ACADEMIC OUTCOMES OF STUDENTS SUPPORTED BY FOUR BURSARY SUPPORT PROVIDER ORGANISATIONS

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This report is part of the research project:
Insights of the bursary support provider sector
regarding ways of optimising
student success in higher education
– and the (unique) contributions
it might make to this.

It it produced in collaboration with

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Contents

INTRODUCTION 4
Participants 4
Analyses 5
Variables in analysis 5
Definitions of terms 6
Constructing the award cohorts 7
Cleaning data 8
Data set 8
Comparisons with national statistics 13
Comparisons with NSFAS-funded students 14
OVERVIEW OF FINDINGS 14
Throughput and progression rates 14
Comparisons with national statistics 15
Outcomes by university 15
Outcomes by fields of study 16
Time to completion 16
Reasons for leaving prematurely 17
Periodisation 17
Outcomes – and causal factors – of bursary support provider organisations 17
THROUGHPUT 21
Overall throughput rate 21
Throughput – by bursary support provider organisation 21
Comparisons with national statistics: Overall throughput 23
Comparisons with NSFAS-funded students 23
Throughput – by university 24
Throughput – by field / faculty 29
Comparisons with national statistics: throughput for undergraduate students by field 34
Overview 34
MBChB 37

Engineering 38
Natural and physical science 39
TIME TO COMPLETION 40
REASONS FOR LEAVING PREMATURELY 41
Overview 42
PROGRESSION 46
Average progression rate 46
Progression rates – by university 47
Comparisons with throughput rates 49
Progression rates – by field 50
Comparisons with throughput rates 51
CONCLUSION 51
APPENDICES 53
Appendix A: Throughput by university – across all four organisations: 2014 53
Appendix B: Throughput by university – across all four organisations: 2015 54
Appendix C: Throughput by field/ faculty – across all four organisations: 2014 55
Appendix D: Throughput by field/faculty – across all four organisations: 2015 56
Appendix E: Progression rates of all four organisations: 2017 - 2019 57

INTRODUCTION

Being able to provide evidence-based information about academic outcomes was one of the main motivations for this research project - funded by DG Murray Trust - which is enquiring into the (unique) contributions the bursary support provider sector may be making to optimise the success of the university students it supports. The bursary support provider sector is interested in being able to compare outcomes within the sector and, if possible, with national statistics.

This exercise is an attempt to make comparisons across various organisations in the sector, using retrospective statistics of student cohorts (looking at undergraduate outcomes only[1]). It also reflects on national data.

While the sector is unified in its aims across organisations – to promote student success through providing financial and various forms of personal support to students from under-resourced households – a quite wide variety of approaches and dosages are employed to realise these. These are seen in Table 2 at the end of this introduction which maps the main features of each organisation's approaches and offerings. As comparisons require that variables are limited, this variety confounds some of the findings that might otherwise be made. The difficulty of making comparisons is thus described and some tentative findings suggested.

Participants

Once again members of the National Bursary Support Providers' Forum have participated in this research. Particular thanks go to the four organisations who elected to produce statistics retrospectively according to the criteria for this study – with all the work that that entailed. Not only have they provided their data for scrutiny, but have provided insightful comments on the findings which I have included with their permission and which have enriched this report. This is a truly collaborative effort.

Originally intended as research to inform the bursary support provider sector, the findings are sufficiently interesting to distribute more broadly, however. In doing so, have anonymised the findings in relation to the participating organisations. They have been generous in making their data available and it is the patterns and correlations that are interesting, rather than the performance of each organisation or programme.

1 The guide informing how calculations are to be done noted that undergraduate degrees can include an Honours, but only if it is included in the original degree.

The organisations are thus as follows:

- Org A: a not-for-profit organisation which supports Health Science students from rural areas.
- Org B: a faith-based not-for-profit organisation which has supported young people from rural areas for 20 years.
- Org C: a for-profit organisation which has worked nationally for 22 years.
- Org D: an eleven-year old organisation which works nationally, and is supported by a single philanthropist.

Org C offered data on five of their programmes – which are referred to as
Prog 1, Prog 2, Prog 3, Prog 4 and Prog 5.

Analyses

The aim was to use historical statistics to say something about three indicators:

- throughput rates;
- time to completion; and
- year-on-year progression rates.

These are mapped as outcomes of each organisation as well as across HEIs and fields of study. (HEIs comprise universities only – and do not include other institutions in the Post-School Education and Training sector like TVET colleges.) Although throughput stats are usually accompanied by a supplementary sub-analysis of the reasons for students not graduating, these have been included here.

As students are sometimes quite sparsely spread across universities or faculties/ fields of study, throughput analyses have only been done where there are 10 or more students in the data set. (This avoids the skewing caused where, for instance, only four students are in a cohort and all complete successfully, giving 100% throughput.)

Variables in analysis

The issue of attribution and causality has been much rehearsed in various fora.

If these findings are to be used to gain insights into what might be making a/the difference, positive trends and their possible causes need to be identified. So for instance, where an organisation gets consistently higher throughputs at university A – or in field B – the possible reasons for this need to be pursued. For instance the relatively high throughput and progression rates of the Org A students bear testimony that mono-lingual, rural origins are not in themselves necessarily an impediment.

Some questions which this study might have answered are:

- Does the **security of full funding** make a / the difference? (What does 'full funding' comprise?)
- Might the differences in **psycho-social offerings/dosages** be significant?
- Does **student selection** play a role in throughput rates?
- Are the students of those organisations with lower throughput rates doing the **'difficult' qualifications?**
- Are the organisations with better throughputs offering **academic support**?

Other questions which may bear further investigation are:

- Which **fields of study at which universities** are likely to result in greater student success? Should organisations focus on supporting these (or would these students have succeeded anyway?)
- Did the organisations with better throughputs offer support in **career and university choice**s?
- Is throughput affected by the **academic year in which students are recruited**?
- Are **higher matric marks at entry** predictive? (The literature says there is a weak correlation between school and university results.)

In addition, there may be some fascinating findings in sub-analyses by field/faculty combined with university – so are the throughputs at NMU pulled down by the many students battling with Engineering? This detailed analysis may be easy to do for some organisations, but not for others – but would certainly help to focus attention.

Definitions of terms

The ability to work with these retrospective statistics rested on an extensive piece of definitional work undertaken in 2020 which outlined the meaning of terms, and what is counted and how.[2]

A detailed guide was developed on exactly how to produce statistics in order to limit the differences in approach - so that the results presented here have been produced through the same methodology.

2 See 'Terms used in the bursary support sector when measuring academic outcomes – towards developing common usage / definitions.' Developed by a working group of the National Bursary Support Providers Forum, facilitated by Penny Morrell. November 2020.

We have defined terms as follows:

- An **award cohort** comprises all students who became a beneficiary of the bursary support provider organisation in a particular year – no matter their year of academic study.[3]
- **Throughput** is the proportion of all students in an award cohort who graduated, no matter how long they took to do so.
- The **year-on-year progression** is the proportion of all students who are being supported by an organisation who, at the end of a calendar year, pass sufficient of their courses to progress to the next academic year – whether or not they are carrying modules. The progression rate includes students who graduate.

Elaborated on in the body of the report, the issue of definitions is crucial, as is the composition of the data set and what is counted- as they lie at the heart of what comparisons can, and cannot, be made. Terms have been used in various ways within the sector – but also, and of more concern, within the national statistics. For instance 'throughput' is used to mean all kinds of things – including all students who wrote final year exams and passed; in other cases it has been used for what we call year-on-year progression rate.

Our term 'progression rate' replaces

- 'year-on-year pass rate' which was used differently by various organisations to mean passing all courses/modules or passing some but still progressing; and
- 'success rate' which was too inclusive and non-specific to be useful.

Constructing the award cohorts

An **award cohort** comprises all students who became a beneficiary of the bursary support organisation in a particular year (e.g. 2014) – no matter their year of academic study.
By agreement, the only students excluded from this number are those who withdrew from being a beneficiary for other funding.

In order to calculate the **throughput rates,** the participating organisations were asked to work with data for students in cohorts 2014 and 2015, as there were not likely to be many (or very few) students still studying in 2020.

3 This is not necessarily the year the student started studying (their 'start year'), as they may only have become a beneficiary after their first year of studying. For organisations who only take students from the first year of studying, however, the start year and the year of becoming a beneficiary is the same.

As the need for this long lead time does not apply to **year-on-year progression rates**, however, these rates were calculated for more recent years – namely 2017, 2018 and 2019. The assumption is that students in the 2014 and 2015 cohorts could still be studying in 2017 and 2018 and 2019. the years for which progression rates were analysed.

Cleaning data

The participating organisations each had to undertake a significant exercise of cleaning the data so that they were internally consistent and complied with the criteria as agreed. This was an exacting, although apparently useful, task which was said to have served their purposes beyond this exercise.

Data set

The data set comprises 946 students – 590 in 2014 and 356 in 2015. All four organisations submitted statistics for 2014 and 2015 award cohorts.
Org C submitted discrete sets of data for five projects.

Table 1: Total number of students in each award cohort – by participating organisation

	2014	**2015**
Org A	76	50
Org B	138	117
Org C	298	85
Prog 1	*149*	*11*
Prog 2	*15*	*9*
Prog 3	*74*	*50*
Prog 4	*8*	*4*
Prog 5	*52*	*11*
Org D	78	104
TOTAL	**= 590**	**= 356**

Table 2 presents each organisation's modus operandi, showing the diversity of what and how much is offered. This, we suggest, undermines our ability to easily compare outcomes.

Table 2: Summary of organisations' approaches and offerings

	OVERALL AIM / CHARACTER	RECRUITMENT & SELECTION	
		Stage of study	**Selection criteria**
Org A	To impact poverty in rural households – and to produce health practitioners for rural areas.	Most / all recruited from first year – though have recruited in all years (especially when students faced financial exclusion)	Financial need. Dependent on university acceptance.
Org B	To impact poverty in rural households – social justice motivation.	All recruited from first year.	Financial need. Average matric results over 60% - higher for certain fields of study.
Org C			
Prog 1	Flagship programme – for SADC students	At any stage in their degrees	On merit - and interest in/ aptitude for their courses
Prog 2	Flagship programme.	About to register for, or already in, undergrad studies.	Combination of academic merit and financial need.
Prog 3	Opportunities for dependants of Tiger Brands' employees in the lower bands i.e. factory & shopfloor staff.	At any stage in their degrees – though most from first year.	60% average for Matrics. 50% average for tertiary students.
Prog 4	Corporate bursary scheme for young people in the areas in which the mines are operating - skills for local work	About to register for, or already in, undergrad studies	Area they come from- not financial need (though most from financially poor households .) Suitability for the discipline (wanted by the company).
Prog 5	Opportunities for those living in the mines' operational areas.	At any stage in their degrees – though most from first year.	Area they come from. Academic merit – and generally suitable for chosen degree.
Org D	Enable social mobility and break cycle of poverty. Skills for well-paid jobs – improve their financial situation.	Almost all (95%) recruited from first year.	Financial need. Average matric results over 65%. Must do fields of study at universities supported by Org D.

