JHEA/RESA Vol. 14, No. 1, 2016, pp. 141-154

(ISSN 0851–7762)

Availability of Study Time for Undergraduate Finance Students at an Open and Distance Learning Institution in South Africa

C.F. Erasmus and G.P.M. Grebe*

Abstract

Adult learners at open distance learning institutions often experience increased demands from their employers, families and society. Continuously challenged by time constraints, adult learners are confronted with time allocation decisions of meeting academic responsibilities while maintaining a work–life balance. This research evaluated the time management of adult learners by determining whether adult learners commit the appropriate number of study hours to their academic responsibilities in accordance with the prescribed notional credit hours. An online questionnaire was distributed to a sample of students studying towards a baccalaureate degree in financial management within an academic department at an open distance learning institution. The results suggested that students commit insufficient time to academic responsibilities measured against the notional credit hour system. To manage time better, adult learners should be informed of the rationale behind the notional credit hour system and be introduced to a time management tool whereby those students who fail to make adequate progress should be enrolled on time management courses.

Résumé

Les apprenants adultes dans les établissements d'apprentissage ouvert et à distance sont souvent confrontés aux exigences accrues de leurs employeurs, leurs familles et la société. Outre leurs contraintes de temps continues, les apprenants adultes sont sensés gérer leur temps afin de pouvoir assumer

* Department of Finance, Risk Management & Banking, University of South Africa, South Africa. Email: erasmcf@unisa.ac.za / grebegpm@unisa.ac.za

leurs responsabilités académiques tout en maintenant un équilibre entre leur travail et leur vie personnelle. Cette recherche a évalué la gestion du temps des apprenants adultes pour déterminer s'ils consacrent un nombre d'heures approprié à leurs responsabilités universitaires conformément au quantum horaire national prescrit. Un questionnaire en ligne a été distribué à un échantillon d'étudiants de licence en gestion financière au sein d'un département universitaire dans un établissement d'enseignement ouvert à distance. Les résultats indiquent que les étudiants ne consacrent pas suffisamment de temps à leurs études universitaires, si l'on compare avec le crédit horaire national. Pour mieux gérer le temps, il faut informer les apprenants adultes de la justification du crédit horaire et les imprégner sur un outil de gestion du temps. Ainsi, ceux qui ne parviennent pas à faire des progrès suffisants devront être inscrits aux cours de gestion du temps.

Introduction

'Recognition that students have limited time is very important', according to Lawless (2010: 110), who commented on the time that students have to devote towards their academic responsibilities. All students experience increasing duties towards their family, cultural responsibilities or employment demands. The strain on adult learners in open distance learning, most of whom form part of the employed economic sector, is continuously challenged by additional responsibilities, which in many cases require them to sacrifice scarce study time in an attempt to maintain work–life balance. This has led to students' study time declining steadily over a number of years (Higher Education Research Institute 2003).

It is generally acknowledged that students face outside pressures such as full-time employment, family responsibilities and financial pressures, to name but a few. However, it should be stressed that the throughput and retention rates of registered students are at this stage essential for the sustainability of universities. An area of concern for a South African university is the continued experience of remarkably low graduation or throughput rates of only 15 per cent for undergraduate and diploma programmes (Mtshali 2013). All South African higher educational institutions operate within a framework set by the government (Davis and Venter 2010). This government framework determines the amount of state funding higher educational institutions receive based on student throughput and retention rates (Pityana 2009). The framework is set to provide guidelines for tuition providers on the standard of these courses. The South African Qualifications Authority (SAQA) makes use of the notional credit system at secondary and tertiary levels throughout the National Qualifications Framework (NQF) level descriptors. The notional credit system is an indicator of the volume of learning required by a learner measured in credits. A single

credit is the application of ten notional study hours where a notional hour of studying includes learning activities such as reading, contact lectures, assessment preparation and individual study, irrespective of the mode of tuition delivery (face-to-face, distance or online) (Academic Development Centre 2009).

Open Distance Learning (ODL) universities in South Africa have a proud history of producing graduates of high quality and calibre at a distance learning institution. For an ODL university to remain in a positive position, systems and procedures must continuously be revised, controlled and updated.

