Measuring postgraduate cohort throughput: A case study

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Abstract
The need to improve the success rate of students in South African universities is widely regarded as a national priority. Measuring this success is, however, more difficult. Although the NPHE sets some benchmarks for system performance, there is currently no indicator set for longitudinal student performance. This article reports on a study done into postgraduate throughput performance at one institution. The article examines the terminology adopted in the study, and reports general trends found in the data. The question of the length of time to graduation that should be examined when studying throughput data is examined, and the throughput ‘norms’ per degree-type, for this institution during the time period studied are reported. It is hoped that publication of this case study will contribute to debates regarding the development of sector understandings of the topic.

INTRODUCTION
The need to improve the success rates of students in South African universities is widely regarded as a national priority. Along with the need to increase access to tertiary education, the White Paper on Higher Education (1997) speaks of the need to increase success and success equity, as well as efficiency in the form of increased student throughput and retention rates, in the system. The National Plan for Higher Education (NPHE 2001) similarly specifically prioritises ‘increas(ing) the number of graduates through improving the efficiency of the higher education system’ (2001, 14). One of the key steering mechanisms for the system, the funding framework, is linked to graduate output in an attempt to realise this goal.

Measuring this success is, however, more difficult. Although the NPHE sets some benchmarks for system performance, there is currently no indicator set for longitudinal student performance. In addition, there is little published on this subject, either locally or internationally. In part, this may be due to the fact that institutions have not previously had systems capable of performing the necessary analyses. In part also though, this may be due to a desire to keep such information confidential in a competitive environment. Perhaps there is a more substantive concern that results
from such analyses are so context bound that comparison (and therefore publication) is meaningless (and may even be detrimental). However, and regardless of whether this is for reporting or research purposes, as a means of describing how many of the students who initially register for a programme subsequently graduate, such a longitudinal indicator would seem to be of crucial importance to the sector.

Many South African institutions are currently examining data related to student throughput and are grappling with the issues that this raises. At a recent conference of the South African Association for Institutional Research (Stellenbosch 2007) at least four papers relating to the question of how we measure student throughput were presented. Clearly there is a need for collaboration and debate in this area. This article reports on a study done into postgraduate throughput performance at one institution. The article examines the terminology and methodology adopted in the study, examines the question of the length of time to graduation that should be examined when studying throughput data, and reports general trends found in the data. It is hoped that publication of this case study will contribute to debates regarding the development of sector understandings of the topic.

OUTPUTS AND INDICATORS

Globally in higher education over the past decade there been a trend toward increasing measurement. As Walker states, ‘(in) higher education this is a time of benchmarks, measurable and comparable outcomes, a hard-edged accountability and the bottom line’ (2000, 2). South African higher education is not immune from this trend, partly because, in order to be globally competitive the sector needs to adopt the languages and tools of international higher education. Nationally also, there has been a strong imperative to transform and build the system to ensure that it is more responsive to societal needs. ‘Accountability’ has become a key element in the new system (for a full discussion of this topic see Friedman and Edigheii 2006), and there have been, in the past ten years, a range of new reporting requirements regarding academic planning and quality assurance.

The intention of this article is to contribute to discussions regarding indicators of student success. In doing this, it recognises that the measurement of output and performance in higher education is far from uncontroversial. Performance indicators are not neutral tools. Cloete and Bunting (CHET 2004), in a series of studies on performance indicators, point to some of the limitations inherent within these indices. Firstly, performance indicators in general tend to focus on the ‘measurables’, within an underlying input and output, economy and efficiency model of production. Education itself, the quality of provision, and the broader social benefit aspects of education, may not fit easily within this model. Secondly, the performance indicators used in the NPHE, and those used in the CHET study, are all quantitative; quantitative indicators tend to ‘hide complexities’ and reinforce beliefs that ‘only what can be counted counts’ (op. cit., 94). Thirdly, quantitative indicators by themselves provide no context to what is being measured, and have no explanatory power.
At a more concrete level, the practice of measuring individual institutions against system indicators has been criticised for a failure to acknowledge the constraints facing certain institutions, and particularly those which were historically under-resourced: there is a danger that measurement against a single set of system benchmarks will result in a ranking of institutions, and that this ranking will reflect historical differences. Other concerns raised include that the setting of a single set of system benchmarks will promote homogeneity, rather than the desired diversity, in the system; that a strictly comparative account between institutions, or institutions and system benchmarks, does not provide a picture of change over time; and that an institutional measure may hide significant differences obtained between disciplines (op. cit.).