STUDENT PROFILES				
	Nationality	**Geographical origins**		**Household incomes**
Org A	SA only.	KZN only	Almost all from rural areas/ schools.	Instead of applying the old NSFAS limit of R122,000 strictly, we do an assessment to determine if they are "financially needy". Coming from rural areas, in the majority of cases they are.
Org B	SA only.	National	Almost all from rural areas/ schools.	Less than R122 000 per annum. (Old NSFAS criteria – has this changed?)
Org C				
Prog 1	From SADC countries (RSA, Botswana, Lesotho, & Zimbabwe)	SADC	Urban and rural areas.	NSFAS criteria and 'missing middle'.
Prog 2	Mostly SA. Sometimes support foreign students.	National	Urban and rural areas.	"In financial need' NSFAS criteria plus missing middle.
Prog 3	SA only.	Employee population (though child does not have to live within catchment area)	Urban and rural areas.	Not determining – but majority are financially under-resourced.
Prog 4	SA only.	Have to be in catchment area around the mines (and from nominated schools)	Live in areas in which the mines are operating	Not determining – but majority are financially under-resourced.
Prog 5	SA only.	Have to be in catchment area around the mines (and from nominated schools)	Live in areas in which the mines are operating	Not determining – but majority are financially under-resourced.
Org D	Mostly SA. 7% other Africans.	National	Urban and rural	Less than R120 000 per annum.

STUDY OPTIONS	Type of HEI	Field focus	Phase of study
Org A	Public HEIs only	Health Sciences only	Undergrads only
Org B	Public HEIs only (currently 15; to reduce to 6)	May do any degree	Undergrads only
Org C			
Prog 1	Public HEIs only	Specific disciplines - such as paediatric nursing, early childhood education, medicine, agricultural development etc.	Mostly undergrads. Some postgrads.
Prog 2	Public HEIs only	May do any degree	Mostly undergrads - some Honours (to become ready for prof employment).
Prog 3	Public and private HEIs	May do any degree	Mostly undergrads - some Honours (to become ready for prof employment).
Prog 4	Public HEIs only	Specific disciplines such as Mining, Metallurgy and Geology	Mostly undergrads - some Honours (to become ready for prof employment).
Prog 5	Public HEIs only	May do any degree	Mostly undergrads - some Honours (to become ready for prof employment).
Org D	Public HWUs only	Only STEM - plus a few others with work opportunities, like Health Sciences	Mostly undergrad. 6% postgrad.

SUPPORT	Financial	Psycho-social	Training for/ access to employment
Org A	Fully funded. Supplement NSFAS substantially to cover tuition, accommodation, food, books, minor equipment, professional registration fees, pay work exposure stipend	Light compulsory psycho-social support.	Work exposure through the duration of their studies. Used to have work obligations with DoH in KZN – currently changing.
Org B	NSFAS top-up for fees and inc accommodation. Some supplementary amounts.	Full compulsory psycho-social support – dosages from intense to light according to academic level.	Light work readiness. No training or employment obligations/ opportunities.
Org C			
Prog 1	Fully funded.	Full (light) psycho-social support.	No training or employment obligations/ opportunities.
Prog 2	Fully funded scholarship.	Full (light) psycho-social support.	No training or employment obligations/ opportunities.
Prog 3	Only tuition and sometimes book allowances. At private HEIs, fee payments capped at equivalent HEI.	Some psycho-social support - limited to visits and mentoring. No workshops or additional skills. (though mindfulness skills recently added).	No training or employment obligations/ opportunities.
Prog 4	Fully funded.	Full (light) psycho-social support.	Offers contractual training and employment.
Prog 5	Fully funded.	Full (light) psycho-social support.	No training or employment obligations/ opportunities.
Org D	Effectively fully funded: • NSFAS top-up for SA students (accommodation, food, books and living allowance) • full funding for non-SA nationals.	Full psycho-social support.	Big emphasis on facilitating graduates getting good jobs. (Support for workplace readiness.)

Comparisons with national statistics

To compare the findings of this study with national statistics, we have used the cohort studies published in 2019 by the Department of Higher Education and Training (DHET): '2000 to 2016 first time entering undergraduate cohort studies for public higher education institutions'[4].

The other comprehensive source of statistics available are the ' Vital Stats. Public Higher Education 2017' published by the Council on Higher Education in 2019. They are not as recent as the DHET data, however, and their definition of throughput is different to that used in this study and by DHET (as they limit to two extra years the time to completion included in their throughput statistics[5]).

While both the DHET study and this study focus on first-time entering undergraduate university students, there are some differences between the data sets which undermine the ability to make direct comparisons.

- This study addressed cohorts 2014 and 2015. While the DHET study includes these cohorts, they only have data until 2018 – **i.e. for four years for those in the 2014 cohort and three years for those who started in 2015** (presumably as their work was done in 2018 for publication in 2019). Our study has data for these cohorts until 2020. This will affect the 'still studying' category as well as the info available on throughput.
- Some of the DHET data do not separate out those who learn by **distance and contact** – whereas the bursary support provider sector supports only a few students at UNISA. The DHET's NSFAS data presented below includes distance students. The prevailing sense is that there is lower throughput among distance students.
- The DHET study **only includes South African students**– whereas some bursary support provider organisations support students who are not South African, albeit in small numbers.
- The DHET study data are not disaggregated by **household income** – which is significant as the sector largely supports students from lower income households. The comparison is thus best made with a sub-set of their data for NSFAS- supported students.

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4 DHET. (31 March 2019). *2000 to 2016 first time entering undergraduate cohort studies for public higher education institutions'.*

5 Vital Stats limits the time to completion in their throughput definition: 'The throughput rate calculates the number of first-time entry undergraduate students of a specific cohort of a specific year who have graduated either within the minimum time, or up to 2 years beyond the minimum time, to the number of students in the baseline enrolments of that cohort.' (my emphasis).

The most obvious point of difference is the various forms of support students obtain from the bursary support provider organisations – which most other students do not get (besides those accessing focussed funding and support elsewhere).

Another difference is that DHET uses **'dropouts'** to mean students who did not finish their qualification, one way or the other[6]. In contrast, the bursary support provider sector identifies as 'dropouts' students who they are no longer supporting, some of whom may have completed their qualification.

Comparisons with NSFAS-funded students

Probably the most comparable national dataset comprises those who had been funded by NSFAS at some stage. The DHET report notes that 'the year in which the student received the loan does not influence the cohort, neither the number of years the student received a loan. All first time entering undergraduate students, who received a loan during their studies, are tracked, irrespective of the loan year or number of years.'[7]

Again there are factors that confound comparisons, however. For instance organisations in the bursary support provider sector **select their students**, while NSFAS supports all students on the basis of a financial means test only. The DHET data include those who accessed HEIs through contact AND distance.

OVERVIEW OF FINDINGS

Throughput and progression rates

The **overall average throughput rate** of all students in the data set was

- 74% in 2014; and
- 69% in 2015.

This varied sometimes considerably across organisations, universities and fields of study.

The **average progression rate** for the three years 2017-2019, across all four organisations, was 87%. It was never lower than 75% for any organisation in any year.

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6 'If a student drops out from one university and enters another institution then the student is not treated as a dropout. A student who changes courses is not treated as a dropout and a student who drops out and returns at a later stage is accounted for in the study, and is not counted as a dropout.'

7 DHET. (31 March 2019). *2000 to 2016 first time entering undergraduate cohort studies for public higher education institutions'*, p 14.

Throughputs rates are necessarily lower than progression rates as throughputs rates include students who have been excluded from the organisation's support for any of a range of reasons reviewed in the report – while progression rates do not include those who have been excluded from the organisation's support the previous year. As such there is the predictable gap between the average progression rates for 2017 – 2019 and throughput rates for 2014 and 2015 for universities and fields of study – with some having steeper fall-offs than others. (The assumption is that students in the 2014 and 2015 (award) cohorts could still be studying in 2017 and 2018 and 2019 – the years for which progression rates were analysed.)

Further analysis may be useful to determine if progression information is useful – as throughput remains the ultimate indicator of an organisation's successful outcomes (if not, always, the students').

Comparisons with national statistics

To relate the findings of this study with national statistics, a comparison has been made with the NSFAS-funded students, given the confounding elements if the whole DHET dataset is used.

When comparing our seven–year cohort (2014) with theirs (2010 cohort) and our six-year cohort (2015) with theirs (2011 cohort), half of the organisations/programmes in this study's dataset (8 of 16) had throughput rates above the NSFAS-data average using these comparators; one was on par and the other seven were below the NSFAS-data average. (The delicacy of making this comparison is outlined in the report below.)

Outcomes by university

The 'type' of university does not seem to be a determining factor with respect to throughput. Those HEIs with throughput rates above 70%[8] represented various kinds of HEIs: from universities of technology to 'mid-level' universities to those which were historically 'elite'. This was equally so in the case of those who did not have either cohort achieving over 70% throughput.

There may be factors within the sub-cohorts (like a lot of students doing Engineering) that might influence a particular HEIs outcomes however, but this analysis has not been done.

[8] We are using 70% as the highest NSFAS comparator.

Outcomes by fields of study

Fields of study with average throughput rates of over 70% are Health Sciences, Education, Humanities, Science (2014 only) and Technology (2015 only). Law and Engineering were consistently lower than the others.

The variety represented by these higher throughput rates does not allow for easy conclusions, however – but suggests that the following were not determining factors:

- The **number of registered students in the sub-cohort**, as these varied from 12 to 208.
- The **nature of the field** ('hard' compared with 'soft' sciences), as Health Sciences, Science and Technology are included – but so is Humanities.
- The **selection criteria**. While not enough is known about the selection criteria of these students across universities, the general sense is that selection in Health Sciences is more rigorous than accessing courses in the Humanities.

Mapping the data for fields of study onto those for universities would give a finer idea of which course at which universities are likely to result in greater student success. This exercise has not done that, however.

In terms of comparison with national outcomes as described by DHET, there was very little resonance. While this study's throughput rates for Education and Health Sciences are notionally comparable with the national data, the rest of this study's descriptions of outcomes for fields of study are diametrically opposite to those in the (whole) DHET dataset.

In fact DHET's 'good' actual throughput rates (of all students, not just those who are NSFAS funded) are sometimes comparable with this study's 'poor' ones (Engineering and two of the Science and Technology sub-cohorts), while our good throughput rates outstrip theirs (Health Sciences).

Time to completion

One clear and consistent finding, is that allowing for an extra year for completion (N+1) significantly increased the throughput rates. While two thirds completed in minimum time (N) this becomes around 90% for N+1.

This is useful information, both for what might be reasonably tolerated as well as for budgeting purposes – and supports the now-jettisoned calls for a four-year curriculum.

Reasons for leaving prematurely

282 of the 946 original students (30%) were no longer supported by these organisations if/when they graduated.

