



Students at TNC do not fail COURSES – They fail SUBJECTS!

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Introduction

Everybody working in TVETs in South Africa, including at Tshwane North College (TNC), is under pressure to improve certification and retention rates. Recent results from across the country suggest these range from as low as 20% in some campuses, and even lower for certain courses. Despite intensive attempts to improve the system, the results have improved only marginally. But we have now started to question this approach. Could it be that in our search for finding ways to improve retention and certification scores, we have been looking all this time in the wrong places?

Evidence based planning

At TNC as with most colleges, students select a course in line with their aspirations. That course usually has several subject, and they need to pass them all in order to pass the course. The specific subject will depend upon the course, but usually has some components of English language and maths.

However, success can be dependent upon a large number of factors, including:

- Motivation
- Life experiences
- Socio-economics, such as
 - Room to work at home
 - Access to books, TV, electricity
 - Distractions such as caring for others

Over and above this are academic results. However, we have found that those results do not necessarily reflect the academic skills of the students. Because of this, we have started to look more closely at the literacy and maths scores of students when they enter the college, to see if they have the potential to fulfil basic course needs.

Table 1: Regression analysis on top Subject

Name	Nrow	Intercept	SpellW	ReadVoc	Cloze	RComp	WC	SD	MA	MP	% PASS	Correlate
Life Orientation L2	244	-0.27	0.16	0.12	0.03	0.07	0.04	0.02	0.00	0.15	87	0.50
Mathematical Literacy L2	200	-16.07	0.12	0.00	0.03	0.20	-0.04	0.02	-0.09	0.37	81	0.53
English 1st Additional Language L2	119	-0.66	-0.01	0.03	0.25	-0.06	0.02	-0.11	0.21	0.10	70	0.38
Client Services&Human Relations L2	117	-28.00	0.08	0.22	0.14	0.15	0.06	0.08	0.08	0.06	67	0.62
Science of Tourism L2	81	1.55	0.09	0.00	-0.06	0.17	0.05	0.11	0.15	0.04	72	0.41
Sustainable Tourism in South Africa L2	81	0.70	0.11	0.05	-0.01	0.18	0.02	0.01	0.16	0.00	58	0.46
Tourism Operations L2	78	-28.89	0.15	0.10	-0.01	0.22	0.10	0.16	0.25	-0.11	71	0.64
Computer Practice N4	57	-52.09	0.02	0.43	0.08	0.15	0.06	-0.02	0.38	-0.08	86	0.56
Food Preparation L2	56	-7.75	-0.04	0.14	0.00	0.17	-0.04	0.22	0.08	0.11	64	0.59
Hospitality Generics L2	56	-1.08	0.02	0.23	-0.05	0.25	-0.07	0.16	0.13	-0.04	79	0.53

Profiling

In collaboration with Shaping the Learner and Do-IT Solutions, we have been using Profiler for the past three years. In early 2015 we started a major exercise to analyse results from more than 1500 students who had studied seven subject in 89 courses where there were enough results to be statistically valid. Below (Table 1) is a summary table of the results from the 10 most popular courses.

Results were collected from seven literacy test and two maths tests. Note that the Maths Problems was designed to test literacy skills in a maths environment.

Tests used were as follows:

Spelling	words
	non-words
Vocabulary	Reading
	Cloze
Reading	Comprehension
	Word Choice
Sound Discrimination	
Maths	Arithmetic
	Problem Solving

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Results are shown in the table below, the blue being most significant, and red being less significant. Initial analysis shows that there is a significant correlation between Profiler results and Subject scores.

Furthermore, results suggest that Reading Vocabulary and Maths Arithmetic are notable predictors of exam outcomes, irrespective of other factors.

The next stage

Profiler has already shown it can be used for helping placement of students in courses and TNC will be using this information to review course structure to see if the subjects on a course can be adapted to match the literacy and maths skills of students, without compromising quality.

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