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Performance of first-year accounting students: does time perspective matter?

Academic failure of first-year accounting students is a national and international problem. Existing research is inconclusive regarding the causes for the failure and does not make provision for the possible influence of dominant time perspectives on performance in accounting. This article investigates whether time perspective has an effect on the performance of first-year accounting students. A quantitative non-experimental predictive multivariate design is used and confounding variables are taken into consideration. The results of the study indicate significant relationships between performance in first-year accounting and gender, age and a past-negative time perspective. The most significant result of this study is that a past-negative time perspective, together with an unfavourable psychosocial background, might have led to failure in first-year accounting. It is suggested that students with a negative time perspective be identified and encouraged to participate in support programmes at the university.

Prestasie van eerstjaarsrekeningkundestudente: speel tydsperspektief 'n rol?

Studente se onvermoë om eerstejaarsrekeningkunde as vak te slaag, is 'n nasionale en internasionale probleem. Bestaande navorsing bied nie algemeen aanvaarde antwoorde omtrent die oorsake van hierdie probleem nie. Dit maak ook nie voorsiening vir die moontlike invloed van 'n dominante tydsperspektief op die prestasie in rekeningkunde nie. Hierdie artikel doen 'n ondersoek om te bepaal of tydsperspektief 'n effek het op die prestasie van eerstejaarsrekeningkundestudente. 'n Kwantitatiewe nie-eksperimentele meerveranderlike voorspellingsontwerp word gebruik en die effek van steuringsveranderlikes word verreken. Die resultate van die studie dui aan dat geslag, ouderdom en 'n negatiewe verlede-tydsperspektief beduidende verwantskappe met prestasie in rekeningkunde toon. Die mees uitstaande resultaat van die studie is dat 'n negatiewe verlede-tydsperspektief tesame met 'n ongunstige psigososiale agtergrond kan lei tot die onvermoë om rekeningkunde op eerstejaarsvlak te slaag. Daar word aanbeveel dat studente met 'n negatiewe tydsperspektief geïdentifiseer en aangemoedig word om aan universiteitsondersteuningsprogramme deel te neem.

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National and international research points to a problem regarding the academic performance of first-year accounting students. A literature review revealed that many cognitive and non-cognitive factors that might influence performance in accounting had been researched, but that the results of these studies were contradictory and inconclusive.[1]

Zimbardo & Boyd (1999: 1271-2) are of the opinion that time perspective (TP) is often a non-conscious process during which personal and social experiences are partitioned into past, present and future time frames. They state that individuals' perspective of time could influence their judgements, decisions and actions, and that TP provides a foundation for achievement and goal-setting. This raises the question as to whether TP does, in fact, play a role in the academic performance of accounting students. As far as could be ascertained from a review of the relevant literature, the influence of TP on performance in accounting has not yet been researched. This article aims to report on a quantitative research study conducted to determine whether TP could provide new insights into the problem of performance of first-year accounting students. If TP plays a role in the performance in first-year accounting, TPs of students can be measured during first-year psychometric tests. Students with TPs that are not conducive to performance in first-year accounting can then be identified, and these students can receive special attention according to their specific needs.

The following section commences with a discussion of the literature related to five possible TPs, namely the past-negative, the past-positive, the present-hedonistic, the present-fatalistic and the future TPs. This is followed by a discussion of the survey conducted, using a semantically differentiated scale questionnaire distributed among first-year accounting students at the University of the Free State (UFS).

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1   See Auyeng & Sands 1994: 261-8; Baard et al. 2010: 135-41, Bargate 1999: 143; Bergin 1983: 24-7; Byrne & Flood 2005: 114-20; De Wet & Van Niekerk 2001: 93-106; Doran et al. 1991: 80-3; Duff 2004: 421-5; Eiselen & Geyser 2003: 120-8; Steenkamp et al. 2009: 121-31; Tickell & Smyrnios 2005: 254-5.

1. Background literature

Individuals have different perspectives about time and their specific dominant TP may influence all their actions and ways of thinking. According to Lewin (1951: 75), TP is defined as "the totality of the individual's views of his psychological future and psychological past existing at a given time". A person's TP is not an attribute that can be isolated from his/her cognition and personality. Nor is TP the determining factor of an individual's personality, but it fits within the framework of his/her personality and cognition. TP may be the driving force behind a person's motives, decision-making and goal-setting (Lennings et al. 1998: 629; Van der Linde 2005: 4).