The main drivers of students no longer being supported, were
- the bursary support provider organisations (62%);
- followed by the students themselves (21%).

In terms **of the causes** of students no longer being supported,
- the main cause was academic (71%);
- followed by personal reasons (16%).

No student was no longer supported for financial reasons – either their own or an organisation's.

Periodisation

Given that the throughputs rates are of students recruited six and seven years ago, a range of changes in the bursary support provider organisations' offerings will have been made since then. For instance
- Org B has completely overhauled its selection methods and lightened its psycho-social offering while venturing into forms of academic support.
- Org D has changed its selection criteria and process significantly, and have increased and honed their psycho-social and academic support to students which have drastically improved their academic outcomes. In addition they have increased the amount of focussed support for specific degree areas at certain universities, e.g. Computer Science Degrees at UP.[9]

Outcomes – and causal factors – of bursary support provider organisations

Outcomes

The academic outcomes reported above need to be understood with respect to the variables in Table 2 - both the higher throughput rates of students supported by Org A (88% and 91% for 2014 and 2015) and the five Org C programmes (which range from 50% to 100%) as well as the lower rates of Org B (57% and 58%) and Org D (65% and 48%).

[9] Comment from Director of Org D, September 2021.

The concern about possible skewing in findings where data sets are small has been addressed by visibly excluding these from findings. This is especially the case with the Org C projects, all of which had one cohort with under 15 students. Interestingly, however, the sub-cohorts with larger numbers of students produced better results, while those with smaller numbers were highly varied.[10]

Causal factors

Academic selection criteria do not seem to be a simple causal factor. While it could be a factor in student success for Org A (which relies on universities' rigorous Health Sciences selection mechanisms), using university selection criteria does not simply transfer to other professional fields – like Engineering where throughputs tend to be lower (average across the four organisations of 50% and 31% for 2014 and 2015).

While Org D – which focuses on STEM fields - seems to have slightly higher academic requirements than Org B generally, Org B uses higher selection criteria for students wanting to study in the STEM fields, making them similar to Org D. As noted, Org D's support focussing on STEM only, did not result in higher throughputs for their 2014 and 2015 cohorts.

The selection criteria for Org C's more successful projects are varied. They range from those used in the selective flagship project (Prog 2 and Prog 1) to serving any eligible youth from the catchment areas in one of the community–based projects (Prog 5) and supporting employees and their families in Prog 3.

Household income criteria are relatively standard – even when working in catchment areas as those living there are largely financially-challenged with , at most, some in the missing middle.

10 Numbers of students in relation to the throughputs of Org C's programmes. (Grey shaded data have less than 11 students):

	2014		2015	
	No. of students	**Throughput**	**No of students**	**Throughput**
Prog 1	149	91%	11	91%
Prog 2	15	100%	9	78%
Prog 3	74	67%	50	85%
Prog 4	8	63%	4	50%
Prog 5	52	71%	11	55%

Org A and Org B recruit exclusively from **rural areas** while Org C and Org D also recruit from **urban areas**. There is an argument that the gap between school/home and starting at an HEI is exacerbated by being raised in an often mono-lingual and under-stimulating rural area with little access to IT. Although Org A's selection criteria (for Health Sciences) mitigate this, it shows that rural origins are not a simple causal factor.

The stage of study at which students begin to be supported by the organisations varies across the four organisations and again does not seem to be causal - although the numbers of those starting after first year seem to be small so this is not definitive (though certainly this approach would reduce the higher dropout rates of first year students). Org B recruits **only first year students** while Org A, Org D and some of Org C's projects may recruit a few students who have already completed first year. A study of those students in relation to others would ascertain this – but this study cannot make a finding here.

Full funding is not simply determining. Four of the five Org C programmes are fully funded, as are Org A – but so are students supported by Org D, while Org B students may have to look for funding for some shortfalls.

We have not defined what constitutes 'full funding', however. There is a sense that some students might have all their direct costs paid but have no extras ('3-star full funding'), while others might have enough to engage more fully in student life ('5-star full funding'). This could be further interrogated. The Director of Org C which does '5-star full funding' whenever they can is clear that 'the right amount of money at the right time is absolutely key'. They add that

> "Only once that is in place, does the student have headspace and energy to focus and hopefully excel. It enables them to relax and focus on the self-development and often healing which needs to take place. If there are issues with funding, it leaks into everything. We find that if the funding is not sorted in this fashion, we may as well not conduct visits because then it all become consumed by the funding issue and you never get to talk about academic progress and any other issues or barriers to success."

The one commonality between organisations with higher throughput rates – and, indeed, those with the lower rates – are the **psycho-social support models and dosages.** Org A and Org C both have light support models with very few workshops – unlike Org B and Org D who have concerted dosages of both. ***While we cannot say a light dosage is better than a heavier one – it does indicate that light dosages can work.***

The case for a much lighter touch

Two projects which provide light psycho-social support have high throughput rates:

- Org A – which has throughputs of 91% and 88% for 76 and 50 students respectively – provides regular but not frequent psycho-social support through part-time mentors; they provide very few workshops, given the Health Sciences students' schedules.
- While Org C tends towards a lighter touch in its provision of support generally, its Prog 3 has only some funding plus only 'some psycho-social support - limited to visits and mentoring' and, at the time, almost 'no workshops or additional skills' (though mindfulness skills have recently been added). They nonetheless had throughput rates of 67% and 85% of 74 and 50 students respectively – showing that while flagship programmes like Prog 1 and Prog 2 may achieve better throughput rates than others, it is still possible to achieve excellent results despite constraints in selection and support offered.

The issues of dosage and approach that comprise 'a lighter touch' are clearly important. The Director of Org C describes their approach as follows:

> "We have an attitude of 'benign neglect' towards our students. We provide all the essentials and a nurturing environment but then we let them go. We make it very clear we are there to assist and we won't judge them if they have difficulties or problems. It's also made clear that they should reach out early as its easier to solve little problems before they become big problems. If they do reach out, they are guaranteed a quick and appropriate response. We do sporadic check-ins and if we see them falter, we intervene. We will check in more regularly on those students who have experienced difficulties…. We are firm but fair and hold our students to account. We don't judge, but if students transgress there are consequences. We make sure they know that 'we have their backs'. We keep the workshops to a minimum and focus on building one on one relationships, building trust and knowledge and giving individualised advice, guidance and interventions."

THROUGHPUT

As said, the throughput rate is the proportion of all students in an award cohort who graduated, no matter how long they took to do so.

The data set includes all those who no longer received the organisation's support for any of a range of reasons – e.g. they left to do another course, they failed and the organisation excluded them etc. As noted above, however, it excludes those who left for another source of funding.

The throughput rate is calculated as the number of students who graduated divided by the number who started to be supported in a particular year – expressed as a percentage.

Overall throughput rate

The overall average throughput rate of all students in the data set was

- 74% in 2014; and
- 69% in 2015.

Throughput – by bursary support provider organisation

The throughput rates by organisation range from 48% to 100%.

Org A and the two Org C flagship programmes achieved the highest (88% - 100%) – while the throughput rates of Org C's three 'community' programmes ranged from 50% to 85%.

Org D and Org B had throughput rates ranging between 48% and 65%. These are below the averages of the study of 69% and 74%.

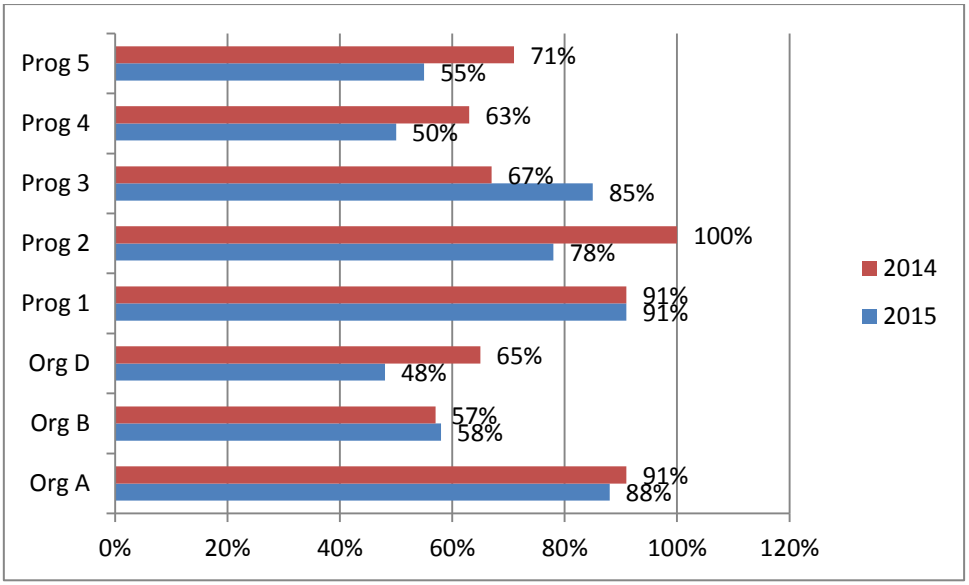

Figure 1: Throughput of students in award cohorts 2014 & 2015 - by participating organisation[11]

Table 3: Throughput of students in award cohorts 2014 & 2015 - by participating organisation[12]

	2014	2015
Org A	91%	88%
Org B	57%	58%
Org C		
Prog 1	91%	91%
Prog 2	100%	78%
Prog 3	67%	85%
Prog 4[13]	63%	50%
Prog 5	71%	55%
Org D	65%	48%

11 Each organisation's graduates as a proportion of the total cohort (excluding those who left for other funding).

12 Each organisation's graduates as a proportion of the total cohort (excluding those who left for other funding).

13 The Director of Org C suggests that the lower throughput rates for Prog 4 were to do with 'the fact that all the students study Engineering (which has low throughput rates as a discipline) and we are limited to selecting them from areas surrounding the mines which historically are very disadvantaged.; They added that they will 'use this information to try to influence our clients to allow students from these areas to study programmes of their choice and to select Engineering students on merit from a broader catchment area.'

Comparisons with national statistics: Overall throughput

While the DHET study does define **throughput**, their tables based on cohort studies clearly indicate that they are counting all students who started studying in a particular year in relation to the number who ultimately graduated. This is consistent with our definition – although the sector constructs cohorts of award year which, in a few cases, is not a student's first year of study.

To construct a possible comparison with national cohorts, we have used DHET cohorts 2010 and 2011 as they had had 7 and 8 years when the study was done. This would allow N+2 for six-year degrees (and for very long durations for those doing three-year degrees!).

Comparisons with NSFAS-funded students

Table 74 in the DHET report (reproduced below) shows that around two thirds of NSFAS-funded students graduated in 7 or 8 years: e.g.

- 2010 cohort: 66,4% graduated in 7 years and 69,2% in 8 years;
- 2011 cohort: 64,7% graduated in 7 years - after which data are not available.

