

**A STUDY INTO ACADEMIC MOTIVATION IN 3RD LEVEL STUDENTS USING
AJZEN'S THEORY OF PLANNED BEHAVIOUR: A LOOK AT POSSIBLE
GENDER DIFFERENCES.**

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Chapter 1: Acknowledgements

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Chapter 2: Abstract

The purpose of this study was to look at academic motivation in 3rd level students using Azjen's theory of planned behaviour and to compare possible sex differences within this framework. Motivational determinants were examined using the constructs of the theory of planned behaviour and the external variables academic experience, goal setting and self-concept. Fifty participants took part in the study; males and females between the ages of 18 and 28, there were four excluded cases. Each individual was required to fill out a questionnaire based on the theory of planned behaviour and which included the external variable academic experience and goal setting and a self-concept questionnaire. Results showed that the theory of planned behaviour variables are significantly correlated with intention and therefore can be used as a model for academic behaviour. Gender differences were also found within this framework. Differences in subjective norm, perceived behavioural control but interestingly enough not in attitude or intention. There were also gender differences in goal setting with females putting more emphasis on academic goals than males and in their academic experience. There were no differences in self-concept. Past study behaviour was found to be a good predictor of future intention. These findings suggest that males and females 3rd level experience and approach to study at this level is also different for some aspects of their lives. This may help with the implementation of first year mentor or study advice for students. If past behaviour indicates future study behaviour it would seem to be important to have structures in place for students from their first day at 3rd level to help them to achieve the best results they possibly can.

Chapter 3: Introduction

The objective of this research is to explore the viability of using Ajzen's Theory of Planned Behaviour to explain the link between studying behaviour and its variables; attitude, social norms and perceived behavioural control with a view to possible sex differences in student's motivation and therefore study behaviour. For the purpose of this paper three external behaviours were also looked at; goal setting, academic experience and self-concept. Past study behaviour as an external variable was also explored. The following literature review will present the research in the areas (1) Academic Motivation, (2) Academic Motivation and Gender differences, (3) Theory of Planned Behaviour, Academic Motivation and Gender Differences; Attitude, Subjective Norm and Perceived Behavioural Control, (4) External variables proposed to influence academic motivation; Goal Setting, Academic Experience, Self-concept, (5) Past study behaviour as a predictor of present and intended study behaviour.

Recently a report by the Higher Education Authority (HEA) in Ireland linked achievement in the Leaving Cert to drop out rates at third level institutions. The report stated that the higher the marks awarded in the leaving cert the more likely those individuals were to progress in 3rd level education (Mooney, O., Patterson, V., O' Connor, M., & Chantler, A., 2010). The report also states that average dropout rate for all 3rd level institutions in Ireland is currently at 15% and the reasons for dropouts are currently listed as poor academic record or past study behaviour, poor social support and poor financial support. Furthermore females were less likely to drop out than males (Mooney et al, 2010).

3.1 Academic Motivation

A student with positive academic motivation has a desire to learn, likes learning and believes that education is important. Positive academic motivation is learned from a young age. Many individuals may enhance or encourage this motivation but motivation to walk and to talk and to become more independent in actions and thoughts seems to come naturally. However somewhere along the way individuals may develop a negative academic motivation. Negative academic motivation is as expected in complete contrast to positive academic motivation, i.e. a disinterest in study, negative belief in oneself to reach goals and thereby giving up on finding something too difficult to complete. One of the variables in Ajzen's theory of planned behaviour is perceived behavioural control (PBC). This can be either positive or negative (Ajzen, I., 1991). The theory of planned behaviour is central to this study; it proposes that motivation to behave in a certain way is preceded by intention. The individual may not believe that they are capable of learning something that they perceive as difficult or may not do well in some task leading to this belief. Learning disabilities, development delay, previous failure, unrealistic goal setting by the student or their parents, competition, parent and peer attitudes/social norms, another of the TPB variables may lead to negative academic motivation (Rathvon, N., 1996; Levine, M., 2003).

3.2 Academic Motivation and Gender differences

The gender gap in academia is not a current one for decades psychologists have investigated gender differences and similarly when it comes to academia a mounting body of evidence has suggested that gender difference has an effect on motivation (Duffy & Sedlacek, 2007; Ehrmann, & Massey, 2007; Hughes, Karp, Fermin, & Bailey, 2005).

The results of earlier studies investigated show mixed indications that there are gender differences in academic achievement (Marsh, H. W. & Seeshing Yeung, A., 1998; Skaalvik,

1990; Hyde, Fennema & Lamon, 1990). In an international study examining reading comprehension in 10-year-old children girls were favoured in every participating country (Mullis et al. 2003; Mullis et al. 2007 as cited in Logan & Johnston, 2010). Further investigation of gender difference literature during this analysis in Logan and Johnston's review, which examined different aspects of reading including motivation, behaviour and cognitive abilities, found evidence suggesting different reading strategies between the two genders (Thompson 1987, as cited in Logan & Johnston, 2010). More importantly in light of this paper, differences are consistently found in attitudes and motivation toward reading (McKenna, Kear, and Ellsworth 1995; Wang and Guthrie 2004; Morgan and Fuchs 2007; Logan and Johnston 2009, as cited in Logan and Johnston, 2010).