The notional credit system within higher education had been carefully developed more than fifteen years ago (Grové 2001) and although it is assumed to still be accurate and relevant, modern society has changed considerably since that time. On the one hand, these changes have resulted in increased responsibilities, challenges and complexity putting additional strain on the lives of ODL students. It is only natural to assume that these barriers have reduced tuition and study time. On the other hand, some changes could improve the learning experience, such as technological improvements and rates of learning from online materials, as more frequent academic interventions are possible in the academic offer to adult learners. However, after consideration of all these factors, the notional credit system has remained unchanged.

Student throughput rates at any higher educational institution are one of the key determining factors for the amount of public funding that an educational institution will obtain (Pityana 2009). Consequently, it is of the utmost importance to search for possible reasons that contribute to the poor rates of throughput and to identify possible solutions in order to overcome this problem. Research has suggested that more time is needed to teach distance learning courses than traditional residential face-to-face education as educators need to develop course material (National Education Association 2000).

The research on which this article is based investigated whether students devote sufficient time to prepare for and complete course modules based on the notional credit system. This research evaluated the notional credit system of baccalaureate degree within an academic department at an ODL university. In order to verify whether the notional credit hour system has been determined fairly in relation to the number of hours that students commit towards their studies, a sample of 1,828 financial management students within an academic department was drawn.

The principal purpose of the research was therefore to explore the number of hours registered adult ODL students commit towards their studies as recommended by the notional credit system and to address assumptions that could influence the final composition of the mark achieved. Three problems were addressed in the research:

- Whether the notional credit system that an ODL university uses is a fair indication of the number of hours students need to commit towards their studies in order to complete a degree course module.
- Whether a student working in an environment closely related to his or her field of study has an advantage when preparing for a module compared to a student who is not employed within such an environment.
- Whether face-to-face contact sessions in an ODL environment assist a student to succeed in a course module.

The anticipated results of the above-mentioned problems were that:

- Students study fewer hours than required to successfully complete a module as determined by the notional credit system.
- Students who work in an environment closely related to their field of study require fewer hours to prepare for and to complete the specific module successfully in comparison to their counterparts who work in an environment not related to their field of study.
- Students who attend a face-to-face contact session would be more likely to complete a module successfully than students who do not attend face-to-face contact sessions.

The remainder of this paper is structured as follows: discussion of relevant literature and studies that have been conducted on study time allocation of students; description of the research methodology used to obtain data for empirical study; and presentation and discussion of the empirical results. Finally, the conclusion proposes areas for future research.

Literature Review

Authors from the United States and South Africa have researched the use of the credit hour system (Shedd 2003; Smith 2004; Wellman 2005). This is an enticing area but Tinto (2002) warns that research findings are country specific. Credit hours originated from the United States (US) (Wellman 2005). This substantiates the need for the review of foreign literature. However, Prinsloo contributed largely within the South African environment, asserting that recognition cannot only be attributed to the US for developments in the credit system. Prinsloo, Müller and Du Plessis (2010) recommend that future studies are crucial to develop a country-specific understanding of student behaviour. A South African ODL university was the first one that was referred to as a Distance Education (DE) institution in the modern sense (Tait 2008)

and it is therefore the best South African institution for further development of country-specific research.

South Africa has a specific framework that all Higher Education (HE) entities have to abide by. These policies are set by the government and are overseen by the Council of Higher Education (CHE) (Davis and Venter 2010). Investigation of the credit hour system led to questions on the purpose of a credit hour system. Wellman (2003) reported that the government could use the credit hour system in several ways. It can be a measure of the time spent on a task, a measure of progress towards obtaining a degree, a regulatory tool to enforce certain standards, a control method on quality education and a reporting tool. Pitter, LeMon and Lanham (1996) found in their research that there is a need to determine what the required number of credit hours is that students must obtain for a qualification within a specific discipline. They also concluded that there was a tendency to increase the number of credit hours for a baccalaureate degree.

The key to success is allocating enough time to study for a subject (Davis and Venter 2010). It is acknowledged that students have limited time and that this is an important factor to consider (Lawless 2010).

Nonis and Hudson (2010) investigated Davis and Venter's (2010) assertion by testing the hypothesis that there is a relationship between time spent studying outside of class and academic performance, however, this hypothesis was not supported by the evidence gathered. The researchers further explained that the reason why there was insufficient support for this hypothesis is because there is no measure to determine the quality of the number of hours spent studying. Wright and Mischel (1987), however, suggested that a formula exists to measure academic quality or performance by the multiplication of the student's ability and motivation (Performance = Ability x Motivation).