Since the introduction of Lewin's ideas on the psychology of time, TP has been related to a host of psychological and sociological constructs. Lennings et al. (1998: 629) claim that three dimensions of TP can be identified, namely temporal extension, temporal attitude and temporal structure. Temporal extension is strongly related to goal-setting and influenced by individuals' orientation to the past or the future. The temporal attitude refers to whether an individual has a positive, negative or neutral feeling towards time. Temporal structure refers to the individual's ability to integrate the past, present and future. Lennings et al.'s (1998: 629-41) study focused on a single TP, either past, present or future, without the complicating influence of the other temporal perspectives.

Zimbardo & Boyd (1999: 1272) are of the opinion that these TP theories assume that a low score on a specific time frame equals a high score on another time frame, and that they are, therefore, one-dimensional. The authors further state that the reasons why previous theories on TP have not been incorporated into current areas of psychological science are "the disjointed and non-cumulative nature of past research, the lack of adequate theory and the absence of a valid measure for assessing time perspective". To address the shortcomings of the previous scales, the present and future TP's were refined into five possible TPs. Contrary to previously held beliefs that a low score on one dimension implies a high score on another, these five perspectives are regarded as being independent. When a specific orientation is used excessively in relation to the other TPs, it serves as a cognitive temporal bias towards an orientation towards

the past, future or present time frame. An individual will then rely on a specific perspective of time in daily life choices. For example, an individual who is predominantly present time-orientated may be able to enjoy the moment, but may have a problem delaying gratification and planning realistic goals.

Current research on TP and on the relationship between TP and academic performance, in particular, is very limited. This view is shared by other researchers such as Athawale (2004: i), Horstmanshof & Zimitat (2007: 703) and Pienaar & Bester (1996: 88). As current research on TP is limited and most theories are one-dimensional, this article focuses on Zimbardo's multidimensional TP theory. Figure 1 shows the different TPs classified by Zimbardo (Zimbora & Boyd 1999: 1274-7).
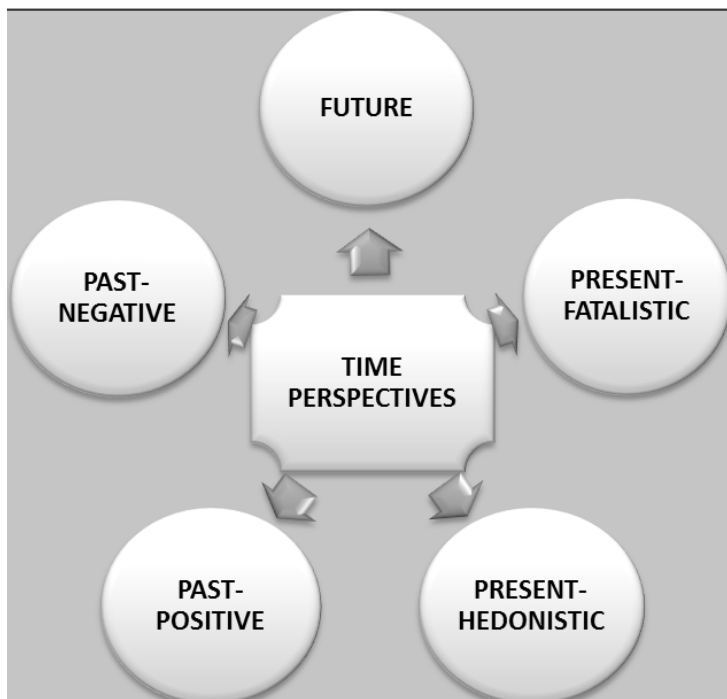

Figure 1: Zimbardo's TPs

2.   Zimbardo's time perspectives

According to Zimbardo & Boyd (1999:1272), an individual's TP is relatively stable and determined by the situations affecting him/her. Many learned factors, for example cultural factors, educational factors, religious factors, socioeconomic status and family modelling, may determine the specific TP that is dominant in an individual's life. TP is, therefore, multiply-determined, but it exerts a definite influence on individuals' everyday decisions and actions (Zimbardo & Boyd 1999: 1273).