Further research into gender differences and education at a higher level conclude that females outperform males in language assessments but that males outperform females in math assessments and problem solving (Skaalvik, 1990; Hyde et al, 1990). However unlike Hyde et al findings there were no differences between the sexes for achievement or achievement expectations in maths. Others also conclude that there is no significant gender difference in academic achievement (Marsh, H. W. & Seeshing Yeung, A., 1998; Lindberg, S. M., Hyde, J. S., Jennifer L. Petersen, J. L. & Linn, M. C., 2010).

More recently investigators have looked at personality differences between males and females and not just at the behaviour they display. Sheard (2009) looked at gender differences in university academic performance and gender differences in hardiness commitment, which has been proven to be the most significant positive correlate of academic achievement compared to control and challenge, the other variables in the hardiness construct. He found that females scored higher in hardiness commitment and hence achievement. According to Baxter (1989), a commitment is

“an intention to perform some action, effect some outcome, or produce some consequences perceived as obligatory requiring an investment of personal or social resources over some period of time”.

According to the TPB an intention is controlled by one’s own attitudes, subjective norms and PBC, and therefore is self-controlled and voluntary behaviour in all likelihood ensues. The commitment to performing the behaviour however is not obligatory and so the greater the sense of obligation the more likely the behaviour is to occur. The sense of obligation may be increased by increased attitudes toward the behaviour, social norms and perceived behavioural control. (Yoon, 2011).

Recent research has shown that males are scoring lower than females in admissions, overall academic success and completion of their degree due to a number of reasons, for example society and its influence. Sax (2008) questioned whether it seems that one gender is falling behind or is it the fact that changing society highlights the differences between the sexes.

Interestingly, it has been reported that factors such as playboy lifestyle and violence decrease academic motivation in males. To substantiate the first piece of research it was also found that motivation increased with a decrease in self-reliance, contempt for homosexuality and a winning mentality, typically seen as alpha male traits (Kahn, J.S. & Holmes, J. R., 2011).

Based on this evidence males in today’s society will be negatively motivated to study if they do not change to meet society’s norms.

3.3 Theory of Planned Behaviour, Academic Motivation and Gender Differences

To date there has been limited research into academic motivation using the Theory of Planned Behaviour. However research does suggest that the theory of planned behaviour is successful in predicting intention to carry out a particular behaviour in the study of health behaviours especially condom use and health screening (Albarracin, D. et al., 2001; Armitage, C.J. et al, 2002; Cooke R. & French, D.P., 2008). Research in the area of health behaviour has proven that intention can demonstrate behaviour and therefore may lead to intervention and education in order to change destructive health behaviours e.g. drinking, gambling and HIV/AIDS prevention (Armitage & Conner, 2001a; Conner & Armitage, 1998; Godin & Kok, 1996). In particular Webb and Sheeran's (2006) meta-analysis shows that intentions exert causal influence on behaviour.

The theory of planned behaviour was chosen due to its success in predicting other behaviours. It is a model of behaviour based around people's intentions, a determination to act in a certain way, which have been demonstrated to influence people's ensuing behaviour (Webb & Sheeran, 2006; Chudry, F., Foxall, G. & Pallister, J., 2011).

Ajzen and Fishbein's Theory of Reasoned Action originally anteceded the Theory of Planned Behaviour in 1975. It proposed that a person's behaviour is determined by their intention to perform that behaviour. The intention is determined by the person's attitudes and their subjective norms towards the behaviour (Fishbein, M.A. & Ajzen, I., 1975). The only limitation with the Theory of Reasoned Action was its inability to accurately predict behaviour that was a conscious choice. This is the reason for the introduction of the third construct perceived behavioural control that was added by Ajzen and Fishbein in 1980 (Ajzen, 1985, 1991). PBC allows the investigation of individuals perceptions, whether they believed they had the ability or control over their behaviour, to be included in the prediction

of their behavioural intentions Ajzen considered perceived behavioural control to directly and indirectly influence behaviour through intentions. According to Azjen's model intentions are based upon three variables attitude, subjective norm and perceived control (Ajzen, 1991).

3.3.1. Attitude

Attitude is perceived as ones positive or negative toward the behaviour in question (Ajzen, I., 1988). An individual's attitude comprises their prominent beliefs, positive or negative, about the outcome of the behaviour in question, i.e. in the case of study behaviour whether this will bring about a positive or negative result in that person's academic life.

Mei Tan, L. & Laswad, F. (2006) demonstrated this with accounting students. They found that those who studied accountancy held positive attitudes towards the study of accounting and also the accounting profession compared to those who did not major in an accounting degree.

Quantitative evidence in a study exploring attitudes and borrowing intentions in students suggests that student debtors do not appear to regard borrowing from the student loan company as debt but as a form of credit to enhance their future. It was found that attitudinal dimensions do exert a significant impact on the intention to borrow.

However once students were questioned about their attitude to experiencing university while paying back a loan the results differed somewhat. It was found that those who saved money or who had loans to pay back were socially frugal and "enjoyed oneself less at university".

It was also discovered that parent's attitudes toward debt shaped their childrens' (Chudry, F., Foxall, G. & Pallister, J., 2011).