Succeeding at an ODL university is difficult for many because of constraints such as housing, working hours and inadequate childcare (Tait 2008). Working full-time significantly reduces the probability of passing a subject (Martins 2007). Thurmond and Wambach (2004) advocate that some of these time management aspects can be bridged with interactive learning.

Shedd (2003) performed a study in which she used a survey on the number of credit hours in relation to time spent in class and found that the survey results were incomplete and confusing. This supports the need for further research on this topic and areas that relate to the various aspects thereof. However from a South African perspective a credit is defined as the amount of hours students need to devote towards their studies in order to complete a course module. According to this system, a student has to study for ten hours to accumulate one notional credit hour (McGrath and Nickola 2008). Smith (2004)

stated that for articulation purposes all modules were designed in multiples of twelve credits. A typical semester module of twelve credits would therefore require students to commit to 120 actual hours of study in order to successfully complete the module (Academic Development Centre 2009; McGrath and Nickola 2008; Smith 2004).

Other scholars (Nonis and Hudson 2010; Thurmond and Wambach 2004) identified certain limitations and made some recommendations, which were considered in this study.

Methodology

The research on which this article is based focused on the time students allocate to preparing for their course modules studying at an ODL university and how they meet the standards regarding the notional credit system as set by the Council of Higher Education (CHE). Ethical clearance was obtained from the institutions' research committees to gather the primary data by means of a questionnaire. The empirical research was formulated to address the three research questions and is presented as three components in this article. The components are:

- The notional credit system is a fair indication of the amount of hours students require to complete a course module.
- A student working in an environment closely related to their field of study has an advantage, academically, when studying for a module as they have prior knowledge of the academic content and can relate to the curriculum outcomes of course modules.
- Discussion classes assist a student at succeeding in a course module.

The main objective of the questionnaire distributed to the sample population was to establish the number of hours students use to study for a module. This objective represents the fundamental aspect of the hypotheses being tested. The data was collected by using an online survey which made it possible to provide students with a better defined structure on the possible number of hours they could have spent on various forms of preparation.

The population for this research included 1,828 students of an academic department of a South African ODL university. The evidence was collected from a sample of students who were enrolled on a baccalaureate degree in financial management offered within the academic department. The sample population is scientifically valuable because the sample group formed part of an academic department and the research can be repeated to extrapolate find-

ings to other fields of study within the ODL university. Therefore the sample population also had the ability to verify the significance of the credit system within higher education (more specifically, the department). Timing for this questionnaire was critical as the final mark for the subjects was released shortly before the primary evidence was collected. Martins (2007) confirmed that correct timing reduces or eliminates the respondents' memory errors. To prevent the duplication of results the research was limited to only investigating certain degree programme modules within an academic department. Duplication could have occurred in a scenario where a student was registered for more than one of the modules used in the research.

Data was analysed by using basic statistical principles, such as calculating a mean or counting the number of respondents in the stratum. A mathematical equation was used to prove or disprove certain assumptions.

The evidence gathered is valid as only the sample group was provided with the address of the online survey via their email addresses. A text message was sent to the population to inform them of the link to the survey that was distributed via email, provided that the ODL institution had a mobile contact number for the student in the population. All communication between the head of the module and the population was monitored by the research team in order to maintain the validity of the research and confirm that there were no external influences on the population.

Empirical data collected successfully reached the objective of determining the time spent on preparation for the summative assessment by students at an ODL university within HE. Secondary data confirmed that foreign and local studies took place and found time allocation to be a relevant measure when referring to a credit hour.

Findings

The sample population consisted of 1,828 adult learners. From the sample population a 7 per cent response rate was achieved. The average hours spent preparing for a module were calculated based on five aspects of learning. These identified aspects are time spent on:

- studying from the textbook and study guide
- doing calculations from the textbook and study guide
- completing assignments
- working through old examination papers
- accessing information on e-portals, participating in an online discussion forum or downloading additional online study material.

The average number of hours a student spends on preparation for a module is seventy-four hours. This is worth seven notional credits if we consider the definition and interpretation according to the South African perspective of a notional credit (Academic Development Centre 2009; McGrath and Nickola 2008; Smith 2004). The evidence found poor attendance at face-to-face contact sessions as only 28 per cent of respondents attended such sessions. The use of the discussion forum on an e-portal had an even lower percentage of students who actively participated with 61 per cent of students not using the forum and 13 per cent not even being aware of such a forum.

