

Improving course success rates at the honours level by setting minimum marks for the prerequisite undergraduate qualification

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Abstract

The study investigated whether a proposed minimum admission requirement of 60 per cent in the final-year module of specialisation at undergraduate level could attribute to the course success rate of students proceeding to the BCom honours degree in Business Management with specialisation in Financial Management at Unisa. Regression analysis and Pearson chi-square tests were conducted. Final-year marks for the Financial Management module, MNF3015, showed a positive correlation with the marks students obtained for the three selected postgraduate level modules at honours level. Significant positive correlations were also found between marks of 60 per cent or more obtained for MNF3015, and marks obtained for the postgraduate modules in Investments ($r = 0.464$, $p = 0.017$), Financial Risk Management ($r = 0.347$, $p = 0.188$) and Financial Management ($r = 0.468$, $p = 0.002$). Tests for the possible statistical association between the marks obtained in the three selected postgraduate-level modules and gender, age, home language and language of tuition did not yield significant values. A minimum mark of 60 per cent for final-year modules in the area of specialisation as an admission requirement is recommended in order to improve the success rate of Finance students at honours level.

Keywords: course success rates, admission requirements, ODL

INTRODUCTION

The University of South Africa (Unisa) is a dedicated open and distance learning (ODL) institution of higher learning. ODL aims to remove barriers to access and provide flexible learning opportunities and student centredness, supporting students and constructing learning programmes with the expectation that students can succeed (Unisa Open Distance Learning Policy 2008, 2). However, it is

debatable whether an open policy will indeed lead to student success, or whether it will lead to a decrease in success rates.

ODL provides benefits to learners, employers and governments, as pointed out by the United Nations Educational, Scientific and Cultural Organisation (Unesco) (Moore and Tait 2002, 8). For the learner, ODL means increased access and flexibility, as well as the combination of work and education. For employers, it offers quality education and cost-effective development of their employees. For governments, it increases their education capacity and improves the cost-effectiveness of their education and training systems.

Unisa regards ODL as a multi-dimensional concept aimed at bridging the time, geographical, economic, social, educational and communication distance between student and institution, student and academics, student and courseware and student and peers.

According to Moore and Tait (2002, 23), the possibilities created by electronic and printed technologies might be formally institutionalised in certain policies such as open admissions, freedom of selection of what, when and where to learn. For ODL to optimally yield the above-mentioned benefits, admission requirements should present the lowest possible barriers to entry.

However, all institutions of higher learning in South Africa are subsidised by the Department of Higher Education and Training (DHET). This presents the challenge of using the taxpayers' money as cost-effectively as possible. Equally, learners should not be set up for failure. According to WikiEducator (2011), Unisa has been criticised by both internal and external stakeholders for its open policy.

External stakeholders, such as the former Ministry of Education (prior to the establishment of the Department of Higher Education [DHET]), are critical of the admissions policy of Unisa. Their criticism is that the admissions policy of Unisa is like a revolving door, citing that the institution provides access, without success. Internal stakeholders are convinced that poor success and throughput rates can be attributed to the policy of open access that allows students into the system without requisite skills and thus affects their chances of passing; in effect, input has an adverse impact on output.

The Council on Higher Education (CHE) also expressed its concern about inefficiencies related to student success and throughput rates, graduation rates, student dropouts, student repetition and the retention of failing students, as well as the unit costs per student across the entire higher education system in South Africa (CHE 2000, 17).

There are a number of reasons why Unisa needs to tackle student success, retention and satisfaction. Firstly, Unisa has a moral obligation to ensure that

student access and success in the ODL environment are inextricably linked by providing appropriate, high-quality teaching and student support and efficient administrative service. Secondly, persistent failure and dropout has significant financial implications for students and, increasingly, for Unisa in view of the government's current outcomes-oriented funding framework. The intention of the funding framework is to distribute future teaching (and research) development grants only on the basis of approved plans to improve success and throughput and demonstrably effective institutional initiatives in this regard. Thirdly, continued poor success, retention and graduation rates diminish institutional reputation as well as student and staff morale (Unisa ODL Task Team 6 report 2010, 9).

