

The performance and success of postgraduate business students

A. Davis

Department of Business Management
University of South Africa
e-mail: davisa@unisa.ac.za

P. Venter

Department of Business Management
University of South Africa
e-mail: ventep@unisa.ac.za

Abstract

The factors that contribute to postgraduate business student performance and success within an open and distance learning (ODL) environment were investigated. An exploratory research approach was followed in three stages: a structured questionnaire, semi-structured qualitative interviews and a secondary document analysis of the student records. The contributing factors were identified to inform future teaching practices in ODL that may lead to an improvement in student performance, course pass rates and ultimately the throughput rate of qualifications. The contributing factors in this context pertain to formative assessment, student enjoyment of the course, lecturer involvement and attendance of course workshops. Students highly value proactive contact from lecturers in the form of text messages and email communications. Recommendations include a reconsideration of the assessment practices – in particular, the weighting of the contribution of assignments towards the final mark. Offering regular face-to-face sessions with the students – albeit with lecturers or appointed tutors – is recommended. The influence of regular lecturer contact and face-to-face workshops is particularly interesting, considering that the research was conducted at an ODL institution. Additional questions on student learning styles arise regarding the students' fit with ODL, course design and teaching practices in ODL. This could lead to further research in the South African higher education environment.

INTRODUCTION

Student success is a strategic priority for institutions of higher education in South Africa. The production of university graduates – and especially postgraduate students – is an essential component of the national system of innovation of modern industrialised societies (Council on Higher Education 2009, 1–24). Not

only does student success contribute to the institutional reputation, but according to the current higher education funding formula, government funding is also increasingly being linked to institutional throughput rates (Pityana 2009b). Combined with the government funding formula, the challenges of the schooling system, increasing competition, rising costs, ageing facilities and a general scarcity of academic staff, the importance of student success cannot be ignored any longer. Indeed, interventions from both academics and the institution itself are necessary to determine how student performance can be enhanced, to improve student throughput.

The University of South Africa (Unisa) is the oldest university in South Africa and the only dedicated open and distance learning (ODL) institution in the country. The largest provider of ODL on the African continent, it enrolls just over one third of all students in South Africa (Pityana 2009a). Like all South African higher education institutions, Unisa is plagued by high dropout rates and low success rates. A case in point is the fourth-level postgraduate Strategic Management course, which formed the basis for this research project.

In an attempt to contribute to the discussions on student performance and success as contributing factors to student retention, this article reports on the findings of an exploratory research project to identify the drivers of student performance in a postgraduate business course. Furthermore, the research project also involved an analysis of student data to identify the factors that differentiate between successful and unsuccessful students. An underlying assumption that guided this research was that student performance and success in a compulsory course within a qualification (BCom Honours) contributes to the overall throughput rate of the qualification.

A thematic search within this journal on student cancellation and performance from 1979–2006 indicated that reporting on these concepts is not new. However, the most recent submission related to this theme was published in 2008. This latter submission considered students' tensions and attitudes towards formative assessment in ODL. Steyn (2001, 30–48) evaluated the learning materials and assessment system of a postgraduate module at Unisa. However, the current article introduces a new context of student performance, which led us to broaden our literature search; several studies on student performance and retention were identified. These studies focused mostly on on-campus undergraduate students (Kember 1990, 11–24; Tinto 1987; Woodley, De Lange and Tanewski 2001, 113–31; Yorke 1999), mature distance education students (Gibson and Graff 1992, 39–51) (see also Kember 1989, 278–301 and 1990, 11–24; Smith 2004, 28–38; Truluck 2007; Woodley, De Lange and Tanewski 2001, 113–31) and online learning experiences (Kidney and Puckett 2003, 203–212; Roffe 2002,

40–50). Even fewer studies focused on retention in postgraduate distance education students (Carroll, Ng and Birch 2009, 197–209; Geri, Mendelson and Gefen 2007; Koen 2007). Notwithstanding the potential contribution of knowledge about the drivers of student performance, relatively little research has been conducted in this particular context, namely postgraduate ODL-based business studies in a developing country.

We claim that if the drivers of student performance in a postgraduate business course are known, student performance can be driven more purposefully. Furthermore, knowledge of the differentiating factors between successful and unsuccessful students can lead to an identification of focus areas for potential development within institutions and courses. Ultimately, not only would this knowledge contribute to our knowledge of ODL practices, but it can lead to an improvement in throughput, a reduction in student dropout and an enhancement of institutional reputation and funding. The institution benefits and the student ultimately reaps the rewards for his/her efforts.

The research possibilities for academics and practitioners are wide-ranging in a higher education environment characterised by high dropout rates and low success rates. Faced with a plethora of research topics, we asked: What are the contributing factors in the performance and success of postgraduate business students in open and distance learning?

Within the framework of student performance and success at an ODL institution in a developing country, our research adds to the conversation on what contributes to student success and performance.

