

## Postgraduate Throughput Trends: A Case Study at the University of Ghana

R.J. (Nico) Botha

*Department of Education Leadership and Management, College of Education,  
University of South Africa, P.O Box 392, Pretoria, 0003, South Africa  
Telephone: +27 8241163611, E-mail: botharj@unisa.ac.za*

**KEYWORDS** Postgraduate. Students. Dropouts. Throughput. Models. Ghana

**ABSTRACT** A common thread in contemporary research on postgraduate student throughput trends in higher education institutions refers to the ways in which the various stakeholders at tertiary institutions take important decisions to ensure a better completion rate (throughput) among the students. To further promote the appreciation of throughput among the students, this paper is based on an empirical study among a number of postgraduate students at the University of Ghana, reviews some trends and possible factors that might play a role in student throughput at this university. The outcomes of this study showed that student throughput at this institution had decreased over time due to, inter alia, financial difficulties; personal challenges and less opportunities for the students to get study leave from their employers. Most postgraduate students who combined studying with work were not able to devote adequate time to their studies. The paper concludes with recommendations to improve student throughput at postgraduate level.

### INTRODUCTION

There is a growing concern at the tertiary institutions worldwide about the issues of quality in the postgraduate training programs; the length of time it takes for the postgraduate students to complete their studies; the success rate of the postgraduate students; and the high percentage of the postgraduate students who terminate their studies and drop out of the system before their graduation. In view of these and other similar trends throughout the world, studies on the duration of the postgraduate studies and concerns about shortening the time that the students take to complete their postgraduate studies have become matters of utmost importance, not only to the students and the managers of the higher education institutions, but also to the governments, funders of the postgraduate studies and other stakeholders in higher education. Several of these studies expressed concerns about the problems with the postgraduate education and specifically about the time the students take to complete their studies (cf. Holdaway et al. 1995; Sayed et al. 1998; Lessing and Schultze 2012; Amehoe 2014).

A number of studies have been conducted for enrolment and student throughput at the institutions of higher learning in Africa by, inter alia, the World Bank; the South African Department of Education; the Association of African

Universities; the United States Partnership for Higher Education in Africa (PHEA) and the Centre for Higher Education and Transformation (CHET) to mention but a few. In addition, the Higher Education Research and Advocacy Network in Africa (HERANA) with its' project on higher education and development, has been involved in research on the status of the postgraduate enrolment and throughput at institutions of higher learning and the impact it has on the world economies (Amehoe 2014; Luescher-Mamashela 2015; Botha 2016).

The above-mentioned studies confirm that both student-related factors and institutional factors have an influence on the low student throughput and students who take long to complete their postgraduate studies, or do not complete their studies at all (Latona and Brown 2001; Carey 2004; Manathunga 2005; Shushok and Hulme 2006; Lovitts 2012; Amehoe 2014; Luescher-Mamashela 2015). But what is the student throughput and how can it be conceptualised?

### Conceptualising Student Throughput in Postgraduate Education

The earliest studies of the postgraduate throughput and retention in postgraduate higher education occurred in the United States in the 1930s and focused on what was at that time referred to as the student mortality or "The failure

*of students to graduate*” (Berger and Lyon 2015: 16). Historically higher education research always focused on solving students’ problems regarding mortality (Shushok and Hulme 2006). To this end, much more research exists on why students fail to persist as opposed to why they succeed. By focussing on what students are doing right instead of what they are doing wrong might illuminate new aspects of successful student experiences which can be applied to support all the students (Amehoe 2014; Botha 2016).

Researchers and scholars’ comprehension of the meaning of the concept ‘throughput’ depends on various situations; and, for this reason, various terms have been developed over time to describe the different throughput situations. The use of the term ‘throughput’ may be traced back to the attempts by the quasi-academics and the politicians to equate the success or the completion rates of the students at the higher education institutions to the input and the output concept in the industry. This is similar to the conveyor belt syndrome of a factory, the success rate of which is determined by the quantum of output released through a revolving door (Clifford 2014). With this perception in mind, MacMillan (2007: 237) defines throughput as “*the amount of work, people, or things that a system deals with in a particular period of time*”. Some other definitions of throughput go beyond the input and output production concept of the industry which appears to be limited to the goods or the products and consequently involves the number of people a system deals with in a particular period of time. Horne and Naude (2007), on the other hand, defined the throughput rate at tertiary institutions as the percentage of students who registered for a module or a course and passed the prescribed examination. Authors such as Craincross (1999), Latief and Blignant (2008), Hauser and Koenig (2011) and Amehoe (2014) concluded that the most simple description of the student throughput is the number of years a student takes to complete the prescribed examinations.