All of these concerns regarding performance indicators are valid, but are not sufficient to justify a lack of reflection on and research into our practices. Whilst we may disagree with particular indices proposed, or with the setting up of comparisons, ‘norms’ and targets, the argument in favour of self-examination is almost a moral one and it would be difficult to justify a failure to engage in this manner. Even if one wishes to argue that there is little merit in examining the performance of one programme relative to the performance of other, different, programmes in the institution, or relative to the programmes of other institutions, in order to improve performance it is useful to know how the programme or institution is performing relative to its own performance in previous years. Indictors used wisely (and in conjunction with more qualitative measures) can provide such information. They can also be used to provide an indication of our expectations for performance, and, if realistic, may aid in balancing quests for efficiency with a realistic understanding of the multiple reasons for poor throughput, many of which are beyond the power of the institution to influence.

**THROUGHPUT TERMINOLOGY ADOPTED IN THIS STUDY**

As Scott points out, although internationally there is ‘wide common understanding of concepts’ used in throughput studies, there is ‘little consistency in the definitions used’ (2005, 4). This lack of common definition of how throughput performance should be measured leads to a lack of systemic data against which systems, institutions or programmes can be measured, or can measure their own performance. Without a common understanding of terms it is difficult to determine what counts as ‘normal’, or to set realistic aims. Clearly, a standard terminology would be useful in the South African context.

The NPHE sets a number of suggested performance indicators against which the attainment of system goals can be measured. With regard to student retention and throughput, four terms for measurement in the national context are identified. Firstly, the document sets as a ‘benchmark’ for improving efficiency a ‘graduation rate’ indicator (2001, 20). This graduation rate is measured as the proportion of the students enrolled (headcount enrolments) for a particular degree in a particular year who graduate in that year. This indicator is, however, influenced by three factors. The
first is the length of the degree: in a scenario where all students passed, the graduation rate in a one year degree would be 100 per cent. The graduation rate in a three year degree would be 33.3 per cent (i.e. one third of the students in the degree would be in final year and would graduate in that year). The NPHE acknowledges this factor in setting different indicators for degrees of different lengths. However, the distinction drawn is insufficiently precise, with, for example, all qualifications of three years or less grouped together, irrespective of length. Secondly, the indicator is affected by the number of occasional students in the system: students who are taking single courses for their own benefit only and who have no intention of graduating are currently included in calculations of the graduation rate, to the detriment of the offering institution (Subotsky 2007). The third factor which strongly influences this indicator is the stability of intake numbers to the degree. Thus, the ideal scenario of a 33.3% graduation rate in a three year degree relies on an assumption that the intake to that degree was constant over that three year period. If the intake had dropped, there may be more students in the final year relative to the other two years of the degree, and the graduation rate could be expected to be higher. If, on the other hand, the intake had increased, there would be relatively fewer students in final year, and a lower graduation rate. Given that intake rates are rarely constant, the use of this indicator as a system benchmark is regarded as highly problematic (Bunting and Cloete, 2004, 60).

The second term adopted by the NPHE document is that of ‘retention rates’, measured as the proportion of students registered one year who return the following (note that this includes students who have graduated and are registered for further study). The document cites a ‘significant drop’ in these rates in the system in the early 2000s, but states that these retention statistics could have been influenced by graduations from an earlier enrolment bulge (2001, 17). There is an evident lack of sufficient information here: if the falling retention rate is indeed due to increased graduation numbers, then it should not be a concern. If, however, it is due to a higher level of failure for whatever reason, the implications for the system are different. The lack of adequate information regarding students in the system – how many leave university without having graduated (for academic or non-academic reasons), how many graduate, how many proceed to higher degrees – is clearly an issue that must be addressed.