POSTGRADUATE STUDENT SUCCESS

In 2005, a total of 54 494 students enrolled for the first time for a postgraduate qualification at South African universities. Between 2000 and 2005, the average growth rate for honours first enrolments was 9.1 per cent (Council on Higher Education 2009, 1–24). The growth in enrolments is in response to the high demand for postgraduate skills in a globalised world. Although a steady growth in honours enrolment numbers can be seen across South African institutions, the rate of completion is low.

Unisa's postgraduate completion rate portrays an even grimmer picture. Strategic Management is a compulsory course in the BCom Honours Business Management qualification. This implies that a high failure rate in this course directly contributes to a low success rate regarding the qualification and a low throughput rate. Only 33 per cent of students who originally registered for the strategic management course passed. Not only is the success rate a cause for

concern, so is the dropout rate: almost 36 per cent of students dropped out in 2009, were not admitted, or chose not to sit for the examination. At the institutional level, for the 2001–2007 cohort it was found that between 36 and 51 per cent of students entering Unisa for the first time drop out by their second year of study. By the third year of study, the dropout rates increase to between 49 and 61 per cent. In subsequent years, the dropout rates reach up to 69 per cent (Subotzky and Prinsloo 2011, 1–26).

Knowing that student performance and success are not novel issues in education, a review of the existing research ensued.

Performance and success of postgraduate students

The performance and success of postgraduate business students were used as the constructs for the literature review. Within the Unisa context, no previous research project involving a group of postgraduate business students could be found. In broadening the search criteria, a similar study was found that focused on the retention and progression of postgraduate business students at the University of Southern Queensland. Carrol et al. (2009) found that inadequate student support – particularly the lack of proactive contact – impacts negatively on the retention and progression of students. These authors found that satisfaction and retention were not linked in the Carrol study. Even when dissatisfied, some students persisted because they think their study too important to drop out – perhaps because they had clear career-related goals (Gaskell 2009, 193–196).

In the same year, at the Zimbabwe Open University, Chabaya et al. (2009) attempted to uncover the issues affecting the progression of postgraduate students. Although these were not business students, the nature of postgraduate studies at their institution nevertheless remains relevant to our study. Some of their findings indicate that delays in the receipt of the research guide, the unavailability of supervisors, and student non-attendance at timetabled contact sessions were the most pertinent factors affecting student progress. In a Canadian study by Fillion et al. (2009, 223–240) the key role of lecturers was confirmed. Elements most appreciated by students were found to be the lecturer, and course usefulness for everyday life and career purposes.

Again, on a local level within South African higher education, Koen (2007) attempted to explain the retention and dropout of a large group of Master's students over a six-year period. Again, the nature of postgraduate study makes these findings relevant to our research project. Koen's study dealt with factors that promote retention (and, by implication, performance) and with factors that promote dropout. Because, according to Koen (2007), retention in South Africa cannot be divorced from economic and household factors, student selection,

student ability and adaptation challenges, he also examined the impact of those structural factors on student decisions. Koen's study combined aspects of Tinto's (1975, 1988) main variables with a range of context-specific factors such as finances, part-time study, constraining social roles, academic progress, faculty type and degree programme, and household-level circumstances.

The relationship between student performance, success, satisfaction and retention

An underlying premise in education is that if students perform and are successful in their studies, then the likelihood of them completing their qualifications is higher. In an attempt to confirm this premise, a definition of student success may be useful. Within the ODL environment, and Unisa specifically, Subotzky and Prinsloo (2010) state that student success includes course success, retention, graduation, graduateness and satisfaction. According to these authors, the broad term 'student success' is used to denote all these different dimensions of success. This statement indicates a relationship between performance, success, satisfaction and retention.

In an earlier study, however, Bean and Bradley (1986, 393–412) could not find a conclusive answer to the question whether increased satisfaction leads to improved performance, or vice versa. More than two decades later, the Noel-Levitz organisation (in Wickersham and McGee 2008, 73–83) reported that in higher education satisfied students are more likely to achieve academic success than dissatisfied students. The key to measuring satisfaction lies in determining what is important to the student. Satisfaction is a multivariate condition with a variety of measures, such as programme design, instructional design, instructor behaviour, social conditions and student characteristics (Davis and Venter 2010, 5).

This echoes the views of Benbunan-Fich, Hiltz and Harasim (2004, 19–37), who found that student satisfaction is affected by all aspects of the educational experience, such as satisfaction with course rigour and fairness, with lecturer and peer interaction, and with support systems. Endres et al. (2009, 304–312) found that student satisfaction comprised five distinct factors, namely satisfaction with faculty practices, course materials, learning practices, student-to-student interaction and online tools. Drouin (2008, 267–284) noted that when students were able to interact with their classmates and instructor they felt part of a community, which contributed to student satisfaction and led to student retention.

Building on the view portrayed by Subotzky and Prinsloo (2010), student retention is regarded as inherent to student success. As such, a brief discussion on student retention and dropout is included. It is deemed necessary to describe the views of Vincent Tinto (1975) and David Kember (1989; 1990). Tinto is considered the

main retention theorist. Kember used Tinto's work to develop a model applicable to distance education institutions. Within the South African higher education system, Koen (2007) devised a model that considered postgraduate student dropout at a South African residential university. Lastly, a model devised to address the unique particularities of Unisa will be briefly discussed.