Table 74: National total % dropout and graduates for students who received DHET NSFAS funding (contact and distance)[14]

Intake year	GRADUATES (%)							
(Year 1)	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
2005	13,4	33,4	46,3	52,9	56,7	59,1	61,2	63,0
2006	13,9	34,6	47,3	54,2	58,3	61,0	63,3	65,2
2007	13,1	33,4	46,9	54,3	59,0	62,1	64,5	66,2
2008	13,2	34,6	49,1	57,1	61,7	64,9	67,1	68,9
2009	14,6	36,8	51,2	59,4	64,0	66,8	68,9	
2010	17,2	39,7	54,4	62,2	66,4	69,2		
2011	15,5	38,3	52,8	60,3	64,7			
2012	16,1	39,3	53,6	61,3				
2013	17,8	44,0	58,9		Data not available			
2014	19,4	46,3						
2015	20,0							

Note: Data not available - requires data from 2018 academic year and onwards. 2018 data available October 2019

What is striking is how few students graduated in three or four years – though this is slightly mitigated by the inclusion of longer degrees in this data set, which means three or four years are not simply N and N+1.

- 2014 cohort: 19,4% graduated in three years and 46,3% in four years.
- 2015 cohort: 20,0% graduated in three years (after which no data were available).

14 DHET. (31 March 2019). *2000 to 2016 first time entering undergraduate cohort studies for public higher education institutions'*, p 141.

The table below shows comparisons between:

- our seven–year cohort (2014) with their 2010 (NSFAS-funded) cohort (66,4% graduated in seven years and 69,2% in eight years) ; and
- our six-year cohort (2015) with their 2011 (NSFAS-funded) cohort (64,7% graduated in seven years).

In summary half (8 of 16) of this study's cohorts were above the NSFAS-data average using these comparators; one was on par and the other seven were below.

Table 4: Throughput of students in award cohorts 2014 & 2015 compared with DHET NSFAS-funded cohorts of 2010 and 2011 - by participating organisation

	2014: DHET 2010 (66,4 - 69,2%)	2015: DHET 2011 (64,7%)
Org A	above	above
Org B	below	below
Org C		
Prog 1	above	above
Prog 2	above	above
Prog 3	on par	above
Prog 4	below	below
Prog 5	above	below
Org D	below	below

The other national comparisons are with fields of study, reported in that section below.

Throughput – by university

The next figure and table reflect throughput rates at each university, based on the combined statistics submitted for this study.

They are presented in Table 5 in descending order of the 2014 throughput rates. Results which are shaded in grey have more than 10 students in the total data set.[15] As the data with under 10 students can skew the results, they have been omitted from Figure 2 below (although included in Table 5 for completeness).

Tables in Appendices A and B present the numbers from which the data below were extracted.

The 'type' of university does not seem to be a determining factor in academic success.

[15] Ten universities had under 10 students (across all four organisations) in both 2014 and 2015 – being CPUT, MUT, NWU, SMU, ULimpopo, UNISA, UniVen, UniZul, VUT, WSU. Two other (TUT and CUT) had less than 10 students in 2015.

- Those with throughput rates above 70%[16] represent various kinds of HEIs: from universities of technology (DUT) to 'mid-level' universities (UKZN, UWC, UJ) to those which are historically 'elite' (Wits, RU and UCT).
- Those who did not have either cohort achieving over 70% throughput were equally varied – again from CUT and TUT - to UFS and NMU - to SU and UP.

While this suggests that the 'type' of university is not determining, there may be factors within the sub-cohorts (like a lot of students doing Engineering) that might be influencing these outcomes.

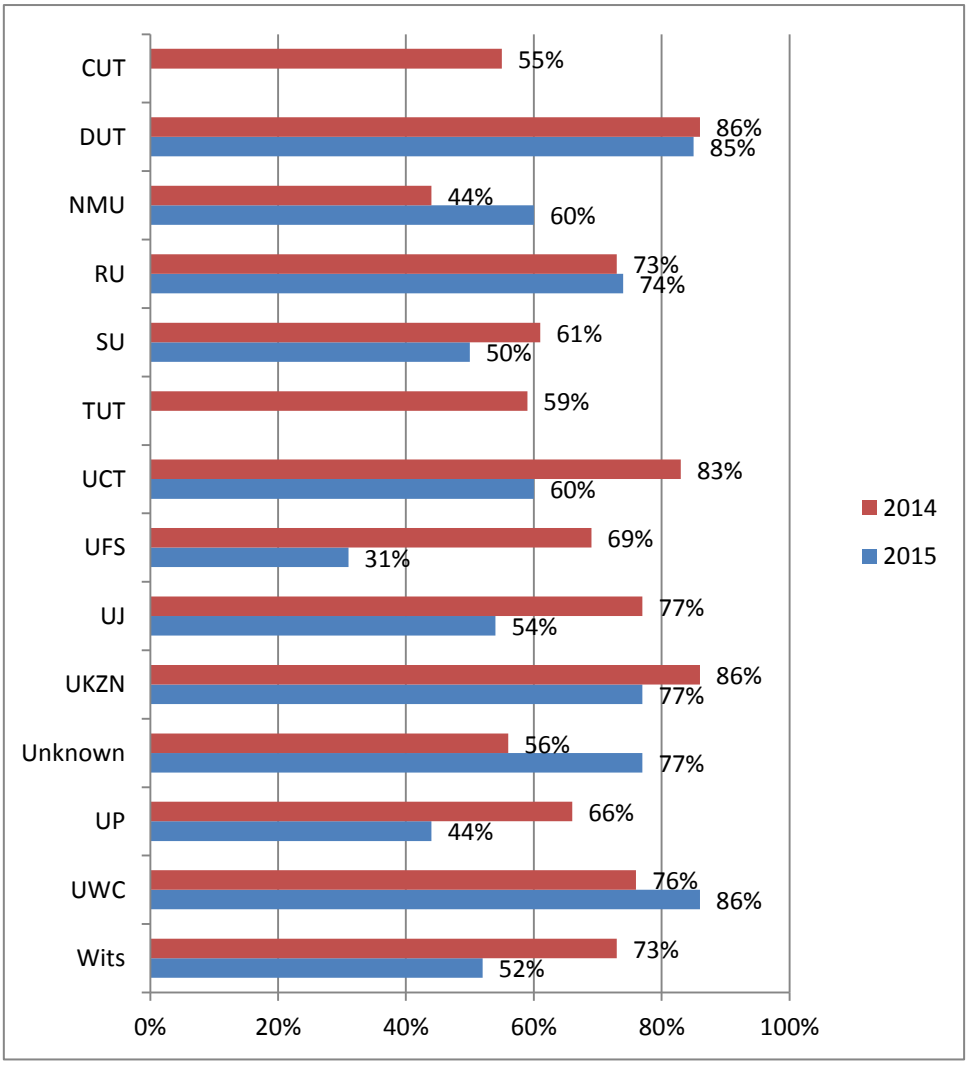

Figure 2: Throughput rates of all students in award cohorts 2014 & 2015 - by university[17]

16 We are using 70% as the highest NSFAS comparator.

17 Total of each university's graduates as a proportion of the total cohort (i.e. students supported by any of the four organisations) at that university (excluding those who left for other funding).

A closer examination of the causes for disparate throughput rates within a university - e.g. 31% and 69% at UFS – would need to be undertaken to understand the causes. It may well have something to do with fields of study.

Table 5: Throughput rates of all students in award cohorts 2014 & 2015 - by university[18]

(Results shaded in grey have more than 10 students in the total data set)

	2014	2015
MUT	100%	n/a
SMU	100%	50%
UniVen	100%	n/a
UniZul	100%	100%
WSU	100%	n/a
DUT	86%	85%
UKZN	86%	77%
UCT	83%	60%
UJ	77%	54%
UWC	76%	86%
RU	73%	74%
Wits	73%	52%
VUT	71%	n/a
UFS	69%	31%
UP	66%	44%
SU	61%	50%
TUT	59%	100%
Unknown	56%	77%
CUT	55%	33%
CPUT	50%	67%
NWU	50%	50%
ULimpopo	50%	100%
NMU	44%	60%
Unisa	29%	60%

The next tables 6 and 7 show the unevenness of throughput rates across bursary support provider organisations which is masked in the statistics above.
So for instance Org C's (and Org A's) throughput rates at UCT and Wits are higher than the average which is brought down by the throughputs of students supported by Org B and Org D.
We have not elaborated further, leaving it to the reader to find answers to their particular questions of the data in the tables 6 and 7.

18 Total of each university's graduates as a proportion of the total cohort (i.e. students supported by any of the four organisations) at that university (excluding those who left for other funding).

Table 6: Throughput at universities with a combined total of 10 or more students (supported by any of the four organisations): 2014 - by organisation (in descending order by throughput rate)

	Number in cohort	Number completed	Through-put rate	Org A		Org B		Org C: Prog 1		Org C: Prog 2		Org C: Prog 3		Org C: Prog 4		Org C: Prog 5		Org D	
				compl	thrgh	compl	thrgh	compl	thrgh	compl	thrgh	compl	thrgh	compl	thrgh	compl	thrgh	compl	thrgh
DUT	22	**19**	**86%**	5	100%	12	92%					2	50%						
UKZN	158	**136**	**86%**	48	87%	14	70%	40	95%			15	83%			0	0%	19	86%
UCT	52	**43**	**83%**			1	50%	25	93%	5	100%	2	100%	1	100%	2	67%	7	58%
UJ	44	**34**	**77%**	2	100%	3	33%	11	92%	1	100%	8	89%			9	82%		
UWC	21	**16**	**76%**			6	86%	7	78%			3	60%						
RU	11	**8**	**73%**	1	100%	2	50%	1	100%			0	0%					4	100%
Wits	70	**51**	**73%**	0	0%	8	42%	26	93%	4	100%			3	100%	0	0%	10	71%
UFS	16	**11**	**69%**	1	100%	4	67%	0	0%	1	100%							5	63%
UP	53	**35**	**66%**	1	100%	4	44%	17	81%	3	100%	1	25%			8	80%	1	20%
SU	33	**20**	**61%**	1	100%	4	57%	8	100%	1	100%	1	50%					5	38%
TUT	22	**13**	**59%**			5	83%					0	0%			8	57%		
Other	16	**9**	**56%**									8	57%			1	100%		
CUT	11	**6**	**55%**			5	71%							1	25%				
NMU	16	**7**	**44%**	2	100%	5	36%												

Table 7: Throughput at universities with a combined total of 10 or more students (supported by any of the four organisations): 2015 - by organisation (in descending order by throughput rate)

	Number in cohort	Number completed	Through-put rate	Org A		Org B		Org C: Prog 1		Org C: Prog 2		Org C: Prog 3		Org C: Prog 4		Org C: Prog 5		Org D	
				compl	thrgh	compl	thrgh	compl	thrgh	compl	thrgh	compl	thrgh	compl	thrgh	compl	thrgh	compl	thrgh
UWC	14	12	86%	2	100%	7	78%	1	100%			2	100%						
DUT	13	11	85%	3	75%	4	80%					4	100%						
UKZN	90	69	77%	27	90%	20	71%	5	83%			4	100%			3	100%	10	53%
Unknown	13	10	77%									10	83%						
RU	19	14	74%	3	75%	2	67%			2	100%	1	100%					6	67%
NMU	15	9	60%	1	100%	7	78%											1	20%
UCT	20	12	60%			2	67%			1	100%	2	100%					7	50%
UJ	24	13	54%	1	100%	7	54%					3	50%	1	50%	1	50%		
Wits	66	34	52%	1	100%	9	45%	1	100%	2	50%	1	50%			1	33%	19	54%
SU	22	11	50%			3	33%	1	100%	1	100%	2	100%					4	44%
UP	18	8	44%	1	100%	1	17%	2	100%	1	100%	2	100%					1	25%
UFS	13	4	31%			1	33%					1	100%					2	22%

Throughput – by field / faculty

These next sets of throughput data are about fields / faculties. These are necessarily approximate as universities divide courses and fields of study differently to one another.