3.3.2. Subjective Norm

Subjective Norm is based on the individual's perception of others thoughts on the behaviour, whether to perform or not to perform it i.e. social pressure and perceived expectations of family, teachers, and friends (Ajzen, 1991). A meta-analysis examined two constructs of subjective norm; perceived injunctive, social pressures to engage in a behaviour based on the perception of what other people want you to do and descriptive norms, social pressures based on the observed behaviour of others, in relation to behaviour over 196 studies. He found mixed results. It was reported that descriptive norms for the most part correlated better with behaviour than perceived injunctive norms (Manning, M., 2009).

Many studies investigating the viability of the Theory of Planned Behaviour have confirmed that subjective norm is a good predictor of intention along with attitude and PBC. It has however been reported to be the weakest predictor of intention but there are reasons for this In a paper looking at the predictive ability of the Theory of Planned Behaviour with regard to grad school applicant the Self-determination theory (Deci & Ryan, 1985) was used to explain why attitudes had a greater effect on results compared to subjective norms According to the Self- Determination theory individuals are more persistent in goals which they have selected themselves to the degree that the encouragement of others is felt as pressure or control therefore decreasing motivation and persistence. Perceived behavioural control however measures this aspect and therefore all four variables: attitude, subjective norms, perceived behavioural control, and intentions predicted behaviour (Deci & Ryan, 1985; Deci & Flaste, 1995 as cited in Ingram, K. L.; Cope, J. G.; Harju, B. L.; Wuensch, K. L., 2000)

3.3.3. Perceived Behavioural Control

Perceived behavioural control (PBC) represents the individual's thoughts on how they perceive their own ability to perform the behaviour taking external and internal factors into consideration (Armitage & Reidy, 2008).

Moreover, the TPB allows for perceived control to affect behaviour directly, regardless of the behavioural intention that is formed. Behaviour was significantly correlated ($p < 0.001$) with intention and perceived behavioural control. When PBC and intentions were examined without social norms and attitude it was still possible to predict behaviours (Ingram, K.L. et al, 2000). The greater the perceived behavioural control the stronger the intention and hence behaviour according to the TPB (Baron & Kenny, 1986). As an individual feels they have control over their behaviour then they are more likely to exhibit the behaviour. However under conditions of low volitional control intention is required in order to engage in the behaviour (Armitage & Conner, 2001). The addition of PBC to the theory of reasoned action and therefore the now named Theory of Planned Behaviour allows prediction of behaviours that are not considered to be a complete conscious choice. If the individual perceives that she or he lacks the capacity' to perform the behaviour, this may override any intention to act (Nigbur, D., Lyons, E., Uzzel, D., 2010).

Due to its apparent influence within the TPB model PBC has been investigated further. Ajzen (2002b) identified two distinct variables within PBC loosely termed self-efficacy and controllability. Bandura (1986, 1992) has argued that self-efficacy is an internal concept and PBC reflects a more general, external concept.

The results of an investigation by Rhodes and Courneya (2004) into perceived behavioural control and motivation based on using the two variables self-efficacy and controllability found when motivation was held constant PBC had a larger effect on intention than attitude

and social norms. However this was not the case when both self-efficacy and controllability were used to represent PBC. Attitudes and social norms had a more significant affect in this case.

Ruthig et al. (2008) investigated perceived behavioural control and academic experience/emotions. They found that negative emotions for example boredom, unhappiness etc. negatively affected high control and conversely that positive emotions positively affected high control. On the other hand achievement didn't predict performance in students with low control. These results demonstrate that in order for those with high PBC to increase their academic achievement a positive academic experience is recommended.

Armitage and Reidy (2008) summarised the theory of planned behaviour individuals as those that behave in a certain way if they intend to behave in that way. They will behave this way if “they perceive their actions as socially acceptable, where there is social obligation to do so and if they believe they are able to carry out the behaviour.”

3.4 External variables proposed to influence academic motivation

Ajzen (1991) himself described his theory of planned behaviour as open to external variables if they can be shown to have a significant influence on intention and hence behaviour in accordance with the existing variables of attitude, social norms and perceived behavioural control. The external variables proposed to have an influence were goal setting, academic experience and self-concept. These three were chosen due to their perceived influence on a student's academic life, their seriousness about study/goal setting and their perceptions of themselves and their own self. Finally past behaviour was also taken into account and correlated with the intention to study in the future.

3.4.1 Goal setting

Goal importance has been studied extensively in literature to date across a wide range of areas from health to the workplace to academic life (Hallgeir et al., 2011; Sideridis & Kaissidis-Rodafinos, 1998; Presseau, et al., 2010; Sideridis, & Padeliaadu, 2001; Bandura, 1997; Shunk, 1990). A summary of some of the literature on goals in academic life includes the following; those who set goals were more academically motivated and performed better in exams than those who did not set goals or who did not think that goals were that important (Sideridis & Kaissidis-Rodafinos, 1998), intensity of effort for higher goals reinforced Brehm's motivational intensity theory, i.e. that effort increased with more difficult tasks compared to easier tasks (Silvia, P.J. et al., 2010); students with low reading level showed a decreased interest in goals ultimately performing lower in language and mathematics at the end of an academic year than the high readers (Sideridis & Padeliaadu, 2001).

A meta-analysis by Scobbie et al. (2009) researched 24 papers and five theories: (i) social cognitive theory, (ii) goal setting theory, (iii) health action process approach, (iv) proactive coping theory, and (v) the self-regulatory model of illness behaviour. The interventions aiming to increase adherence resulted in significant improvements.