The concepts that underpin the student retention and departure have been illustrated by scholars in various models of which Tinto and Durkheim’s models are the most well-known (Draper 2008). The publication of Tinto’s 1975 landmark student integration model demarks the start of the current international dialogue on student retention and student throughput (Tinto

1997). This model (Tinto 1975) theorises that students who socially integrate into the campus community increase their commitment to the institution and are more likely to graduate.

While Tinto’s model has been supported, attacked and revised over the last 30 years, it has significantly influenced how the researchers and the practitioners view the postgraduate student retention and graduation (Swail 2014). Tinto’s seminal theory created a base from which thousands of studies have followed, making postgraduate student retention one of the most widely studied areas in higher education today (Berger and Lyon 2015). Tinto’s 1975 model was followed in 1993 by a second model of him, this time on student departure (Tinto 2007). This model states that to persist with their studies, students need integration into formal and informal academic systems as well as into formal and informal social systems (Draper 2008; Demetroiu and Sciborski 2012; Amehoe 2014).

Tinto’s 1975 student integration model has changed over the course of the 35 years from when it was originally introduced. Most notably, its more recent versions have included motivational variables including goal commitment (Amehoe 2014). Over the last decade motivational theories from multiple fields of study, including educational psychology and social psychology, have been applied to the practice, theoretical developments and the study of postgraduate retention. In particular, the attribution theory of motivation (Demetroiu and Sciborski 2012) has been notable in practice and in the retention literature. Additionally, expectancy theory, goal setting theory, self-efficacy beliefs, academic self-concept, motivational orientations and optimism have been used to gain understanding into the postgraduate student persistence and retention (Habley and McClanahan 2014; Botha 2016).

This model (Tinto 1975) is explained; according to Amehoe (2014) in no uncertain terms the reasons behind student retention and student departures in tertiary education by identifying and explaining the three major sources of student departure from the system, namely academic difficulties; inability of the individuals to resolve their educational and occupational goals; and students’ failure to become or remain incorporated in the intellectual and the social life of the institution. The central idea of the model is that of ‘integration’; it claims that whether a student

persists or drops out is quite strongly predicted by their degree of academic integration (personal development, enjoying the subject, academic self-esteem and identification with academic norms and values) and social integration (how many friends they have, personal contact with academics and their enjoyment of study).

Holistic approaches to student retention include all stakeholders carried over from the late 1990s to the early 2000s. Retention literature from this time stresses on cross-departmental institutional responsibility for retention via wide-range programming (cf. Kadar 2001; Lehr 2004; Walters 2004; Salinitri 2005; White 2005). These studies emphasised that all programmes and initiatives designed to support postgraduate retention should deal with formal and informal student experiences inside and outside the classroom. Habley and McClanahan (2014) reiterated that the interactions students have with concerned individuals on campus (faculty, staff, advisors, peers, administrators) have a direct impact on the postgraduate retention.

To this end, Tinto (2010) suggested that to improve postgraduate retention, all higher educational institutions must offer easily accessible academic, personal and social support services. The interactions students have on campus with individuals at academic, personal and support service centres can influence their sense of connection to the institution and their ability to navigate the campus culture; meet expectations and finally graduate. An institution that holds high expectations and actively involves the students in its learning creates an environment where the students are more likely to succeed (Demetroiu and Sciborski 2012; Amehoe 2014).

In conclusion, throughput is all about making adequate provision in the academic environment to help students complete their studies on schedule; to improve their success rates in the various programmes; and prevent them from dropping out of the system. This involves certain strategies geared towards retaining students and making their experience fulfilling on a sustainable basis (Botha 2016).

### **Factors Related to Student Throughput**

The conceptualisation above reveals the significance of throughput studies in higher education. Among the important institutional strat-

egies that can correct negative consequences associated with the low throughput rates at an institution are to increase success rates and reduce dropout rates. A low throughput rate results in the time spent by the lecturers on students who do not complete their courses in time; negative perceptions of the image of the institution; and a loss of money, time and lower self-esteem on the part of the student (Bischoff 2005; Visser and Hansio 2005; Amehoe 2014).

