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FACTSHEET

THROUGHPUT RATE OF TVET COLLEGE STUDENTS (NATIONAL CERTIFICATE VOCATIONAL) FOR THE PERIOD 2017 TO 2019

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1. BACKGROUND

The National Certificate (Vocational) (NC(V)), which is a three-year qualification, was introduced by the then Department of Education at public Technical and Vocational Education and Training (TVET) colleges in 2007 to respond to the priority skills demands of the South African economy. The NC(V) continues to be offered by TVET Colleges; however, many stakeholders have expressed concern about the low numbers of students completing the full NCV qualification within expected time frames.

Reliable and credible information about throughput rates of TVET College students enrolled in NC(V) programmes has been hard to come by for many years owing to the unavailability of unit level student enrolment data. Since 2016, however, the Department of Higher Education and Training (DHET) began collecting unit level enrolment data from TVET colleges. The availability of such data has now made it possible to calculate the throughput rates of NC(V) students with better reliability and confidence. The Department published its first fact sheet on TVET College throughput rates (NCV) in 2021.

Information about throughput rates is crucial to understanding, among others, the level of efficiency of an education system. Throughput rates provide insights into how quickly or slowly students move through the system. The slower the movement of students from enrolment to completion, the greater the cost to the system. Moreover, the slow movement of students through the system (which is caused largely through high levels of repetition) creates a bottleneck in the system, resulting in constraints to the admission of the number of new entrants to TVET colleges. As the number of students repeating courses overlap with new student enrolments, entry into required courses become harder for all to access. Bottlenecks can cause both the student and the institution to incur increased educational costs, waste time, and delay completion. High throughput rates impede student progress, impact negatively on teaching and learning, increase costs, and impacts negatively on the ability of institutions to facilitate student success. Delays in the completion of qualifications entail a waste of resources both at individual as well as at collective levels. They also deprive the economy of adequate numbers of new graduates. The National Development Plan¹ recognises that throughput rate is “a critical indicator of performance” of the TVET College system and sets an ambitious target thereof.

2. DEFINITION OF THROUGHPUT RATE

Throughput rate is defined as the rate at which a student cohort successfully completes a qualification within the stipulated timeframe for that qualification². For the purposes of this fact sheet, the throughput rate is defined as the number of students who completed NCV Level 4 in 2019 within expected time frames (namely, 3 years), expressed as a percentage of the number of students who enrolled for NCV Level 2 (in 2017).

3. PURPOSE

The purpose of this fact sheet is to provide information and insights into the throughput rate of TVET college students enrolled in NC(V) programmes. Such insights can be drawn upon to inform interventions to address relevant challenges and to improve accountability in the system.

¹ NPC (2011) *National Development Plan: Vision for 2030*. National Planning Commission

² DHET (2019). Data Dictionary

4. METHODOLOGY USED TO CALCULATE THROUGHPUT RATE

The throughput rate is calculated by dividing the total number of students who completed NC(V) Level 4 in year 3 (2019), by the total number of students who enrolled for NC(V) Level 2 in year 1(2017), multiplied by 100. This calculation is based on a comparison of the same cohort of students who enrolled in year 1 and who completed in year 3. This Fact Sheet used the TVET Management Information System (TVETMIS) database as the data source for enrolment data, and the DHET Examinations database as the data source for completion data.

5. LIMITATIONS

- The South African Identity Number (ID) was used as a unique identifier to merge the TVETMIS and Examinations datasets; consequently, records with passport numbers were excluded from the analysis. This means that non-South African students were excluded from the analysis.
- “Exam-only³” students who completed NCV Level 4 in year 3 were excluded from the analysis because these students are not counted as part of the cohort who enrolled in 2017.