In response to the issues related to success rates at Unisa, Subotzky and Prinsloo (2011, 190) formulated a framework for improving student success and suggested that Unisa's ODL implementation plan should involve various initiatives, including re-conceptualising the student support services, rethinking formative assessment, and redefining the admission requirements appropriate to Unisa's socioeconomic and educational environment.

The matter of admission requirements for the Honours Bachelor of Commerce (HonsBCom) was debated during a meeting of the Tuition Committee of the College of Economic and Management Sciences (CEMS). The chairperson at the time was not convinced that an admission requirement of a minimum mark of 60 per cent in the final-year module in the area of specialisation at undergraduate level would enhance student course success and throughput rates at the honours level.

Despite some research in other academic disciplines, such as social work, computer sciences, engineering and technology, no research in the financial sciences have been undertaken to prove or disprove the notion that an admission requirement of 60 per cent could contribute to improved course success rates at a subsequent, higher level of learning at an ODL institution.

RESEARCH PROBLEM

The research investigated whether there is a correlation between the marks students attain for the final-year module of specialisation and the marks ODL learners achieve at postgraduate level. The Department of Finance, Risk Management and Banking (DFRB) was faced with a decision whether it should introduce an admission requirement of at least 60 per cent for the final-year modules of a bachelor's degree in order to be granted admission to HonsBCom study, or not.

The research problem was whether any scientific evidence that a minimum of 60 per cent for the final-year module of specialisation as a criterion for admission

to honours studies in the same field could be found. The study also tested the correlation between differences in gender, age, language and marks obtained at postgraduate level for three selected finance modules.

The DFRB at Unisa had to determine whether there is statistical evidence that the proposed requirement of 60 per cent at the third-year level for admission to the honours modules in Financial Management (MNF3015) is valid and that it could indeed contribute to improved course success rates at the honours level. The contribution of this article is therefore to test the validity of the 60 per cent mark requirement for MNF3015, as admission requirement to the HonsBCom in Business Management (with specialisation in Financial Management) at Unisa as an ODL institution. Clearly there is a tension between providing open access on the one hand and being responsible and ethical on the other hand about granting admissions.

RESEARCH OBJECTIVES

The primary objective of the research was to determine whether there are statistically significant correlations between the marks students achieved at third-year level in the Financial Management (MNF3015) module and the marks for three of the modules which form part of the Finance specialisation area offered by the Department of Finance, Risk Management and Banking at honours level:

- Advanced problems of business finance (FINVRAJ)
- Investments (BELBESE)
- Financial risk management (FINRIS5)

The secondary objective of the study was to determine whether a mark of 60 per cent or more made any significant difference to the mark that students attained for the modules stated above at honours level.

The third objective was to determine whether there is any correlation between age, gender, home language, language of tuition and the mark that the students achieved for the above-mentioned honours-level modules.

This article is structured as follows. First, the relevant literature is reviewed. Following that, the methodology to determine the correlations or lack thereof will be explained. This is followed by the conclusions, the implications for openness in ODL and a recommendation for the admissions policy of the department involved.

LITERATURE REVIEW

Several studies have been undertaken about the use of historical academic achievements as a predictor of future academic performance, as well as other factors which contribute to course success or failure of learners at tertiary level.

Subotzky and Prinsloo (2011, 187–188) conclude that the common thread in the literature is that success is shaped by three key modalities: attribution, locus of control and self-efficacy. They add that the Unisa model is unique in applying all of these to both the students and the institution.

Secondary school grades have been used and have often been found to be a predictor of subsequent academic and work performance (Brown 1994, 605–606; Caretta 1992, 1112–1114; Ridgway and Passey 1995, 35–44; Weiss, Lotan, Kedar and Ben-Shakhar 1988, 492–497). However, there are also opposing views (Collins, White and Kennedy 1995, 22–28). Secondary school grades are not as good a predictor of performance for older students as for school leavers (McKenzie and Schweitzer 2001).

At undergraduate level, Van Eeden, De Beer and Coetzee (2001, 171) studied cognitive ability, learning potential and personality traits as predictors of academic achievement by engineering and other science and technology students. They concluded that school achievement is the best predictor of academic achievement of such students at first-year level, and added that English proficiency had an influence on performance.