As Arts, Built Environment and Management had small samples (under 10 students across all four organisations) the results are easily skewed. We have therefore left them out of Figure 3 but included them in Table 8 for completeness.

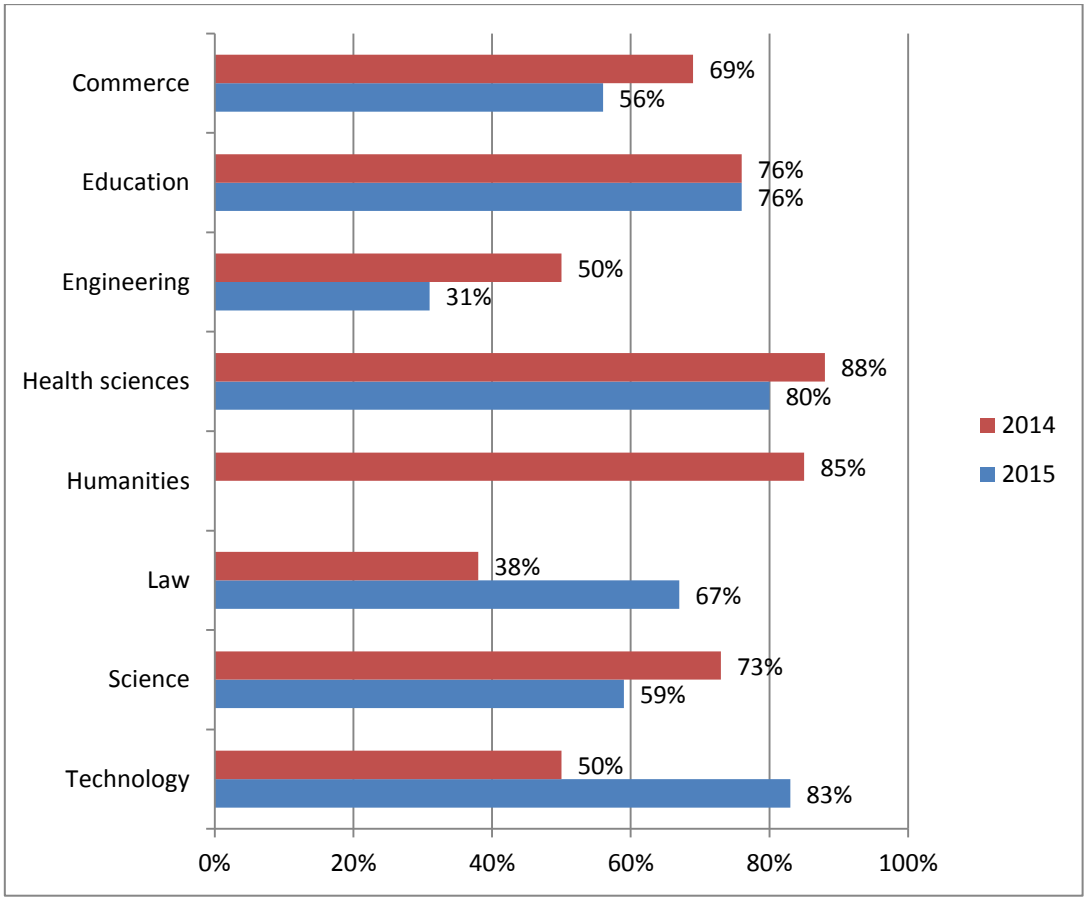

Figure 3: Throughput rates of all students in award cohorts 2014 & 2015 - by field/faculty

- Fields with average throughput rates over 70% are Health Sciences, Education, Humanities, Science (2014 only) and Technology (2015 only).
- Law and Engineering were lower than the others.

It is noticeable, however, that there are divergent throughput rates within a field – e.g. Engineering (31% and 50%); Law (38% and 67%) and Technology (50% and 83%). There are no immediately obvious reasons for this, however, and explanation would need further enquiry.

Table 8: Throughput rates of all students in award cohorts 2014 & 2015 - by field/faculty
(Results shaded in grey have more than 10 students in the total data set)

	2014	2015
Arts	100%	75%
Built Environment	0%	100%
Commerce	69%	56%
Education	76%	76%
Engineering	50%	31%
Health sciences	88%	85%
Humanities	85%	89%
Law	38%	67%
Management	80%	100%
Science	73%	59%
Technology	50%	83%

(Tables in Appendices C and D present the numbers from which the data above were extracted.)

The highest throughput rates were found in

- Health Sciences (88% or 184 of 208 and 85% or 77 of 91 students);
- Humanities (85% or 39 of 46 students);
- Science (73% or 66 of 90 students) as well as
- Technology (83% or 10 of 12).

Only Health Sciences had a throughput rate above 80% for both years, however. With the exception of Technology, all had sizeable numbers of students in the sub-cohorts.

The variety represented by these higher throughput rates does not allow for easy conclusions – but suggests that the following were not determining factors:

- The **number of registered students in the sub-cohort**, as they varied from 12 to 208.
- The **nature of the field** ('hard' compared with 'soft' sciences) – as Health Sciences, Science and Technology are included – but so is Humanities.
- The **selection criteria**. While not enough is known about the selection criteria of these students across universities, the general sense is that selection in Health Sciences is more rigorous than accessing courses in the Humanities.

Tables 9 and 10 compare these average throughput rates with each organisation's throughputs.

So, for example, in 2014 the average throughput rate for Health Sciences was 88%. With the nature of the field (and thus the selection criteria) constant:

- the average was exceeded by Health Sciences students in the two flagship Org C's programmes: Prog 2 (100%) and Prog 1 (92%) – as well as by Org B (94%) and Org A (91%).
- Health Sciences students in Org C's Prog 3 was below that average at 78%, as were those supported by Org D at 73%.
- Again the number of students was not a decisive factor.

Table 9: Throughput statistics of fields/faculties – by organisation: 2014
(only those fields/faculties with a combined total of 10 or more students supported by any of the four organisations - in descending order by throughput)

	Total students in cohort	Compl qual	Through-put	Org A		Org B		Org C: Prog 1		Org C: Prog 2		Org C: Prog 3		Org C: Prog 4		Org C: Prog 5		Org D	
				comp	thrgh	comp	thrgh	comp	thrgh	comp	thrgh	comp	thrgh	comp	thrgh	comp	thrgh	comp	thrgh
Health sciences	208	184	88%	69	91%	15	94%	61	92%	3	100%	7	78%			5	100%	24	73%
Humanities	46	39	85%			2	29%	34	94%			2	100%			1	100%		
Education	34	26	76%			5	63%	17	85%			4	67%						
Commerce	88	61	69%			15	58%			7	100%	22	79%			9	90%	8	47%
Science	90	66	73%			18	61%	23	85%	2	100%	7	64%			3	75%	13	72%
Engineering	74	37	50%			13	41%			1	100%	1	33%	5	63%	16	64%	1	33%
Technology	12	6	50%									1	33%			2	50%	3	60%
Law	26	10	38%			5	45%					2	18%			1	50%	2	100%

Table 10: Throughput statistics of fields/faculties – by organisation: 2015
(only those fields/faculties with a combined total of 10 or more students supported by any of the four organisations - in descending order by throughput)

	Total students in cohort	Compl qual	Through-put	Org A		Org B		Org C: Prog 1		Org C: Prog 2		Org C: Prog 3		Org C: Prog 4		Org C: Prog 5		Org D	
				comp	thrgh	comp	thrgh	comp	thrgh	comp	thrgh	comp	thrgh			comp	thrgh	comp	thrgh
Health Sciences	91	77	85%	44	88%	14	78%					7	88%			3	100%	9	75%
Technology	12	10	83%			3	100%					2	100%					5	71%
Education	17	13	76%			8	80%	3	75%			2	67%						
Law	15	10	67%			3	75%			1	100%	4	80%					2	40%
Science	64	38	59%			8	38%	7	100%	1	100%	4	100%	1	100%	2	100%	15	54%
Commerce	78	44	56%			11	58%			2	67%	16	70%			1	50%	14	45%
Engineering	54	17	31%			8	31%			1	50%	2	100%	1	33%	0	0%	**5**	29%

Comparisons with national statistics: throughput for undergraduate students by field

The cautions about the differences between the DHET dataset and those used in this study which undermine the ability to make direct comparisons - are pertinent here. As said above, they include

- the difference in the depths of the dataset of the two cohorts (ending in 2018 for DHET and 2020 for this study);
- the inclusion in the DHET study of distance students which lowers throughput rates – while the sector has very few students studying through distance;
- and, most obviously, the various forms of support students obtain from the bursary support provider organisations, which most other students do not get (besides those accessing focussed funding and support elsewhere).

In addition the DHET data used below comprises all (first-time entering, undergraduate) students and are not only those supported by NSFAS as presented above. They include those studying at distance.

Overview

The DHET report concludes the following:

> 'Considering the various fields of study, business studies students have the lowest throughput rates, followed by the humanities (excluding education) which are significantly higher. Education in general (covering all qualifications) has the next highest throughput rate, although lower that the Bachelor of Education on its own. Finally the science, engineering and technology fields have the highest throughputs of all fields of study.' [19]
>
> and
>
> 'The MBChB qualification, a 6 year degree programme for medical doctors, has very high throughput rates when compared to all other qualifications. … It is recognised that the entry requirements for the MBChB are demanding and only school leavers with excellent school leaving results gain access.' [20]

Bearing in mind that these DHET data are for all undergraduate students, the comparisons with this study's datasets are given below.

19 DHET (31 March 2019) '2000 to 2016 first time entering undergraduate cohort studies for public higher education institutions'' p 135.

20 DHET (31 March 2019) '2000 to 2016 first time entering undergraduate cohort studies for public higher education institutions'' p 135.

There are two comparisons:

- their narrative ranking of various fields; and
- their reported throughputs after five years of study (which we are comparing with our 2015 cohort) and after six years of study (which we are comparing 2014 cohort).

In short while this study's throughput rates for Education and Health Sciences are notionally comparable, the rest of this study's descriptions are diametrically opposite to those in the DHET dataset.