6. SUMMARY OF FINDINGS

- In the 2017 academic year, 61 045 students enrolled for the NC(V) Level 2 programme. In 2019, 6 328 students of this cohort completed the NCV Level 4. Therefore, 10.4% of all students enrolled in the NC(V) 2 programme in 2017 completed this qualification within the expected time frame. The overall throughput rate of the 2017 NCV Level 2 student cohort was therefore 10.4%. (Table 1)
- The NC(V) Level 2 throughput rate for females is almost twice as that for males and 2.4 percentage points higher than the overall throughput rate of 10.4 %. (Table 2)
- The highest throughput rate was in the *Education and Development* programme, which was 10.9 percentage points higher than the overall throughput rate. The second highest throughput of students was in the *Primary Health* programme, which was 7.5 percentage points higher than the overall throughput rate. (Table 3)
- The lowest throughput rate was in the *Process Plant Operations* programme, which was 7.2 percentage points lower than the overall throughput rate. The second lowest throughput rate for the 2017 NC(V) Level 2 cohort was in the *Information Technology and Computer Science* programme, which was 6.4 percentage points lower than the overall throughput rate. (Table 3)
- TVET colleges with the highest throughput rate for the 2017 NCV Level 2 cohort were Waterberg TVET College (21.4 %), Gert Sibande TVET College (19.0 %), Northlink TVET College (17.4%) and Mopani South-East TVET College (14.8%). (Table 4)
- TVET colleges with the lowest throughput rate for the 2017 NC(V) Level 2 cohort were Central Johannesburg TVET College (2.0%), Flavius Mareka TVET College (2.1%) and Northern Cape Rural TVET College (2.4%). (Table 4)
- The province with the highest throughput rate was Mpumalanga, which was 3.9 percentage points higher than the overall throughput rate of 10.4%. (Table 5)
- The province with the lowest throughout rate was Northern Cape, which was 5.8 percentage points lower than the overall throughput rate. (Table 5)

³ These are students who do not formally enrol at the TVET College and do not attend classes/lectures; they only register to write examinations

- It is evident that there were major differences in the throughput rate of students enrolled in the NC(V) Level 2 programme in 2017 across gender, programme, TVET colleges and provinces.

7. TABLES

Table 1: Throughput rate of NCV Level 2 students enrolled in TVET Colleges in 2017

Number of new entrants for NCV Level 2 in 2017	Number of students who completed NCV Level 4 in 2019	Throughput rate (%)
61 045	6 328	10.4

Source: TVETMIS 2017 and National Examinations Database, November 2019

Notes: The students who enrolled for NCV Level 2 in 2017 for the first time (as new entrants), were compared to those students who completed NCV Level 4 in 2019

Table 2: Throughput rate of NCV Level 2 students enrolled in TVET Colleges in 2017, by gender,

Gender	Number enrolled (NCV 2,2017)	Number completed NCV Level 4 in 2019	Throughput rate (%)
Male	24 134	1 595	6,6
Female	36 911	4 733	12,8
Overall	61 045	6 328	10,4

Source: TVETMIS 2017 and National Examinations Database, November 2019

Notes: The students who enrolled for NCV Level 2 in 2017 for the first time (as new entrants), were compared to those students who completed NCV Level 4 in 2019

Table 3: Throughput rate of NCV Level 2 students enrolled in TVET Colleges in 2017, by programme

Programme	Number enrolled (NCV 2,2017)	Number completed (NCV4, 2019)	Throughput rate (%)
1. Civil Engineering and Building Construction	4 384	291	6,6
2. Drawing Office Practice	90	4	4,4
3. Education and Development	1 416	301	21,3
4. Electrical Infrastructure and Construction	8 033	347	4,3
5. Engineering and Related Design	7 608	498	6,5
6. Finance, Economics and Accounting	3 897	366	9,4
7. Hospitality	3 964	473	11,9
8. Information Technology and Computer Science	3 538	143	4,0
9. Management	2 982	357	12,0
10. Marketing	2 858	210	7,3
11. Mechatronics	417	36	8,6
12. Office Administration	11 641	1 874	16,1
13. Primary Agriculture	1 822	238	13,1
14. Primary Health	340	61	17,9
15. Process Plant Operations	251	8	3,2
16. Safety in Society	2 249	291	12,9
17. Tourism	4 007	577	14,4
18. Transport and Logistics	1 548	253	16,3
Overall	61 045	6 328	10,4

Source: TVETMIS 2017 and National Examinations Database, November 2019

Notes: The students who enrolled for NCV Level 2 in 2017 for the first time (as new entrants), were compared to those students who completed NCV Level 4 in 2019

Table 4: Throughput rate of NCV Level 2 students enrolled in TVET Colleges in 2017, by TVET College