On average, more than 80 per cent of respondents were employed and worked for an average of thirty-six hours every week. This is similar to previous findings that 82 per cent of ODL university students are part-time learners (Pityana 2009). The data also found that 50 per cent of the respondents did work in an organization related to their field of study.

Correlation Between Actual Hours Committed to Academic Responsibility and the Throughput Rate

The degree programme modules that this study was based on are twelve credit modules. As prescribed by the notional credit system students ought to commit at least 120 actual hours for each of these modules in order to pass (McGrath and Nickola 2008). From the analysis of the data gathered, the research found that the average amount of hours students devoted to each of these modules were merely seventy-four hours, which is forty-six hours short of the prescribed minimum per semester. Students committed roughly only two-thirds of the amount of study hours required, which is a cause for concern. The first anticipated finding of this research, namely that students commit too few hours towards their studies, was thus proven correct. The findings suggests that the average student does not allocate enough actual study hours compared to the number of hours required compared to the prescribed number of notional credit hours.

The research substantiates that a reason for poor throughput rates is the time that a student allocates towards academic responsibilities. If one considers a scenario where the students did in fact adhere to the 120 actual hours required, therefore studying an additional forty-six hours, the throughput rate for the modules should have increased. The assumption for the increase in throughput rate would be motivated by the principle of the 'power of practice', alternatively the learning curve (Anzanello and Fogliatto 2011; Ritter and Schooler 2002). The average mark scored by respondents in this study was a low 38 per cent. It is expected that the students could have achieved much better results if they had adhered to the number of study hours prescribed. Application of a

mathematical method known as cross multiplication can be used to estimate the average mark a student would obtain if preparation were in line with the recommended number of hours. The following equation permits the calculation of an average mark, assuming the amount of knowledge gained from each single hour of study is constant:

Average mark obtained by respondents:			38 per cent
Average number of hours studied:			74 hours
Required hours of study:			120 hours
Therefore:			
74 hours	=	38 per cent	*(calculation 1)*
120 hours	=	x per cent	
(0.38÷74) × 120	=	62 per cent	(By cross multiplying)

From the basic principles of mathematics, when solving calculation 1, it is found that students would achieve an average mark of 62 per cent if they committed to the recommended amount of study hours.

A student without any knowledge of a certain task might be able to complete the task, but not without mistakes. After a number of times completing this task, the knowledge that is gained would increase exponentially. When learning ability reaches a plateau the ability to learn decreases and knowledge will only increase by small amounts with extensive practice (also known as 'the learning curve') (Ritter and Schooler 2002).

The Benefit of Employment in a Financial Industry

One of the assumptions of this study was that students who are employed in an environment related to their field of study perform better than students working in non-related environments. The logic behind this was the assumption that respondents have a better understanding of the subject when working in an environment that is familiar to their field of study and that they would perform better as they have prior knowledge from work-related experiences. The evidence collected indicated that the average marks of students working in environments related to their study field were 37 per cent, whilst their peers working in non-related fields scored an average mark of 38 per cent. These results suggest that the workplace in which the sample group of students operate is irrelevant to the final mark achieved. There is thus no meaningful relationship between students' performance and the environment in which students work.

The findings thus point in the direction that the main contributing factor to student success is simply the amount of effort a student puts into their studies. This effort should principally involve the studying of learning material and preparing for the summative assessment. Students who do work in areas

familiar to their field of study should indeed earn higher marks, but only after they have already completed the required preparation, which supposes committed preparation of 120 hours per semester.

The Effect of Face-to-Face Contact Session Attendance on Student Performance

On average the final mark for students who attended the face-to-face contact session was 37 per cent, compared to the 38 per cent that the students achieved when not attending a contact session. The one point difference contradicted the assumption that direct contact between a student and a lecturer would enhance opportunity for learning and that the student would therefore achieve a better final mark. However, if interpreted from the 1 per cent difference the data collected might suggest that the contact session served no meaningful purpose with regard to improving student performance and throughput rates. However, since experience has shown that the lecturers in the academic department have to prepare for these classes and concentrate their effort on areas in the study material that students find difficult and challenging to master, another interpretation could be that only less successful students attend, while the more successful students feel that they will be wasting their already scarce time on preparation for these contact sessions. Less successful students therefore require more attention in the contact sessions that could result in a contact session being invaluable for the more successful student.