An optimal TP is balanced in the sense that the past, present and future components blend and flexibly engage according to the demands, needs and values of a specific situation. Zimbardo (2002: 62) explains this as follows:

> A positive past orientation connects us with our roots, heritage, family, religion and national rituals. It gives us a sense of stability, of our self over time; it's where positive self-esteem is nourished. A future orientation gives us wings to soar to new destinations, to seek new challenges and opportunities by envisioning scenarios of possible future selves. A present time perspective allows spontaneity, sensation-seeking, openness to novelty, being in the moment, and fully experiencing and expressing emotions.

The presence of these three TPs in an individual is described as being the optimal and balanced TP. However, individuals tend to have a dominant TP towards the past, present or future. The five different TPs according to Zimbardo's TP theory will now be discussed.

2.1   Past-negative time perspective

Individuals with a past-negative TP usually reflect a negative, aversive view of the past. The reason why they have a negative attitude towards the past may be due to unpleasant or traumatic events they experienced in the past. Such unpleasant events might have been embedded in adverse psychosocial conditions while they were growing up. Those with a past-negative TP may also have a negative attitude towards the past, because they reconstructed favourable events of the past negatively, or because of a combination of both (unpleasant or traumatic events and a reconstruction of favourable events). Students with a past-negative TP are, therefore, governed by

situations, either negative or perceived negative, they experienced in the past (Zimbardo & Boyd 1999:1274).

2.2   Past-positive time perspective

The past-positive TP is the opposite of the past-negative TP with regard to feelings about, and perceptions of the past. Individuals who have a past-positive TP have a glowing, nostalgic and positive view of the past. They are more inclined to score low on depression and anxiety measures, whereas those with a past-negative TP are more inclined to score high on depression and anxiety measures. Individuals with a past-positive TP also tend to have good self-esteem, whereas those with a past-negative TP tend to have a low self-esteem. (Zimbardo & Boyd 1999: 1277-8).

The past of an individual with a past-positive TP was basically positive, and they reflect on the present with optimism, even when things are not going all that well. In general, it can be said that these individuals have a healthy outlook on life (Zimbardo & Boyd 1999: 1275, 1278). Therefore, theoretically, students with a past-positive TP will have a positive attitude towards their studies, which may contribute towards performance in accounting.

2.3   Present-hedonistic time perspective

Students with a present-hedonistic TP are oriented towards the present, and current enjoyment, pleasure and excitement are more important to them than the rewards of tomorrow. This means that they will not sacrifice their current pleasures in order to reap future benefits, and they fail to consider future consequences. They also tend to have a low preference for consistency and low impulse control, because they place emphasis on novelty and sensation-seeking (Zimbardo & Boyd 1999: 1275, 1278). This is in line with Strathman et al.'s (1994: 742) findings that these individuals are "... more concerned with maximising immediate benefits at the expense of costs or benefits that will not occur for some time, and they place a high priority on such immediate benefits".

Present-hedonists, therefore, live for the moment and hardly ever consider the consequences of their actions. The reasons why students with a present TP may not typically consider future consequences may

be that they regard immediate goals as more important than future goals. They may find future-relevant information unconvincing, or the present, with its more concrete and certain consequences, may have a greater influence on them (Strathman et al. 1994: 742).

2.4 Present-fatalistic time perspective

Individuals with a present-fatalistic TP have an absence of a focused TP. This means that they do not reflect the excitement of individuals with a present-hedonistic TP, the nostalgia of those with a past-positive TP, or the bitterness of those with a past-negative TP. They believe that the future is predestined and not influenced by their actions, and that fate determines whatever happens to them. Therefore, nothing they can do will be able to change things. Students with a present-fatalistic TP believe that they have a lack of control over future events, and they achieve lower marks. They are also pessimistic and high risk-takers, because they believe that they can do whatever they want to do; only fate will determine what happens to them (Zimbardo & Boyd 1999: 1275, 1278).

2.5 Future time perspective

Simons et al. (2004: 122) define the future TP as "the present anticipation of future goals". Strathman et al. (1994: 742) state that individuals with a future TP"... believe that certain behaviours are worthwhile because of future benefits, even if immediate outcomes are relatively undesirable, or even if there are immediate costs".