College name	Number enrolled (NCV 2,2017)	Number completed (NCV4, 2019)	Throughput rate
Boland TVET College	680	97	14,3
Buffalo City TVET College	1 369	178	13,0
Capricorn TVET College	2 951	322	10,9
Central Johannesburg TVET	637	13	2,0
Coastal TVET College	1 956	210	10,7
College of Cape Town for TVET	1 330	137	10,3
Eastcape Midlands TVET	1 365	151	11,1
Ehlanzeni TVET College	1 645	117	7,1
Ekurhuleni East TVET College	1 488	108	7,3
Ekurhuleni West TVET College	3 362	370	11,0
Elangeni TVET College –	1 642	148	9,0
Esayidi TVET College	1 388	183	13,2
False Bay TVET College	684	80	11,7
Flavius Mareka TVET College	335	7	2,1
Gert Sibande TVET College	2 741	521	19,0
Goldfields TVET College	650	46	7,1
Ikhala TVET College	799	109	13,6
Ingwe TVET College	1 279	83	6,5
King Hintsa TVET College	557	67	12,0
King Sabata Dalindyebo TVET	1 371	88	6,4
Lephalale TVET College	206	21	10,2
Letaba TVET College	982	144	14,7
Lovedale TVET College	418	59	14,1
Majuba TVET College	1 903	198	10,4
Maluti TVET College	1 798	207	11,5
Mnambithi TVET College	769	47	6,1
Mopani South East TVET	1 409	209	14,8
Motheo TVET College	539	46	8,5
Mthashana TVET College	612	77	12,6
Nkangala TVET College	1 259	167	13,3
Northern Cape Rural TVET	505	12	2,4
Northern Cape Urban TVET	292	25	8,6
Northlink TVET College	1 066	185	17,4
Orbit TVET College	1 360	189	13,9
Port Elizabeth TVET College	1 428	90	6,3
Sedibeng TVET College	1 631	145	8,9
Sekhukhune TVET College	815	37	4,5
South Cape TVET College	572	68	11,9
South West Gauteng TVET	3 797	364	9,6
Taletso TVET College	887	76	8,6
Thekwini TVET College	1 033	89	8,6
Tshwane North TVET College	1 422	103	7,2
Tshwane South TVET College	1 002	73	7,3
Umfoloji TVET College	1 140	132	11,6
Umgungundlovu TVET College	1 239	60	4,8
Vhembe TVET College	1 521	109	7,2
Vuselela TVET College	695	49	7,1
Waterberg TVET College	718	154	21,4
West Coast TVET College	1 272	129	10,1
Western TVET College	526	29	5,5
Overall	61 045	6 328	10,4

Source: TVETMIS 2017 and National Examinations Database, November 2019

Notes: The students who enrolled for NCV Level 2 in 2017 for the first time (as new entrants), were compared to those students who completed NCV Level 4 in 2019

Table 5: Throughput rate of NCV Level 2 students enrolled in TVET Colleges in 2017, by province

Province	Number enrolled (NCV 2,2017)	Number progressed (NCV4, 2019)	Throughput rate
Eastern Cape	8 586	825	9,6
Free State	3 322	306	9,2
Gauteng	13 865	1 205	8,7
Kwazulu/Natal	11 682	1 144	9,8
Limpopo	8 602	996	11,6
Mpumalanga	5 645	805	14,3
North West	2 942	314	10,7
Northern Cape	797	37	4,6
Western Cape	5 604	696	12,4
Overall	61 045	6 328	10,4

Source: TVETMIS 2017 and National Examinations Database, November 2019

Notes: The students who enrolled for NCV Level 2 in 2017 for the first time (as new entrants), were compared to those students who completed NCV Level 4 in 2019

8. CONCLUSION

This report indicates that only 10.4% of students who enrolled for the NCV in 2017 completed the qualification within the 3-year expected time frame. Although this figure is low, it reflects a small increase from the throughput rate of the 2016 cohort, which was 9.2%⁴. This report has also found that throughput rates differ significantly across gender, programme, TVET College and provincial disaggregations.

There are inefficiencies in education investment when throughput rates are low; low throughput rates often result in much smaller class sizes at later levels of the NC(V) programmes, which, in turn, increases per capita costs, as generally the same amount of lecturing time is required even when classes become very small. Given the low throughput rates in the TVET College sector, the cost of producing NCV TVET College graduates is exceedingly high. It is therefore imperative for TVET Colleges, Regional Offices and the DHET to use this report to identify and implement interventions that could improve throughput rates.

⁴ DHET (2021). Fact Sheet on Throughput Rate throughput rate of TVET college students (National Certificate Vocational) for the period 2016 to 2018. Pretoria.