The NPHE makes use of two other indicators of student performance: ‘drop-out rates’, measured as the number of students who have not graduated, but who have not returned to re-register the following year of study; and ‘success rates’, mentioned only briefly in the document, but which were previously used in the higher education system and calculated as the proportion of full-time equivalent credits earned over students enrolled: effectively this gives an indication of course pass rates. Although the NPHE states the intention to move away from the use of ‘success rates’ in subsidy calculation (2001, 21), this indicator is widely accepted as a measure of student success. However, since it operates at course level and is not linked to degree registrations or to retention, this indicator does not by itself provide an adequate measure of student throughput.
Since these terms are already defined and in use in the South African context, to avoid confusion they should not be given alternate meanings when used in throughput studies (although in some current research the term retention rate has been modified to not include graduations, but only those students returning to the degree of study, Lourens et al. 2007). In the section below the terms adopted in this study are outlined.

A longitudinal study of student success is called a ‘cohort study’. The term historically has been used to refer to the lifecycle of a particular event (Ryder 1965). In student throughput studies, a cohort sample may vary depending on the purpose of the study: it could be sufficiently broad to include all students entering a particular university in a particular year, it could be all students entering a particular type of programme in a particular year, or it could be specifically defined in terms of the number of students entering a particular programme in a particular year. For quality assurance and curriculum development purposes, as well as to take account of differing programme length, however, a cohort sample defined at the level of the particular programme is perhaps most useful, with data aggregated to produce a bigger institutional-picture account. For the purposes of this study therefore, a cohort is defined as the number of students who first registered for a particular programme in a particular year and whose progress towards that qualification is subsequently tracked. Students who cancel their registrations at any point later than two weeks after registration are included in the cohort student numbers.

In addition to the number of students entering the programme in a particular year (the cohort number), there are two essential sets of data necessary to conduct longitudinal throughout analysis. The first is the number of students who have graduated in a certain time, or after a certain number of years. Dividing the number of students who have graduated from the degree by the number who first registered gives the proportion graduated at that time. It is important to note, however, that the presentation of figures regarding the proportion of the cohort that has graduated in a certain time would be incomplete without reference also to the number of students still in the system, and thus the proportion of students who could potentially graduate. The second piece of essential information is therefore the number of students who are still registered for the degree at that time. Clearly, the more recent the cohort studied, the lower the number of graduates, but the greater the number of students still registered in the system and thus the greater the number of possible graduates.

It is not essential to know the number of students who have withdrawn from the degree, as this can be calculated as the difference between the number of students who initially registered, and the sum of the number that have graduated and those still in the system. However, it is useful for throughput purposes to know the number of students who, without having obtained the original degree, have transferred to another degree (as opposed to those who have simply left the system), as the two measures have different implications regarding ‘failure’. When examining student throughput systemically, it is also useful to know the number of students who, having successfully graduated from one degree, have proceeded to register for another.
This basic data can be used to provide a set of indicators which have a standard meaning in the system. Working at the systemic level in New Zealand, Scott (2005) adopts definitions for the terms ‘retention’, ‘attrition’, ‘completion’ and ‘progression’ which are in use also in the United States of America. In his definition, the term ‘retention’ is defined in the same way as it is in the NPHE, i.e. as all students, whether graduated of not, who return to the system the following year. The term ‘attrition’, as he defines it, is the converse of retention, and thus includes all students, whether graduated or not, who have left the system, and have not re-registered in the following year. Note that this is not the same as the ‘drop-out rate’ described in the NPHE, as that rate refers only to students who have left without having graduated. ‘Completion’, in Scott’s terms, refers to the number of students who, within a certain time period have completed their qualifications, and ‘progression’ refers to the proportion of students who re-register for a further degree after having completed their initial degrees.