According to Zimbardo & Boyd (1999: 1275, 1278), individuals with a future TP plan for the future and achieve the goals they have set. They also state that these individuals consider future consequences and abstain from actions and behaviours that may jeopardise their future goals. The authors argue that such individuals with future TPs are conscientious and not inclined towards risk-taking, showing a preference for consistency and reward dependence. Individuals with a future TP are also less aggressive than those with a present-fatalistic TP and less impulsive than those with a present-hedonistic TP. Zabel (1995: 20) agrees with the above and is of the opinion that this TP allows a person to plan for the future, bearing past successes and failures as well as possible future failures and successes in mind.

Therefore, these individuals have a balanced time orientation and are able to enjoy the gratifying moments of the present.

The implication of the future TP would be that accounting students who have a dominant future TP would concentrate on future goals and do their accounting homework exercises regularly, ensuring that they perform well in first-year accounting. This is in line with the discussions of Simons et al. (2004: 126) and Kauffman & Husman (2004: 5) who stated that a student's future TP positively affects his/her motivation, persistence and achievement. This is further supported by the finding of De Volder & Lens (1982: 570) who found that students who place higher value on goals in the distant future and on studying diligently to achieve those goals would be more persistent in studying hard daily and would obtain better academic results.

From the previous sections it is clear that issues such as depression, anxiety, self-esteem and conscientiousness characterise individuals with different TPs. Table 1, as summarised from Zimbardo & Boyd (1999: 1277), contrasts these issues in terms of the five different TPs.

Table 1: The correlation of depression, anxiety, self-esteem and conscientiousness to the different TPs

	Past negative	Past positive	Present hedonistic	Present fatalistic	Future
Depression	p<0.001	-p<0.05	p<0.01	p<0.001	-p<0.05
Anxiety	p<0.001	-p<0.001	-	p<0.001	p<0.05
Self-esteem	-p<0.001	p<0.001	-	-p<0.001	p<0.05
Conscientiousness	-p<0.05	-	-p<0.001	-p<0.001	p<0.001

These correlations indicate that depression positively correlates with the past negative, the present fatalistic and the present hedonistic TPs. Therefore, individuals with these TPs are more inclined to suffer from depression than those with the past positive and the future TPs who tend not to suffer from depression.

Anxiety shows a strong correlation with the past negative and present fatalistic TPs and a somewhat weaker correlation with the future TP. This indicates that individuals with past negative and present fatalistic TPs and, to a lesser degree, those with a future TP tend to be more anxious than those with a past positive TP.

With regard to self-esteem, individuals with a past negative or present fatalistic TP tend to have a poor self-esteem, whereas those with a past positive and future TP tend to have good self-esteem. Individuals with a future TP can be regarded as conscientious, because this is the only TP that correlates positively with conscientiousness. The present hedonistic, the present fatalistic and, to a lesser degree, the past negative dominant TPs tend to be significantly inversely correlated to conscientiousness.

The discussion of Zimbardo's TP and Table 1 indicate that, theoretically, there should be a relationship between TP and performance in first-year accounting. It further implies that students with a dominant past-positive TP or a dominant future TP may be in a better position to pass first-year accounting than those with another dominating TP. The next section discusses the methodology applied to determine whether there is, in practice, a relationship between TP and performance in first-year accounting (REK114) for a group of students at the UFS.

3.   Methodology

The study was conducted among first-year accounting students enrolled for the REK114 module at the UFS. REK114 is a compulsory first-year module for all Bachelor of Commerce (BCom) students.

Consent to obtain information on students and their performance in REK114 by means of statistical data as well as permission to conduct the research was obtained from the appropriate university authorities. Students in the target population were briefed about the aim and purpose of the study and the authors respected the right of any individual to refuse to participate in the study or to withdraw from participating at any time. Students were assured that participation in the research was voluntary and that all data obtained would remain confidential. Written permission to use students' marks, statistical information as well as information acquired form the questionnaires was obtained from the students who participated in the study before they were required to complete the questionnaires.

For the REK114 module, 1 157 students were registered, but the data from only 553 questionnaires could be used, because not all the students were willing to participate in the study.

