriate behavioural skills, knowledge and abilities that can increase personal mastery (Epstein et al., 2003). Thus, the focus on strengths use and deficit improvement can create a learning environment in which first-year students can feel confident in their abilities resulting in a better fit with the study course and engagement.

## **Engagement**

In the academic literature, engagement has been defined in different ways. An engaged individual can be referred to as an individual who displays active behavioural intensity and emotional quality during the performance of a task (Connell, 1990; Connell & Wellborn, 1991; Fiedler, 1975; Koenigs, Fiedler & deCharms, 1977; Wellborn, 1991). Engagement can be defined as "...high levels of energy and high levels of involvement in one's work" (Bakker, Albrecht & Leiter, 2011, p.22). In this study engagement is defined as "...a positive, fulfilling, and work-related state of mind that is characterised by vigour, dedication and absorption" (Schaufeli, Salanova, Gonzàlez-Romà & Bakker 2002a, p. 75). Vigour can be defined as "...high levels of energy and mental resilience while working and by the willingness and ability to invest effort in one's work, while dedication can be defined as "...experiencing meaning and satisfaction in his/her work to be eager and motivated" (Schaufeli, Salanova et al. 2002a). With this said an individual is likely to experience engagement when showing energy and commitment in his/her work. Absorption has recently been theorised in literature as a state of "flow" which is stable (Csikszentmihalyi, 1990), which emerged as an outcome of engagement rather than a factor thereof (Montgomery, Peeters, Schaufeli & Den Ouden, 2003). Therefore, this study will only focus on vigour and dedication as the 'core' dimensions of engagement.

The concept of engagement is also applicable to students. Student engagement is the persistent and positive drive of a student to accomplish academic tasks (Maslach, Leiter & Schaufeli, 2008). When students feel valuable and dynamic towards their studies it is likely to lead to high levels of performance compared to students who feel less valuable and dynamic. When investigating the relationship between engagement and performance, it seems that when a student is active and committed in their studies, they will be able to perform and be more successful. Furthermore, the concept of student engagement is an important factor which can assist a university to develop strategies that could encourage students to willingly take part in educational activities (Kuh, 2009). Student engagement has

become a primary concern in educational research and evidence indicate that it is through the action of student engagement that motivation leads to positive learning outcomes for the student (Furrer & Skinner, 2003). According to Kuh et al. (2007) student engagement can be an important antecedent of academic achievement and the persistence in coping of academic course work.

### **Fit with study course**

Theories of “fit” has explored how people interact within the work environment in an effort to understand which factors influence retention (Chatman, 1989; Kristof-Brown et al., 2005). Person-job fit refers to the match between employee characteristics and job characteristics (Kristof-Brown et al., 2005). More specifically, the person-job fit concept can be referred to as the congruence between an individual’s talents, skills and the demands of the job (Edwards, 1991). Person-job-fit is defined as “...the match between the person and the assigned job with a specific focus on how the person and job characteristics align and whether or not they meet each other’s needs”(Kristof, 1996, p.7).

The relationship between person-job fit and several work-related outcomes is well documented in fit literature. Previous research findings show that person-job fit can be associated with several work outcomes namely, commitment, personality, job satisfaction and performance (Caldwell & O’Reilly, 1990; Edwards, 1996; Saks & Ashforth, 1997). Similar results indicated that person-job fit is a significant predictor of employee’s performance at work (Edwards, 1991). Literature also show that good person-job fit is important (Kristof-Brown et al., 2005) and ensure the effective completion of given work tasks (Edward, 1991). Hamid and Yahya (2011) state that employees who has the unique abilities, skills and knowledge that fit with the demands of their job perform more effectively in their jobs compared to employees who do not possess these abilities. Therefore, person-job misfit may result in increased absenteeism, lower levels of production and low turnover rates (Mathis & Jackson, 2003).

The concept of person-job fit is also applicable to first-year students and fit with their study course. Students may feel more engaged when they experience their study course as meaningful (Hancock & Betts, 2002; Williams, 2002). Meaningful and challenging educational environments is associated with engagement and perceived academic abilities.

However, when students are unable to match their skills to their academic tasks (Abu-Hilal, 2000; Bandalos, Yates & Thorndike-Christ, 1995; Harter, 1992; Hembree, 1988), it can lead to increased motivation and willingness to invest effort in academic tasks (Atkinson, 1964; Eccles, Adler, Futterman, Goff, Kaczala, Meece, Midgley, 1983; Skinner, Wellborn & Connell, 1990; Skinner, Zimmer- Gembeck, & Connell, 1998) which can result in feelings of disinterest in or dissatisfaction with their study course. In other words, disengaged students feel less energised, detached and negative towards their studies, whereas engaged students feel more energised and strongly attached to their studies as they are willing to invest effort in their academic tasks (Rothmann, 2003). Thus it is important to ensure that a first-year student is able to identify himself/herself in their studies to ensure motivation towards successful course completion and engagement.

### **The Relationship between PBSU, PBDI and engagement**

An important aspect of student engagement to consider is students' proactive use of their strengths in their studies. Past research showed that individuals experience high levels of engagement when applying their strengths in his/her work (Govindji & Linley, 2007; Linley, Garcea, Hill, Minhas, Trenier & Willars, 2010). Individuals who are able to use their strengths proactively also feel satisfied and are more motivated (Linley & Harrington, 2006). Studies conducted by Peterson, Stephens, Park, Lee and Seligman (2009) found a significant relationship between strengths and satisfaction in one's work.

It is a necessary for individuals to take the initiative towards using their strengths proactively [Van Woerkom et al. (in process)] which is associated with optimism and well-being (Govindji & Linley, 2007; Proctor, Maltby & Linley, 2011). Harter, Schmidt and Hayes (2002) stated that engaged individuals display a consistent initiative towards using his/her strengths to improve the current state at work. Past studies have shown that employee engagement is directly related to the use of strengths (Lopez, Hodges & Harter, 2005). Students are more likely to experience feelings of accomplishment which can result in better academic performance when they are given opportunities to use their strengths in their study course (Austin, 2005; Park & Peterson, 2006a). Engagement can be enhanced when students are able to recognise their strengths and have opportunities to apply them, leading to enhanced well-being, growth, development and course completion (Kuh, et al.,

2005). Based on the above it is hypothesised that students who proactively use their strengths are likely to experience higher levels of engagement.

*H<sub>1a</sub>: There is a positive relationship between students' proactive behaviour towards strengths use and engagement.*

Past research has shown that training and development relates to increased performance (Abdullah, Ahsan & Alam, 2009). Individuals may experience personal mastery and growth when they are actively searching for developmental opportunities to improve their deficits (Senge, 1990). A study by Xanthopoulou, Bakker, Demerouti and Schaufeli (2009) states that when employees are provided with opportunities to improve their deficits it may stimulate professional growth and development, which is associated with engagement. Individuals using their strengths or developing their deficits experience more enthusiasm and energy, which is associated with engagement (Langelaan, Bakker, Schaufeli & Van Doornen, 2006; Schaufeli & Salanova, 2007). Previous research also confirms the relationship between the strengths- and deficit improvement approach with a work outcome such as engagement [Van Woerkom et al. (in process); Linley, Garcea, Hill, Minhas, Trenier & Willars, 2010; Wood, Linley, Maltby, Kashdan & Hurling, 2011]. Students' academic performance levels are more likely to decrease when they struggle continuously with academic obstacles (i.e. areas of weaknesses) in their studies (Kahn, Nauta, Gailbreath, Tipps & Chartrand, 2002; Wortman & Napoli, 1996) which can result in low levels of engagement. Providing students with the support and development opportunities to improve their abilities, skills and knowledge can result in low levels of absenteeism and enhanced engagement levels (Connell & Wellborn, 1991; Croninger & Lee, 2001).