Social cognitive theory has appeared in much of the literature on academic motivation especially with regard to self-efficacy. As has already been mentioned in this paper Self-efficacy refers to an individual's confidence in their own ability to achieve and can in some ways be compared to perceived behavioural control variable of Ajzen's theory of planned behaviour. Self-efficacy is thought to improve intrinsic motivation due to the aspect of the

self and its motivation to achieve its goals. Bandura (1997) and Shunk's (1990) research suggests that goals promote both self-efficacy and improved performance.

Locke and Latham's goal-setting theory (2002) is based on the premise that conscious goals affect action. Goal setting theory focuses on understanding the relationship between conscious performance goals and subsequent levels of task performance. The only stipulation is that goals should be specific and difficult without being impossible. Again the self is central to this theory and self-efficacy is one of its main factors. Results across many studies in this meta-analysis demonstrated that setting specific goals led to an increase in the desired goal-related behaviour (Scobbie et al. 2009).

Due to its obvious success in increasing motivation goal and specifically goal orientation has been developed as an important theory in academic motivation over the past few decades. Two aspects of goal orientation have been reviewed by Kaplan & Maehr (2007); mastery goal orientations and performance goal orientations. Mastery goal orientation as the name suggests reflects mastering information and has been found to be associated with self-efficacy, positive attitude and self-regulated learning (Ames, 1992a as cited in Kaplan & Maehr, 2007). Performance goals orientation on the other hand relates to demonstrating academic ability (Ames, 1992a as cited in Kaplan & Maehr, 2007). Individuals who focus on this aspect of goal orientation are more concerned with extrinsic motivation and how others see them rather than how they feel. This may be compared to social norms of Ajzen's theory of planned behaviour. Students with a low level of perceived behavioural control may not do well by focusing on performance goals compared to those students with a low level of PBC who focus on mastery goals (Fuchs et al., 1997 as cited in Kaplan & Maehr, 2007). Goal setting was integral to all of the interventions investigated in Kaplan & Maehr's paper.

3.4.2. Academic Experience

Emotions and perceived academic control were examined by Ruthie et al (2008) to determine whether they had a bearing on academic achievement. Results intimate that for a high level of perceived academic control “adaptive” levels of emotions (lower boredom, lower anxiety, or higher enjoyment) are required to increase students’ achievement. Similarly Gavala and Flett (2005) looked at perceptions of stress and discomfort (less than enjoyable academic experience) among Maori student in New Zealand and found that a culturally enjoyable experience increases well-being, academic enjoyment and motivation. Students who experience a positive university and college life are more likely to enjoy increased motivation to study.

Ruthig et al. (2008) investigated perceived behavioural control and academic experience/emotions. They found that negative emotions for example boredom, unhappiness etc. negatively affected high control and conversely that positive emotions positively affected high control. Conversely achievement didn’t predict performance in students with low control. These results demonstrate that in order for those with high PBC to increase their academic achievement a positive academic experience is recommended.

Self-determination theory defines intrinsic motivation as engagement in a task for reasons inherent to do the task itself, such as interest or enjoyment, rather than for external reasons, such as monetary rewards. In the self-determination theory, intrinsic motivation refers to engaging in behaviour because of interest, enjoyment or inherent satisfaction. By contrast, extrinsic motivation refers to engaging in behaviour for reasons that are outside the self, such as gaining rewards, avoiding sanctions or instrumentally valuing the activity (Deci & Ryan, 2000; Ryan & Deci, 2000). Specifically, Chatzisarantis and Hagger et al. (2002) used the behavioural regulation for physical activity questionnaire (Mullan, Markland, & Ingledew,

1997) to assess the motives of enjoyment and interest as indicators of intrinsic motivation. This measure could elicit responses made on the basis of outcome expectancies, i.e. intrinsic and extrinsic motivators (Chatzisarantis, N. L. D., 2006).

Phillips et al, 2003 looked at study between personality traits, type of motivation and goal specific cognitions. Intention and perceived behavioural control explained 32% of the variance in final degree marks, with intention being the strongest predictor. Controlling for TPB variables conscientiousness and openness had direct effects on intention. In total 65% of the variance was explained. Enjoying studying for its own sake was an indirect predictor of intention but the results indicate that, in the last few months of a degree, a focus on the eventual rewards of hard work is important to maintaining high intention, and thus maximizing performance. Therefore it does not matter entirely what the three initial variables are really, they could be self-efficacy instead of PBC or extrinsic motivation instead of social norms or enjoyment instead of attitude but it still makes up part of the TPB variable and in the end motivation to study and hence lead to study behaviour and therefore higher exam result is the same. Joining all 3 TPB variables of attitude (positive), social norms (positive) and PBC (also positive) leads to maximum performance, be that at the top or the bottom depending on who is the smartest and the least smart in the class (Phillips et al., 2003). That is, they should challenge students at their level of competency while at the same time hold a high probability of eventual success. Doing so can increase a student's sense of competence and self-efficacy and lead to greater enjoyment in the experience (Osborne, J. W. & Jones, B.D., 2011).

It has been found that females spend more time working academically and actively discussing their course content outside of lecture hours than males (Dayioğlu & Türüt-Aşık, 2007; Harris III & Harper; Jenkins, 2009; Mau & Lynn, 2001).