The actual DHET rates presented below are for five and six years of study – they obviously increase and reflect the narrative better when the when ten years are considered.

Following Table 11, three fields of study are compared with DHET data (which includes all students and is for ten years of studying, a duration which bursary support providers would not endure):

- MBChB
- Engineering and
- Natural and Physical Science.

The overall finding is that our throughput rates compare favourably with theirs, despite their drawing from their total data set.

Table 11: Comparisons of throughputs rates reported by DHET with those in this study. – by field of study

DHET throughput rates			This study's average throughput rates		
overall finding	**after** five years of studying	**after** six years of studying		**after** five years of studying (2015 cohort)	**after** six years of studying (2014 cohort)
'Business studies students have the lowest throughput rates'	22,1%	27,9%	This study does not have 'Business Studies' as a category. The closes is Management which has high throughput rates	100% – although the sample was under 20 students.	80%
'followed by the humanities'.	24,8%	28,9%	Humanities had among the highest throughput rates.	89%	85%
'Education in general (covering all qualifications) has the next highest throughput rate, although lower that the Bachelor of Education on its own.'	54,1%	57,8%	Throughput rates for education looks comparably similar	76%	76%
'Science, engineering and technology fields have the highest throughputs of all fields of study.'	Science: 56,3% Technology: ? Engineering: 43,8%[21]	Science: 62,8% Technology: ? Engineering: 54,1%	Our study shows variable outcomes for science and Technology Engineering throughput rates are generally poor	Science: 59% Technology: 83% Engineering: 31%	Science: 73% Technology: 50% Engineering: 50%
'The MBChB qualification, a 6 year degree programme for medical doctors, has very high throughput rates when compared to all other qualifications.'	not available	66,8%	Throughput rates for health sciences (generally) look comparably similar	85%	88%

[21] These rates increase with additional years . SO for instance after ten years Engineering has throughput rates of 65,4% (2008), 63,9% (2007) etc

MBChB

The DHET study looks only at the MBChB qualification whereas our statistics are for Health Sciences generally, which includes a range of health professions, not just the MBChB.

That said, this study's high throughput rates for Health Sciences echo the DHET's high throughput rate – and exceeds the commensurate number of study years as seen in the table above. In addition, the Org A's director has commented that some of the allied health professions get lower throughput rates than the MBChBs – suggesting that Org A's MBChBs would do better than the outcomes reported by DHET.[22]

Table 59: National total % dropout and graduates for the 6 year MBChB (Contact and Distance)

NATIONAL TOTAL: MBCHB

Intake year	GRADUATES (%)				
(Year 1)	Year 6	Year 7	Year 8	Year 9	Year 10
2000	69,7	81,2	85,8	88,2	89,7
2001	66,3	80,3	85,5	89,0	90,6
2002	75,4	84,3	89,0	91,9	92,7
2003	72,3	82,8	87,1	88,8	90,2
2004	71,5	82,6	86,7	88,4	89,7
2005	69,9	80,9	85,7	88,6	90,3
2006	72,6	83,3	88,3	90,5	91,9
2007	69,2	80,2	85,8	88,9	90,3
2008	68,1	79,5	86,3	89,6	90,9
2009	67,8	82,2	87,6	90,5	
2010	63,9	80,6	86,1		
2011	68,1	83,3	Data not available		
2012	66,8				

Note: Data not available - requires data from 2018 academic year and onwards. 2018 data available October 2019

22 DHET (31 March 2019) '2000 to 2016 first time entering undergraduate cohort studies for public higher education institutions'' p 104 - 105.

Engineering

While the DHET narrative lauds engineering as having the highest throughput rates, the outcomes are only just higher than some of our poorest throughputs. For instance their 43,8% (five years of study) and 54,1% (six years of study) compares favourably with this study's (poor) 2014 throughput rate of 50% (six years of study).

The 31% average throughput achieved in this study by the 2015 cohort, however, indicates that this is one of this study's poorer outcomes.

Table 61: National total % dropout and graduates for 3 and 4 year engineering qualifications (contact and distance)

NATIONAL TOTAL: 3 & 4 Year Quals

Intake year	GRADUATES (%)							
(Year 1)	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
2000	5,5	17,2	27,3	33,1	38,2	41,7	44,4	46,8
2001	4,9	17,7	28,2	36,5	41,4	44,8	47,6	49,8
2002	5,0	19,1	31,5	40,3	46,0	49,9	52,8	55,1
2003	5,5	21,1	34,9	44,4	50,2	53,8	56,8	58,7
2004	5,5	20,6	35,2	45,5	51,7	56,1	59,0	61,8
2005	5,0	19,6	33,2	42,6	48,0	51,8	55,0	57,5
2006	5,8	21,1	34,8	44,7	50,8	55,2	58,9	61,8
2007	6,1	21,3	35,4	45,3	52,6	57,7	61,5	63,9
2008	5,6	20,6	35,4	46,3	54,0	58,7	62,4	65,4
2009	4,5	20,5	36,5	48,8	56,9	61,7	65,7	
2010	5,1	22,0	38,8	50,4	57,8	63,4		
2011	5,3	23,2	40,8	52,6	59,7			
2012	5,6	24,9	42,2	54,1				
2013	6,5	26,1	43,8	Data not available				
2014	6,4	25,9						
2015	6,8							

Note: Data not available - requires data from 2018 academic year and onwards. 2018 data available October 2019

Comment

A table drawn from Org B data (only) indicated that the field from which most students had left for other funding was Engineering: this was 31% of all students who left for other support. (Health Sciences followed, accounting for 16% of those who left.) This suggest that Org B may also serve as an invisible stepping stone to other funding.

As these students are not included in this dataset, perhaps this contributes to a downward skewing in this field?

Natural and physical science

Again while the DHET narrative lauds physical science as having relatively high throughput rates, they are comparable with our poorer throughputs (and lower than the better throughput of one year):

After five years of study DHET reported 56,3% throughput which is similar to our 2015 throughput of 59%; and after six years their 62,8% is less than our 73% (2014 cohort).

Table 64: National total % dropout and graduates for 3 and 4 year life and physical science qualifications (contact and distance)

NATIONAL TOTAL: 3 & 4 Year Quals

Intake year	GRADUATES (%)							
(Year 1)	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
2000	14,6	33,6	45,4	53,2	57,8	60,4	62,2	63,9
2001	15,8	34,5	45,7	54,3	58,3	61,5	63,2	64,6
2002	15,7	35,5	47,8	55,9	60,3	62,7	64,5	65,9
2003	16,1	37,5	49,9	57,8	62,0	64,4	66,5	67,7
2004	16,4	37,8	51,7	60,1	64,6	67,4	69,1	70,6
2005	14,3	36,7	50,4	59,0	64,1	66,9	69,1	70,9
2006	16,8	38,4	52,6	61,1	66,2	69,3	71,7	73,6
2007	15,8	36,8	51,1	60,2	65,9	69,2	71,8	73,4
2008	15,4	35,1	50,0	60,1	65,6	69,1	71,5	73,2
2009	15,4	35,8	50,8	60,7	66,8	70,2	72,5	
2010	15,3	37,5	53,4	62,4	67,7	70,8		
2011	16,6	39,9	55,9	64,8	69,7			
2012	17,3	39,5	54,3	62,8				
2013	18,0	41,3	56,3		Data not available			
2014	20,0	43,8						
2015	21,2							

Note: Data not available - requires data from 2018 academic year and onwards. 2018 data available October 2019

TIME TO COMPLETION

There is a commonly held theory that taking one extra year to complete a qualification is completely acceptable – and the benefits of this are seen in these data.

Figure 4 shows that of the graduates from award cohorts 2014 and 2015:

- 64% and 69% graduated in minimum time (N) – while
- over 90% did so if given another year (N+1) – an average of 91% in 2014 and 97% in 2015. (Only Prog 3 had an average progression rate slightly lower than this – being 85%.)

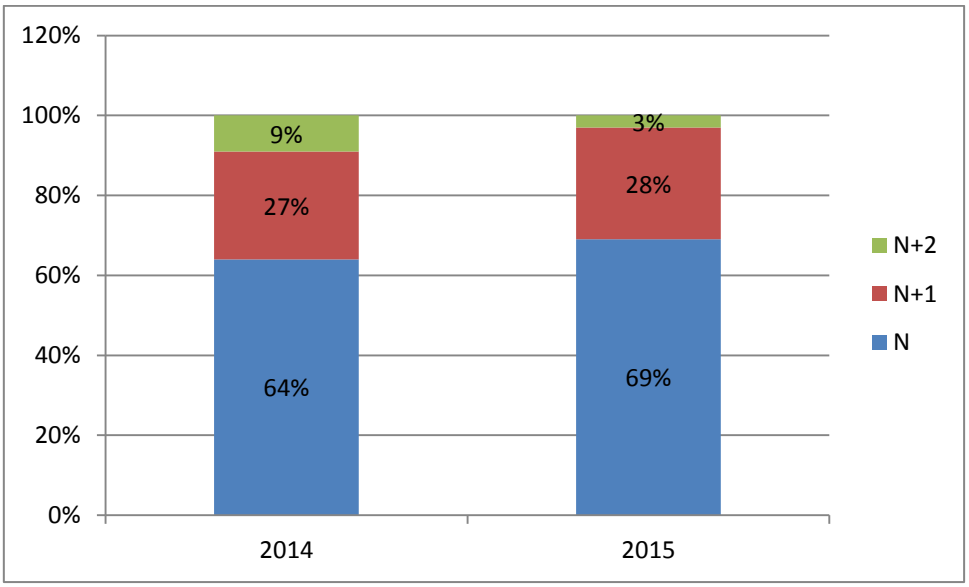

Figure 4: Overview: Time taken to complete qualifications – graduates from 2014 & 2015 award cohorts of three organisations

Table 12: Time taken to complete qualifications – by cohort year and organisation: 2014

	Org A	Org B	Org C					% of students who completed in various times
			Prog 1	Prog 2	Prog 3	Prog 4	Prog 5	
2014								
Total no. of students			**135**	**15**	**46**	**5**	**37**	
N	**69**	**79**	85%	67%	52%	60%	59%	**64%**
total: N plus N+1	71%	51%	96%	100%	80%	80%	**92%**	**91%**
N+2	97%	92%	4%	0%	20%	20%	8%	**9%**
N+3	1%	8%	0	0%	0	0	0%	**0%**
2015	1%	1%						
Total no. of students			**10**	**7**	**40**	**2**	**6**	
N	**44**	**68**	100%		70%	100%	67%	69%
total: N plus N+1	80%	69%	100%	100%	**90%**	**100%**	**100%**	97%
N+2	93%	**97%**			10%			3%
N+3	7%	3%						
% of students completed in N+1		0%	**98%**	**100%**	**85%**	**90%**	**96%**	**94%**
	95%	**95%**						

(Statistics are for only three of the four organisations as Org D did not submit statistics for this section.)

REASONS FOR LEAVING PREMATURELY

Students can either withdraw from being supported ('student driven') – or the bursary organisation or university can exclude them ('organisation driven' or 'university driven').