Governments have always embraced investment in higher education because they recognise that there is a close link between research and economic development and they are therefore interested in funding the postgraduate programmes, especially doctoral programmes. Such funding takes the form of grants allocated either to institutions or directly to the students; and such grants are catered for in national annual budgets. In Australia, Canada and the Nordic states, doctoral education is free; the fees are sponsored by a number of stakeholders. In other countries, such as Thailand and Japan, loans are available to students on postgraduate level. Such stakeholders are, therefore, concerned about the throughput and the attrition trends. Attrition and completion rates of the postgraduate students are becoming statistics of vital concern to the governments and funding agencies because they tend to rely on a performance-driven model to make informed judgments about higher degree research (Eggins 2008; Lessing and Schultze 2012; Amehoe 2014).

Studies by Jiranek (2010), Wamala et al. (2012) and Amehoe (2014) revealed factors such as the field of study; attendance mode (part-time or full time); scholarships; and technical difficulties experienced in the course of research all have an influence on the time research master's and doctoral students take to complete their studies. Several other most often cited variables in the student throughput also include academic and social integration and engagement, financial independency and the demographic factors. These factors have been found to directly or indirectly influence the students' ability or desire to graduate. In addition, the quality of a student's prior instruction and his/her preparedness for postgraduate level work can significantly influence whether or not he/she will succeed at an institution of higher education (Habley and McClanahan 2014). Jiranek (2010) divides these factors into the following two broad categories, namely:

*Student Qualities and Personal Situations* (referring to the academic ability, financial situation, language skills, interpersonal skills and persistence).

*Resources and Facilities Available to Students* (referring to materials, equipment and expertise).

Nevill and Chen (2007) singled out financial support as the main factor contributing to the students' ability to complete the doctoral degrees; and established that many postgraduate students in the USA, for example, are unable to balance work, family and educational responsibilities simultaneously. But what is the situation in an African country such as Ghana as far as the student throughput is concerned?

### Objectives of the Study

The ultimate goal of any study on throughput is not only to contribute towards ensuring that the students complete their studies on time, but also to ensure that the number of students who complete their studies within the accepted time limits keeps rising steadily. Studies on throughput therefore seek to identify and understand the reasons why students take long to complete their studies or fail to complete their studies (student dropout situations). Apart from identifying and understanding the reasons, throughput studies also seek to recommend solutions to ensure improved completion rates and that dropout rates are kept very low at the same time maintaining or increasing the success rate. The aim of this study is therefore to investigate the possible causes of delayed completion and non-completion among the research postgraduate students at the University of Ghana; and to recommend ways in which these situations can be improved. The research question for this study is as follows: *Which specific factors or attributes influence throughput rates at the University of Ghana?*

### METHODOLOGY

This study represents a case study at the University of Ghana in Accra. The population for this study consisted of research masters' and doctoral candidates who completed their theses between 2010 and 2014, but not in the prescribed time (extended candidatures) as well as their respective supervisors. The former postgraduate

students were purposefully selected from the graduation classes of this period because the cohort of students belonged to the period prior to the institutional interventions towards improving postgraduate delivery at the University of Ghana.

Purposive sampling was appropriate for this study because the study sought to investigate a phenomenon within a specific time frame (Twumasi 2001). The sample used for this study was ten former master's students (coded MS) and 10 former doctoral students (coded DS) who completed their postgraduate studies during the period mentioned above, although not in the prescribed period, as well as five supervisors (coded S) who supervised the sampled students. Face-to-face interviews were conducted with the participants.

There was no voice recording of the responses which enabled the respondents to speak freely on the issues raised. Issues related to confidentiality and accuracy of note-taking was taken seriously during the research. Structured interview schedules were used with adequate space provided after each open-ended item to facilitate responses. Thereafter, follow-up interviews were conducted to obtain further clarification on some responses. The respondents were reminded on a weekly basis to complete the interview schedules by means of electronic mail, telephone calls and personal visits by the research assistants. The services of record officers were sought to retrieve the files of the students selected for the review from the archives of the School of Graduate Studies at the university. Each file was thoroughly read from the first to the last document. In this process, relevant data was noted on issues such as date of first registration; appointment of supervisors; thesis topics; the date on which the thesis were submitted; the date on which the oral examination or defence was held; and the date of graduation.