In this study, throughput has been examined at the level of the programme and at the level of the qualification type. The primary indicator examined is the proportion of the initial cohort who has subsequently graduated, which is sometimes referred to as the ‘graduation rate’. However, since this term has been assigned a different meaning in the national context, Scott’s use of the term ‘completion rate’ is adopted in this research. The converse term ‘non-completion rate’ is used to indicate all students who have failed to complete the degree (either having ‘dropped-out’, as defined in NPHE, or having transferred to a different degree).

The completion rate is not an absolute figure: the time period examined is of critical importance when looking at this ratio. This time period may be a fixed point in time or may be a proportionally relative number. Thus, the data may refer, for example, to the proportion of the cohort currently graduated (‘completion rate-to-date’), or the proportion of the cohort graduated after x (where x is a certain number) of years.

Most critically, the value of the programme throughput data is restricted without information related to the curriculum length of a programme: it is of limited worth to know the proportion of students who have graduated after a certain time period unless one knows the relation of that time period to the minimum curriculum time for the programme. In this research, therefore, information regarding the minimum curriculum length (n) was obtained for each programme. Completion rates were measured by reference to this minimum time: the ‘n+x completion rate’ was thus defined as the proportion of students in the cohort who have graduated from the degree in a time period equal to the minimum curriculum length of the programme plus x years.

METHOD

The terms above provide the basic information necessary to examine cohort throughputs. However, although this information is of great value when looking at individual degrees and over particular time periods, the data becomes problematic...
when trying to obtain a composite picture of overall cohort graduation rates. In order to obtain an overall picture of how a particular set of programmes are performing, or to obtain an ‘average’ picture of the performance of a particular programme, or where cohort sample sizes are so small that individual cohort results are meaningless, combination of cohort data becomes essential. However, attempts to combine multiple cohort years in analysis are frequently hampered by inconsistencies in the manner in which the data is handled.

There are two issues that must be addressed when combining multiple cohorts. The first is that the number of cohorts included must be the same in each instance. The second is that the length of time examined for each of the cohorts included in the sample must be equivalent. Thus, when examining throughput rates within a certain period, the period included in the study must be the same for each of the cohorts (rather than including subsequent graduations from earlier years in the sample).

In order to provide a measure of standardization of sample, the study adopted a five-year cohort sample, since it was felt that a period longer than this would not reflect changes that may have occurred in the curriculum or teaching of the programme. Particularly in instances where student numbers on the degree in any one cohort were small, this five-year cohort provided a more stable indication of student performance on the degree. The determination of the specific cohort years to be included in the five-year sample was dependent upon the time period to be examined. Thus, when considering the n+1 throughput rate, the last available n+1 cohort set was used, determined in the following manner:

in 2005:
2004 was the last available graduation;
The 2003 was the last cohort to graduate in n+1 for a 1-year degree registration;
therefore
for 1 year degrees: the last available 5-year cohort is 1999–2003;

2002 was the last cohort to graduate in n+1 for a 2-year degree registration;
therefore
for 2 year degrees: the last available 5-year cohort is 1998–2002; etc.

A similar process was followed in determining the cohort sets to be used where the time period to be examined was greater than n+1. (Note that it would be valid, for example, to examine the n+1 completion rates using the n+2 cohort sample, although the data would be slightly older than that using the n+1 cohort sample. It would not be valid however to examine the n+2 completion rate using the n+1 sample, as the data in the final year in the cohort sample would be truncated. In this research therefore, the completion rate was examined in each instance using the most recent cohort sample for that completion rate.)

The determination of cohort sample and merging of data across years is a fairly onerous and complex task when computed manually, and is probably unnecessary when all that is required is to examine the performance of individual programme
cohorts. However, it does provide statistically meaningful groups which allow for further data manipulation and examination.

**DATA FOR ANALYSIS**

For the analysis which formed the basis of the results reported in this article, longitudinal data for all postgraduate degrees (masters and doctorates) in the University were obtained and were used to calculate the cohort throughput rates for the institution. The data included cohorts from 1993 onwards and were obtained during the course of 2005, thus including information regarding the registrations, but not the graduations, in this year.