*H<sub>1b</sub>: There is a positive relationship between students' proactive behaviour towards deficit improvement and engagement*

### **The relationship between PBSU, PBDI and fit with study course**

No research has directly investigated the relationship between PBSU and fit with study course. However, similar reasons based on literature can be used to explain this relationship between self-efficacy and person-job fit (as the concept of self-efficacy is related to PBSU, see (Van Woerkom et al., in process). Similar to PBSU, self-efficacy can be referred to as a

specific view that an individual has about their unique skills, knowledge and abilities in various circumstances (Locke, McClear & Knight, 1996). When an employee has high levels of self-efficacy (confident in their unique abilities, skills and knowledge) they will be more attuned, feel more positive and confident about their own abilities (Judge, Erez, Bono & Thoresen, 2003) which can result in better person-job fit (Edwards, 1991; Kristof-Brown, Jansen & Colbert, 2002). However, employees with low self-efficacy may experience less positive emotions and feel less competent in their abilities, which can result in poor person-job fit and disengagement. Employees' person-job fit will be high when they are able to apply their unique abilities, skills and knowledge required to complete a given work task (Edwards, 1991; Kristof-Brown, et al., 2002). Similarly, it is expected that, when employees feel confident to use their strengths in their work, they may experience motivation and meaning towards their work which can increase their person-job fit.

Self-efficacy in an educational context refers to a students' perceptions to successfully perform given academic tasks in their study course (Schunk, 1991). When students are confident and able to identify their unique skills, abilities and knowledge in their study course they experience positive feelings such as hope and optimism (Vickers & Vogeltanz, 2000) which can result in better fit with their study course. Previous studies on perceived fit or misfit between students and their academic environment influences students' experience and the completion of their study course (Golde, 2005). According to Eagan and Walsh (1995) students with a good study fit are able to perform better academically and cope better with stress than students who are unable to match their unique skills, knowledge and abilities to their studies. Therefore, when students are able to use their strengths proactively in their studies they may experience more academic adjustment, which can result in better fit with their study course. It is important that students take the initiative to recognise, develop and apply their unique talents, strengths and abilities in their studies to contribute to a better fit and avoid study withdrawal or drop-out. It can therefore be argued that first-year students experience more positive feelings when they are able to apply their strengths in their studies proactively which can result in a better fit with their study course.

*H<sub>2a</sub>: There is a positive relationship between students' proactive behaviour towards strengths use and fit with study course.*

Also, no known studies have been done on the relationship between PBDI and fit with study course. Academic challenges (i.e. stress, area of weaknesses, workloads) can have a negative effect on a students' academic adjustment (Salanova et al., 2010), academic performance and well-being (Kausar, 2010). When students are given the support and development needed to improve themselves continuously it can benefit them in accurately identifying their unique abilities (Fenollar, Roman & Cuestas, 2007), which can lead to more willingness to invest effort in academic tasks, improvement of academic grades, commitment to their studies and better study fit. Furthermore mastery learning can also be considered as another student development method. Evidence for the effectiveness on deficit improvement emerged from research on mastery education. Mastery education focusses on students' strengths and students who feel less motivated in their studies due to their areas of weaknesses (Ironsmith & Eppler, 2007). This educational method can assist students in becoming aware of their areas of weaknesses and invest effort into developing themselves for positive academic outcomes.

Research concluded that numerous educational outcomes such as students' academic performance, engagement in their studies, perceived academic competency, academic outputs (i.e., grades) and their attitudes towards the academic task are associated with mastery education (Guskey & Pigott, 1988). Mastery education will enable students to constantly seek opportunities to develop new skills to try and understand their academic tasks and to improve their level of academic competence (Ames, 1992), which increases their level of energy and academic persistence (Locke & Latham, 2002) and might result in enhanced personal growth and a better fit with their study. For example, mastery orientation students are more willing to invest effort in their academic tasks and feel more committed to improve their skills, knowledge and abilities on a daily basis (Dowson & McInerney, 2001), which can lead to increased motivation towards their studies and good fit with their study course. Furthermore, when students constantly seek opportunities to improve their weaknesses, it can lead to personal mastery because students will feel confident and motivated to improve themselves even more in their studies when they realise they have the abilities to accomplish or master academic challenges/tasks that fall outside their area of strength (Thoen & Robitschek, 2013). Based on the above discussion it can therefore be argued that, when students are able to improve their deficits proactively, it can result in better fit with their study course.

*H<sub>2b</sub>: There is a positive relationship between students' proactive behaviour towards deficit improvement and fit with study course.*

### **The relationship between fit with study course and engagement**

Fit with study course could also be a valuable predictor of first year students' engagement. A previous study showed a positive correlation between student engagement, academic performance, perceived control and sense of belonging (Furrer & Skinner, 2003). Various educational studies indicated that the need to adjust/fit in is one of students' most critical needs to function optimally in various learning environments (Connell & Wellborn, 1991; Deci & Ryan, 1991; Finn, 1989; Osterman, 2000). The need to fit in may have a direct and strong effect on a students' physical and psychological behaviour (Goodenow, 1993b) and their academic performance and satisfaction (Furrer & Skinner, 2003; Westerman, Nowicki & Plante, 2000). For example, when students are able to match their abilities and interests to those of their academic environment it can lead to increased motivation (Komarraju & Karau, 2005), better academic performance (Gardner, 1983; Sternberg, Torff & Grigorenko, 1998a) and enhanced levels of engagement. However, students who struggle to identify themselves within their studies will feel more anxious and less confident in their academic environment and studies (Abu-Hilal, 2000; Bandalos et. al., 1995; Harter, 1992; Hembree, 1988) which can result in lack of commitment in their studies and drop-out (Baird, 2002). Thus, when students' skills and abilities fail to fit the study course it may be associated with misfit that can lead to disengagement and ultimately dropping out. Therefore it is important that students are able to match their unique skills, abilities and knowledge to those of their study course, which can lead to a better fit with their study course and result in high levels of student engagement. Based on the above discussion the following could be concluded.

*H<sub>3</sub>: There is a positive relationship between fit with study course and engagement.*

### **The mediating effect of fit with study course between PBSU/PBDI and engagement**

This study also aims to investigate the potential mediating effect of fit with study course between PBSU/PBDI and engagement. According to Rucker, Preacher, Tormala and Petty (2011) a mediator can be referred to as a variable that identifies how or why a specific relationship occurs between variables. Despite comprehensive literature on person-job fit

and it's relation to work outcomes no research has been done on engagement as a possible outcome of fit with study course. Fit with study course is a variable that could help to mediate the relationship that exists between PBSU/PBDI and engagement. It is argued that PBSU/PBDI enhances fit with study course and fit with study course enhances engagement. For example, students who are confident in their unique talents, abilities and knowledge (i.e. strengths) are more committed to invest effort in their academic studies (Valle, Cabanach, Núñez, González-Pineda, Rodríguez & Piñeiro, 2009) which could lead to a decrease in academic stress, better academic coping and adaptability (Zajacova, Lynch & Espenshade, 2005) and intrinsic and extrinsic motivation (Chowdhury & Shahabuddin, 2007; Prat-Sala & Redford, 2012; Reynolds & Weigand, 2010) resulting in academic success and graduation (Ojeda, Flores & Navarro, 2011). Furthermore students feel more energised and motivated when they proactively pursue opportunities towards their personal development which could increase their persistence when facing difficult tasks (Locke & Latham 2002) that might result in enhanced personal growth and a better fit with their study. When first-year students are able to use their strengths and improve their deficits in their study course, it can lead to a good fit with their study course which can result in enhanced engagement. For example, when the academic environment fills the students' abilities and interests it will lead to increased motivation (Komarraju & Karau, 2005) and better academic achievement (Gardner, 1983; Sternberg et al., 1998a) resulting in engagement. Thus, it is reasonable to expect that fit with study course partially mediates the effects of students' PBSU, PBDI on engagement.