The structured interview schedules for both students and supervisors were pre-coded. By coding the items, it was possible to count frequency of the responses in terms of ideas, themes and words. It also made it possible to categorise items; identify patterns and variables; and synthesise various accounts into coherent evidence from the responses. Written responses to some of the interview questions and responses to the open-ended questions in the questionnaire were analysed qualitatively by

keeping a track of the responses given and teasing out the meaning of the ideas expressed by the respondents into coherent themes. It was possible for the researcher to distinguish between dominant views and minority views and themes that emerged from the responses, since the structured interviews and open-ended interviews were coded. Some responses to the structured interviews were reproduced verbatim in order to support specific characteristics that emerged from the accounts.

Through document analysis, very useful data were obtained from the selected case files. These records provided documentary evidence of the experiences of the student respondents and a clearer understanding of the situations described by the respondents. Themes were derived from the summarised data on each of the case files for analysis and discussion.

Reliability is assured when the same results would be obtained if the research was repeated and validity when research measures what is intended to measure (Bovee and Thill 2011). Interviews allowed the researcher to follow up on the misunderstood items and the inadequate responses, which generally promote validity. In light of the above information, all the interview schedules were self-administered which offered the opportunity to pose follow-up questions to the respondents personally. Another way of ensuring instrument reliability and validity was to carefully construct the interview schedules to ensure that each question was related to the research topic; and to adequately cover all aspects of the research topic in the research questions. The use of interviews and document analysis for the data collection ensured triangulation, which further underscored the reliability of the research.

Patton (2002) proposed a simplified model of seeking the consent of the respondents and interviewees in the qualitative surveys, suggesting that the opening statements should be designed in a manner that would provide answers to questions such as: What is the purpose of collecting the information? How will it be used? What questions will be asked in the interview? The consent of all the potential respondents was sought beforehand by emailing consent letters to them. This was done to introduce the researcher and explain the reasons for seeking the respondents' views in the subject area so that they would feel free to express their views.

To disabuse the respondents' mind of any doubts concerning the research, the purpose of the research was indicated in the prior consent notices and on the questionnaire. Tape recorders were avoided; and the interviews were held without the presence of other people. A prior consent from all interviewees was sought in writing; therefore establishing a good rapport before, during and after the interviews. Confidentiality was also ensured by reassuring the respondents at the beginning of the interview that their responses were strictly confidential and would only be used for the purpose of the research. Finally, the respondents were also given the opportunity to ask questions to clarify any doubts in their minds about the study.

## FINDINGS AND DISCUSSION

The interviews revealed a number of reasons or causes of extended candidature among the postgraduate students at the University of Ghana. The interview responses and the open-ended statements pointed to the specific causes which were analysed and grouped into four main themes for ease of reference, understanding and relevance to the objectives of the study, namely time, personal circumstances, distance from campus/supervisor and finances.

### Problems with Time

Most postgraduate students who combined studying with work were not able to devote adequate time to their studies. The qualitatively data and the case files of extended completion students clearly indicated that the students had full time jobs at the time they enrolled for their studies. The challenge of managing time for work and study rested with the students. One doctoral student (DS1) replied in this regard: *I was combining my job with numerous other commitments, this was not easy, I which I could have done it another way.* One of the master's students (MS3) stated as follows: *My problem was time, if I had enough time I would have completed in the prescribed period.*

As with the other postgraduate students worldwide, their job demands clearly made it difficult for them to complete their studies in the designated time frame. A doctoral student (DS5) explained: *Although I was officially on part-time study leave I didn't have free time assigned to*



*do the thesis, so I combined full-time work and periodically did the work on part-time.* Another participant, a master's student (MS7), commented that: *most graduate students work to provide for themselves and their dependents, this makes it difficult from them to concentrate on their academic work.* One of the supervisors (S1) added that *the main problem was with students not working hard enough on their theses because they were working elsewhere.*