In order to perform this analysis, the data were first sorted by programme level and type, so that all Ph.D. degrees were considered together, all masters by dissertation degrees were considered together, and all masters by coursework and research report degrees were considered together. In the second phase of sorting, data regarding the curriculum length of each programme were obtained and were used to determine minimum time (n) to graduation for each particular degree. (Note that the HEMIS programme does store information regarding the subsidized curriculum length for each programme, divided into formal teaching time and experiential time. However, this data frequently differs from the actual curriculum length of a programme as specified in institutional rule books. For this analysis, the curriculum length of the programme as specified in the rule book was felt to be more appropriate, as a student may not graduate in a shorter time period, even though the full length of the programme may not be subsidized.) The minimum curriculum time was used to sort degrees into groups of equivalent length. Additional grouping variables used included the mode of study (part-time or full-time), the proportion of coursework in the degree in the case of masters degrees by coursework and research report, and the disciplinary grouping of the programme. Only programmes for which full data sets were available were used in analysis (this imposes a strict limitation on cohort studies, as data change with, for example, degree code changes).

This data was used firstly to attempt to establish a ‘standard throughput rate’ at this institution for each of the degree types examined. Secondly, the data was used to comparatively look for trends in the throughput results of different programmes, as these trends could be used to inform future throughput expectations. The results of these analyses are reported below.

**COMPLETION RATES AND TIME-SPANS**

This section of the article examines further the concept of a ‘reasonable time’ to graduation in order to determine whether there is a single point at which the ‘completion rate’ for a programme could be conventionally examined. Clearly, this time period could be conceptually defined by reference, for example, to the academic currency of the degree. However, this research sought to examine the empirical data
in this regard to determine the time periods in which students currently graduate, and, if throughput ‘norms’ were to be established, the time periods (in addition to minimum curriculum time) at which these should be examined for a meaningful result to be obtained. (Note that what is being investigated here is not the average time to graduation, although that is useful information in some contexts. What is under investigation here is the time period or periods at which the completion rate should be measured.)

In this section of the analysis, in order to limit the possible confounding effects of curriculum length, data examined included only that for postgraduate degrees of standard length, i.e. full-time master’s programmes of one year and part-time programmes of two years duration; full-time doctorates of two years and part-time doctorates of four years duration. Standard five-year cohorts were determined, as described above, and were used to ascertain the composite completion rates for each of these degree types over a range of time periods.

The overall results for each degree type, over each of the periods studied, are shown in Table 1.

**Table 1: Postgraduate throughput table**

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Completion rate</th>
<th>Full-time / Part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>n %</strong></td>
<td><strong>n+1 %</strong></td>
</tr>
<tr>
<td>Masters by coursework and research report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>full-time</td>
<td>4</td>
<td>35</td>
</tr>
<tr>
<td>part-time</td>
<td>9</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>Masters by dissertation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>full-time</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>part-time</td>
<td>9</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Ph.D.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>full-time</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>part-time</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>15</td>
</tr>
</tbody>
</table>

[The completion rates in the table are determined using the appropriate cohorts as described above: figures reported are thus not those of a single cohort of data and are not directly comparable. Since data earlier than 1993 was not available for examination, the completion rate and maximum possible completion rate were determined using the closest available cohort. In the case the four year degrees, the n+4 cohort was used to determine the n+5 and n+7 completion rates. There is therefore some truncation of the sample in this data.]
Table 1 shows that, in the period examined, the minimum time completion rates for the qualification-types examined were extremely low in all instances (with the highest proportion achieved in the part-time Ph.D., which is a four-year degree, at 16%). This finding is perhaps not surprising: if the minimum time stipulated (such as one year for a full-time masters by dissertation degree) is intended to be the amount of time spent by the student on task, it necessarily does not take account of the amount of administrative time necessary to complete the marking, committee procedure and graduation process. Since these processes may take around three months to complete, even if the student had completed the requirements within the minimum time period, graduation would only take place in the n+1th year. The problem is exacerbated in the particular data set studied since this data relies on the notion of a calendar year: a mid-year entry to a programme could not possibly have completed in what the data would define as a minimum time period.