*H<sub>4a</sub>: Fit with study course mediates between PBSU and engagement.*

*H<sub>4b</sub>: Fit with study course mediates between PBDI and engagement.*

In light of the above discussion the following hypothesised model will be tested:

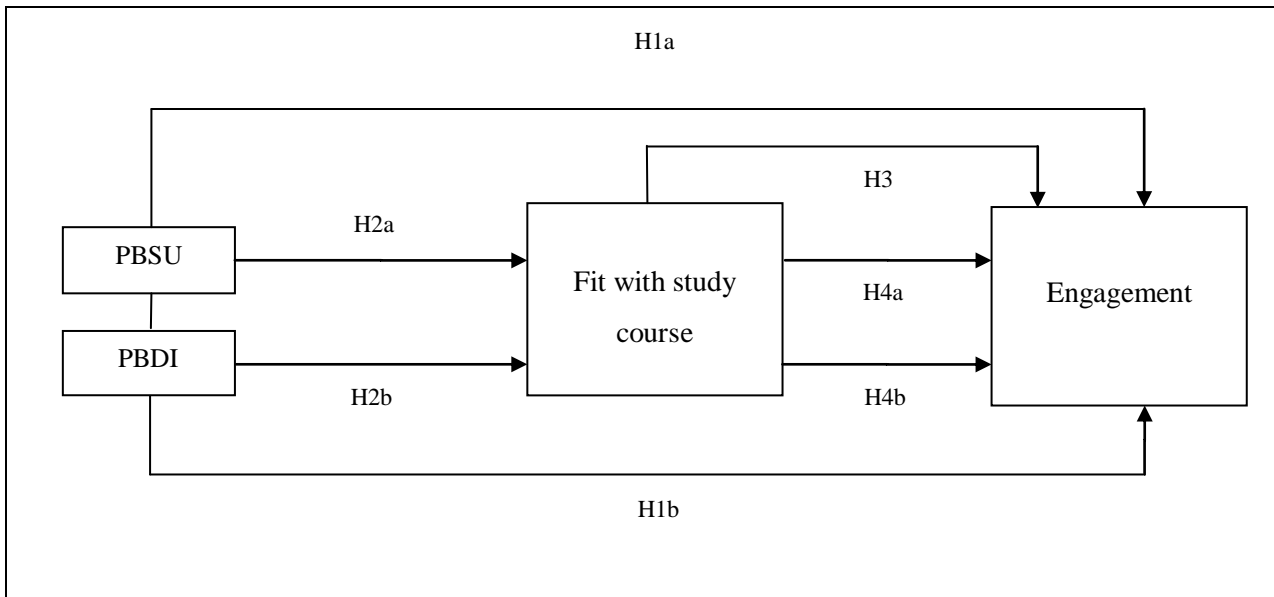


Figure 2: Fit with study course as a mediator in the PBSU/PBDI, engagement relationship.

## RESEARCH DESIGN

### The research approach

This study was quantitative in nature, following a cross-sectional research approach. According to Salkind (2009) a cross-sectional method examines numerous groups of people at one point in time. This approach is economical and time-effective. Since the hypotheses are supported by existing theory the study will both be explorative and confirmatory. However, little is known about the field of individual strengths use and deficit improvement; fit with study course and student engagement.

### The research method

### Research participants

For the purpose of this study, a sample of first-year students on all campuses of the participating university was collected ( $N = 692$ ). The sample group represents different genders, academic years, languages, ages and racial groups. The characteristics of the participants are displayed in Table 1.

Table 1

*Participants Characteristics (N = 692)*

Item	Category	Frequency	Percentage
Gender	Female	616	60.3
	Male	395	38.6
Age	18-23	597	86.2
	24-28	12	1.6
	30-40	5	0.5
Race	White	393	38.5
	Black	559	54.7
	Coloured	35	3.4
	Indian	5	0.5
Home Language	Afrikaans	400	39.1
	English	39	3.8
	Sepedi	23	2.3
	Sesotho	66	6.5
	Setswana	319	31.2
	siSwati	11	1.1
	Tshivenda	11	1.1
	isiNdebele	6	0.6
	isiXhosa	34	3.3
	isiZulu	400	39.1
	isiTsonga	39	3.8
	Other	5	0.5
	Name of Campus	Mafikeng	396
Potchefstroom		517	50.6
Vaal Triangle		109	10.7
Academic Year	First Year	685	99.0
	Third Year	1	0.1
Historical Year	First Year	631	91.2
	Second Year	1	0.1
	Third Year	9	1.3
	Fourth Year	4	0.6
	Sixth Year	1	0.1

*Note.* Where percentages do not sum to a 100, it is due to missing values.

As indicated in Table 1 the sample consisted of 692 participants of whom 616 (60.3%) were female and 395 (38.6%) male. The majority of the participants was between age 18-23 (86.2%). The predominantly spoken home language by the participants was Afrikaans (39.1%) and isiZulu (39.1%) while 319 participants (31.2%) were Setswana. The other languages represented (29.7%) of the total sample. Furthermore 559 (54.7%) of the sample were African, 393 (38.5%) White, 35 (3.4%) Coloured 5 and (0.5%) Indian. The majority of the sample (50.6%) were from Potchefstroom campus followed by (36.1%) from Mafikeng campus and (10.7%) from the Vaal Triangle campus. Most of the participants were first-year academic students [685 (99%)] and first-year historical students [631 (91.2%)].

## **Measuring instrument(s)**

*Biographical Questionnaire:* A biographical questionnaire was utilised to determine the participants' biographical characteristics. Included characteristics were gender, age, race, home language, name of campus, name of faculty, academic year and historical year.

*Students' proactive behaviour towards strength use (PBSU) and proactive behaviour towards deficit improvement: (PBDI).* PBSU and PBDI were measured by means of a new questionnaire (Strengths Use and Deficit Improvement Questionnaire (SUDIQ) developed by Van Woerkom et al. (in process). These scales were scored on a 7-point Likert type scale ranging from 0 (never) to 6 (almost always). Eight items (e.g. "In my studies I use my strengths proactively") were used to measure PBSU ( $\alpha = 0.91$  [Van Woerkom et al. (in process)]) and another eight items (e.g. "In my studies. I concentrate on my areas of development") were used to measure SDI ( $\alpha = 0.92$ ) [Van Woerkom et al. (in process)].

*Student Engagement:* The UWES-S was used to measure the engagement levels of the students. Items was scored on a seven-point Likert-type scale ranging from 0 (never) to 7 (every day). Vigour was measured with five items (e.g. "When I study, I feel like I am bursting with energy"). Dedication was also measured with five items (e.g. "I am enthusiastic about my studies"). The validation of the UWES-S has been done internationally (Schaufeli, Salanova et al., 2002). In South Africa internal consistencies of 0.77 for vigour and 0.85 for dedication were found (Pienaar & Sieberhagen, 2005). A Cronbach alpha was found of 0.70 for vigour and 0.78 for dedication (Mostert, Pienaar, Gauché & Jackson, 2007).

*Students' fit with study course:* In this study the person-job fit perceptions questionnaire, which was developed by Saks and Ashforth (1997), was used to measure fit with study course. The items were adjusted to a student context. This scale was scored on a five-point Likert-type scale ranging from 1 (to a very little extent) to 5 (to a very large extent). Fit with study course was measured by five items (e.g. "To what extent do your knowledge, skills, and abilities match the requirements of your study course?"). A Cronbach alpha of 0.83 for the person-job fit perceptions scale was reported by Saks and Ashforth (1997).

## **Research procedure**

After permission was obtained from the university a letter to participate in the study was e-mailed to all first-year students on all three North-West University campuses. This letter explained the goals and value of the study to the students and the university. The participants completed the questionnaire online on a secure website. The participants were assured that participation was voluntary and that the information confidential. The indicated time-frame for the completion of the questionnaire was about 25-30 minutes. Participants were reminded two weeks before the website was closed. Thereafter the data analysis was performed.

## **Statistical analysis**

Structural equation modelling (SEM) methods were implemented with Mplus 7.2 to analyse the data (Muthén & Muthén, 2014). Cronbach alpha coefficients were used to measure the reliability of the constructs in this study. Due to the recent criticism regarding the alpha coefficient value in psychological research, the omega coefficients were also used as an additional measure of reliability (Raykov, 2012; Revelle & Zinbarg, 2009; Sijtsma, 2009). The product-moment correlations coefficients were used to determine relationships between variables. The practical significance of the results was determined by the use of effect sizes (Steyn & Swanepoel, 2008). The cut-off points for the practical significance of the correlation coefficients was set at 0.30 (medium effect) and 0.50 (large effect) (Cohen, 1988). A confidence interval of 95% ( $p \leq 0.001$ ) was used to measure the statistical significance of the variables. Latent variables in the structural model were created by using the individual items as indicators. Item parcelling methods were therefore not applied in this study (Bandalos & Finney, 2001). The maximum likelihood (ML) estimator was implemented. The input type of the estimation was the covariance matrix.