Evidence in two student case files (DS4 and MS2) showed that the students did not complete their studies on time due to the time constraints. They had to juggle their studies and work and therefore could not make progress. One supervisor (S5) commented in this regard: *Students couldn't complete data collection because they were working; sometimes students get employed in their thesis year and drop out. Others simply lacked focus or didn't set the right priorities.* Another supervisor (S3) shared her opinion: *one of my students in my department was incapable pursuing a PHD even though she had sufficient background qualifications, while another one (S1) added: My one student was simply not focused and consistently expended his energies on other things (moonlighting) instead of completing his research.*

It is evident from the personal confessions of the students and their supervisors that this obstacle of a lack of time resulted in a challenge for them and therefore prevented them from completing their research works and submitting their thesis on time, with the consequence of delayed or extended completion. This issue is also in line with a bulk of literature that cites a lack of time as one of the main constraints in an effective postgraduate student throughput (Amehoe 2014; Botha 2016).

### Personal Circumstances

In addition to the time constraints, personal circumstances were cited as another main and contributing obstacle to the successful completion of the studies. Evidence in three student case files (DS10; DS5 and MS2) indicated unexplained circumstances and an inability on the part of students to communicate their challenges which resulted in lapsed candidature or the non-completion of their studies. When these three respondents were questioned about the issue, two were prepared to elaborate. One of

the doctoral students (DS5) stated the following: *I had problems with my marriage, therefore I could not focus on my study, I had to save my marriage, this was more important at that time.* A master's student (MS2) added the following: *I had health problems for two years, this has made it very difficult for me to focus on my postgraduate studies; I had to take extension due to ill health, I had surgery.*

Personal challenges such as family constraints or misplaced priorities like: to become involved in more lucrative ventures (moonlighting); employers' inability to grant the students a study leave; and poor performance at the course work stage in the instance of the master's students were also cited as reasons why they did not complete their studies on time and correspond to what Habley and McClanahan (2014) have stated in this regard. The inability of some students to communicate the difficulties they encountered during their studies also contributed to the non-completion or dropping out of the system. One student (DS10) explained as follows: *I did not know where to go; I had personal problems and issues that I could not discuss with my supervisor or other students; I did not have any support structure.*

### Distance from Campus/Supervisor

Besides these personal challenges such as family demands (especially from the students who were married) and health issues, qualitative data from the student responses also revealed other issues such as the lack of access to libraries and internet services due to the distance between their residences and the institution of study as reasons for slow throughput. These responses were also in line with the literature findings in this regard (cf. Amehoe 2014; Botha 2016). One student (DS2) commented in this regard: *I was stationed in a very deprived area where I had difficulty in accessing good libraries and internet services, while another one (MS5) stated: I just wish my supervisor was closer to me; it was such an issue to visit or even contact him; he was so far.*

### Finances

Most postgraduate students were unable to get financial support for their studies due to the inadequate sponsorship opportunities or sources of funding to meet the high costs of the re-

search, especially in the sciences. One student (MS4) commented: *I had to ask for extension due to lack of funds to conduct field research in good time, and this results in the late return of results for samples sent abroad for analysis.* Another student (DS7) added: *I could not complete on time because I had to start working in the factory when my father had a fatal accident and could no longer assist me.* A supervisor (S2) replied: *Students with financial problems were engaged in full time or part time employment, and it appears some students wanted to guarantee themselves reasonable job security on completion of the program.*

Another issue cited by the respondents was the high fees charged for the postgraduate studies at the universities. Botha (2016) has cited high fees as one of the main obstacles in the effective student throughput on the African continent. One student (DS4) stated the following: *We are charged way too much. Government should force our public universities to charge realistic fees.* One supervisor (S4) with supervision experience in other countries added: *The model in countries which allowed its universities to charge full fees for certain market driven and highly sought degrees and afterwards returns such full fees to assist the needy or sustain the less subscribed disciplines, may be considered for Ghanaian public universities.* In this regard it is worth noting that some private tertiary institutions in Ghana are already making great strides in this direction.

## CONCLUSION

A historical look at the postgraduate retention reveals that the empirical study of this phenomenon has grown considerably over the last 50 years. Researchers are concerned about the variables related to the student persistence on the post graduate level and identifying the best practices to encourage degree attainment. Tinto's theory of student retention remains a seminal theory important to the field; however, applications of motivational theories to postgraduate retention over the last decade have brought many new and interesting perspectives to the retention study and practice. Specifically, practitioners such as the academic advisors have been interested in the attribution theory.