Although factors such as previous academic performance and language proficiency were not taken into account, Martins (2007, 129) found that there is a significant correlation between students enrolling for too many modules and work-related reasons for failure studying economic and management sciences at Unisa.

In a study conducted among distance education students in Business Management and their lecturers several reasons for failure were identified (Killen, Marais and Loedolff 2003, 151–157). Students cited poor examination preparation, insufficient time management and too many demands on students' time (work, travel, study, family). Lecturing staff were of the opinion that insufficient effort, poor examination preparation and failure to reach the depth of understanding required at tertiary level were to blame for students' poor academic performance. The current study showed that work-related reasons top the list as the most important factor contributing to failure. Relatively more students who failed (86%) were in full-time employment in comparison to full-time students.

Sadler and Erasmus (2005) found that black accounting students in South Africa studying by means of distance education who failed ascribed their failure to poor preparation for examinations, poor study techniques, course workload, an

inability to perform under examination conditions, and an inability to distinguish between important and less important information in their study material.

Albertyn, Kapp and Bitzer (2008, 752) focused on MPhil and PhD students and found that the pressures of MPhil coursework while holding a full-time job and studying part-time could influence their completion time and may result in attrition. The master's programme could serve as a sifting process for those students who have the potential and tenacity to continue with a PhD.

Loots (2008, 1227–1228) focused on the role of the quality of study material in ensuring the course success of students, suggesting the use of a student mentorship programme for first-year students, as well as a continuous logical programme evaluation in order to ensure the quality of tertiary programmes.

Horne and Naudé (2007) found that continuous assessment and the contribution of the continuous assessment mark in determining examination admission and incorporating the assessment mark (year mark) into the final mark improved the pass rate of computing students. In this regard, Horne and Naudé (2007) confirmed the value of formative assessment in improving throughput rates.

Pelech, Stalker, Regehr and Jacobs (1999, 215–226) studied the relationship between pre-admission data and subsequent problems in the practicum and classroom for students in a two-year graduate social programme. They found that undergraduate grade point average (UGPA) is positively correlated with subsequent academic achievement and negatively correlated with the experience of problems in the programme. They concluded that the undergraduate grade point average (GPA) continues to be one of the most valid predictors of subsequent academic performance and success. They furthermore found that age and the amount of time elapsing since the completion of an undergraduate degree are predictors of interpersonal and academic problems.

Dunlap, Henley and Fraser (1998, 455–462) investigated the relationship between admissions criteria and academic performance in a masters' degree in Social Work (MSW) programme. Their findings suggest that applicants with a higher undergraduate grade point average (UGPA) and graduate record examination (GRE) scores are more likely to succeed in the MSW programmes. They however also found that the predictive values of these criteria were affected by background variables such as gender and race. Females scored significantly higher than males, and Caucasian students scored significantly higher than African-American students.

Holmström and Taylor (2008, 819–836) explored the relationship between the admission information of applicants to a social work programme and their subsequent performance in the programme. Holmström and Taylor (2008) further found a substantial (although not absolute) association between previous academic qualifications and the likelihood of experiencing difficulties during the

programme. They however caution against relying too heavily upon previous academic performance as the major selection criterion, given concerns regarding the influence of socioeconomic factors upon attainment. The authors furthermore suggest that admission processes alone are not sufficiently valid or reliable to predict or prevent students having difficulty during the programme.

The steering group of the Higher Education Review (2004, 4) in the United Kingdom emphasised that a fair and transparent admission system is essential for all applicants. They see a fair admission system as one that provides equal opportunity for all individuals, regardless of background, to gain admission to a course suited to their abilities and aspirations. The group suggested that admission policies and procedures should be informed and guided by current research and good practice. Where possible, universities and colleges using quantifiable measures or criteria should use tests and approaches that have proved it can predict undergraduate success. Whether existing or new alternatives are used, the institutions should be able to demonstrate that their methods are relevant, reliable and valid. They further emphasised that the ability to complete a course should be an essential criterion for admission.

Prinsloo (2011, 5), in addressing some challenges facing Unisa as an ODL institution, suggests that it should strive for *appropriate* open admission requirements, allowing freedom of choice embedded in institutional responsibility to optimise students' chances of success.