To determine whether TP had an influence on performance in first-year accounting, the aim of the study was formulated to determine whether relationships between the different TPs and performance in REK114 existed. The three sources of variability, namely systematic variance, error variance, and confounding variance, were recognised and controlled for in the research design by applying the principle of MAXIMINCON (McMillan & Schumacher 2006: 118). The confounding variables were controlled by building independent variables into the research design (McMillan & Schumacher 2006: 18). Confounding variables included the students' age, gender, ethnicity and psychosocial background. These had to be included in the design, because the literature shows that unfavourable psychosocial backgrounds, age, gender and ethnicity might influence academic performance. Examples of unfavourable psychosocial factors include a lack of emotional support, an unfavourable socio-economic situation, depression and an environment not conducive to learning. It also includes health problems and the impact of stress as a specific health concern.[2] Intellectual ability was not included as a variable, because the prerequisites for registering for a BCom degree at the UFS are such that it can be assumed that students who meet the prerequisites have the intellectual ability to pass first-year accounting. This assumption is supported by existing research findings that previous academic performance is related to academic performance and academic success generally, and specifically in accounting at tertiary institutions.[3]

Data was collected using the following self-reporting measuring instruments as research tools: a biographical questionnaire, the Psycho-Social Questionnaire (PSQ), developed by Viljoen in 2007, and the Zimbardo Time Perspective Inventory (ZTPI), developed by Philip Zimbardo and John Boyd and published in 1999.

2   See Bennett 2003: 137; Buboltz et al. 2001: 131; Chilisa et al. 2001: 23; Dass-Brailsford 2005: 574, 579; DeBerard et al. 2004: 66; Dennis et al 2005: 234; Trockel et al. 2000: 125; Dusselier et al. 2005: 15; Hall et al. 2006: 190; Jones et al. 2001: 36; Keeling 2001: 53; Lumley & Provenzano 2003: 641; Steenkamp et al. 2009: 127; Vaez & Laflamme 2003: 156.

3   See Barnes 2006: 88; Eskew & Faley 1988: 144; Gist et al. 1996: 57; Jackling & Anderson 1998: 65; Kahn & Nauta 2001: 633; Lourens & Smit 2003: 169; Tickell & Smyrnios 2005: 254; Turner et al. 1997: 287.

The research is ethical, because none of the participants could suffer any physical or psychological harm through participation.

4. Results

4.1 Descriptive statistics

From the 553 respondents, the proportion of female respondents (55.8%) who participated in the study was slightly higher than that of male respondents (44.2%). The majority of the respondents who participated in the study were Black (65.6%), followed by White (25.9%), Coloured (6.3%), and Indian (2.2%).

The ages of the respondents in the sample varied from 17 to 50 years, but the majority (59%) of the students were aged between 17 and 19 years, indicating that they had started studying soon or immediately after completing Grade 12.

The PSQ was designed as a six-point semantic differential type scale consisting of nineteen items, while the maximum score per item is six. Therefore, a maximum total score of 114 is possible. A high score indicates negative psychosocial circumstances, while a lower score indicates positive psychosocial circumstances. The total of the midpoints for nineteen items was 66.5. The mean of this sample was 40.9 and the median 38, both of which were lower than the total midpoint. The Gaussian distribution (normal distribution curve) was, therefore, positively skewed. This implies that more students in this sample had favourable psychosocial backgrounds and fewer students had unfavourable psychosocial backgrounds.

The average of the final mark in REK114 obtained by the respondents was 44.4%. This low mark agrees with national and international research findings mentioned earlier which identified a problem regarding academic success of first-year accounting students.

The data summarised in Table 2 indicates the orientation of the respondents towards the five different TPs.

Table 2: Time perspective of respondents (scores of five TPs from the ZTPI)
(n=553)

Variable	Mean	Std. dev	Minimum	Maximum	Median
Past-negative	3.01	0.72	1.30	5.00	3.00
Past-positive	3.50	0.57	1.00	5.00	3.56
Future	3.70	0.53	2.15	5.00	3.69
Present-hedonistic	3.41	0.53	1.67	5.00	3.40
Present-fatalistic	2.49	0.65	1.00	5.00	2.56

The scale for each of the TPs in the ZTPI ranges from a theoretical low (minimum) of 1 to a high (maximum) of 5. Average scores for students in the sample were highest for the future TP, followed by the past-positive, present-hedonistic, past-negative and present-fatalistic TPs.