Any of these three reasons can be motivated by financial, personal or academic reasons. So, for instance, a student can decide to withdraw (from receiving the organisation's support and / or from university altogether) for financial reasons (they cannot afford any shortfalls that are not funded); or personal reasons (family /relationship issues intervene, they are not healthy/well) or for academic reasons (they do not like the course; they find it too hard).

On the other hand the bursary support provider organisation may exclude them from continued support as the organisation no longer has enough funding / funding for that particular university / field ('financial'); censure the student for their personal behaviour ('personal'); or they do not meet the required minimum success in order to continue to be supported ('academic').

Universities typically exclude students for academic or financial reasons (unpaid fee accounts) – and only occasionally for personal reasons.

Overview

282 of the 946 original students (30%) were no longer supported by these organisations if/when they graduated – being

- 26% (153 students) in 2014 (cohort of 590); and
- 36% (129 students) in 2015 (of cohort of 356).

(This excludes those who left for other funding.)

In terms **of the drivers** of students no longer being supported, Table 13 below shows that

- the bursary support provider organisations were the biggest drivers of support being withdrawn (no longer being given) (62%);
- followed by the students themselves (21%).

While only 5% were reported to having been excluded by the universities, there will certainly have been students who were excluded by both the organisation and the university within the 51% reported as organisational exclusions.

In addition – and importantly – organisations will have excluded students following their donors' rules. In many cases this is NSFAS, given that some/most include NSFAS funding as part of their financial package – but equally rules are imposed by private/commercial donors which are sometimes even stricter than NSFAS.

In terms **of the causes** of students no longer being supported,

- the main cause was academic (71%);
- followed by personal reasons (16%).

Nobody was no longer supported for financial reasons – either their own or an organisation's.

Table 13: The drivers and causes for students no longer being supported by an organisation

	Student Driven	Organisation Driven	University Driven	Unknown	total	
Financial	0	0	0	0	= 0	0%
2014	0	0	0	0		
2015	0	0	0	0		
Personal	23	23	0	0	= 46	16%
2014	12	12	0	0		
2015	11	11	0	0		
Academic	35	149	16	0	= 200	71%
2014	28	67	12	0		
2015	7	82	4	0		
Unknown	0	0	0	35	= 35	13%
2014	0	0	0	21		
2015	0	0	0	14		
	=58	=172	=16	=35	281	
	21%	62%	5%	12%		

The variations across organisations are seen in Figure 5 and Table 14.

- Org B and Org D actively exclude students significantly more than Org A and Org C do.
- Org B and Org D initiated the exclusion of 75% and 86% of all students who were no longer supported by them while this was 54% for Org A. Org C initiated 13% – 50% of those who were no longer supported by them.
- Students were the main initiators of withdrawal from Org C's support – being 47% - 80% across the five programmes.

So the organisations with the better throughputs were the lower initiators of exclusion of students – perhaps not surprising as most of the exclusions were for academic reasons.

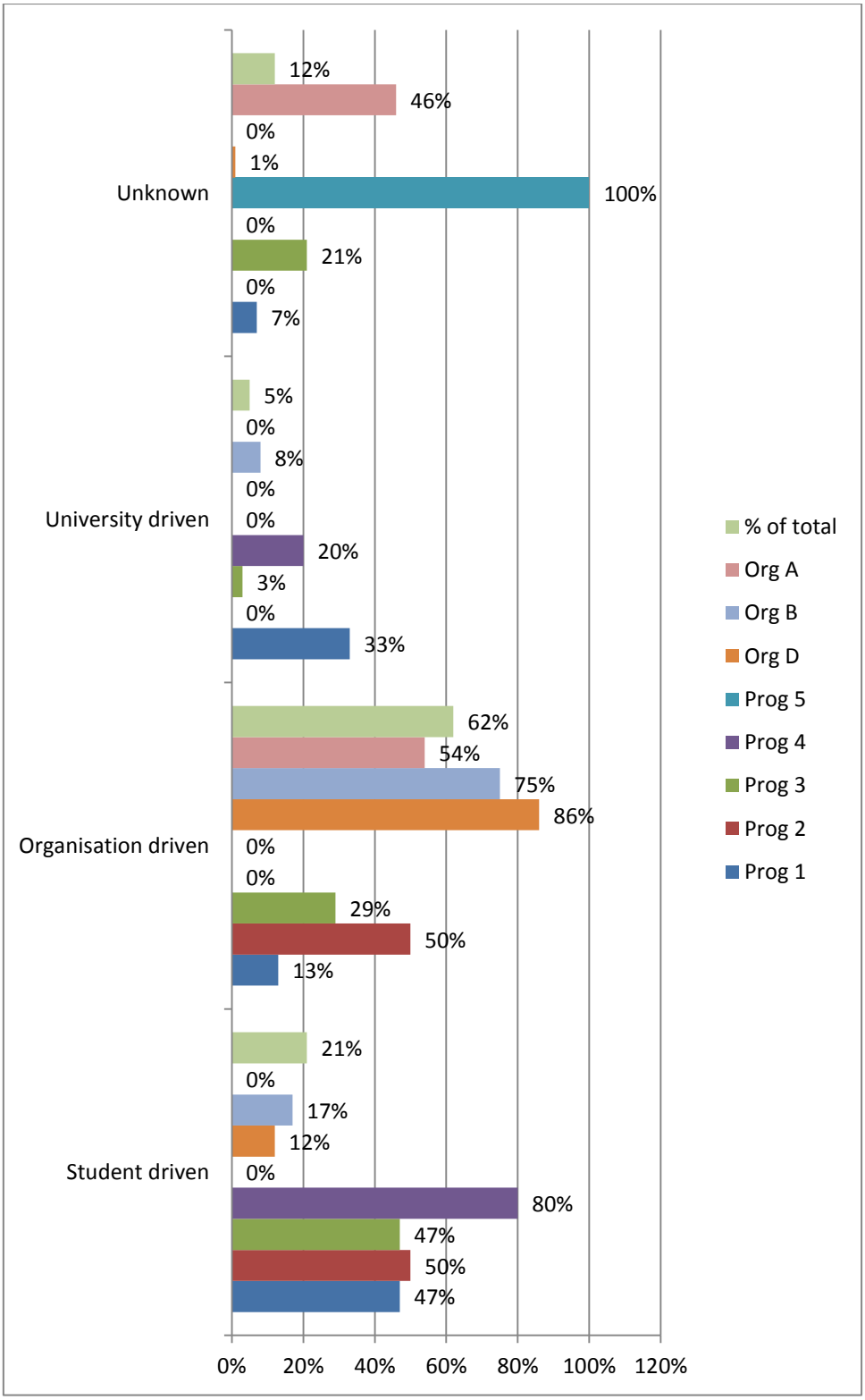

Figure 5: Drivers of reasons for students no longer being supported by an organisation - by organisation

Table 14: Drivers of reasons for students no longer being supported by an organisation - by organisation

	Org A		Org B		Org C										Org D		total	
					Prog 1		Prog 2		Prog 3		Prog 4		Prog 5					
	n	% of total	n	% of total	n	% of total	n	% of total	n	% of total	n	% of total	n	% of total	n	% of total		% of total
TOTAL	**13**		**108**		**15**		**2**		**37**		**5**		**20**		**81**		**281**	
Student driven: total	**0**	**0%**	**18**	**17%**	**7**	**47%**	**1**	**50%**	**18**	**47%**	**4**	**80%**	**0**	**0%**	**10**	**12%**	**58**	**21%**
2014	0		10		6		0		14		2		0		8		40	
2015	n/a		8		1		1		4		2		0		2		18	
Organisation Driven: total	**7**	**54%**	**81**	**75%**	**2**	**13%**	**1**	**50%**	**11**	**29%**	**0**	**0%**	**0**	**0%**	**70**	**86%**	**172**	**62%**
2014	7		44		2		0		8		0		0		18		79	
2015	n/a		37		0		1		3		0		0		52		93	
University Driven: total	**0**	**0%**	**9**	**8%**	**5**	**33%**	**0**	**0%**	**1**	**3%**	**1**	**20%**	**0**	**0%**	**0**	**0%**	**16**	**5%**
2014	0		5		5		0		1		1		0		0		12	
2015	n/a		4		0		0		0		0		0		0		4	
Unknown: total	**6**	**46%**	**0**	**0%**	**1**	**7%**	**0**	**0%**	**7**	**21%**	**0**	**0%**	**20**	**100 %**	**1**	**1%**	**35**	**12%**
2014	0		0		1		0		4		0		15		1		21	
2015	6		0		0		0		3		0		5		0		14	

PROGRESSION

As said, the year-on-year progression rate is the proportion of all students who are being supported by an organisation in any given year who, at the end of that year, pass sufficient courses to progress to the next academic year – whether or not they are carrying modules. The progression rate includes students who graduate.

The main reason that the progression rate is necessarily higher than the throughput rate is that it does not include students who have been excluded from the organisation's support the previous year for any of the range of reasons reviewed above.

Average progression rate

The average progression rate across all four organisations, for the three years 2017-2019, was 87%.

The three community programmes each had instances of progression rates in the 70%s. The lowest average progression rate for all organisations was 75% (Prog 5).

Table 15: Progression rates for 2017 – 2019 – by organisation (listed alphabetically)

	2017	2018	2019	Average across 3 years
Org A	91%	93%	93%	**92%**
Org B	85%	86%	84%	**85%**
Org C				
Prog 1	95%	88%	94%	**93%**
Prog 2	88%	88%	84%	**87%**
Prog 3	83%	78%	88%	**82%**
Prog 4	86%	73%	90%	**83%**
Prog 5	76%	71%	81%	**75%**
Org D	86%	90%	88%	**88%**
Average across all four orgs	**86%**	**83%**	**88%**	**87%**

The data which produced these rates are given in Appendix E.

Progression rates – by university

This analysis has characterised some HEIs as 'mid-level' and some as '(historically) more elite' to see if there were any notable trends.

The higher progression rates of 86% to 94% were found in universities that could be characterised as 'mid-level', namely SMU, UKZN, CPUT, UWC, DUT.

The progression rates of the '(historically) more elite' universities — like Rhodes, Wits, UCT, Stellenbosch and Pretoria — were clustered next from 80% to 88%.

A second set of 'mid-level' universities had average progression rates between 80% and 83%: being TUT, UFS, NWU, NMU, and UJ while the lowest progression rates (below 70%) were found in two universities of technology - CUT and VUT - as well as the distance HEI UNISA.

While we cannot know conclusively, there is a sense that the 'mid-level' universities may be more accessible and hospitable; that the large numbers of non-elite students, making is easier for students to adapt at these institutions. In addition it is possible that these universities are better geared to supporting a diversely educated student population – though the numbers which require support can be overwhelming.

Whether or not there are different exit standards at the 'mid-level' compared with the 'historically elite' universities is not known.

(HEIs which had 100% progression rates had very small student numbers / samples, making their results too skewed from which to generalise.)