The less academically engaged behaviour by men may contribute to their less competitive GPA and greater challenges with reading, formal writing and communication skills throughout their education (Garden, 2006).

3.4.3. Self-concept

Self-concept is “an organized set of characteristics, traits, feelings, images, attitudes, abilities, and other psychological elements that a person attributes to oneself” (Kobal, 2000, p. 25).

Hamacheck in Akinpelu (2001) concluded that there is an increasing amount of evidence proposing that a student’s performance in education is influenced by the concept of self.

Bandura repeatedly referred to self-efficacy as the key component in beliefs that influence tasks and eventually achievement (Bandura, 1997). Self-efficacy was also found to have dramatic effects on student motivation and learning (Schunk, 1991).

A recent study on academic self-concept and academic motivation found that self-concept plays an important role in affecting desirable educational outcomes however this conclusion was reached using a reciprocal effects model and not TPB. Intention to study was not researched in this particular study however it demonstrated that increases in academic self-concept led to increases in subsequent academic achievement. (Marsh & Martin, 2010)

Another study tested the comparability of self-concept and academic achievement between Slovenia and France. Results showed that there were some cross-cultural differences with the French ahead of the Slovenians in some domains of self-concept and academic achievement (Kobal & Musek, 2001).

Once again behavioural intention to study is not taken into account and this is one of the reasons why self-concept was included in this study.

A study undertaken in Nigeria found that there were gender differences in academic achievement and self-concept. From viewing the data it was found that male students had more extra-curricular time than women who in this culture were expected to take part in house work before their studies. The view that women should be in the home and not in an academic environment or continue in the workplace may hinder their academic goals and their academic intention to study (Onyilo & Onyilo, 2010). Onyilo and Onyilo base picked a number of players and those numbers just didn't pan out (Onyilo & Onyilo, 2010).

In addition to Skaalvik's discoveries that females outperform males in language assessment he also examined gender differences in academic self-concept. He found that females had a higher level of achievement and higher academic achievement expectations than their male classmates in language tasks (Skaalvik, 1990).

3.5 Past study behaviour as a predictor of present and intended study behaviour

Humans in general are creatures of habit and with the help of a stable environment many intended behaviours are not carried out. Therefore the effect of past behaviours will be looked at in the theory of planned behaviour model. According to Oullette and Wood (1998) there are two modes through which past behaviour leads to future behaviour, one is habit and the other is conscious decision making.

Habit comes from well-practised everyday behaviour. They become automatic, a process that no longer requires thinking, e.g. brushing ones teeth in the morning or putting on a seatbelt. It can be done while concentrating on another task. Habits are difficult to cease and occur due to a constant supporting environment i.e. social norms and attitudes. The environment or

attitudes need to change in order for the habitual behaviour to cease or for behaviour to begin in the first place.

The other process, conscious decision making, was proposed due to the models of rational reasoning, e.g. theory of reasoned action, and the theory of planned behaviour. Conscious decision-making is needed in an unstable, non-supporting environment, i.e. a student without habitual study behaviour may be motivated to study with their attitude, social norms and perceived behavioural control as per the theory of planned behaviour. Oullette and Wood's research into past behaviour as a predictor of future behaviour found that conscious decision making strongly predicted future behaviour and that intentions directly predicted behaviour performance (Oulette & Wood, 1998)

Ajzen himself looked into the effects of past behaviour on future behaviour and found that whether the behaviour is habitual or intended as per the theory of reasoned action if it is performed regularly in the past there is a high likelihood that it will be performed in the future and so past behaviour has a bearing on future behaviour regardless if it's a habit or an intention. (Azjen, 2002)

Similarly research predicting blood donation with respect to past behaviour and intentions found that past behaviour predicted future behaviour for future donation (Ferguson & Bibby, 2002).

Reviewing the literature on the above constructs the following hypotheses have been proposed.

Chapter 4: Hypotheses

Hypothesis 1. It is hypothesised that females will have a greater intention to study and thus as per the theory of planned behaviour a greater academic motivation than males.

Hypothesis 2. It is hypothesised that past study behaviour by females will be greater than that of males and therefore females will have more of an intention to study than males daily and weekly.

Hypothesis 3. It is hypothesised that the TPB variables i.e. attitude, social norm and PBC will significantly positively correlate with intention to study.

Hypothesis 4. It is hypothesised that the external variables i.e. goal setting, academic experience and self-concept will also significantly positively correlate with intention to study.

Chapter 5 Method Section

5.1. Respondents

Fifty respondents (N = 50) participated in this study, with four missing values for gender. In this sample the slight majority of respondents were female (n = 25, 54.35%). Twenty-one males participated (n = 21, 45.65%); there were four missing values. The mean age for female respondents was 20.96 (M = 20.96, SD = 2.72) and for male respondents was 19.95 (M = 19.95, SD = 1.12), with an age range from 18 to 28 years. All respondents from this opportune student sample attended University College Dublin, Griffith College Dublin and Dublin City University.