4.2 Statistics of association

4.2.1 Confounding variables: univariate analysis

Univariate ANOVA indicated that the impact of gender on the performance in REK114 was significant: female students performed better, with an average mark of 46.5%, than male students who had an average mark of 41.8% (p=0.0157).

Barnes (2006: 73) found no significant relationship between gender and performance in first-year accounting, while Doran et al. (1991: 74) found that males performed better than females in first-year accounting. However, Cantwell et al. (2001: 231) support the findings of the research on which this article is based, namely that females performed better than males in first-year accounting. The reasons why female students perform better in first-year accounting are debatable, but the authors share the opinion of Smith (2004: 167) who states that females are generally more diligent and focused, whereas males may give preference to sports activities and socialising.

The univariate ANOVA indicated that the impact of ethnicity on performance in REK114 was not statistically significant (p=0.4223). No national or international research studies on the relationship

between ethnicity and performance in accounting were found in the literature. However, studies conducted nationally to determine the relationship between ethnicity and the general performance of students generally show that ethnicity had an influence on the pass rate of first-year students, because first-year White students performed better than first-year Black students (Huysamen 2000: 147; Negash, in Barnes 2006: 29).

The association of age with performance in REK114 was significant (p=0.0023), with an inverse relationship between age and performance in REK114. This meant that younger students performed better in REK114 than older students. Although existing literature shows inconsistent results regarding the relationship between age and performance in accounting, the findings of this research study are supported by those of Du Plessis et al. (2005: 696) and Koh & Koh (1999: 24). In the authors' opinion, a possible reason for this might be that older students tend to be full-time employees with families and that, because they have more responsibilities, they have less time to study.

The impact of psychosocial background on the performance in REK114 was significant (p=0.0498). An inverse relationship existed between psychosocial background and performance in REK114, indicating that students from unfavourable psychosocial backgrounds scored lower in REK114.

Students who did not receive emotional support while growing up may be governed by insecurity which could negatively affect their academic performance. This statement is supported by the findings of Dass-Brailsford (2005: 574), Dennis et al. (2005: 234) and Fuertes & Sedlacek (1994: 77) who state that students who do not receive emotional support are more likely to underachieve than those who have a strong support system. This feeling may cause students to give up trying to achieve academically. Students who have experienced unfavourable socio-economic circumstances may perceive that they have insurmountable impediments.

The finding that an inverse relationship existed between psychosocial background and performance in REK114 was further supported by studies indicating that first-year students experience many stressors that may lead to stress, anxiety and depression.

These stressors include relationship problems with boy-/girlfriends; relationship problems with parents and family members; violence, crime and political unrest, and the fear of having contracted HIV/AIDS.[4]

4.2.2 Independent variable (time perspective): univariate analysis

A regression analysis of achievement in REK114 against the various TP scores indicated that the impact of the past-negative TP on performance in REK114 was significant (p=0.0103). The r squared value (R^2) was 0.012. The results indicate that respondents who were negative about the past did not perform well in REK114. This observation was supported by the finding that students with a past-negative TP are governed by their past experiences (Zimbardo, in Zabel 1995: 23). During 15 years of lecturing in accounting, the authors observed that some students who had had negative experiences regarding accounting at school had negative attitudes towards the subject. These negative views of past experiences with accounting govern these students' attitudes and actions and have an impact on their performance in first-year accounting.

Regarding the past-positive TP, respondents with a higher past-positive TP score obtained higher marks in REK114, although this association was not statistically significant (p=0.0814; R^2=0.006). According to Zimbardo & Boyd (1999: 1275), individuals with a past-positive TP are optimistic and will reflect on the present with optimism even when things are not going that well. According to the authors, this may be the reason for the positive relationship between past-positive score and academic performance, because students with a past-positive TP feel optimistic and, therefore, continue to make an effort to pass.

Respondents who scored high on the future TP obtained higher marks in REK114, although association was not statistically significant (p=0.0650; R^2=0.006). This may be explained by the findings of Fraser & Killen (2003: 261), Jansen & Bruinsma (2005: 248) and Zimbardo & Boyd (1999: 1278). These studies indicate that individuals with a

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4   See Bennett 2003: 137; Botha et al. 2005: 84; Furr et al. 2001: 97-8; Hall et al. 2006: 201-3; Struthers et al. 2000: 589.

future TP consider future consequences and abstain from actions and behaviours that may jeopardise their future goals. They are, therefore, conscientious, which will lead to good time management in order to reach their goals.