Student dropout

Tinto's work is rooted in Durkheim's theory of suicide. He applied Durkheim's theory by viewing the college as a social system with its own value and social structures. He then considered dropout from that system as analogous to suicide. Tinto assumed that insufficient interactions with others in the college and insufficient congruency with the prevailing value patterns resemble the conditions resulting in suicide in the wider society. The basic message of Tinto's theories is that an institution that invests in student welfare will be rewarded with good throughput (Koen 2007). In essence, the core of Tinto's (1975) theory is based on two related propositions: the greater the level of academic integration, the stronger the desire to succeed; the greater the level of social integration, the stronger the commitment to stay at the institution.

Although Tinto's work on retention is widely accepted and still useful almost four decades later, it was subject to some criticism. One such criticism is that it did not account for the influence of sub-cultural environments on student behaviour in an institution (Tierney 1992). Another is that it did not consider experiences in distance education, or the case of part-time students (Tierney 1992). This is where Kember's (1989) model made a contribution.

Kember contended that existing models of dropout were not directly applicable to distance education because of the characteristics of that form of education. Kember's model of dropout from distance education includes components of background characteristics, motivation, academic environment, and the social, work and family environment. Kember made recommendations about the ways in which distance education courses might be formatted to reduce student dropout. Academic, social and work integration leads to a decision process weighing costs and benefits, which ultimately leads to a decision to drop out or complete the course. Course completion indicates student success.

In the South African higher education environment, Koen (2007) conducted research to explain the retention and dropout of a large group of Master's students over a six-year period. His study combined aspects of Tinto's main variables with a range of context-specific factors such as finances, part-time study, constraining social roles, academic progress, faculty type and degree programme, and household-level circumstances.

As part of the objectives of the Unisa Throughput Forum, a modelling task team was appointed in 2010 to develop a framework and strategy for enhancing student success, retention, graduation and satisfaction. Given the dynamic and complex nature of success and retention, and the particularities of the local ODL context, a unique model was developed that incorporated the existing literature (Subotzky and Prinsloo 2010, 1–24).

The conceptual model consists of six key constructs, namely situated agents, capital, habitus, the student walk, domains and modalities of transformation and a broad definition of success.

For the purpose of this article, we will only discuss the student walk construct as it links directly with the scope of our research. The student walk denotes the numerous ongoing interactions between the student and the institution throughout each step of the student's journey through higher education. It involves mutual transformation on the basis of engagement and knowledge. According to Subotzky and Prinsloo (2010), the interactions between student and institution will shape the way the other engages in the interaction. The more effectively one engages with the other, the more effective the interaction will be. In support of the views of Tinto (1987), Kember (1990) and Koen (2007), the conceptual model acknowledges that students are also influenced by non-academic factors (such as personal life circumstances), which also influence success. Most importantly, the model explains success in terms of the required mutual transformation of student and institutional attributes, which rests on the depth and accuracy of relevant mutual knowledge.

The final construct pertains to the broad definition of success. According to the modelling task team, success entails course success; graduation and time-to-completion within the expected minimum time; a positive student experience and high levels of satisfaction throughout all steps of the student walk; a successful fit between students' graduate attributes and the requirements of the workplace, civil society and democratic, participative citizenship; and course success. Course success not only implies graduation, but also includes cases where students pursue the intrinsic reward of study, or where they complete qualifications at other institutions.

RESEARCH DESIGN

While increasing student performance and success are both critical elements for improving throughput, our focus was on developing an understanding of what drives student performance and ultimately successful course completion in the course being studied. Our research design was exploratory in nature, within the interpretive paradigm. The research process comprised three stages, namely a

structured questionnaire, semi-structured qualitative interviews and secondary document analysis of student records.

The questionnaire was constructed using the major elements of student performance, success and satisfaction literature, and was influenced by the specific course components and interaction with students. The questionnaire comprised five sections. Based on the work of Tinto, Kember, Koen and Subotzky and Prinsloo, the first and fourth sections covered some elements of the study environment at home, along with work and individual characteristics. To accommodate social integration, Section two addressed the communication channels used and the value students derive from these. Academic integration was considered in Section three, where the value of the various course components, the overall assessment of the course and the level of performance in the course assignments were considered. Section four recorded the demographical details. Finally, Section five asked respondents why they chose Unisa (and ODL) and what they would do differently if they were to repeat this specific course.

To compensate for the nature of exploratory research, we also provided for semi-structured interviews to clarify findings from the questionnaire. These interviews were informally structured to receive feedback on the students' experience of studying at Unisa. It also enquired about their experience in ODL, their enjoyment of the course, communication with lecturers, interaction with other students, learning difficulties, suggestions to the course team for future offerings and personal reflection on their overall experience.

Lastly, in an attempt to identify the variables that differentiate between successful and unsuccessful students, we analysed student records. The dataset contained demographic data, historical data (for example, the institution where the student obtained his/her first degree) and performance data (for example, average assignment marks and final course mark).