5.2. Questionnaire Design

The questionnaire was designed to enable the researcher to measure the constructs of The Theory of Planned Behaviour (Ajzen & Fishbein, 1980; Ajzen, 1990). All questions concerning the theory were consistent with previous applications and employed a semantic differential format; in this case a seven-point scale. Furthermore, the questions were based on all the variables as proposed by Ajzen and Fishbein (1977), intention, attitude, perceived behavioural control (PBC), and social norm and the external variable, goals, self-concept and academic experience. The questionnaire contained four sections: (1) the variables of the theoretical conceptual framework (i.e. intention and its predictors); (2) a section concerning the students recent study behaviour; (3) a section on exact past study behaviour (i.e. hours/day and days/week and intended hours/day and days/week study; and (4) **Self-Concept**

Clarity Scale (Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavalley, L. F., & Lehman, D. R. (1996)).

5.3 Theory of Planned Behaviour Variables & External Variables

5.3.1 Attitude

In this questionnaire attitudes were assessed in response to the following question: "How do you feel about studying for 3hrs per night four days per week?" Responses were measured on eight seven-point semantic differential scales with the following bipolar adjectives: 'difficult/easy'; 'time consuming/not time consuming'; 'boring/interesting'; 'helpful/unhelpful'; 'enjoyable/unenjoyable'; 'practical/impractical'; 'worthwhile/worthless'; and 'inspiring/uninspiring'. Five of the items were reversed in order to control for the possibility of transfer effects.

5.3.2 Subjective norm

Incorporated within the questionnaire were three separate measures of subjective norm. The direct measure of subjective norm required respondents to rate their general level of how important 'significant others' (i.e. close family and friends) would expect them to act with regards to studying for the recommended amount. Respondents were asked to evaluate the following statement using a seven-point semantic differential, 'disagree (1)/agree (7)' dimension: 'Most people who are important to me approve of my studying at least the recommended amount per week'.

5.3.3. Perceived Behavioural Control

Five statements contained randomly within the questionnaire assessed perceived control. Examples of these statements were: ‘The best way for me to do well in my exams is to study at least the recommended amount per week’, and ‘My studying for at least the recommended amount per week is completely up to me’. Each of these statements was measured on a seven-point semantic differential. All items in this construct were rated on a seven-point dimension where high scores indicated high-perceived control while low scores indicated low-perceived control.

5.3 4. Intention

Intention was assessed by means of two statements posed at separate points within the questionnaire which asked respondents about the likelihood of them studying for the recommended amount per week. Examples included the following items: ‘I intend to study for the recommended amount per week for the rest of the academic year’ and ‘I will make an effort to study for at least the recommended amount per week for the rest of the academic year’. All responses were rated on the seven-point dimension from ‘disagree (1)/agree (7)’, with high scores indicating positive behavioural intentions and low scores indicating negative intentions.

5.3.5. Goal Setting

Goal setting was investigated as an external variable. It was assessed by the question “I have set goals for my exam results and in order to achieve these goals I feel I should study for at least the recommended amount per week”. Responses were rated on the seven-point dimension from ‘disagree (1)/agree (7)’, with high scores indicating goal setting and low scores indicating lack of goal setting.

5.3.6. Academic Experience

Academic experience was also investigated as an external variable to the Theory of Planned Behaviour. Academic experience was rated on a seven point scale from disagree (1)/agree (7). Examples of questions included “I find lectures/labs/tutorials in college interesting” and “I attend college on a regular basis”.

5.3.7. Self-Concept Clarity Scale

This section of the questionnaire assessed respondents’ level of self-concept. The Self-Concept Clarity scale (SCC) measures "the extent to which self-beliefs are clearly and confidently defined, internally consistent, and stable." Low scorers tend to have lower self-esteem, ruminate more, and their self-descriptions are less stable over time. High scorers tend to have higher self-esteem, more consistent self-descriptions, and less chronic self-analysis.

The scale consists of twelve statements; the first statement 'My beliefs about myself often conflict with one another' (reverse scored). Another of the statements 'In general, I have a clear sense of who I am and what I am'. All responses were rated on a five-point 'disagree (1) /agree (7)' dimension. Eight of the twelve statements were reverse scored in order to control for the possibility of transfer effects.

5.4. Additional information

Respondents were required to give information regarding their gender/sex, age and discipline of study.

5.5. Procedure

Two weeks prior to the commencement of this study, researchers approached random schools within the university to request permission to attend classes to invite registered students to participate.

One week prior to the commencement of the study researchers approached students randomly on campus requesting them to fill out the questionnaire provided. All respondents were briefed before the study that it concerned academic motivation using the Theory of Planned Behaviour and two other measures. Respondents were told that if they did not wish to complete the questionnaire they could withdraw at any stage or mark void on the questionnaire itself. When respondents were finished completing the questionnaire they were debriefed on the nature of the study. Names were not required to preserve the participant's anonymity. Confidentiality was assured at all times.

Chapter 6: Results

Table 1 presents descriptive data (M and SD) and independent t-test results for sex differences within Theory of Planned Behaviour variables, Goal Setting, Academic Experience and Self-concept variables.

Table 1 highlights the differences between males and females with regard to each of the TPB variables and the external variables. Independent t-test results are significant for subjective norm ($t(44) = -2.372, p < 0.05$), PBC ($t(44) = -2.108, p < 0.05$), Goal setting ($t(38.887) = -2.528, p < 0.05$) and Academic Experience ($t(44) = -2.354, p < 0.05$), i.e. there is a significant difference between males and females for subjective norm, PBD, Goal setting and academic experience respectively.