The goodness-of-fit of the models was tested by the traditional chi-square ( $\chi^2$ ) statistic, the Comparative fit index (CFI), the Tucker-Lewis index (TLI), the Root mean square error of approximation (RMSEA), and the standardised root mean square residual (SRMR) even if the cut-off values for adequate fit had little agreement (Lance, Butts, & Michels, 2006). The conformist process was used in this study, in which the model fit was considered adequate when the CFI and TLI values were larger than 0.90 (Byrne, 2010; Hoyle, 1995). The

RMSEA value was used to determine the model fit; values below 0.05 indicate a good fit and values between 0.05 and 0.08 indicated a moderately good model fit (Browne & Cudeck, 1993).

The indirect effect was estimated by means of a mediation analysis (Rucker Preacher, Tormala & Petty, 2011). The mediation was tested through the means of a bootstrapping method. According to Preacher and Hayes (2008) bootstrapping is a non-parametric resampling method which can be used to test the indirect effects of variables; it is also the most preferred method to use compared to Baron and Kenny's traditional methods (Hayes, 2009; MacKinnon, Lockwood, & Williams, 2004). The bootstrap method was set to resample 5 000 draws (Hayes, 2009). The bootstrap confidence interval level was set at 95% for this study. It was therefore investigated whether the indirect effects would not cross zero at that level. The effect of the independent variables (proactive behaviour towards strength use and deficit improvement) on the dependant variable (engagement) which was mediated by the mediating variable (fit with study course) was investigated in this study.

## **RESULTS**

The measurement model was tested by creating five latent variables which included proactive behaviour towards strength use and deficit improvement, fit with study course dedication and vigour. The items were used as indicators of each latent variable in the three competing measurement models. It is important to note that all of the three competing measurement models included the study-fit variable. The first proposed model tested strengths as one factor and engagement as one factor. To test whether alternative models do not provide more acceptable explanations for the observed inter-item covariance matrix, competing models were tested. Model 2 tested strengths as a one factor- and engagement as two-factor model. Model 3 tested strengths as two factors and engagement as two factors (PBSU and PBDI) and engagement as two factors (vigour and dedication). Model 3 was the best fitting model with a RMSEA value of below 0.05 and CFI and TLI values were larger than 0.90.

Table 2 presents the results of the competing measurement models that were tested for this study.

Table 2

*Results of the Competing Measurement Models*

<b>Model</b>	$\chi^2$	<i>df</i>	<b>CFI</b>	<b>TLI</b>	<b>RMSEA</b>
Model 1	2492.18	431	0.83	0.82	0.06
Model 2	2296.33	428	0.82	0.80	0.07
Model 3	1248.71	424	0.93	0.92	0.04

**Notes:**  $\chi^2$  = chi-square; *df* = degrees of freedom; *p* = statistical significance; CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation

As can be seen in Table 3 Model 3 was the best fitting measurement model. This model estimated that PBSU and PBDI are two distinct factors and that engagement consists of two dimensions namely vigour and dedication (CFI = 0.93; TLI = 0.92; RMSEA = 0.04). Further analysis and the structural model were therefore based on this measurement model. The remaining results reported, and the structural model of the research, was therefore based on this measurement model.

In Table 3, the standardised factor loadings of Model 3 are presented.

Table 3

*Factor Loadings for PBSU, PBDI, dedication, vigour and fit with study course*

<b>Factor Loadings</b>	<b><math>\beta</math></b>	<b>Standard Error (S.E.)</b>	<b>P</b>
PBSU ← PBSU 1	0.60	0.03	0.00*
PBSU ← PBSU 2	0.74	0.02	0.00*
PBSU ← PBSU 3	0.67	0.02	0.00*
PBSU ← PBSU 4	0.70	0.02	0.00*
PBSU ← PBSU 5	0.76	0.02	0.00*
PBSU ← PBSU 6	0.62	0.03	0.00*
PBSU ← PBSU 7	0.79	0.02	0.00*
PBSU ← PBSU 8	0.75	0.02	0.00*
PBSU ← PBSU 9	0.51	0.03	0.00*
PBDI ← PBDI 1	0.62	0.03	0.00*
PBDI ← PBDI 2	0.78	0.02	0.00*
PBDI ← PBDI 3	0.75	0.02	0.00*
PBDI ← PBDI 4	0.74	0.02	0.00*
PBDI ← PBDI 5	0.68	0.02	0.00*
PBDI ← PBDI 6	0.75	0.02	0.00*
PBDI ← PBDI 7	0.79	0.02	0.00*
PBDI ← PBDI 8	0.71	0.02	0.00*
SSFI ← SSFI 1	0.56	0.03	0.00*
SSFI ← SSFI 2	0.83	0.02	0.00*
SSFI ← SSFI 3	0.85	0.01	0.00*
SSFI ← SSFI 4	0.87	0.01	0.00*
SSFI ← SSFI 5	0.86	0.01	0.00*
VI ← VI 1	0.80	0.02	0.00*
VI ← VI 2	0.59	0.03	0.00*
VI ← VI 3	0.31	0.04	0.00*
VI ← VI 4	0.86	0.01	0.00*
VI ← VI 5	0.64	0.03	0.00*
DE ← DE 1	0.79	0.02	0.00*
DE ← DE 2	0.80	0.02	0.00*
DE ← DE 3	0.63	0.03	0.00*
DE ← DE 4	0.77	0.02	0.00*

*B = Standardised Beta Coefficient; p ≤ 0.001*

As can be seen in Table 3 the corresponding factor analyses all had significant factor loadings on the applicable latent variable.

The lowest factor loading for PBSU was 0.51 - item 9: “I seek opportunities that best suits my strong points”; the highest factor loading for PBSU was 0.79 - item 7: “I make the most of my strong points”. The lowest factor loading for PBDI was 0.62 - item 1: “I concentrate on my areas of development”; the highest factor loading for PBDI was 0.79 - item 7: “I

make an effort to improve my limitations”. The lowest factor loading for Fit with study course was 0.56 - item 1: “To what extent do your knowledge, skills, and abilities match the requirements of your study course?”; the highest factor loading was 0.87 - item 4: “To what extent does your study course enable you to do the kind of work you want to do?”. The lowest factor loading for Vigour was 0.31 - item 3: “When I study, I feel like I am bursting with energy”; the highest factor loading was 0.86 - item 4: “When studying I feel strong and vigorous”. The lowest factor loading for Dedication was 0.63 - item 3: “I am enthusiastic about my studies”; the highest factor loading was 0.80 - item 2: “My studies inspire me”.

The correlations and reliability coefficients of Model 3 are presented in Table 4 below. Means are not reported in Table 4. All means were zero because the latent variables were standardised.

Table 4

*Correlation Matrix (r) and Reliability Coefficients for Latent Variables*

Variable name	$\alpha$	$\omega$	1	2	3	4	5
1. PBSU	0.88	0.89	1.00	-	-	-	-
2. PBDI	0.89	0.90	0.63	1.00	-	-	-
3. Fit with study course	0.82	0.82	0.36	0.33	1.00	-	-
4. Vigour	0.74	0.69	0.45	0.55	0.46	1.00	-
5. Dedication	0.90	0.93	0.44	0.47	0.63	0.82	1.00

Note:  $p \leq 0.01$  for all values

$r \geq 0.30$  is practically significant (medium effect);  $r \geq 0.50$  is practically significant (large effect).  $\alpha$  = alpha reliability;  $\omega$  = omega reliability

As can be seen from Table 4 the Cronbach alpha and omega reliability coefficients were all above 0.70. The omega reliability of vigour was borderline at 0.69 but can still be considered acceptable. PBSU and PBDI had practically significant with fit with study course, vigour and dedication. Fit with study course had a practically significant (medium effect) relationship with vigour and a practically significant (large effect) relationship with dedication. All correlations were positive and statistically significant.

The estimates and significance of the direct structural paths of Model 3 are indicated in Table 5.

Table 5

*Estimates ( $\beta$ ) of the Direct Structural Paths in the Standardised Model*

<b>Structural path</b>	<b><math>\beta</math></b>	<b>Standard Error (S.E.)</b>	<b><math>p</math></b>
PBSU $\rightarrow$ Vigour	0.10	0.10	0.08
PBSU $\rightarrow$ Dedication	0.11	0.10	0.06
PBDI $\rightarrow$ Vigour	0.11	0.10	0.00*
PBDI $\rightarrow$ Dedication	0.23	0.07	0.00*
PBSU $\rightarrow$ SF	0.25	0.05	0.00*
PBDI $\rightarrow$ SF	0.18	0.03	0.00*
SF $\rightarrow$ Vigour	0.30	0.12	0.00*
SF $\rightarrow$ Dedication	0.52	0.16	0.00*

\*  $p \leq 0.01$ 

The results indicate that there was no significant relationship between PBSU and vigour ( $\beta = 0.10$ ;  $p = 0.08$ ) or between PBSU and dedication. ( $\beta = 0.11$ ;  $p = 0.06$ ). Hypothesis 1a is rejected. Furthermore, the results show that there were significant positive relationships from PBDI to vigour. ( $\beta = 0.38$ ;  $p < 0.001$ ) and between PBDI and dedication ( $\beta = 0.23$ ;  $p < 0.001$ ), thereby providing support for Hypothesis 1b.