Selection and analysis

The questionnaire was administered at the October 2009 Honours study workshops at Unisa in Pretoria, which were attended by approximately 600 of the 946 registered students. Of these, 207 usable responses were received. In determining drivers of performance stepwise estimation was used, which is an application of multiple regression analysis to identify the fewest possible independent variables, while achieving the maximum predictive accuracy (Hair et al. 2006, 249–250). The standardised beta-coefficient is used to compare the contribution to the explanation of the variance of the dependent variable within the regression model, thus making regression coefficients more directly comparable (Norušis 1993).

For the purposes of this analysis, respondents were divided into the following four categories:

- Below average performers (<45% average) – 48 respondents fell into this category;
- Average performers (45–55% average) – 73 respondents fell into this category;
- Above average performers (56–65% average) – 49 respondents fell into this category; and
- Top performers (>65% average) – 37 respondents fell into this category.

In some reports we used only two categories: low performers (comprising below average and average performers) and high performers (comprising above average and top performers). Top two box percentages (options 4 and 5 on a scale of 1 to 5) and means were used as a measure of comparison.

To consider the potential bias introduced by administering the questionnaire at a face-to-face session, we compared the overall student profile with the profile of the 207 respondents:

- The sample is biased toward females: 63 per cent, compared to 54 per cent for the overall course;
- Black African students are somewhat over-represented: 58 per cent, compared to the 43 per cent registered for the course overall;
- Gauteng-based students were strongly represented: 81 per cent, compared to the 52 per cent they make up of the total student base for the course;
- Students with full-time employment were more strongly represented (81%) than their proportion of the overall student profile (approximately 70%) would suggest.

While the purpose of the qualitative sample was not to achieve representation, it was important to interview a relatively diverse group of students in terms of race, performance and geographical location. The profile of the qualitative interviews is as follows:

- Three black, two white and one Indian student;
- One below average performer, two average performers, two above average performers and one top performer;

The performance and success of postgraduate business students

- Two respondents who had dropped out of the same course in a previous academic year;
- Five respondents from Gauteng, one respondent residing outside South Africa.

The student records of the 946 registered students were analysed. Incomplete student records and administrative cancellations (for example, due to non-payment) were removed and 915 usable records remained. Analysis of the student records revealed the following:

- 86 per cent of students of the course obtained their first degrees from Unisa and 13 per cent from other South African residential universities;
- 94 per cent of students chose English as their language of study, with the remaining 6 per cent choosing to study in Afrikaans;
- Most students were African (46.8%), with white students (27.5%), Indian students (20.8%) and coloured students (4.9%) also represented;
- Female students represented a slight majority of 54 per cent;
- By far the majority of students were South African (92.5%), with other African countries contributing 6.7 per cent of students;
- Students tend to be in the 20–29 years age group (50.7%) or in the 30–39 years category (30.4%);
- 18.6 per cent study full-time, while 43.1 per cent work full time;
- The majority are based in Gauteng (51.9%) or in KwaZulu-Natal (20.5%);
- Only 37 per cent of students submitted all three their assignments during the 2009 academic year.

The final course results were also analysed. Figure 1 is a summary of the findings of the course results.

This illustrates the challenge of student performance and success faced by the university even at postgraduate level, with only about one third of registered students successfully completing the course.

For the logistical regression analysis, we used the forward stepwise method. The predictive power of the model is 85.8 per cent – i.e., the model is able to predict the position of a case in the classification table correctly 85.8 per cent of the time.

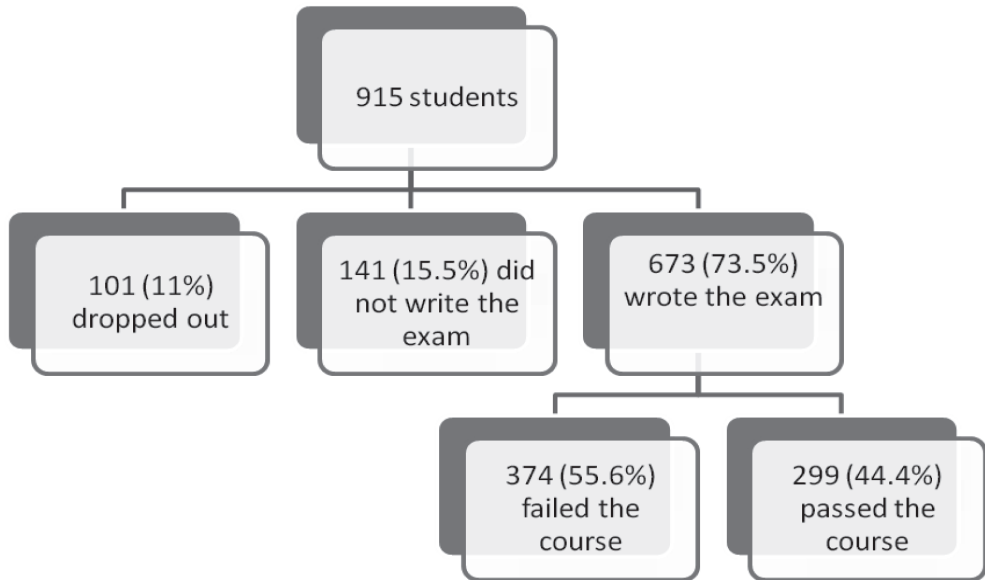


Figure 1: Strategic Management course results 2009

The variables in the regression model are indicated in Table 1. This suggests that the submission of assignments is by far the strongest predictor of success, followed by race, language, age and the university where the first degree was obtained (South African versus foreign institutions). These outcomes are discussed in more detail below.