There was an inverse relationship between the present-hedonistic TP and performance in REK114, although again not statistically significant (p=0.6476; R^2=0.0004). The inverse relationship is expected, because students who score high on the present-hedonistic TP are oriented towards the present and for these students present enjoyment, pleasure and excitement are, for example, more important than higher marks in a test the following day. Not studying in advance for a test or examination may cause these students to achieve a poorer performance than those who study in advance for a test or examination. The present-hedonistic TP could explain why some students do not regularly do their accounting homework and, consequently, fail first-year accounting.

The impact of the present-fatalistic TP on performance in REK114 was not significant (p=0.1434), with an inverse relationship between the present-fatalistic TP and performance in REK114, R^2=0.004. As with the past-positive, future and present-hedonistic TPs, the association was not significant, but the results lie in the expected direction as underscored by the theory. This agrees with Zimbardo & Boyd's (1999: 1275-6) statement that students with a present-fatalistic TP perceive that they have a lack of control over future events and, therefore, achieve lower marks. The feeling and perception of lack of control may lead to stress and depression and this, in turn, may also have a negative impact on performance.

4.3 Multivariate analysis – full model

Various interrelated factors are involved in the prediction of academic success; consequently, the prediction of academic performance should be holistically analysed (Kersop 2004: 185). Data was initially analysed using analysis of covariance (ANCOVA), including in the model all predictors and confounding variables discussed earlier. After fitting this full model, stepwise model selection was used to remove, one at a time, the variables with the least significant association with performance in REK114 (provided that the p-value was at least 0.1). Table 3 presents the results of the final fitted model.

Table 3: Final fitted model

Source	DF	F-value	Pr>F
Age	1	9.09	0.0027
Gender	1	4.41	0.0362
Past-negative	1	6.55	0.0108

In the final fitted model, the interrelatedness of variables was considered. The variables age, gender and the past-negative TP were indicated to be the final fitted model. These three variables explain 4% of the variance in performance in first-year accounting significantly. The calculated R^2 is significant on the 1% level (p<0.0001). Although the final fitted model explains only 4% of performance in first-year accounting, the result can be considered meaningful, because a large sample was used in the study. The full model, therefore, indicates that older male students with a past negative TP have poorer academic achievement.

5. Discussion

As stated earlier, the aim of this research study was to determine whether TP could provide new insight into the problem of poor performance in first-year accounting. A controversial factor that was not included directly as a confounding variable in this study is first language. The univariate and multivariate analyses of association, however, revealed that no significant relationship between ethnicity and REK114 was found. This finding implies that language did not have a significant influence on the performance of first-year accounting students, since the majority of the students in this sample did not study in their first language, as 65% of the students who participated in this study were Black, with a first language that was neither English nor Afrikaans. This assumption is supported by the international findings of Hartnett et al. (2004: 182) who stated that, despite the language difference, it was found that accounting performance by foreign students whose first language is not English is no worse than the performance of resident students whose first language is English. Jackling & Anderson (1998: 65-73) also found language not to be significant in explaining performance in

accounting. A national study conducted by Koh & Kriel investigated whether language was a contributing factor to performance of first-year accounting students. They found that performance in first-year accounting could not be attributed directly to problems with English caused by poor proficiency in the language (Koh & Kriel 2005: 227).

The results of the univariate analysis indicated that gender, age, psychosocial background and past-negative TP were significantly related to performance in REK114. However, no significant relationship existed between ethnicity and performance in REK114. The past-positive and future TPs were not significantly related to performance in REK114 at a $p<0.05$ level of significance. However, if a $p<0.1$ level of significance had been used, these two TPs would have shown a significant relationship to performance in REK114. The present-hedonistic and present-fatalistic TPs were not significantly related to performance in REK114 ($p>0.1$). However, the observed relationships were as expected, implying that the present-hedonistic and the present-fatalistic TPs showed a negative relationship with performance in REK114. The implication was that students who scored high on the present-hedonistic TP or the present-fatalistic TP may obtain lower marks in REK114 than those who score low on these two TPs.

