

VARSITY STUDENTS LACK ESSENTIAL SKILLS

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Shocking new test results show that most first-year students at universities across the country do not have the literacy skills, and only a tiny proportion have the mathematical skills, required in higher education.

The final pilot phase of the National Benchmark Tests Project (NBTP) is a damning indictment of the implementation of outcomes-based education and raises questions about the validity of National Senior Certificate (NSC) results.

It also explains the high failure rate at tertiary institutions. Previous research has shown that less than one in three of all technikon and university students graduate within five years.

Principal NBTP investigator Nan Yeld, who is the dean of higher education development at the University of Cape Town, said the tests revealed that “the school system is not able, at this stage, to deliver the ambitious new curricula, particularly in mathematics”.

She emphasised, however, that “this is not the same as saying the curriculum is the problem”. The findings largely confirmed what the researchers knew about student competence, she said, although “some have been angry that NSC results gave a different picture”.

About 13 000 students at universities wrote the assessments in February. The results of these tests were distributed to universities over recent weeks.

The participating universities were UCT, the University of the Western Cape (UWC), Stellenbosch University, the University of KwaZulu-Natal, the Mangosuthu University of Technology, the University of the Witwatersrand and Rhodes University. Over 300 academics have participated in the project.

Only 7 percent of students who wrote the mathematics tests were found to be proficient, meaning they would not need extra help to pass their first year. The test assessed the skills needed to study first-year maths at university.

About 73 percent had intermediate mathematical skills, and would need to take part in extended or augmented programmes to pass the subject. The remaining 20 percent had only basic skills and would need long-term support.

This finding “provides some support for doubts about the large number of students achieving over 70 percent in the NSC examination in this subject”, the study authors wrote in a presentation.

The challenges universities faced regarding maths were “enormous”, they said, and university maths curricula should adapt to help the struggling students.

In a different test, about a quarter of students were numerically competent, half had intermediate numeracy skills and a quarter would need extensive support. These skills

were central to most university disciplines, where students had to be able to interpret tables and understand percentages and basic proportion and trends, the researchers said.

About 47 percent of the students who wrote the academic literacy tests were proficient, 46 percent had intermediate skills, and 7 percent had basic skills. This test assessed ability in English, the medium of instruction.

The results “strongly suggest that higher education institutions need to provide extensive support in language development, for almost half of registered students”.

The student sample was representative in terms of gender and demographics, the project leaders noted.

Higher Education SA commissioned the NBTP out of concern about the standards of the new NSC and low graduation rates at universities. One of the aims was to assist with the development of university curricula, particularly for foundation courses.

Yeld said the test results were provisional and indicated that the problems existed, but more research was needed to confirm these. Testing centres would be set up across the country in September, December and January.

Yeld said deputy education director-general Penny Vinjevold had seen the results and was working with the NBTP to strengthen the NSC.

“We hope the results of the NBTP and the NSC will converge in a few years and there will be no need for the benchmarking project.”

Neither Vinjevold nor Education Department spokesperson Granville Whittle could be reached for comment.

Stellenbosch vice-chancellor Russel Botman said the figures reflected the reality at universities. “You can see the difference between a student coming from a good former Model C school and a student coming from a disadvantaged background. Even in a six-year programme like medicine they do not catch up.”

UWC vice-chancellor Brian O’Connell pointed out that the results “cover the top universities of the country.

“Your common sense would tell you that the profile of the students coming to UWC would not be the same as that at UCT, so when you see the general findings you can deduce, more or less, what UWC’s figures might look like. Not good.

“But this is what we are geared to try to deal with. We get kids who are badly prepared, but if we can hold on to them long enough, work on their self-confidence and get them inducted into the disciplines, they flourish and go on to get master’s and doctorate degrees. The talent is there.”