Given these constraints, clearly the minimum curriculum time is not a useful point at which to measure completion rates in throughput studies. In fact, the results obtained suggest that it may be useful to distinguish, particularly in marketing material, between minimum curriculum times, and expected completion times, in order that students are aware of the likely financial implications of their studies, and in order to avoid an unnecessary sense of failure from unrealistic expectations.

Even if the minimum time plus one (n+1) category is examined, initial graduations are low in all instances, with a maximum completion rate achieved in the full-time masters by coursework and research report at 35%. There are, however, striking differences between the proportion of students initially graduating from the degrees and those graduating after a considerably longer period. At its maximum, this difference runs from 1 per cent minimum time to 64 per cent in n+7 (for the Ph.D. full-time). This raises a question as to the point at which completion rates can be regarded as ‘final’. Put another way, at what point does the difference between the proportion of students who have graduated in a particular time period and the number who could possible graduate become negligible? In a graph which plotted graduations over time, this would be the point at which the slope of the graph becomes close to horizontal.

Detailed findings, as well as the data presented in Table 1, show that completion rates in masters degrees in n+5 years show no appreciable difference from those in n+7 years, or from the n+7 maximum possible completion rate (with a slight exception in the case of the full-time masters by dissertation). This finding suggests that the n+5 completion rates can be used, for these degrees, as a proxy for final completion figures. The findings for the PhD. sample are, however, less clear. Differences between the n+5 sample and the n+7 sample do exist and there are differences between this sample and the maximum possible completion rate. Data presented by Mouton (2007) shows that the final completion rate for doctoral degrees may only be reached after ten years. However, use of an n+7 cohort for a four-year degree implies that, if the appropriate cohort data as described above is used, the data is already very old (the n+7 cohort sample for this group in 2005 would be
1990–1995): it is doubtful that meaningful data would be obtained in an examination of a longer time period.

The length of time taken to reach a proxy for final completion rates suggests that these proxies should not be the only indicator examined if intentions are to improve throughput performance. Ideally, in the example used in Table 1, it is not necessarily the number of graduates which needs to increase, but rather the time period in which they are graduating which needs to decrease. This suggests that it may be of more use in throughput studies to report completion rates at a few points in the time scale, rather than as an absolute at any one time period.

GENERAL TRENDS IN THE FINDINGS

Detailed results of the throughput analysis for the institution are not published here, however, this section reports on general patterns which appear to be evident in the data, as these trends could inform future throughput expectations (all reported figures are for n+1 five year cohort means determined as described above and drawn in 2005).

First, the most striking feature of the results achieved is the extremely wide range of completion rates achieved across different programmes. Results varied from 0 per cent (in the worst instance) to 74 per cent (in the best case). This raises questions regarding why this should be the case: is the subject matter of one particular programme that much more complex than another; are teaching methods (in the case of coursework degrees) that dissimilar; does the completion rate relate to support available; are there extra-curricula factors which impact more in certain areas than in others; or is it simply that we play out our own throughput expectations in the absence of guidance as to what these expectations should be? These are issues which are beyond the scope of this project to answer. The wide range found, however, does raise a caution regarding the interpretation of any combined throughput results, as these results may hide large discrepancies in the raw data between different programmes.

Second, as discussed above, minimum time and minimum time +1 completion rates for postgraduate students in this research were found to be very low. However, eventual completion rates for the same programmes were much higher than expected. This result may suggest that we need to examine our expectations regarding curriculum time, but also suggests that completion rates should be reported as a series, over a period of time.

Third, as expected, large differences were found between the completion rates for full-time and for part-time students. Typically, these differences seem to reflect a completion rate approximately 20 per cent lower for part-time students than for full-time students on the same programme. Other variations of mode (distance studies, block release versus traditional part-time students etc.) have not been examined.