Table 1: Variables in the equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Foreign university	-1.614	.736	4.811	1	.028	.199
Language	-.619	.241	6.609	1	.010	.538
Race	.563	.205	7.511	1	.006	1.756
Age	-.667	.120	31.024	1	.000	.513
Assignment submission	1.623	.113	204.681	1	.000	5.068

The frequencies for the differentiating variables are indicated in Table 2. We report only on selected variables, namely race, assignment submission and workshop attendance. Although the remaining variables also provide interesting results, an analysis thereof is beyond the scope of this article.

Table 2: Summary of differentiating variables

Characteristics	Categories	% passed	Pearson's chi-square coefficient*
Study language	English	32.3	0.028
	Afrikaans	38.6	
Race	Black	25.2	0.000
	White	40.1	
	Indian	38.9	
	Coloured	35.6	
Age group	20--29	36.4	0.029
	30--39	30.2	
	40--49	21.6	
	50+	15.8	
Number of assignments submitted	No assignments submitted	0	0.000
	One assignment	14.6	
	Two assignments	31.4	
	Three assignments	56.3	

* A Pearson coefficient of less than 0.05 indicates a difference in proportions at the 95 per cent level of confidence, or higher.

From Tables 1 and 2 it is noteworthy that the more assignments the student submitted, the higher his/her chances of passing the course. Although assignments contribute only ten per cent of the final mark, getting involved in the study process early on and staying involved have a beneficial effect on the final outcome. In addition, most South African students study in their second or third language, English. Afrikaans is the only other option offered at Unisa for Afrikaans first-language speakers. Age also plays a role, as is evident from the declining proportion of students in the higher age group, who pass.

We did not speculate on the possible reasons for the impact of these variables on course results. However, an analysis of these variables may warrant a follow-up research project.

RESEARCH FINDINGS

In adhering to our research question, we report only on the findings pertaining to the constructs that formed the foundation for this research project, namely

performance and success. Our aim was to identify the drivers of performance and the following section reports on our findings.

Drivers of student performance

In determining the primary drivers of student performance, the stepwise regression model that yielded the best results had an adjusted R-squared of 0.862 and was highly significant (p value of 0.000). The results of the regression model are depicted in Figure 2.