No significant differences were found in Intention ($t(44) = -1.960, p > 0.05$), Attitude ($t(43) = -.278, p > 0.05$) and self-concept ($t(41) = .994, p > 0.05$), i.e. there are no significant sex differences for intention, attitude or self-concept.

Table 1. Sex differences within TPB, Goal Setting, Academic Experience and Self-concept variables

	Sex	M	SD	t	df	Sig
Intention	<i>Male</i>	7.1429	3.56771	-1.960	44	.056
	<i>Female</i>	9.1600	3.39951			
Attitude	<i>Male</i>	31.2857	6.38861	-.278	43	.782
	<i>Female</i>	31.8750	7.64035			
Subjective Norm	<i>Male</i>	10.7143	3.97672	-2.372	44	.022*
	<i>Female</i>	13.6400	4.31934			
PBC	<i>Male</i>	21.0952	3.98629	-2.108	44	.041*
	<i>Female</i>	23.8400	4.71416			
Goal Setting	<i>Male</i>	3.86	1.824	-2.528	38.887	.016*
	<i>Female</i>	5.12	1.509			
Academic Experience	<i>Male</i>	8.7619	3.71355	-2.354	44	.023*
	<i>Female</i>	11.0000	2.72336			
Self Concept	<i>Male</i>	39.1000	10.66179	.994	41	.326
	<i>Female</i>	36.2174	8.34460			

Table 2 presents descriptive data (M and SD) and independent t-test results for sex differences in studying behaviours.

No significant differences were found to occur between males and females for past study behaviour, i.e. in the past three months ($t(44) = -.728, p > 0.05$), hours studied per day ($t(36.307) = .031, p > 0.05$) and days studied per week ($t(43) = -.660, p > 0.05$)

Table 2. Sex differences in studying behaviours

	Sex	M	SD	t	df	Sig
<i>In the past 3 months I have studied hours per week</i>	Male	3.14	1.878	-.728	44	.470
	Female	3.56	1.981			
<i>Study for-hours per day</i>	Male	2.10	1.165	-2.239	36.307	.031
	Female	3.32	2.393			
<i>Study for -days per week</i>	Male	4.20	1.908	-.660	43	.513
	Female	4.72	3.076			

Table 3 presents inter-correlations for the study variables (using a Pearson correlation?).

These results indicate that as expected (as per TPB) perceived behavioural control is the best predictor of intention to study, followed by subjective norm and hours studied per day (past study behaviour).

Table 3: Correlation for the study variables within TPB, Goal Setting, Academic Experience and Self-concept variables

Variables	1	2	3	4	5	6	7	8	9	10
1. <i>hours per day</i>	-----									
2. <i>days per week</i>	.337*	-----								
3. <i>In the past 3 months</i>	.595**	.266	-----							
4. <i>Intention</i>	.538**	.465**	.438**	-----						
5. <i>Attitude</i>	.416**	.256	.219	.479**	-----					
6. <i>Subjective Norm</i>	.320*	.340*	.380**	.556**	.362*	-----				
7. <i>PBC</i>	.484**	.355*	.524**	.574**	.369**	.485**	-----			
8. <i>Goal Setting</i>	.386**	.300*	.418**	.471**	.365*	.446**	.417**	-----		
9. <i>Academic Experience</i>	.474**	.453**	.192	.373**	.231	.065	.379**	.416**	-----	
10. <i>Self-Concept</i>	-.002	-.025	-.190	.081	-.173	.046	.049	-.177	-.227	-----

Note: *. Correlation is significant at the 0.05 level (2-tailed), **. Correlation is significant at the 0.01 level (2-tailed).

Intention and attitude

A positive significant relationship was found between intention and attitude ($r = .479$, $p < .01$, 2-tailed). Therefore as the level of positive attitude toward studying of the respondent increased, their intention to study increased.

Intention and subjective norm

A positive significant relationship was found between intention and subjective norm ($r = .556$, $p < .01$, 2-tailed). Therefore as the level of perceived social pressure of the respondent increased, their intention to study increased.

Intention and perceived behavioural control

A positive significant relationship was found between intention and perceived behavioural control ($r = .574$, $p < .01$, 2-tailed). Therefore as the level of perceived behavioural control of the respondent increased, their intention to study increased.

Intention and Goal Setting

A positive significant relationship was found between intention to study and goal setting ($r = .0471$, $p < .01$, 2-tailed). Therefore as the level of goal setting of the respondent increased, their intention to study increased.

Intention and Academic Experience

A positive significant relationship was found between intention to study and academic experience ($r = .373$, $p < .01$, 2-tailed). Therefore as the academic experience of the respondent was enhanced, their intention to study increased.

Intention and Self-concept

No significant correlation was found between intention to study and self-concept.

There was no significant relationship between intention to study and one's self-concept ($r = .081, p > .05, 2\text{-tailed}$).

Intention and Past Study Behaviour

A positive significant relationship was found between intention to study and past study behaviour ($r = .438, p < .01, 2\text{-tailed}$). Therefore as the more established the study behaviour, the more likely individuals were to intend to study.

Intention and hours per day study

A positive significant relationship was found between intention to study and present daily studying behaviour ($r = .538, p < .01, 2\text{-tailed}$). Therefore as the more established the daily study behaviour, the more likely individuals were to intend to study the recommended amount.