The literature review provides indications of possible correlations between marks attained at prior levels of learning and course success at subsequent levels of learning in various fields, but it is not conclusive; neither does it pertain specifically to Finance as an academic discipline or ODL institutions.

METHODOLOGY

To achieve the research objectives, the following quantitative data analysis was used.

Survey population

The analysis presented in this report is based on the results of 85 students who completed the MNF3015 module at Unisa and who proceeded to enrol for the FINVRAJ, BELBESE and FINRIS5 honours modules during the period 2007–2009.

Data and methods

The predictor and criterion data for this study were obtained from the Unisa database for the period 2007–2009, namely students’ marks in FINVRAJ, BELBESE and FINRIS5 at honours level, their marks at third-year level for Financial Management (MNF3015), as well as age, gender, home language and language of tuition.

The statistical techniques that were used in this study included regression analysis and Pearson chi-square (X^2). Regression analysis was used to determine the strength of a predictive relationship of the predictor (independent variable) such as the students’ MNF3015 marks and a criterion (dependent variable), in this case their marks at honours level. Both bivariate and multivariate correlations between independent and dependent variables were conducted.

RESULTS

The results will be presented by providing an overview of the demographic profile of the students included in the analysis, followed by the bivariate and multivariate correlation analysis.

Demographic profile of students

Table 1 below provides a breakdown by age group and gender of the students as obtained from the database.

Table 1: Distribution of students who completed module MNF3015 – By age group and gender, 2007–2009

Age group (years)	Female		Male		Total	
	n	%	n	%	n	%
<24	9	52.9	8	47.1	17	100.0
25–29	19	54.3	16	45.7	35	100.0
30–34	12	66.7	6	33.3	18	100.0
35–39	3	42.9	4	57.1	7	100.0
40–44	3	60.0	2	40.0	5	100.0
45+	1	33.3	2	66.7	3	100.0
Total	47	55.3	38	44.7	85	100.0

As shown in Table 1, during 2007–2009, a total of 85 students completed the MNF3015 undergraduate module and enrolled for the BELBESE, FINRIS5 and FINVRAJ postgraduate modules. Students who did not have a mark in any of

the postgraduate modules were excluded from the correlation analysis. Females and males constituted 55.3 per cent and 44.7 per cent respectively of the students included in the analysis for this study.

Correlations between final-year and postgraduate marks

This section deals with the primary objective of the study, namely to determine whether there is a correlation between the marks students obtained at final-year level in MNF3015 and their marks at postgraduate level in FINVRAJ, BELBESE and FINRIS5.

Table 2 depicts the results of the correlation test between marks that the students had obtained in MNF3015 and those obtained in BELBESE, FINRIS5 and FINVRAJ.

Table 2: Correlation between marks obtained in MNF3015 and marks obtained in BELBESE, FINRIS5 and FINVRAJ, 2007–2009

Independent variable	Dependent variables			
	MNF3015	BELBESE	FINRIS5	FINVRAJ
N (total)	85	39	22	66
MNF3015 Pearson correlation (r)	1	0.063	0.120	0.378*
Sig. (2-tailed)		0.703	0.595	0.002

*Correlation is significant at the 0.01 level (2-tailed).

The data in Table 2 show that 85 students were registered for MNF3015, whereas fewer students, in other words 39, 22 and 66, were registered for BELBESE, FINRIS5 and FINVRAJ, respectively. The results from the Pearson correlation show that there is a generally weak positive linear correlation between the marks that the students obtained at final-year level and those that they obtained at postgraduate level for BELBESE ($r = 0.063$, $p = 0.703$), FINRIS5 ($r = 0.120$, $p = 0.595$) and FINVRAJ ($r = 0.378$, $p = 0.002$). All the Pearson correlation coefficients (r) for these statistical relationships are below 0.50 (see Table 5). It is important to note that there is a relatively higher correlation between MNF3015 and FINVRAJ ($r = 0.378$; $p = 0.002$) than is observed for the other two modules. This further implies that students' performance at undergraduate level for MNF3015 explains 14.29 per cent of the variation in the marks obtained at postgraduate level for FINVRAJ. Comparatively, performance in MNF3015 only accounts for 0.40 per cent and 1.44 per cent of the linear variation in the marks the students obtained in BELBESE and FINRIS5, respectively.