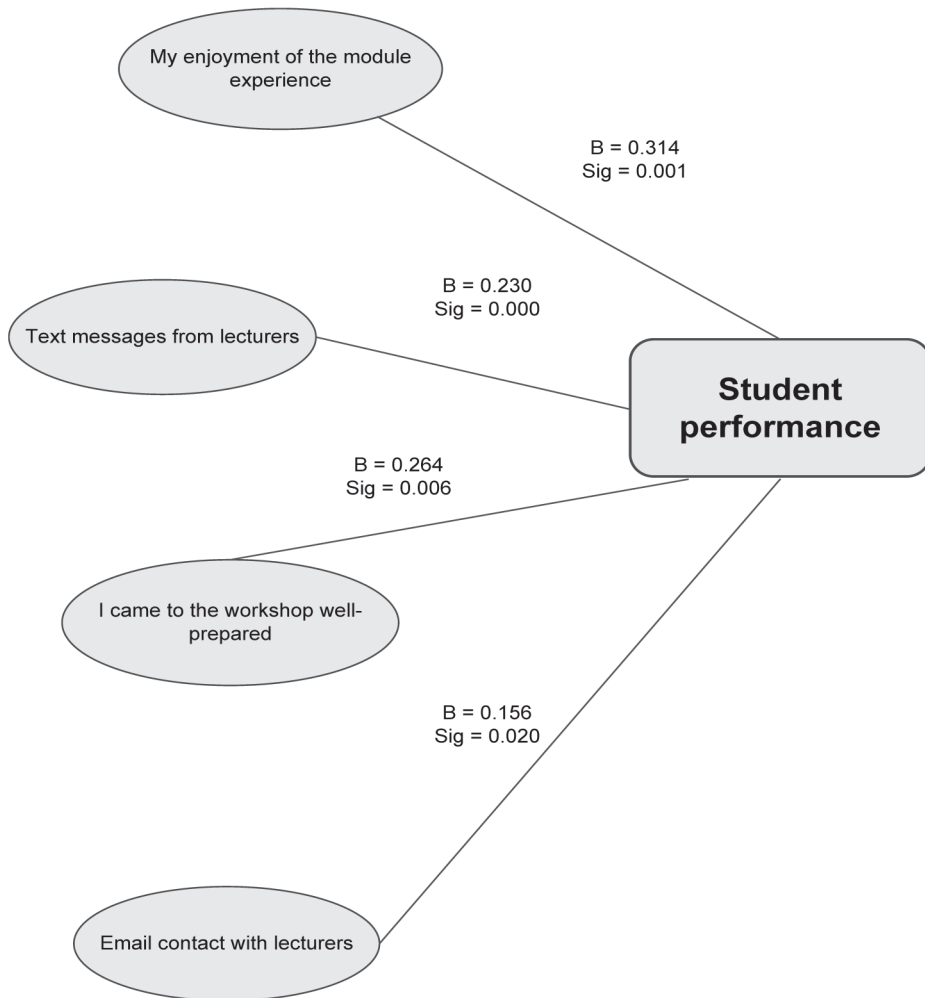


Figure 2: Stepwise regression results for student performance

The beta-coefficients suggest that student enjoyment of the course has the largest impact on student performance. *‘I can really identify with a lot that [Strategic*

The performance and success of postgraduate business students

Management] has to offer. And I can apply it and I do understand it better' [Interview 3]. Further stepwise estimation analysis of the relationship between student enjoyment and other questions suggests that student enjoyment is most strongly impacted by the overall course design (see Table 3), followed by the students' confidence in their own ability.

Table 3: Drivers of student enjoyment of the Strategic Management course

	Standardised beta-coefficient	Significance
Overall design of the Strategic Management offering	0.423	0.000
My own confidence in my ability to complete this course successfully	0.271	0.000
I learnt something valuable about strategic management from the DVD	0.117	0.012
The extent to which the Strategic Management course content is applicable to my work	0.097	0.025
Doing the assignments	0.094	0.034

The next biggest impact is the extent to which students arrive for study schools or workshops well prepared. This suggests a certain level of diligence and proactive behaviour: *'You have to read every day, I can even show you my study guide for Strategic Management – for this year it is completely dirty now because they taught me that every day I must at least learn something from my book'* [Interview 1]. This behaviour is most strongly associated with the academic integration of students (Kember 1990; Tinto 1988).

Text messages from lecturers and email contact with lecturers also have a significant impact on student performance. Both relate to the social integration of students, as described by Tinto (1988, 438–455) and Kember (1990). It is interesting that personal interaction with lecturers seems far more important than social integration with other students. In addition, active and positive lecturers seemed to elicit a positive response from students: *'Because of my location, I only communicate through email and myUnisa discussion board. Only the lecturers of strategic management are actively participating in discussions. This I really appreciated and a huge thank you to the team. I cannot say the same about the other two courses that I am registered for. There is NO participation by lecturers. This is frustrating because even if you do send an email the chances are that a "standard reply email" is sent back to you, or, they do not reply at all'* [Interview 5].

The value of course components

In evaluating the course components, we asked the students about the value of the main components. The course components evaluated include the study guide, the tutorial letters with the assignment model answers, the workshops, the assignment guidance provided by the lecturers and the process of doing the assignments. The top five course components rated by top two boxes ('valuable' and 'very valuable') are depicted in Figure 3. The value of the primary course components, namely face-to-face contact with lecturers and formative assessment in the form of assignments, are emphasised here. This is confirmation of the value of formative assessment, as perceived by the students.