Intention and days per week study

A positive significant relationship was found between intention to study and present weekly studying behaviour ($r = .465, p < .01, 2\text{-tailed}$). Therefore as the more established the weekly study behaviour, the more likely individuals were to intend to study the recommended amount.

Chapter 7: Discussion

In general the results from this research paper support previous attempts to confirm the theory of planned behaviour (Armitage, C.J., & Conner, M., 2001; Ingram et al. 2000). Significant correlations were found between intention and attitude, intention and subjective norm and intention and perceived behavioural control. Past behaviour was also found to be significant with respect to intention to study. This finding also supported past papers in this field (Ajzen, I., 2002; Ferguson & Bibby, 2002; Oulette, & Wood, 1998).

However the purpose of this paper was not to confirm the validity of the theory of planned behaviour but to use it to identify gender differences in academic motivation. Intention to study in this case is thought to predict study behaviour and therefore distinguish those who are academically motivated to succeed.

Gender differences were significant for some of the theory of planned behaviour variables; subjective norm and perceived behavioural control and the chosen external variables; goal setting and academic experience. However they were not significant for intention. This resulted in the first hypothesis being disproven. The first hypothesis expected that females would have a greater intention to study. They did not and while there was a difference in the mean scores there was a non-significant correlation.

The other TPB variable that was not significantly correlated for gender differences was attitude. This may be one of the reasons for the result in intention. All three of the Ajzen's TPB variables work together to create a result for intention (Ajzen, 1991; Hassan & Shiu 2007; Webb & Sheeran, 2006). Some of the variables hold more influence than others, for example perceived behavioural control is thought to act independently as well as in tandem

with attitude and social norms and social norms is thought to be the least influential of the three variables (Armitage, & Conner, 2001; Ingram et al, 2000).

As Nigbur et al (2010) discovered attitude does not predict whether or not an individual will behave in a particular way. Attitude only contributes to the possibility that the individual may act this way under certain conditions. However it would be expected that if a student has a positive belief about something e.g. study the stronger the likelihood that they will intend to study and therefore act on their intentions.

It is generally accepted that if attitude, subjective norm and perceived behavioural control is significant for gender differences then intention will be also. In this case attitude and intention do not show statistical significance for gender difference but does for subjective norm and perceived behavioural control. In this case intention is not significant for gender difference and both genders have a similar intention to study behaviour.

The other exception to a statistically insignificant result for gender difference was self-concept ($p > 0.05$). However while self-efficacy has been extensively investigated in relation to the theory of planned behaviour (REF) self-concept has not been as widely explored as an influencing construct. Previous literature has pointed to the fact that regardless of achievement scores that self-concept remained equal and so the results from this paper prove to support previous research in this area (Skaalvik, 1990). More recently gender differences have been found however this was investigating differences in students self-concept within single sex school environment, with boys found to have a greater self-concept in relation to maths and science and girls in relation to English (Sullivan, 2009). Marcic and Kobal Grum (2011) found some middle ground when investigating the construct further and found that gender differences were found in the interdependent self-concept, i.e. showing for outside influences but not for independent self-concept. The scale used in this analysis investigated

the independent self-concept and if previous research is taken into account gender differences should not have been expected in this case.

Hypothesis 2 proposed that past study behaviour by females will be greater than that of males and therefore females will have more of an intention to study than males daily and weekly.

Results from Table 2 however do not prove this hypothesis. There are no significant differences in gender study behaviour. Since there was no significant difference in intention to study between the two genders there should now not be the same expectation for a gender difference in past study behaviour. As intention is statistically insignificant it may be feasible to expect that past study behaviour mirror intentions as has been proven in previous research (Ferguson & Bibby, 2002; Oulette & Wood, 1998).

Hypothesis 3 was proven and previous research into the efficacy of the theory of planned behaviour and its variables were proven in this case. All three variables significantly correlated with the intention to study across both genders (Armitage & Conner, 2001).

Hypothesis 4 was also proven for the most part. Self-concept did not significantly correlate with any of the other variables. Evidence in the literature all pointed to a relationship between self-concept and academic achievement (Akinpelu 2001; Marsh & Martin, 2010; Kobal & Musek, 2001). While academic achievement often results from positive study behaviour it does not necessarily point to a correlation between self-concept and study intention and/or behaviour. The research entailed in this paper does not point to a significant relationship between intention, attitude, subjective norms, perceived behavioural control, goal setting or academic experience.

This study was proposed in order to investigate gender differences in academic motivation. In the process of this investigation the theory of planned behaviour was also scrutinised and found that the TPB variables do have a strong correlation with intention, as was indicated by previous research. Gender differences were expected to be significant for all of the variables but this was not the case. Male and female attitude and therefore intention to study was similar. There was no significant correlation between males and females for self-concept. This had not been investigated previously with regard to the TPB. Males and females do have differences in academic motivation mainly in their subjective norms, how they react to family and friends attitudes and in their perceived behavioural control. This may be used to determine how students should be motivated at 3rd level. Future research would be interesting to investigate if they actually studied the intended amount i.e. to find a causal relationship and to look at personality and the difference in academic motivating factors. Academic experience was also found to be a factor in intention to study and there were significant differences in gender, perhaps this may also be a route for further research if numbers of those attending 3rd level colleges is to stay at a high level from start to finish.

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