Regarding the paths investigated in Hypothesis 2 the results showed that a significant relationship exists between PBSU and fit with study course ( $\beta = 0.25$ ;  $p < 0.001$ ) and between PBDI and fit with study course ( $\beta = 0.18$ ;  $p < 0.001$ ), thus providing support for Hypothesis 2a and 2b.

With regards to paths investigated in Hypothesis 3 the results indicated a significant relationship between fit with study course and vigour ( $\beta = 0.30$ ;  $p < 0.001$ ) as well as between fit with study course and dedication ( $\beta = 0.52$ ;  $p < 0.001$ ). These results provide support for Hypothesis 3.

In Table 6, the results of the estimates and confidence intervals of the indirect structural paths are reported.

Table 6

*Indirect effects with Confidence Intervals at the 95% Confidence Interval*

Indirect effect	Estimate	S.E	<i>p</i>	Confidence Intervals (95%)	
				Lower	Upper
PBSU → Fit with study course → Vigour	0.08	0.02	0.00*	0.03	0.12
PBDI → Fit with study course → Vigour	0.08	0.02	0.00*	0.01	0.09
PBSU → Fit with study course → Dedication	0.13	0.03	0.00*	0.07	0.20
PBDI → Fit with study course → Dedication	0.09	0.03	0.00*	0.03	0.15

\*  $p \leq 0.01$ 

Table 6 indicates results regarding the indirect effects investigated for Hypothesis 2a and 2b and both were statistically significant  $p < 0.01$ . Fit with study course was therefore a mediator between PBSU and vigour 0.08 [ $p < 0.01$ ; 95% CI (0.03, 0.12)] and also a mediator in the relationship between PBSU and dedication 0.13 [ $p < 0.01$ ; 95% CI (0.07, 0.20)]. Fit with study course was also a mediator between PBDI and vigour 0.08 [ $p < 0.01$ ; 95% CI (0.01, 0.09)] and PBDI and dedication 0.09 [ $p < 0.01$ ; 95% CI (0.03, 0.15)]. Therefore, Hypothesis 2a and 2b were confirmed.

## DISCUSSION

The aim of the study was to test a structural model of PBSU, PBDI, fit with study course and engagement amongst first-year students and to test the mediating effect of study course between PBSU/PBDI and engagement. The relationship between these variables has never been tested in the South African context in a sample of first-year university students.

Structural equation modelling was used to determine the significant predictors (PBSU, PBDI, fit with study course) of student engagement. Hypothesis 1a stated that PBSU have a significant relationship with engagement. However, the results indicate that there was no direct significant relationship between PBSU and vigour ( $p = 0.08$ ) or between PBSU and dedication. ( $p = 0.06$ ), although the significant levels were close to 0.05. However, the mediating effect of fit with study course was significant for the relationship between PBSU and engagement indicating that PBSU influences fit with study course, which in turn results in vigour and dedication (i.e. a full mediating effect of fit with study course). From these

results, one can assume that, when universities provide an environment in which students already proactively use their strengths, they don't necessarily express high levels of energy or satisfaction. Hypotheses 1a were therefore rejected.

Hypothesis 1b stated a positive relationship between PBDI and engagement. The results of this study indicated a significant positive relationship with PBDI and engagement, specifically with dedication. These results provide support for Hypothesis 1b. According to Salanova et al. (2010) academic obstacles (i.e. areas of weaknesses) can affect a students' academic performance and productivity and lead to disengagement (Salanova et al., 2010). Additionally, when students are constantly struggling with difficult tasks that fall outside their area strength they are more likely to perform poor academically (Kahn et al., 2002; Wortman & Napoli, 1996) which can result in disinterest and low levels of engagement. However, when students feel valued and supported by the university to continuously improve their weaknesses they will feel more motivated and committed towards their studies (Wentzel, 1997) which can result in higher levels of engagement. Thus, development and support in students' proactive improvement in their academic abilities can lead to reduced absenteeism and increased engagement (Connell & Wellborn, 1991; Croninger & Lee, 2001). For example, when students feel that they can continuously learn to master difficult tasks they will experience a sense of accomplishment in their studies which can lead to higher levels of motivation and engagement. However, based on this evidence one can argue that, when first-year students are in an environment that enables them to proactively pursue these development opportunities in their studies, they may experience higher levels of engagement.

Hypothesis 2a stated a significant positive relationship between PBSU and fit with study course. The results indicated a positive relationship between PBSU and fit with study course. These findings lead to the acceptance of Hypothesis 2a. Therefore students who perceive themselves as capable of accomplishing academic tasks can experience increased meaning and willingness to invest effort in their studies (Stoeber, Childs, Hayward & Feast, 2011) which can result in better fit with their study course. Additionally students who are confident in their abilities will experience more positive emotions towards their studies compared to students who perceive themselves as academically incapable (Bandura, 1997). Furthermore students possessing a high degree of self-efficacy will be more successful at accomplishing academic tasks and resulting in better academic performance (Jewett, 1996)

and better study fit. When, according to Lent, Taveira and Singley (2009), students are able to continuously use their unique abilities to accomplish a given task and believe in their unique abilities and skills they will feel more familiar with their studies, which can lead to good fit with their studies. For example, when first-year students are constantly seeking for opportunities to use their strengths in their studies they will feel more motivated and interested in their studies which can positively influence their fit with their study course. Based on the evidence one can argue that when first-year students use their strengths proactively in their study course, they experience positive feelings towards their studies resulting in a better fit with their study course.

Hypothesis 2b stated a significant relationship between PBDI and fit with study course. Results indicated a positive relationship between PBDI and fit with study course. These findings lead to the acceptance of Hypothesis 2b. Students who improve their deficits proactively are likely to experience higher levels of satisfaction towards their study course. University students who are able to master academic goals may experience positive feelings and behaviour towards their study course resulting in better fit with their study course, motivation and engagement (Salanova et al., 2010). Consequently students may experience feelings of interest and high motivation towards their studies when they are able to improve and match their skills, knowledge and abilities to those of the study course (Barell, 1995). When students therefore proactively aim towards development and improve their abilities, skills and knowledge they are more likely to approach academic tasks with confidence (Arnold & Brown, 1999).

Hypothesis 3 stated that there exist a positive relationship between fit with study course and engagement. The results indicate that a strong positive relationship exist between fit with the study course and engagement, specifically with dedication. These findings lead to the acceptance of Hypothesis 3. Previous studies found that individuals are more likely to find meaning in their job when they are able to match their needs to those of the job (Hoffman & Woehr, 2006; Resick, Baltes & Shantz 2007; Verquer Beehr & Wagner, 2003). This results in positive work outcomes such as engagement. Various studies by Brkich, Jeffs and Carless (2002), Caldwell & O'Reilly III (1990) and Lauver and Kristof-Brown (2001) showed a strong relationship between person-job fit and a variety of work outcomes (performance, commitment and engagement). For example, individuals with good person-job fit are likely to demonstrate high levels of job performance, organisational commitment and job

engagement. A recent study on undergraduate and graduate students showed that perceived fit contributes to student engagement (Gilbreath, Kim & Nichols, 2011; Schmitt, Oswald, Friede, Imus & Merritt, 2008). When students relate to their studies they can experience feelings of energy and satisfaction which will lead to engagement (Salanova et al., 2010). Thus, when students can match their abilities to the requirements of the study course they are likely to experience high levels of energy and dedication towards their studies.