Fourth, evidence was found to support the contention that throughput results vary according to programme discipline. In this research, results for programmes
in the three curriculum groups defined by the Department of Education (Science, Engineering and Technology, SET; Business, Commerce and Management, BCM; and Humanities including Law and Education, HUM) were compared. Results show considerably higher completion rates for programmes in the Humanities grouping than in either of the other two groupings. Non-completion rates were also lowest for this group. Although the difference between the SET and BCM groups was perhaps not as significant as that between HUM and the other two groups, a comparison of these groups show that although n+1 completion rates are initially slightly higher for the SET group, the non-completion rates for this group are also higher, so final completion rates are higher for the BCM group. These findings may not extrapolate to other institutions and other contexts (Mouton, 2007, reports poor throughput rates in the Humanities as compared to other disciplines), but do seem to support commonly held conceptions regarding differential performance in different disciplines.

Fifth, it may be useful in further studies of this nature to link the drop-out rate to a time period as has been done with the completion rate. Although this was not explicitly the focus of this study, there is a suggestion in the data that drop-out rates are likely to be highest within the minimum curriculum time for the degree. Those students who remain registered after this time period are likely, at some point, to subsequently graduate. Mouton (2007) reports similar findings. This clearly has implications for how institutions treat students who remain registered many years after they should have graduated.

Finally, although there is no clear-cut trend, and exceptions are evident, there may be some support in the data for the suggestion that the lower the coursework proportion in the coursework and research report masters (i.e. the higher the research component), the better the throughput. This is to some extent counter-intuitive, as it is widely believed that it is the research component of these degrees that contributes to poor throughput. However, it may be that the research requirement will be a major hurdle for students to complete regardless of whether it is weighted at, for example, 20 per cent or 50 per cent. The data in this analysis seem to suggest that a coursework and research report curriculum which is well structured around a substantial research project may be a better throughput risk than one which is heavily laden with coursework but also contains a research component. This tentative finding requires further investigation.

CONCLUSION

The general findings reported suggest that completion rates differ widely between contexts and degrees, and that combinations of data may hide more than they reveal. This must be borne in mind in interpretation of the data presented in this case study. The results obtained from this analysis cannot be read to mean more than the results from a particular context at a particular time. However, this research does suggest a terminology and a method which could be adopted elsewhere to inform throughput analyses. The value of this method is that it provides throughput figures which,
because they are ‘standardized’, allow us to begin to understand our current practices and therefore to debate our throughput expectations.

The results obtained in this analysis also suggest some general trends found in the data, which may provide an indication of trends to be found elsewhere. The specific completion rate ‘norms’ identified for the degree-types studied at this institution may not have relevance elsewhere, but do begin to raise questions for this institution regarding, for example, time expectations and subsidy implications of throughput results.

The finding that postgraduate students take significantly longer to graduate than expected has implications also for the graduation rates for the institution. If the length of time taken to graduation is significantly longer than the minimum curriculum time, in any year the number of both new student and returning students in the degree who could be expected to be re-registered in the following year is higher than would be anticipated if the throughput times were shorter. This raises concerns that the graduation rate benchmarks set in the NPHE may not be achievable.

Although it is not the intention of this article to extrapolate throughput ‘norms’ for the system, the trends in the findings do provide some indications of points that should be borne in mind when setting up throughput expectations. Most pertinently, a single completion rate will not give the full data that is necessary for throughput studies, and both time and proportion of graduations need to be examined. Also, given the trends found in the data with regard to differing completion rates for the different groups examined, any attempt to set up ‘norms’ should take these differences into account: ‘norms’ per group may be most appropriate.

Finally, the specific completion rates reported in this research are not dissimilar to those found elsewhere. Cronje (2007) reports similar n+1 completion rates in masters level study at another major South African institution. Mouton (2007) reports similar doctorate completion rates for the South African system as a whole. Scott (2005, 10) reports completion rates at doctorate level for the New Zealand system as a whole at 56–57 per cent after 7 years (roughly equivalent to our n+5 category), and of 53 per cent for the Australian system as a whole. Seen in this light, our performance is perhaps not as poor as we have come to believe.

NOTE

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REFERENCES