The results of the univariate and multivariate analysis of association were considered collectively in determining the significance of TP on the performance in first-year accounting. Age, gender and past-negative TP were indicated as significant predictors by both the univariate and multivariate analyses. Psychosocial background was indicated as a significant predictor of performance in first-year accounting in the univariate analysis, but it was eliminated when the multivariate ANCOVA was conducted. The reason for this may be that psychosocial factors such as a lack of emotional support, health problems and financial problems are confounded with a past-negative TP. The literature indicates that, if students experienced unfavourable psychosocial factors, it might have a negative influence on their academic performance.[5] The fact that the past-negative TP showed a significant relation to REK114 might be related to the finding that an

5   See Dass-Brailsford 2005: 579-80; DeBerard *et al* 2004: 66; Dennis *et al* 2005: 234; Kanyongo *et al* 2006: 638; Pritchard & Wilson 2003: 18-27; Ruthig *et al* 2009: 233-4.

unfavourable psychosocial background has a significant influence on performance in REK114.

6.   Conclusion and recommendations

Extensive research has been conducted on the influence of cognitive and non-cognitive factors on the performance of students, in general, and accounting students, in particular. These studies, however, do not provide conclusive answers. Research on the influence of TP on performance in accounting is lacking and, because no factor exists in isolation, in the present study confounding variables were considered when the influence of TP on performance in first-year accounting was researched.

The findings indicate that age, gender and the past-negative TP are significantly related to performance in first-year accounting. Although the past-negative TP was the only TP significantly related to performance in first-year accounting, the statistical relationships of the other four TPs to performance in first-year accounting contribute to answering the question as to whether TP plays a role in the performance of first-year accounting students.

The research further revealed that a possible interrelationship between psychosocial circumstances and the past-negative TP may exist. It can, therefore, be concluded that TP does play a role in the performance of first-year accounting, but that other factors should also receive attention in addressing the problem of the high failure rate in first-year accounting.

On the basis of the research findings, the following recommendations are made:

• According to the univariate analysis, age was indicated as being significantly related to performance in first-year accounting, with younger students performing better than older students. In order to assist older students to pass, they could be encouraged to take fewer subjects per year instead of taking the full load of subjects indicated for a first-year student. This will enable them to spend more time on the subjects for which they have registered.

• Another research study where the PSQ is used should be conducted. In the proposed study, however, the questions should be analysed

according to emotional support, socio-economic status and depression, or even according to each individual item appearing in the questionnaire. In so doing, more detailed information can be obtained with regard to specific problems in respect of the psychosocial background and their influence on performance in first-year accounting or on performance in general.

- The study on which this article is based could be repeated by selecting a random sample from all undergraduate accounting students. The results could then be generalised to all undergraduate accounting students.

- The UFS could use the ZTPI to determine the dominant TP of all first-year students. Students with a past-negative TP should receive counselling, and the university should pay more attention to the personal circumstances of such students. Although the UFS does offer a counselling service, not all students who experience problems or who come from unfavourable psychosocial circumstances make use of this service.

- There is limited research on the effect of a TP intervention with regard to the academic performance of students. However, Seijts (1998: 157) is of the opinion that TP is a flexible construct that can be modified. He researched the effect of a TP intervention on physical activity and found that a TP intervention can change behaviour with regard to physical activity. If this is the case, it should be possible for a TP intervention to change behaviour with regard to academic performance, in general, and study habits and academic performance in accounting, in particular. This matter remains a subject for possible future research.

- It is proposed that the UFS should identify students from unfavourable psychosocial backgrounds, with negative study attitudes and a dominant past-negative TP. Special attention should then be paid to these students in the form of counselling, courses on study skills, and personal attention, especially as a means of changing their attitude to study. This may enable students to be in a better position to pass accounting and perform better academically.

Although the research results indicated in this article are limited to first-year accounting students at the UFS, the most outstanding

result discussed in this article is the connection between unfavourable psychosocial circumstances and a past-negative TP. An unfavourable psychosocial background, together with a past-negative TP, has an influence on performance in first-year accounting. It can be concluded that performance in first-year accounting remains a multiple determined aspect in which TP cannot be ignored but should receive more attention.

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