Final-year marks of 60 per cent or more and 59 per cent or less, and marks obtained at postgraduate level

The data in Table 3 show the results of the correlation testing for the relationship and significance of the differences between marks of 60 per cent or more and those of 59 per cent or less obtained for MNF3015 and the marks obtained for BELBESE, FINRIS5 and FINVRAJ.

Table 3: Test of significance of difference between marks of 60 per cent or more obtained in MNF3015 and marks obtained in BELBESE, FINRIS5 and FINVRAJ, 2007–2009

Independent variable			Dependent variables			
			MNF3015	BELBESE	FINRIS5	FINVRAJ
>=60 %	MNF3015	N (total)	51	26	16	40
		Pearson correlation (r)	1	0.464*	0.347	0.468**
		Sig. (2-tailed)		0.017	0.188	0.002
<=59 %	MNF3015	N (total)	34	13	6	26
		Pearson correlation (r)	1	-0.618*	0.104	-0.068
		Sig. (2-tailed)		0.024	0.845	0.741

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

It is evident from Table 3 that the correlation between a mark of 60 per cent or more obtained at undergraduate level for MNF3015 and that attained for BELBESE, FINRIS5 and FINVRAJ is relatively stronger than observed for a mark of 59 per cent or less for MNF3015. A mark of 60 per cent or more achieved in MNF3015 is significantly correlated with a mark achieved for BELBESE ($r = 0.464$; $p = 0.017$). A mark of 60 per cent or more obtained for MN3015 is statistically associated with a mark obtained in FINRIS5 ($r = 0.347$; $p = 0.188$), although the association is not significant. Furthermore, a mark of 60 per cent or more obtained in MNF3015 is significantly correlated with a mark attained for FINVRAJ ($r = 0.468$; $p = 0.002$). This latter observation implies that a mark of 60 per cent or more in MNF3015 explains 21.9 per cent of the variation in the mark obtained for FINVRAJ.

It further appears from Table 3 that there is a significant negative association between a mark of 59 per cent or less at undergraduate level for MNF3015 and a mark obtained at postgraduate level for BELBESE ($r = -0.618$; $p = 0.024$). This implies that lower performance, that is marks of 59 per cent or less in MNF3015, is in most cases accompanied by higher marks in BELBESE. There is a weak non-significant association between a mark of 59 per cent or less for MNF3015 and that attained in FINRIS5 ($r = 0.104$; $p = 0.845$). Again, there is a negative non-significant association between a mark of 59 per cent or less for MNF3015 and a mark obtained for FINVRAJ.

The results show that the statistically predictive power of marks of 60 per cent or more in MNF3015 in relation to the marks obtained for BELBESE, FINRIS5 and FINVRAJ is relatively higher than that for marks of 59 per cent or less for MNF3015.

Correlations between gender, age, home language, language of tuition and marks obtained for BELBESE, FINRIS5 and FINVRAJ

The results show that younger students obtain higher marks for BELBESE, FINRIS5 and FINVRAJ compared to older students. However, this observation is not significant for all three postgraduate modules.

The results indicate that gender is not an influential factor for the marks that students obtained in the three postgraduate modules.

The results also confirm that home language is not statistically associated with the performance of students in all three postgraduate modules, as indicated in Table 4.

Table 4: Correlations between age, gender, language of tuition, home language and marks obtained for FINVRAJ, BELBESE and FINRIS5

Variable	FINVRAJ	BELBESE	FINRIS5
Age	$r = -0.195$; $p = 0.117$	$r = -0.158$; $p = 0.337$	$r = -0.060$; $p = 0.789$
Gender	$r = 0.374$; $p = 0.541$	$r = 1.612$; $p = 0.204$	$r = 0.663$; $p = 0.416$
Language of tuition	$r = 0.962$; $p = 0.327$	$r = 3.373$; $p = 0.066$	$r = 0.013$; $p = 0.910$
Home language	$r = 13.880$; $p = 0.382$	$r = 13.650$; $p = 0.399$	$r = 8.556$; $p = 0.381$

CONCLUSION

The research problem was whether there is a correlation between the marks students attained for MNF3015 and their honours modules in Finance, as well as whether an admission requirement of 60 per cent or more could contribute to better course success rates at honours level.