Results do provide grounds to suspect that some of the respondents who attended a contact session are students who only have very limited time left to prepare, or might think lecturers only address study units that will be tested in the summative assessment. This specific group of students lack the required positive attitude towards academic achievement and therefore do not acquire the additional insight into the study units by attending the contact session. A further appropriate finding could be that both attending and non-attending students lack the required skills and competencies in order to successfully master the learning outcomes for the identified degree programme modules.

Comparing Student Performance by Considering the Number of Hours Worked Weekly

The evidence collected indicates that nearly all the respondents in the sample population are employed for an average of thirty-six hours a week while studying part-time. The research question relating to the comparison of student performance of employed with unemployed ODL students could therefore not be tested. No clear conclusions could thus be drawn to determine which group of ODL students would outperform the other. Due to this finding, the

hypothesis tested by Nonis and Hudson (2010) could not be confirmed or investigated from a South African perspective.

In view of the findings of this study, the following recommendations are proposed:

- Students need to be informed of the hours required in order to successfully complete each module. This may be done by clearly defining how a credit relates to hours spent studying. Educators should use learning material effectively to communicate the working of a credit hour system.
- Students need to be provided with a time management tool, such as a study programme or academic time journal. Technology-enhanced learning support should be provided such as scheduled e-communications to students on academic progress in learning material.
- Student progress must be tracked by means of regular formative assignments whether online or paper based.
- Students who do not make adequate progress (thirty-six credits per year or three semester modules of twelve credits each) need to be introduced to a module about study methods and time management as part of a student success and retention policy. However, failure following such intervention means such students will have to be deregistered or provided with an opportunity to enrol for an alternative qualification, such as a higher certificate or diploma.

Conclusion

The purpose of this article was to explore time management of adult learners at DE institutions and to confirm that the measurement of adult learners at DE institutions is an accurate indicator of the time an adult learner should devote towards their academic responsibilities and the number of hours registered DE students commit towards their studies. The results of the research serve as evidence that adult learners within DE institutions do not allocate sufficient study time to their degrees or course modules. The objective of finding an indication of what exactly defines a credit, and what the uses thereof are, remain unchanged. The credit system reveals vulnerability when it is referred to as country specific. South Africa abides by the framework that is set by the Council of Higher Education. The applied credit system has the ability to measure costs incurred by government, measure progress on a task, measure progress towards obtaining a degree or the time a student spend in order to pass a module. The literature suggested that the credit system is correctly applied from a South African perspective.

The research problems raised in this article can now be answered with the following findings:

- Students commit insufficient time to their studies compared to the requirements set out by the notional credit system.
- Students that are employed in environments closely related to their study field do not outperform their counterparts who are not employed in these environments. The environment in which a student works is therefore irrelevant to a student's final mark achieved.
- The attendance of face-to-face contact sessions within an ODL institution serves no meaningful purpose with regard to improving student performance and throughput rates.

From the abovementioned findings it is evident that students fail to adhere to the requirements stipulated by the credit hour system. The results from the research confirm that a reason for the poor throughput rates is the insufficient amount of time allocated towards academic responsibilities. There are numerous reasons why students in the sample group failed to commit to the required hours. Modern society, as we know it today, presents many challenges and additional responsibilities that were absent in earlier times. Specifically referring to the circumstances of the modern ODL student with full-time employment, families to support and other obligations, the time available to master their studies has become limited. An environment that is closely related to a student's field of study does not seem to aid in the achievement of higher final marks. Nevertheless, it is anticipated that students will benefit from working in environments related to their field of study, only after they have managed to study the prescribed number of notional hours. The research results were, however, incomplete to support this general belief, and there is thus an opportunity for further investigation. The finding that the students who attended face-to-face contact sessions did not achieve higher marks than the non-attending students was unexpected.

The limitations of this research were that a response rate of 7 per cent was achieved and that the sample group included only students within one academic department registered for degree programme modules.

It is recommended that this particular study be repeated by other disciplines within HE institutions, as the various disciplines all have unique requirements with regard to the number of notional hours needed in order to complete course modules. This could aid in collecting additional information regarding the time management of adult learners. The information could be used to identify the

most appropriate method to motivate adult learners to devote additional time towards course offers.

South Africa has leading DE institutions and these institutions should be able to improve, evolve and adapt in order to ensure future development and growth with regards to tertiary tuition. The current notional credit system within DE institutions is correctly applied; however interventions are recommended by which adult learners should be informed and motivated to understand the importance of committing the sufficient number of hours towards their studies. This recommendation, if properly executed, may aid in the achievement of higher throughput rates: most academics will agree that student success is achieved with preparation, ability and motivation (Ishler and Upcraft 2005).