Fit with study course mediates the relationship between PBSU/PBDI and engagement. Based on the results fit with study course had a full mediating effect between PBSU and vigour and between PBSU and dedication. Therefore, when students proactively use their strengths they don't necessarily directly experience high levels of energy or dedication but rather through the effect of fit with their study course. Fit with study course also mediated the relationship between PBDI and vigour and between PBDI and dedication. Therefore, when students proactively develop and improve their weaknesses this will not only indirectly increase engagement through fit with their study course, but will also have a direct positive impact on engagement. Hypotheses 4a and 4b were therefore accepted. Thus, when universities see that students experience a mismatch with their study course, they should reinforce proactive behaviour towards strength use and deficit improvement amongst first-year students. This will enhance a better fit with study course which will increase engagement levels.

This research study is a contribution to the literature on student well-being as it adds to the information on possible predictors of student engagement. The key findings of the study are that there were a significant positive relationship between PBDI and engagement, but no direct significant relationship between PBSU and engagement (although the significant levels were close to 0.05). Results also showed that there was a full mediation effect between the PBSU and engagement and a partial mediation effect between PBDI and engagement.

### **Limitations and Recommendations**

Several limitations were identified in this study, one of which was that a cross-sectional design was used (Fogarty & McGregor-Bayne, 2008; Kelly & Shin, 2008); therefore the effect of the relationship between PBSU, PBDI, fit with study course and student engagement could not be determined. It is recommended for future research that

longitudinal research be used to determine the effects of student engagement and whether the predictors (PBSU, PBDI, fit with study course) included in this study could rather be outcomes of student engagement. Secondly the data in this study was gathered from a single self-report questionnaire which is based on individual ratings. It is suggested that other forms of measures are used in future research studies such as focus groups and interviews, where students are able to talk openly in a group about several themes related to the study. Thirdly the study focussed specifically on first-year students from one university. This means that results cannot be generalised to other students in this university or to students in other universities, technicons and colleges. It is necessary to include students from other universities in South Africa. Lastly fit with study course was tested as a mediator in the relationship between PBSU, PBDI and engagement. Further studies can also consider moderators in the PBSU, PBDI and engagement relationships such as psychological capital, coping strategies, personality traits, social support and parental support.

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## **CHAPTER 3**

### **CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS**

The conclusions that are provided in this chapter arise from the general and specific objectives of the study outlined in Chapter 1. The limitations of the study will also be discussed followed by recommendations for future research.

#### **3.1 CONCLUSION**

The main objective of this research was to test a structural model of proactive behaviour towards strengths use (PBSU), proactive behaviour towards deficit improvement (PBDI), fit with study course and engagement amongst first-year students, and to test the mediating effect of study course between PBSU/PBDI and engagement.

The specific objectives were

- 1) to conceptualise PBSU, PBDI, fit with study course and engagement in the literature;
- 2) to determine the relationship between PBSU, PBDI, fit with study course and engagement amongst first-year university students;
- 3) to test a structural model that includes students' PBSU, PBDI, fit with study course and engagement;
- 4) to determine whether fit with study course mediate the relationship between PBSU/PBDI and engagement; and
- 5) to make recommendations for future research and practice.

The first objective of the research was to conceptualise PBSU, PBDI, fit with study course and engagement from the literature.

Proactive behaviour towards strengths use and deficit improvement can be seen as two additional forms of proactive behaviour [Van Woerkom, Mostert, Els, Rothmann & Bakker, (in process)]. A proactive individual will constantly seek for opportunities which will improve or change their environment rather than accepting and crafting their current

situation (Crant, 2000). A proactive individual can also be referred to as a person who seeks continuous feedback (Ashford, Blatt & Van de Walle, 2003), looks for new prospects (Frese & Fay, 2001), builds relationships with others (Ashford & Black, 1996), seeks information (Morrison, 1993), helps colleagues (Organ, 1988), takes responsibility (Morrison & Phelps, 1999) and redesigns his/her work (Ashford & Black, 1996; Wrzesniewski & Dutton, 2001). Against this background PBSU is defined as an individual's self-starting behaviour towards using his/her strengths in the workplace, and PBDI is defined as individual self-starting behaviour towards improving deficiencies in the workplace [Van Woerkom et al. (in process)].

The concepts of PBSU and PBDI emerged from positive psychology which is a well-known movement and focus on individuals' holistic function and wellness (Duckworth, Steen & Seligman, 2005). However, the positive psychology movement focusses on the individual's talent, strengths and unique skills rather than on the deficits of an individual (Cameron, 2003; Carr, 2004). A strength can be defined as "...a pre-existing capacity for a particular way of behaving, thinking or feeling that is authentic and energising to the user and enables optimal functioning, development and performance" (Linley, 2008, p. 9). Minhas (2010) says when employees utilise their unique skills, talents and strengths in their job it can lead to enhanced self-confidence which can result in satisfaction and happiness (Govindji & Linley, 2007; Linley Nielsen, Wood, Gillett & Biswas-Diener, 2010). Additionally, strengths use can relate to positive emotional and social outcomes (Biswas-Diener, Kashdan, Minhas, 2011; Linley et al., 2010) resulting in increased energy and meaning towards their work (Govindji & Linley, 2007; Linley et al., 2010). Thus proactive use of strengths in the work context can lead to enhanced performance (Clifton & Harter, 2003) and engagement.

Although it is argued that strengths use contributes to positive outcomes it is not ideal to focus on strengths only. Some employees are faced with work tasks that are challenging and fall outside their area of strength, which can be referred to as a deficit or area of weakness. A deficit refers to a shortcoming or impairment in an individual's performance (Merriam-Webster Dictionary, 2012). When an employee feels that he/she lacks a certain skill it can influence behaviour and attitude towards work negatively which can result in poor performance. However, employees can develop/improve their deficits with appropriate development and training programmes. Organisations can use performance appraisals to

identify employee's deficits in order to identify the needed for training and development (Glen, 1990; Santos & Stuart, 2003) which can lead personal mastery, capability and decrease in exhaustion levels (Maslach, 2006; Schaufeli & Peeters, 2000). It is therefore important to utilise both PBSU and PBDI to optimise holistic growth among employees.

Although PBSU and PBDI are concepts that were developed in the organisational context it can also be applied to the educational context. Most educational institutions focussed on students' areas of weaknesses rather than on their strengths (Clifton, Anderson, & Schreiner, 2006; Clifton & Nelson, 1992; Shushok & Hulme, 2006). However, strengths-based education can be associated with more positive outcomes such as developing students' strengths and engagement (Lopez, 2011). Students can experience a sense of detachment/disinterest in their studies (which can result in lower academic achievements) when they are unable to utilise their strengths and develop their deficits (Greenberg, Domitrovich, & Bumbarger, 2001). However, students can make valuable contributions to their studies when they are equipped with the knowledge and skills on how to apply their strengths on a daily basis (Park & Peterson, 2006a).

Students feel less energised in their studies when they are confronted with constant academic challenges (i.e. deadlines, exams, tight class schedules) without the needed support and resources from facilitators and the institution (Van der Merwe & Rothmann, 2003). However, first-year students can apply proactive and preventive coping strategies which can decrease their academic stress and contribute to them feeling more energised and satisfied (Gan, Yang, Zhou & Zhang, 2007). Proactive behaviour can also teach students the appropriate skills and abilities to plan and manage the demands in their studies and forthcoming challenges (Greenglass, 2002). It is therefore important for universities to assist first-year students by providing them with the skills, abilities and knowledge on how to use their strengths proactively and improve their deficits in their studies to contribute to a better fit with their studies and higher levels of energy and meaning.

Fit with study course can be associated with the person-job fit literature. Person-job fit occurs when employees are able to match their skills, knowledge and abilities to their job requirements, or when the needs/desires of employees meet the demands of their job (Edwards, 1991; O'Reilly, Chatman & Caldwell, 1991). Person-job fit can be associated with various work outcomes for example employees' satisfaction in their work, decreased

work stress, motivation, retention and job performance. Well-being and positive feelings such as personal accomplishment, self-efficacy and satisfaction occurs when a person is able to match their needs to those of their job (Edwards & Rothbard, 1999; Gilbreath, 2004; Kristof, 1996; Moos, 1988). Additionally employees feel more satisfied within their jobs when their jobs match their personality or character (Spokane, 1985; Tinsley, 2000).