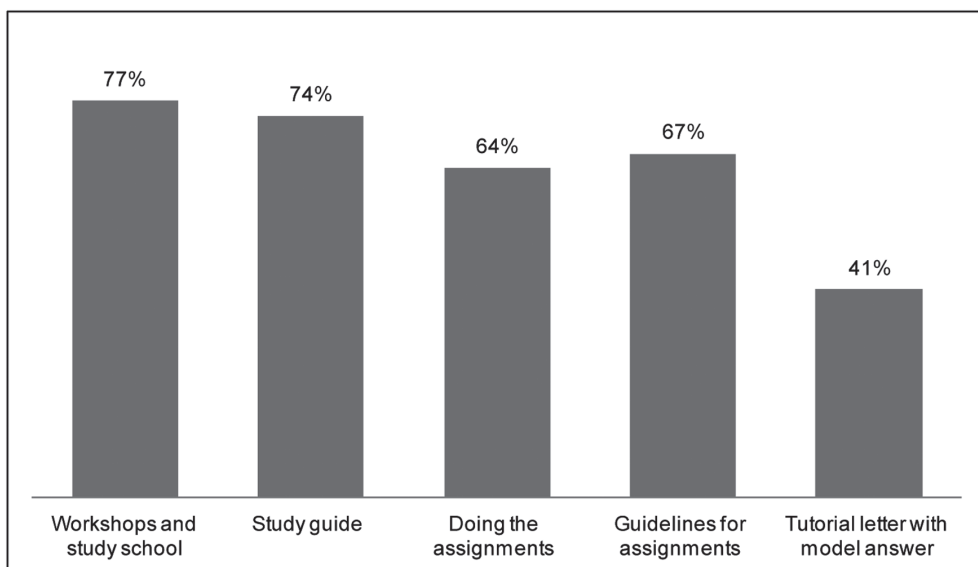


Figure 3: The top five course components

While there appears to be a great deal of agreement between students as regards the most valuable course components, top performers appear to value assessment activities somewhat more than other groups. For example, 78.4 per cent of the students who regard doing assignments as 'very valuable' are top performers, compared to the 64.3 per cent of all respondents who regard it as 'very valuable'. Similarly, 78.4 per cent of the respondents who found the assignment guidelines provided by lecturers 'very valuable' were top performers compared to the 67.1 per cent of the total respondents who regard the guidelines as 'very valuable.' In addition, top performers are more inclined to arrive better prepared for study schools and workshops (top two box score of 70.3% compared to 56.6% for the total).

It is also interesting to note that of those students who attended the workshop, 76.6 per cent passed the course.

As mentioned earlier, the more assignments the student submitted, the higher his/her chances of passing the course. It is also encouraging to note that, apart from the empirical evidence, students themselves rated the doing of assignments as valuable. Of the students who submitted all three assignments, 96 per cent passed the course. One of the suggestions on how the course may be improved, was: '*In my view we can have maybe four or five assignments a year*' [Interview 1].

CONCLUSION

This research project originated from our interest in the factors that contribute to student performance and success. We were especially motivated by an attempt to improve the pass rate of the Strategic Management course, which will ultimately lead to an improvement in the throughput rate of the B.Com. Honours in Business Management qualification. As academics, we have a natural curiosity regarding our profession, our practices and our students. This article reported on the findings of an exploratory research project that identified the drivers of student performance in a postgraduate business course. The research project also reported on the findings of a secondary document analysis of student records, which identified factors that differentiate between successful and unsuccessful students.

Based on the findings of our research project, we identified the contributing factors to postgraduate business student success within an ODL environment. Student performance is driven by personal enjoyment of the course and own preparations for the workshops. Contact with the lecturers has been confirmed as an important driver. Lecturer–student contact strategies, such as regular text messages from lecturers and email contact with lecturers, were noted as important. This is due to the inherent nature of ODL; distance and isolation are thus important to overcome. This confirms the importance of academic and social integration in distance education. Coupled with this is the students' perceived sense of community. Effective interaction between students and lecturers is a driving force for student performance. Furthermore, our findings confirm that positive students experience a high level of satisfaction, expressed through their enjoyment of the course. Enjoyment is another driving force of performance.

Students indicated the high value of the learning experience from doing assignments. This is an important finding, as we also proved that students who submit all their assignments as part of the formative assessment, significantly improve their chances of course success.

We also identified the differentiating factors between successful and unsuccessful students. Here we again confirmed that students who submit their assignments and attend the workshops significantly improve their chances of course success. Overall, white students still perform better than black students. Black students, older students and students not studying in their first language need more support. What this support entails offers a possible future research topic.

The value of our research to fellow lecturers at Unisa is that it identified the ‘at risk’ groups, at postgraduate business management level, as black students, older students with lower matric pass rates, and students who do not submit all their assignments. The identified risk factors are now poised for further action, albeit in terms of requiring additional resources to deal with them or a redesign of the course offering to counter the risks. More should be done to encourage assignment submission. This may be achieved by making all assignments compulsory and restructuring so that assignments contribute a greater percentage to the final mark, which could serve to increase the rate of submission of assignments. This implies that at an institutional level, the tuition policy may now provide for a higher final mark contribution of formative assessment. In addition, face-to-face sessions are encouraged – such as tutor sessions or workshops presented by course lecturers. This confirms the importance of a blended learning approach within ODL. Within other ODL institutions – especially those operating in developing countries such as India, Spain and Mexico – an analysis of the heterogeneity of the students may prove useful in identifying risks, and informing future tuition and assessment practices. Addressing these student issues at course level can lead to improved pass rates, improved qualification throughput guaranteeing more subsidies, it can contribute to societal welfare, the calibre of the candidates employed, as well as their potential output.

REFERENCES

- Bean, J. P. and R. K. Bradley. 1986. Untangling the satisfaction-performance relationship for college students. *The Journal of Higher Education* 57 (4): 393–412.
- Benbunan-Fich, R., S. R. Hiltz and L. Harasim. 2004. The online interaction learning model: An integrated theoretical framework for learning networks. *Learning Together Online: Research on Asynchronous Learning*: 19–37.
- Carroll, D., E. Ng and D. Birch. 2009. Retention and progression of postgraduate business students: An Australian perspective. *Open Learning* 24 (3): 197–209.
- Chabaya, O., C. Chiome and R. A. Chabaya. 2009. Students’ failure to submit research projects on time: A case study from Masvingo Regional Centre at Zimbabwe Open University. *Open Learning* 24 (3): 211–221.