References

Academic Development Centre, 2009, 'A brief guide to understanding and using "credits" and "notional hours" in course design', Rhodes University, Grahamstown.

Anzanello, M.J. and Fogliatto, F.S., 2011, 'Learning curve models and applications: Literature review and research directions', *International Journal of Industrial Ergonomics* 41: 573–83.

Davis, A. and Venter, P., 2010, 'The Long Walk to Success: Drivers of Student Performance in a Postgraduate ODL Business Course', in I. Ismail, ed., *Proceeding of the 5th International Conference on elearning*, Penang: Universiti Sains Malaysia, Penang.

Grové, J.P., 2001, 'Music education unit standards for southern Africa: a model and its application in a general music appraisal programme', D.Mus. thesis, University of Pretoria.

Higher Education Research Institute, 2003, 'The official press release for the American freshman 2002'. Available from: http://heri.ucla.edu/pr-display.php?prQry=18, accessed 24 March 2015.

Ishler, J.L.C. and Upcraft, M.L., 2005, 'The Keys to First-year Student Persistence', in M.L. Upcraft, J.N. Gardner and B.O. Barefoot, eds, *Challenging and Supporting the First-year Student*, San Francisco: Jossey-Bass.

Lawless, C., 2010, 'Using learning activities in mathematics: workload and study time', *Studies in Higher Education* 25 (1): 97–111.

Martins, J.H., 2007. 'Failure by distance education students in economic and management sciences', *South African Journal of Higher Education* 21 (1): 129–46.

McGrath, P.J. and Nickola, L., 2008, A New Education Framework and the Impact on Vocational Qualifications Offered by South African Comprehensive Universities of Technology, International Association of Technology, Education and Development.

Mtshali, N., 2013, 'Causes of low graduation rates exposed in new report', Johannesburg: Monash South Africa. Available from https://www.msa.ac.za/about/news/2013/graduation-rates-exposed.html, accessed 8 September 2015.

National Education Association, 2000, 'A survey of traditional and distance learning higher education members', Washington, DC: Abacus Associates. Available from: www.nea.org/assets/docs/HE/dlstudy.pdf, accessed 24 March 2015.

Nonis, S.A. and Hudson, G.I., 2010, 'Academic performance of college students: influence of time spent studying and working', *Journal of Education for Business* 81 (3): 151–59.

Pitter, G.W., LeMon, R.E. and Lanham, C.H., 1996, 'Hours to Graduation: A National Survey of Credit Hours Required for Baccalaureate Degrees', State University System, Florida.

Pityana, N.B., 2009, 'Open distance learning in the developing world-trends, progress, challenges', keynote speech presented at 23rd ICDE World Conference on Open Learning and Distance Education, 7 June.

Prinsloo, P., Muller, H. and Du Plessis, A., 2010, 'Raising awareness of the risk of failure in first-year accounting students', *Accounting Education: An International Journal* 19 (1): 203–18.

Ritter, F.E. and Schooler, L.J., 2002, 'The Learning Curve', in *International Encyclopedia of the Social and Behavioral Sciences*.

Shedd, J.M., 2003, 'Policies and practices in enforcing the credit hour', *New Directions for Higher Education* 2 (122): 13–30.

Smith, A.G., 2004, 'Unisa and TSA negotiate the winding NQF and SAQA road ahead', *Progressio* 26 (1): 23–38.

Tait, A., 2008, 'What are open universities for?', *Open learning: The Journal of Open, Distance and e-Learning* 23 (2): 85–93.

Thurmond, V. and Wambach, K., 2004, 'Understanding interactions in distance education: a review of the literature', *International Journal of Instructional Technology and Distance Learning* 1 (1): 9–26.

Tinto, V., 2002, 'Promoting Student Retention: Lessons Learned from the United States', 11th Annual Conference of the European Access Network, Prato, Italy, 19 June.

Wellman, J.V., 2003, 'Of time and the feds: the federal interest in enforcing the credit hour', *New Directions for Higher Education* 6 (122): 33–38.

Wellman, J.V., 2005, 'The student credit hour counting what counts', *Change: The Magazine of Higher Learning* 37 (4): 18–23.

Wright, J. and Mischel, W., 1987, 'A conditional approach to dispositional constructs: the local predictability of social behaviour', *Journal of Personality and Social Psychology* 53 (6): 1159–77.