Additionally, recent retention research has used theories of expectancy, goal setting, self-

efficacy, academic self-concept, motivational orientations and optimism. Research on optimism and individual strengths and focus of the positive psychology movement, has all been a notable addition to the study of student success in the postgraduate studies. These applications may hold great promise for the future of the retention research.

The lesson to be learned from these discussions is that all the students interviewed had encountered personal and other problems during their candidature. The challenge is how they should handle these issues so that they do not escalate into more serious problems with adverse consequences like their ability to complete their studies on time.

## RECOMMENDATIONS

It is recommended that an effective student retention programme be introduced at the university, inter alia, that are commitment to the:

**Students they serve** (universities should put student welfare ahead of other institutional goals. In other words, institutional goals should always have a direct or indirect relationship to the students' success and achievement);

**Education of all students and not a few of them** (the evaluation of all the services, programmes and activities that are offered to the students must include all constituencies);

**Development of supportive social and educational communities in which all students are integrated as competent members** (every student who arrives on the campus must feel that he/she is valued and a full member of the community).

In addition, the university should consider establishing a Postgraduate Research Endowment Fund (PREF) to support research at the postgraduate level. As the name indicates, such an endowment fund should be established solely for promoting postgraduate research, especially at the doctoral level. The private sector and the industry should be the obvious targets for resourcing this fund. The PREF could be used to augment the current levels of the University of Ghana's Fellowship for doctoral students. The number of the recipients could be expanded to cover more beneficiaries.

Theories abound in support of life-long learning which suggests that learning takes place throughout one's lifetime. Many of these theories confirm that there is an inverse rela-

tionship between ageing and life. In light of these theories, applicants to postgraduate studies are advised to assess their personal circumstances thoroughly before they decide to enrol for postgraduate studies.

On the problem of lack of personal planning and the inability to focus on studies, students are advised to seek counselling from those who had been through the postgraduate studies or from the university's academic departments about the costs involved in studying the programmes of their choice, research and other necessities involved in the entire programme to enable them to make an informed decision.