It is also important to note that a first-year student also needs to match his/her unique skills, knowledge and abilities to the requirements of their chosen study course. For example, when students' skills are incongruent to their study course (Abu-Hilal, 2000; Bandalos, Yates & Thorndike-Christ, 1995; Harter, 1992; Hembree, 1988) it can lead to demotivation and less willingness to invest effort in academic tasks (Atkinson, 1964; Eccles, Adler, Futterman, Goff, Kaczala, Meece & Midgley, 1983; Skinner, Wellborn & Connell, 1990; Skinner, Zimmer-Gembeck, & Connell, 1998) resulting in low levels of interest satisfaction in their study course. Thus, students' skills and the demands of their study course should be congruent in order to promote motivation and academic success among first-year students.

Engagement can be defined as "...a positive, fulfilling, and work-related state of mind that is characterised by vigour, dedication and absorption" (Schaufeli, Salanova, González-Romà & Bakker, 2002, p.75) Engagement consists of three dimensions – vigour, dedication and absorption. However, this study only focussed on vigour and dedication. Schaufeli, Salanova et al. (2002) define vigour as "high levels of energy and mental resilience while working" and the "willingness and ability to invest effort in one's work" whereas dedication is defined as "experiencing meaning and satisfaction in one's work and to be eager and motivated".

Engagement can also be applicable to students. Student engagement was introduced by Schaufeli and his colleagues (Schaufeli, Martínez, Pinto, Salanova & Bakker, 2002). Student engagement can be associated with students' amount of enjoyment in their studies, their consistency in tasks throughout the term and the amount of energy and time invested in their studies (Horstmannshof & Zimitat, 2007; Salamonson, Andrew, & Everett, 2009). Engaged students will show better academic performance (Schaufeli, Martínez, et al., 2002) and have more passion towards their studies (Stoeber, Childs, Hayward & Feast, 2011). Student engagement is also a predictor of student satisfaction and success which can help them to achieve academic goals in their chosen study course (Strydom, Kuh & Mentz,

2010). Additionally engaged students are more willing to preserve, learn and enjoy academic tasks than students who are academically detached and disinterested (Dowson & McInerney, 2001; Hancock & Betts, 2002; Lumsden, 1994; Voke, 2002).

The second objective was to determine the relationship between PBSU, PBDI, fit with study course and engagement according to the literature. Based on previous research there is a significant relationship between strengths-based approach and the well-being of students (Elias, Arnold & Hussey, 2003; Seligman, 2008; Fox Eades 2008; Jimerson, 2001, Jimerson, Sharkey, Nyborg, Furlong 2004; McGrath & Noble, 2005; Noble & McGrath, 2008; Rhee, Furlong, Turner & Harari, 2001). Students experience feelings of personal accomplishment leading to increased academic performance when they use their strengths in their studies (Austin, 2005, Park & Peterson, 2006a). Additionally feedback on students' strengths rather than their deficits can lead to better performance and increased engagement (Spreitzer, 2008). It was therefore expected that first-year students will experience positive outcomes such as performance, engagement and satisfaction when they are proactively using their strengths. However, the focus on the strengths use exclusively is not ideal. Students may experience difficulty or struggle with tasks that fall outside their strengths area which can hinder their academic performance. For example, students' performance levels are most likely to decrease when they experience difficulty with academic challenges (i.e areas of weaknesses) (Kahn, Nauta, Gailbreath, Tipps & Chartrand, 2002; Wortman & Napoli, 1996) resulting in disengagement. By providing students with an environment in which they improve their deficits they will feel more motivated to accomplish difficult tasks and confident in their abilities resulting in reduced absenteeism and increased engagement (Connell & Wellborn, 1991; Croninger & Lee, 2001). It was therefore expected that, when first-year students are in an environment which supports them in proactively using their strengths and improving their deficits, they are most likely to experience engagement.

No studies could be found that investigate the relationship between strengths use and person-job fit or students' fit with their study course. However, the concept of self-efficacy is related PBSU [see Van Woerkom et al. (in process)] and can be used to formulate an argument for the relationship between PBSU and fit with study course. An individual's specific view regarding their unique skills, knowledge and abilities in various situations can be referred to as self-efficacy (Locke, McClear & Knight, 1996). High levels of self-efficacy will contribute to individuals feeling more adapted, optimistic and confident in their abilities

(Judge, Erez, Bono & Thoresen, 2003) resulting in good person-job fit (Edwards, 1991; Kristof-Brown, Jansen & Colbert, 2002). However, poor person-job fit occurs when individuals struggle to adapt, experience negative feelings and feel incompetent due to low levels of self-efficacy. Thus, when employees perceive themselves as competent to execute work tasks they may feel more motivated and attached towards their work resulting in engagement. Based on this evidence it was argued that a relationship between PBSU and person-job fit exists. However, it is also necessary to argue whether the link between PBSU and fit with study course exists.

Self-efficacy can be referred to as a students' confidence in his/her unique skills, abilities and knowledge (i.e. strengths) to execute and perform academic tasks successfully (Schunk, 1991). Students feel confident and optimistic about their studies when they feel competent to perform academic tasks (Vickers & Vogeltanz, 2000) which can result in better fit with their study course. Additionally students whose skills, knowledge and abilities are congruent with their study course show higher levels of academic performance and better coping with stress than students with poor study fit (Eagan and Walsh, 1995). Students with high self-efficacy are more attuned to their study course resulting in a good fit with their study course (Lent, Taveira & Singley, 2009). Thus, when first-year students are able to match their unique skills, abilities and knowledge they tend to feel more motivated and positive about their studies which can result in a better fit with their study course.

The link between PBDI and students' fit with their study course has not been researched or established in literature. When students are struggling with academic tasks in their study course it can hinder their performance. However, with the assistance and support of the institution students can improve their areas of weaknesses which can lead to better performance and motivation towards their studies, resulting in a better fit with their study course. For example, students experience more personal growth and academic performance (Boulter, 2002; DeStefano, Mellott & Peterson, 2001; Grant-Vallone, Reid, Umali, & Pohlert, 2003-2004) when the institution provides the necessary support and development programmes. Students feel more energised and driven to accomplish difficult tasks when they are in an environment that enables them to develop themselves proactively (Locke & Latham, 2002). This can result in enhanced personal growth and good fit with their study course.

The relationship between person-job fit and engagement in an organisational setting can also be applicable to students. When a good match between an employee and his job exists, it can result in engagement (Lloyd, 2004; MacDonald, 2002). Furthermore employees may feel more engaged and perform well on work tasks when they are able to match their needs to the job demands (Hackman, 1980). However, feelings of dissatisfaction can occur if there is a poor match between the person and his/her job. Thus the congruence between employees' skills, knowledge and abilities and the job requirements can result in good person-job fit and increased work engagement (Hamid & Yahya, 2011; Scroggins, 2008). Students may also experience engagement when they can fit their unique skills to their study course. For example, the congruence between a students' skills and his/her study course can lead to increased motivation (Komarraju & Karau, 2005) and higher levels of academic performance (Gardner, 1983; Sternberg, Torff, & Grigorenko, 1998a) resulting in engagement. However, students feel more anxious and less confident in their academic environment and studies when they struggle to match their skills with the academic requirements (Abu-Hilal, 2000; Bandalos, Yates, and Thorndike-Christ, 1995; Harter, 1992; Hembree, 1988). However, when students' skills match the academic requirements of their study course they will feel more motivated and energised resulting in engagement. Ensuring that students are a good fit with their study course is important to enhance engagement.

The third objective was to test a structural model that includes students' PBSU, PBDI, fit with study course and engagement. The results showed that PBSU had no direct significant relationship with vigour or dedication although the significant levels were close to  $p = 0.05$ . Thus, when educational institutions provide support and development in which students already proactively use their strengths, they don't necessarily express high levels of energy or satisfaction. However, the results support the relationship between PBDI and engagement indicating that, when students feel that they can continuously learn to master difficult tasks, they will experience a sense of accomplishment in their studies which can lead to higher levels of motivation and engagement. For example, students will feel more motivated and dedicated towards their studies when they are in an environment which supports and assists them to improve their weaknesses proactively (Wentzel, 1997). However, students may also feel demotivated and disinterested when they are in an environment in which they are unable to improve themselves proactively. Thus it is important to ensure that first-year students are able to apply their strengths and improve their deficits which can lead to

increased feelings of energy and motivation towards their studies resulting in a good fit with their study course.