- Council on Higher Education. 2009. Postgraduate studies in South Africa – a statistical profile. The Tramshed, Pretoria: Council on Higher Education. Available at: <http://www.che.ac.za/documents/d000195/>. Accessed on 7 May 2010.
- Davis, A. and P. Venter. 2010. The long walk to student success: Drivers of student performance in a postgraduate ODL business course. *Proceedings of the 5th International Conference on e-Learning*. Reading: Academic Publishing Limited.
- Drouin, M. A. 2008. The relationship between students' perceived sense of community and satisfaction, achievement, and retention in an online course. *Quarterly Review of Distance Education* 9 (3): 267–284.
- Endres, M. L., S. Chowdhury, C. Frye and C. A. Hurtubus. 2009. The multifaceted nature of online MBA student satisfaction and impacts on behavioural intentions. *Journal of Education for Business* 84 (5): 304–312.
- Fillion, G., M. Limayem, T. Laferriere and R. Mantha. 2009. Integrating information and communication technologies into higher education: Investigating onsite and online students' points of view. *Open Learning* 24 (3): 223–240.
- Gaskell, A. 2009. Student satisfaction and retention: Are they connected? *Open Learning* 24 (3): 193–196.
- Geri, N., O. Mendelson and D. Gefen. 2007. How to increase student retention in MBA programs with an online element? Paper presented at Proceedings of the Chais Conference on Instructional Technologies Research, The Open University of Israel, Raanana.
- Gibson, C. C. and A. O. Graff. 1992. Impact of adults' preferred learning styles and perception of barriers on completion of external baccalaureate degree programs. *Journal of Distance Education* 7 (1): 39–51.
- Hair, J. F., W. W. Black, B. Babin, R. Anderson and R. L. Tatham. 2006. *Multivariate data analysis*. Sixth edition. Upper Saddle River, NJ: Pearson Prentice Hall.
- Kidney, G. W. and E. G. Puckett. 2003. Rediscovering first principles through online learning. *Quarterly Review of Distance Education* 4 (3): 203–212.
- Kember, D. 1989. A longitudinal-process model of drop-out from distance education. *The Journal of Higher Education* 60 (3): 278–301.
- _____. 1990. The use of a model to derive interventions which might reduce drop-out from distance education courses. *Higher Education* 20 (1): 11–24.
- Koen, C. 2007. Postgraduate student retention and success: A South African case study. HSRC Press. Available at: <http://www.hsrcpress.ac.za/product.php?productid=2205>. Accessed on 7 May 2010.
- Norušis, M. J. 1993. *SPSS for Windows: Base system user's guide, release 6.0*. Chicago: SPSS Inc.
- Pityana, N. B. 2009a. A country report for COL's forum on a decade of ODL in the Commonwealth. Commonwealth of Learning workshop, Pretoria, South Africa. Available at: <http://uir.unisa.ac.za/bitstream/handle/10500/413/COLFORUMAbuja2009.pdf?sequence=1>. Accessed on 26 November 2009.

- _____. 2009b. Open Distance Learning in the developing world – trends, progress, challenges. Keynote speech at the 23rd ICDE World Conference on Open Learning and Distance Education, Maastricht.
- Roffe, I. 2002. E-learning: Engagement, enhancement and execution. *Quality Assurance in Education* 10 (1): 40–50.
- Smith, A. 2004. Off-campus support in distance learning – how do our students define quality? *Quality Assurance in Education* 12 (1): 28–38.
- Steyn, G. M. 2001. Meeting the needs of postgraduate learners: A historical review. *Progressio* 23 (1): 30–48.
- Subotzky, G. and P. Prinsloo. 2010. Towards a framework and strategy for enhancing student success, retention, graduation and satisfaction at Unisa. Report prepared by Task Team 6 submitted to the Senate Tuition and Student Support Committee, 10 May: 1–26.
- Tierney, W. G. 1992. *Official encouragement, institutional discouragement: Minorities in academe – the native American experience*. Norwood, NJ: Ablex Publishing.
- Tinto, V. 1975. Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research* 45 (1): 89.
- _____. 1987. The principles of effective retention. Paper presented at the Fall Conference of the Maryland College Personnel Association. Available at: <http://eric.ed.gov/PDFS/ED301267.pdf>. Accessed on 7 May 2010.
- _____. 1988. Stages of student departure: Reflection on the longitudinal character of student leaving. *The Journal of Higher Education* 59 (4): 438–455.
- _____. 1989. A longitudinal-process model of drop-out from distance education. *The Journal of Higher Education* 60 (3): 278–301.
- Truluck, J. 2007. Establishing a mentoring plan for improving retention in online graduate degree programs. *Online Journal of Distance Learning Administration* 10 (1). Available at: <http://www.westga.edu/~distance/ojdla/spring101/truluck101.htm>. Accessed on 29 November 2009.
- Wickersham, L. E. and P. McGee. 2008. Perceptions of satisfaction and deeper learning in an online course. *Quarterly Review of Distance Education* 9 (1): 73–83.
- Woodley, A., P. de Lange and G. Tanewski. 2001. Student progress in distance education: Kember's model re-visited. *Open Learning* 16 (2): 113–131.
- Yorke, M. 1999. *Leaving early: Undergraduate non-completion in higher education*. London: Routledge.