### REFERENCES

- Amehoe CK 2014. *Postgraduate Throughput at the University of Ghana*. DEd Thesis, Unpublished. Pretoria: University of South Africa.
- Berger JB, Lyon SC 2015. Past to present: A historical look at retention. In: A Seidman (Ed.): *College Student Retention*. Westport: Praeger Publishers, pp. 1-29.
- Bisschoff CA 2005. A pre-luminary model to identify low-risk MBA applicants. *South African Journal of Economic and Management Sciences*, 8(3): 11-17.
- Bovee CL, Thill JV 2011. *Business Communication Today*. 9th Edition. Boston: Prentice Hall.
- Carey K 2004. *A Matter of Degrees: Improving Graduation Rates in Four-year Colleges and Universities*. Washington DC: Report by the Education Trust.
- Clifford H 2014. Are You a Victim of the Conveyor Belt Syndrome? *Lifestyle Magazine*, June.
- Craincross A 1999. *Progression of Students through the Human Ecology Programme (1994-1999)*. Belville: Department of Human Ecology and Dietetics, UWC.
- Demetrou C, Sciborski A 2012. Integration, Motivation, Strengths and Optimism: Retention Theories Past, Present and Future. From <<https://student-success.unc.edu/files/2012/11/Demetriou-and-Schmitz-Sciborski.pdf>> (Retrieved on 20 December 2015).
- Draper S 2008. Tinto's Model of Student Retention. Glasgow: University of Glasgow, Department of Psychology. From <<http://www.psy.gla.ac.uk/~steve/located/tinto.html>> (Retrieved on 20 February 2016).
- Eggins H 2008. Trends and Issues in Postgraduate Education: A Global Review. *Keynote Paper Read at the DCU/UNESCO Forum Workshop on 5 March 2008*, Dublin, Ireland.
- Habley WR, McClanahan R 2014. What Works in Student Retention? All Survey Colleges. ACT Inc. From <<http://www.act.org/.pdf>> (Retrieved on 20 February 2016).
- Hauser RM, Koenig JA (Eds.) 2011. Dropout, Graduation and Completion Rates: Better Data, Better Measures, Better Decisions. *National Research Council Report*. Washington, DC: The National Archives Press.
- Holdaway E, Deblis C, Winchester I 1995. Supervision of graduate students. *The Canadian Journal of Higher Education*, 23(3): 67-81.
- Horne T, Naude E 2007. Poor throughput rates of distance learners in computing courses: Is continuous assessment the answer? *South African Journal of Higher Education*, 21(2): 37-48.
- Jiranek V 2010. Potential predictors of timely completion among dissertation research students at an Australian Faculty of Sciences. *International Journal of Doctoral Studies*, 5: 1-13.
- Kadar RS 2001. A counselling liaison model of academic advising. *Journal of College Counseling*, 4(2): 174-78.
- Latief A, Blignaut R 2008. Factors related to throughput in final year Statistics. *Acta Academia*, 40(1): 26-24.
- Latona K, Browne M 2001. *Factors Associated with Completion of Research Higher Degrees*. Department of Education, Training and Youth Affairs. Tasmania, Australia: University of Tasmania.
- Lehr CA 2004. *Increasing School Completion: Learning from Research-based Practices that Work*. National Center on Secondary Education and Transition. St Paul: University of Minnesota.
- Lessing AC, Schulze S 2012. Postgraduate supervision and academic support: Students' perceptions. *South African Journal of Higher Education*, 16(2): 67-81.
- Lovitts B 2012. *Leaving the Ivory Tower: The Causes and Consequences of Departure from the Doctoral*. Lanham, MD: Rowman and Littlefield.
- Luescher-Mamashela M 2015. *The Impact of Student Engagement on Citizenship Competences*. Cape Town: The Higher Education Research and Advocacy Network in Africa (HERANA).
- MacMillan J 2007. *English Dictionary for Advanced Learners*. 2nd Edition. United Kingdom: A & C Black Publishers Ltd.
- Manathunga C 2005. The development of research supervision: Turning the light on a private space. *International Journal for Academic Development*, 10(1): 17-30.
- Nevill SC, Chen X 2007. The Path through Graduate School: A Longitudinal Examination 10 Years after Bachelor's Degree. *Post-secondary Education Descriptive Analysis Report*. Washington, D.C.: U.S. Department of Education Institute of Education Sciences, NCES 2007-16.
- Patton MQ 2002. *Qualitative Research and Evaluation Methods*. 3rd Edition. Thousand Oaks, CA: Sage Publications.
- Salinitri G 2005. The effects of formal mentoring on the retention rates for first-year, low achieving students. *Canadian Journal of Education*, 28(4): 853-873.
- Sayed Y, Kruss G, Badat S 1998. Students' experience of postgraduate supervision at the University of the Western Cape. *Journal for Further and Higher Education*, 22(3): 275-285.
- Shushok F, Hulme E 2006. What's right for you: Helping students find and use their personal strengths. *Behind Campus*, 11(4): 2-8.



- Swail WS 2014. *The Art of Student Retention: A Handbook for Practitioners and Administrators*. Austin, TX: Education Policy Institute.
- Tinto V 1975. Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45: 89–125.
- Tinto V 1997. Classrooms as communities: Exploring student persistence. *Review of Educational Research*, 45: 89–125.
- Tinto V 2007. Research and practice of student retention: what next? *Journal of Higher Education*, 68(6): 599–623.
- Tinto V 2010. Taking Student Retention Seriously. From <www.marin.edu/WORD.../Taking Retention Seriously.pdf> (Retrieved on 14 January 2016).
- Twumasi PA 2001. *Social Research in Rural Communities*. 2<sup>nd</sup> Edition. Accra: Ghana Universities Press.
- Visser AJ, Hanso M 2005. Approaches to predictive studies: Possibilities and challenges. *South African Journal of Higher Education*, 9(6): 79–88.
- Walters E 2004. Enhancing student learning and retention through the merger of the academic and student affairs unit: The Olivet Plan. *Journal of College Student Retention*, 5(1): 23–36.
- Wamala R, Oonyu J, Ocaya B 2012. Completion time dynamics of doctoral studies at Makerere University: A hazard model evaluation. *Journal of International Education Research (JIER)*, 7(3): 49–58.
- White JW 2005. Sociolinguistic challenges to minority collegiate success: Entering the discourse community of the college. *Journal of College Student Retention: Research, Theory & Practice*, 6(4): 369–393.

---

**Paper received for publication on May 2016**  
**Paper accepted for publication on October 2016**