The literature by Brown (1994, 605–606), Caretta (1992, 1112–1114), Ridgway and Passey (1995, 35–44), as well as Weiss et al. (1988, 492–497) suggest that there may be cases where academic performance at prior levels of learning could be an indicator of performance at subsequent levels of learning.

This article found a generally weak positive correlation between the marks that the students obtained at final-year level and those that they obtained at postgraduate level for BELBESE ($r = 0.063$, $p = 0.703$), FINRIS5 ($r = 0.120$, $p = 0.595$) and FINVRAJ ($r = 0.378$, $p = 0.002$). There is relatively higher correlation between MNF3015 and FINVRAJ ($r = 0.378$; $p = 0.002$ respectively) than for the other two modules.

A mark of 60 per cent or more in MNF3015 was found to be significantly correlated to a mark for BELBESE ($r = 0.464$; $p = 0.017$). Furthermore, a mark of 60 per cent or more in MNF3015 is significantly correlated with a mark for FINVRAJ ($r = 0.468$; $p = 0.002$). Finally, a mark of 60 per cent or more obtained for MN3015 is statistically associated with a mark obtained in FINRIS5 ($r = 0.347$; $p = 0.188$), although the association is not significant.

The results further indicate a weak negative statistical association between the age of students and the marks they obtained for BELBESE, FINRIS5 and FINVRAJ. The results further indicate no statistical association between gender and the marks the students obtained for BELBESE, FINRIS5 and FINVRAJ. The study also indicated no statistical association between marks obtained for BELBESE, FINRIS5 and FINVRAJ and language of tuition and home language.

The Department of Finance, Risk Management and Banking insists on a minimum mark of 60 per cent in the module MNF3015 for admission to honours studies in the Financial Management field of specialisation. The admission requirement is based on the standpoint that students need a minimum mark of 60 per cent at undergraduate level to succeed with the greater volume and more advanced material at honours level. However, prior to this research this had not been substantiated by any empirical evidence in the field of finance and at an ODL institution.

The results obtained in this study support the hypothesis that marks obtained for a final-year module show a relationship with the mark at postgraduate level and that a mark of 60 per cent or more for an undergraduate module has a positive correlation with higher marks achieved by students for honours-level modules in

the same field of specialisation. The study did not find any positive correlation between gender, age, home language, language of tuition and marks obtained in the three honours modules of specialisation in Financial Management.

The findings of the current study are in line with earlier findings by Dunlap et al. (1998), Holmström and Taylor (2008) and Pelech et al. (1999) who investigated the relationship between admission criteria and academic performance in other fields of study, finding that applicants with higher undergraduate scores are more likely to succeed in follow-up programmes and that previous grade scores are predictive of academic success in various field of graduate studies.

The results of the study on which this article is based did not support findings by Dunlap et al. (1998) that background variables, such as age and gender, influence the course success of postgraduate students.

Variables such as the amount of time elapsing since the completion of an undergraduate degree (as identified by Pelech et al. 1999), as a predictor of future interpersonal and academic performance, were not tested.

RECOMMENDATIONS

A fair admission system is one that provides equal opportunity for all individuals, regardless of background, to gain admission to a course suited to their abilities and aspirations (as highlighted by the Higher Education Review 2004, 5). The results of the current study proved the relevancy, reliability and validity of the admission criteria for honours studies of the Department of Finance, Risk Management and Banking at Unisa. The results of the study indicated a significant correlation between an undergraduate mark of 60 per cent or more and marks obtained in the identified modules at honours level. This minimum 60 per cent admission criterion also supports the approach by Prinsloo (2011, 5), namely that Unisa should be *appropriately open* when it comes to admission requirements despite its support of freedom of choice embedded in its ODL policy, yet taking cognisance of its institutional responsibility to ensure a student's chances of course success. It is therefore recommended that the department apply the admission criterion to enable the department to select students who are able to successfully complete the three core modules of the honours programme of five modules, thus contributing to a better throughput rate in the honours degree. Only then can the DFRB help ensure access with success.

Possible further research may involve a study regarding the influence of time elapsed between obtaining an undergraduate degree and engaging in honours studies on eventual success.

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