Table 16: Progression rates for 2017 – 2019
– by university (in descending order by progression rates)
(Results shaded in grey have more than 10 students in the total data set)

	total no. started	average % prog	2017		2018		2019	
			no. started	% prog	no. started	% prog	no. started	% prog
UniZul	5	100%	3	100%	2	100%	0	n/a
WSU	3	100%	1	100%	1	100%	1	100%
University of Limpopo	8	100%	2	100%	4	100%	2	100%
SMU	90	99%	23	100%	32	97%	35	100%
UKZN	1142	94%	399	93%	406	93%	336	96%
Other	79	94%	31	97%	33	88%	15	100%
CPUT	87	92%	33	85%	30	96%	24	96%
RU	192	88%	67	93%	68	93%	57	77%
UWC	171	88%	60	87%	51	84%	60	93%
DUT	97	86%	42	81%	31	87%	24	92%
SU	247	86%	92	89%	83	83%	72	86%
UCT	333	85%	128	90%	114	79%	91	87%
Wits	635	85%	231	83%	217	84%	186	90%
MUT	6	83%	3	67%	1	100%	2	100%
TUT	77	83%	26	92%	27	78%	24	79%
UFS	329	83%	88	80%	97	93%	144	78%
NWU	39	82%	17	88%	15	80%	7	71%
NMU	228	80%	77	70%	66	88%	85	84%
UJ	271	80%	83	85%	78	74%	110	81%
UP	311	80%	110	77%	102	79%	99	83%
CUT	75	67%	18	78%	25	76%	32	53%
UNISA	17	65%	9	44%	7	86%	1	100%
VUT	14	57%	9	33%	4	100%	1	100%
UNIVEN	2	50%	1	0%	1	100%	0	n/a

Comparisons with throughput rates

While throughput rates are the ultimate measure of success, not all those who do not complete their degrees with a bursary support provider have withdrawn for negative academic reasons – making the year-on-year progression rates another interesting piece of information when deciding about universities at which students are most likely to succeed.

The table below shows dramatic differences between progression rates and throughput rates of most HEIs - except , curiously, for DUT.

So while high proportions of students are passing each year, there are quite steep differences between these and the ultimate throughput rate. Presumably the cumulative erosion of a cohort over years produces these lower throughput rates.

The reasons for leaving, as given above, are instructive: 71% being for academic reasons.

Table 17: Progression rates for 2017 – 2019 and throughput rates for 2014 & 2015 award cohorts – by university (in descending order by progression rates)
(for only HEIs with more than 10 students in the total data set)

	Average progression rate 2017 – 2019	Throughput for 2014 cohort	Throughput for 2015 cohort
SMU	99%	under 10 students	under 10 students
UKZN	94%	86%	77%
CPUT	92%	under 10 students	under 10 students
RU	88%	73%	74%
UWC	88%	76%	86%
DUT	86%	86%	85%
SU	86%	61%	50%
UCT	85%	83%	60%
Wits	85%	73%	52%
TUT	83%	59%	too few
UFS	83%	69%	31%
NWU	82%	under 10 students	under 10 students
NMU	80%	44%	60%
UJ	80%	77%	54%
UP	80%	66%	44%
CUT	67%	55%	under 10 students
UNISA	65%	under 10 students	under 10 students
VUT	57%	under 10 students	under 10 students

Progression rates – by field

There are again no neat findings in relation to progression rates of various fields of study.

As with the fields with higher throughput rates, there is again a combination of 'hard' and 'soft' sciences among the higher progression rates (85% - 93%) namely Health Sciences and Science, and Education, Humanities and the Arts.

Commerce, Management and Technology had slightly lower progression rates (77% - 84%) as did the professions: Law (84%), Engineering (78%) and, arguably, Built Environment (69%).

Table 18: Progression rates for 2017 – 2019 and throughput rates for 2014 & 2015 award cohorts – by field

(in descending order of average progression)

	total no. started	**average % prog**	**2017**		**2018**		**2019**	
			no. started	% prog	no. started	% prog	no. started	% prog
Health sciences	1472	93%	418	94%	542	94%	512	93%
Education	204	91%	71	86%	66	94%	67	92%
Humanities	101	87%	42	88%	27	89%	32	85%
Arts	73	86%	32	91%	27	85%	14	78%
Science	642	86%	145	84%	250	87%	247	86%
Commerce	616	84%	177	81%	240	83%	199	86%
Law	178	84%	46	87%	61	84%	71	83%
Management	25	80%	8	88%	11	64%	6	100%
Engineering	562	78%	149	77%	209	78%	204	78%
Technology	110	77%	14	71%	47	79%	49	78%
Built Environment	29	69%	8	63%	14	71%	7	71%
Unknown	1	0%	1	0%	0	n/a	0	n/a

(Org D did not submit faculty analysis for 2017 – but did for 2018 and 2019.)

Comparisons with throughput rates

The high progression rates of Health Sciences (93%) echoes the high throughput rates (85% and 88%) – as do the consistently low throughput rates of law (38% and 67%) and Engineering (50% and 31%) which have average progression rates of 84% and 78%.

Table 19: Throughput and progression rates – by field

(Throughput rates shaded in grey have more than 10 students in the data set)

	average progression rate	throughput 2014	throughput 2015
Health sciences	93%	88%	85%
Education	91%	76%	76%
Humanities	87%	85%	89%
Arts	86%	100%	75%
Science	86%	73%	59%
Commerce	84%	69%	56%
Law	84%	38%	67%
Management	80%	80%	100%
Engineering	78%	50%	31%
Technology	77%	50%	83%
Built Environment	69%	0%	100%
Unknown	0%		

CONCLUSION

The substantive findings are as follows:

- The average throughput rates across the dataset were 74% in 2014 and 69% in 2015.
- Half of the award cohorts (from five of the eight projects/ organisations) achieved throughput rates higher than the NSFAS comparator (of 66,4% - 69,2% for the 2014 cohort and 64,7% for the 2015 cohort).
- Allowing an extra year for completion substantially increases the throughput rates – from 64% to 91% (2014) and 69% to 97% (2015).
- The average progression rate across all four organisations (2017-2019) was 87%.
- As expected the progression rates are consistently higher than throughput rates – although the relationship between them, if any, is not clear.

A significant finding is that success is possible with the provision of light psycho-social support and light funding. The other factors that might be supporting these successes, however, need to be further understood before any generalisations are made.

Two general findings are that

- variables confound easy comparison between outcomes; and
- reasons for outcomes are invariably complex and not readily obvious. They frequently remain opaque, with initial causes being countered by contradicting evidence.

As the main interest in this exercise was to ascertain how organisations' academic outcomes relate to one another and to national statistics however, the following recommendation is nonetheless made:
the above caveats notwithstanding, it is recommended that throughput rates and year-on-year progression rates are calculated annually as per the guidelines developed for this research project by as many organisations in the NBSPF as would like to do so; that comparisons be made with one another and with national statistics where these are available to stimulate discussion about practices and influencing factors.

Answers to the types of questions listed on page 5, however, need dedicated enquiries, with parameters established for each enquiry so that the level of detail is available from which to develop meaningful answers.

APPENDICES

Appendix A: Throughput by university – across all four organisations: 2014

(Results which are shaded in grey have more than 10 students in the data set)

	Total students in cohort	Completed qualification	Throughput
CPUT	8	4	50%
CUT	11	6	55%
DUT	22	19	86%
MUT	3	3	100%
NMU	16	7	44%
NWU	10	5	50%
RU	11	8	73%
SMU	5	5	100%
SU	33	20	61%
TUT	22	13	59%
UCT	52	43	83%
UFS	16	11	69%
UJ	44	32	73%
UKZN	158	136	86%
ULimpopo	2	1	50%
Unisa	7	2	29%
UniZul	2	2	100%
UP	53	35	66%
UWC	21	16	76%
VUT	7	5	71%
Wits	70	51	73%
WSU	1	1	100%
UniVen	1	1	100%
Unknown/ other	16	9	56%

Appendix B: Throughput by university – across all four organisations: 2015

(Results which are shaded in grey have more than 10 students in the data set)

	Total students in cohort	Completed qualification	Throughput
CPUT	6	4	67%
CUT	3	1	33%
DUT	13	11	85%
MUT	0	0	n/a
NMU	15	9	60%
NWU	4	2	50%
RU	19	14	74%
SMU	2	1	50%
SU	22	11	50%
TUT	3	3	100%
UCT	20	12	60%
UFS	13	4	31%
UJ	24	13	54%
UKZN	90	69	77%
ULimpopo	1	1	100%
UNISA	5	3	60%
UniZul	5	5	100%
UP	18	8	44%
UWC	14	12	86%
VUT	0	0	n/a
Wits	66	34	52%
WSU	0	0	n/a
Univen			n/a
Unknown/ other	13	10	77%

Appendix C: Throughput by field/ faculty – across all four organisations: 2014

(Results shaded in grey have more than 10 students in the total data set)

	Total students in cohort	Completed qualification	Throughput
Arts	5	5	100%
Built Environment	1	0	0%
Commerce	88	61	69%
Education	34	26	76%
Engineering	74	37	50%
Health sciences	208	184	88%
Humanities	46	39	85%
Law	26	10	38%
Management	5	4	80%
Science	90	66	73%
Technology	12	6	50%
Unknown	1	0	0%

Appendix D: Throughput by field/faculty – across all four organisations: 2015

(Results shaded in grey have more than 10 students in the total data set)

	Total students in cohort	Completed qualification	Throughput
Arts	8	6	75%
Built Environment	1	1	100%
Commerce	78	44	56%
Education	17	13	76%
Engineering	54	17	31%
Health Sciences	91	77	85%
Humanities	9	8	89%
Law	15	10	67%
Management	3	3	100%
Science	64	38	59%
Technology	12	10	83%
Unknown	4	0	0%

Appendix E: Progression rates of all four organisations: 2017 - 2019

	Org A	Org B	Org C: Prog 1	Org C: Prog 2	Org C: Prog 3	Org C: Prog 4	Org C: Prog 5	Org D	TOTAL
2017									
Total studying	243	483	87	85	138	22	54	**443**	1555
No. progressed	220	409	83	75	114	19	41	**380**	1341
% progressed	91%	85%	95%	88%	83%	86%	76%	**86%**	86%
2018									
Total studying	252	489	33	88	104	22	62	**445**	1495
No. progressed	233	422	29	77	81	16	44	**399**	1301
% progressed	93%	86%	88%	88%	78%	73%	71%	**90%**	87%
2019									
Total studying	232	511	16	62	48	20	43	**477**	1409
No. progressed	215	429	15	52	42	18	35	**420**	1226
% progressed	93%	84%	94%	84%	88%	90%	81%	**88%**	87%
Total 2017-2019									
Total studying	727	1483	136	235	290	64	159	1365	4459
No. progressed	668	1260	127	204	237	53	120	1199	3868
% progressed	92%	85%	93%	87%	82%	83%	75%	88%	87%