It was hypothesised that students' PBSU will lead to perceptions of fit with their study course. The results supported this hypothesis. Students' confidence in their ability to master academic tasks can lead to high levels of meaning and enthusiasm in their studies (Stoeber et al., 2011) which can result in better fit with their study course. Additionally, students with high levels of self-confidence in their studies will be able to pursue academic tasks more effectively, which can lead to increased academic performance (Jewett, 1996), and a good study fit. However, students who view themselves as incapable of mastering academic tasks can experience less positive emotions towards their study course compared to students who feel academically competent (Bandura, 1997). According to Lent et al. (2009) students will be able to identify themselves within their studies, once they are able to apply their unique talents to achieve academic goals which can result in a better fit with their studies. Thus, when first-year students are able to apply their unique skills, knowledge and abilities to their academic requirements they may feel more adjusted which can lead to positive feelings towards their studies, resulting in a good fit with their study course.

The results also supported the positive relationship between PBDI and fit with study course. When students thus improve their deficits proactively they experience feelings of satisfaction and energy towards their studies. Students also show high levels of interest and positive behaviour towards their studies when they constantly seek opportunities to improve themselves (Barell, 1995). Students are more confident in difficult academic tasks when they pursue opportunities in which they can develop the abilities, skills and knowledge they lack (Arnold & Brown, 1999). Thus students show more enthusiasm and positive attitudes towards their academic tasks, which can lead to higher motivation, engagement and a better fit with their study course (Salanova, Schaufeli, Martínez & Bresò, 2010). It can therefore be concluded that, when students are in an institutions which support them in improving the skills, knowledge and abilities that they lack, they will feel valued and motivated in their environment and studies which results in a better fit with their study course.

Lastly, the relationship between fit with study course and engagement was supported by the results of this study. Therefore, when students' unique skills, knowledge and abilities are congruent with their study course they experience high levels of energy and meaning in their

studies. Students will feel more energised and satisfied within their studies when their unique characteristics meet their study course requirements (Salanova et al., 2010). Additionally, the match between a students' abilities, knowledge and skills and their studies can lead to more enthusiasm and dedication (Komarraju & Karau, 2005), higher levels of academic achievement (Gardner, 1983; Sternberg, Torff & Grigorenko, 1998a) and therefore increased engagement. However, when students are unable to match their skills to the requirements of their academic tasks they may feel less motivated and interested in their studies which can lead to a poor study fit and disengagement and even dropout. Thus it is important to ensure that first-year students are able to match their unique attributes to the demands of their chosen study course. They will then be able to perform better and feel motivation towards their chosen study course, which results in a good fit with their study course and enhanced engagement.

The fourth objective was to determine whether fit with study course mediate the relationship between PBSU/PBDI and engagement. The results showed there was a full mediation effect between PBSU and vigour and PBSU and dedication. First-year students don't necessarily directly experience high levels of energy and dedication when they use their strengths proactively but rather through the effect of fit with their study course. The results also indicated a partial mediation effect between PBDI and vigour and PBDI and dedication. For example, when first-year students are proactively seeking for opportunities that enable them to grow personally they will feel more energised and motivated towards their studies, which can increase their study fit and enhance their engagement levels. Student engagement is indirectly influenced through their fit with their study course when they develop their deficits proactively. Students' proactive behaviour towards their deficit improvement can also have a direct positive effect on engagement. It is therefore essential for higher educational institutions to ensure that students use their strengths proactively and improve their deficits to decrease a mismatch with their studies.

In conclusion the results showed no direct significant relationship between PBSU and engagement (although the significant levels were close to 0.05). However, a significant positive relationship between PBDI and engagement was found. The results also showed that fit with study course fully mediated the relationship between PBSU and engagement, and partially mediated effect between PBDI and engagement.

### **3.2 LIMITATIONS OF THE RESEARCH**

The first limitation is that a cross-sectional research design was used. The disadvantage of using this research design is that data is collected at one point in time. The objectives of this study were achieved by using the cross-sectional design to investigate the interrelationships between variables (Struwig & Stead, 2001; Trochim & Donnelly, 2008). However, due to the use of this method the causality of relationships between PBSU, PBDI, fit with study course and engagement could not be determined in this study.

Secondly the data in this study was gathered from a single self-report questionnaire. The use of self-report measures could lead to problems such as “common method-variance” (Tremblay & Messervey, 2011). The data was gathered on individual ratings only. A students’ personal views and bias regarding the items can influence the ratings on the questions. These individual ratings on the questions can vary from the students’ actual/intended rating or his/her perception of the items. However, no recent conclusions have been made on whether the use of self-report measures is considered a disadvantage (Podsakoff, MacKenzie, Lee & Podsakoff, 2003; Spector 2006). It can still be recommended to include other data collection methods.

Thirdly the sample included several characteristics (gender, age, race, home language). However, the study only focussed on first-year students from one university; thus the results of this study cannot be generalised to all students from different academic years in other universities, technicons and colleges. Individuals from different academic years and universities may experience engagement differently.

### **3.3 RECOMMENDATIONS**

Although several limitations are mentioned above the findings may guide universities to develop and refine current policies and procedures regarding student engagement. This study will make the university more aware of first-year students’ needs and to respond more effectively to those needs.

### **3.3.1 Recommendations for universities**

Universities can provide students with strategies to manage themselves according to the demands of their study course. According to Krause (2005) self-management strategies aim to develop self-regulated learners in managing their own engagement, implement time management strategies to encourage motivation, especially in stressful times, and also by preparing first-year students ahead of time by providing help-seeking sources. Self-management strategies will help first-year students to prepare and manage themselves accordingly to ensure that they don't feel overwhelmed with all the changes and demands of their environment and study course.

Group counselling will provide students with the opportunity to share their concerns in their studies with other students going through similar situations. The implementation of group counselling programs can be used to address the issues that students face in higher education (Crozier, 1989); for example, group counselling sessions can be scheduled on a weekly/monthly basis under supervision of an academic staff member qualified in this field. Group counselling can be an effective method to assist students in the school-university transition; also in coping with and management of the demands, expectations and requirements in their study course.

Universities could consider running yearly engagement surveys to identify predictors of student engagement with the university. These results can be used by the university to develop, design or alter programmes or services which can develop and support students. These development programmes and services can provide students with life-orientation skills (i.e. skills to manage time more effectively, managing academic and personal stress, managing finances, personal development and growth, etc.) and additionally providing mentoring, counselling and career guidance for first-year students. These development programmes and services can produce better academic success among students (Miller, Bradburry & Acutt, 2001; Woollacott & Henning, 2004).

PBSU and PBDI can help first-year students towards a better study fit and engagement. It is therefore necessary to identify programmes and implement them to enhance students' academic confidence and motivation towards their studies.

### **3.3.2. Recommendations for future research**

The focus of the study was to test a structural model of PBSU, PBDI, fit with study course and engagement amongst first-year students, and to test the mediating effect of fit with study course between PBSU/PBDI and engagement. A longitudinal research design is recommended for future research in order to observe continuous occurrences and to establish causative factors. Longitudinal research is an observational study design which is used to observe the same variables over longer periods in time. Changes in a construct can be evaluated over time through this research design.

It is suggested that a mixed method design can be used for future research. This method uses both quantitative and qualitative research techniques, methods and approaches in one study alone (Johnson & Onwuegbuzie, 2004). This method can contribute to producing better results given that the researcher will be more in control regarding the time period of the data collection. Additionally quantitative studies make the analysis of the research results easier as it provides statistical results which simplify human experiences. A qualitative study observes the lived human experiences and allows an in-depth study of the phenomenon. Thus, a combination of both qualitative and quantitative data in future studies can reveal a more in-depth understanding.

Fit with study course were conceptualised as a mediator in the relationship between PBSU, PBDI and engagement. Further studies can also consider moderators in the PBSU, PBDI and engagement relationships. Moderators (e.g. psychological capital, coping strategies, personality traits, social support and parental support) can be included in future studies. A moderator can be described as a variable that stipulates the specific circumstances under which an independent variable affects a dependent variable (Baron & Kenny, 1986; Holmbeck, 1997). For example, psychological capital (optimism, hope, self-efficacy and resilience) can alter the relationship between PBSU, PBDI, study fit and engagement. Students with high levels of hope, optimism, self-efficacy and resilience could be more willing to use their strengths and improve their deficits, which could increase their study fit and enhance their engagement. On the other hand students with low levels of hope, optimism, and self-efficacy could experience poor fit with their studies resulting in disengagement.

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