"SOME OF THEM ARE AFRAID OF THE LANGUAGE": PERCEPTIONS OF TVET COLLEGE STAFF ABOUT THE RELATIONSHIP BETWEEN ENGLISH LANGUAGE PROFICIENCY AND ACADEMIC PERFORMANCE AMONG ENGINEERING STUDENTS

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ABSTRACT

Despite the fact that Technical and Vocational Education and Training (TVET) colleges are seen as instrumental in addressing South Africa's labour market skills shortages and high youth unemployment rate, the extremely low throughput and certification rates at these institutions prevent colleges from achieving this goal. The vast majority of students enrolled at TVET colleges come from lower socioeconomic backgrounds and speak English as a second or additional language, yet English is the language through which teaching is conducted at all South African TVET colleges. Prior research has shown that there is a definite relationship between poor academic performance (AP) and learning in an additional language. Existing research of this nature has focused on schools and universities, but there is a dearth of research about the relationship between AP and English Language Proficiency (ELP) in the TVET sector. In order to address this gap, a mixed method study was conducted at one Eastern Cape TVET College to investigate whether the poor AP of National Vocational Certificate (NC (V)) Level 2 Engineering students can be related to their ELP. The initial quantitative phase of the study confirmed prior research by showing that NC (V) students' ELP is indeed significantly associated with their throughput rate and their performance in each specific subject. This article reports in particular on the second qualitative phase of the study, which was based on interviews with TVET college staff involved in teaching Engineering students. The most significant finding is that teaching staff, who daily work at the proverbial coal face of TVET training, are from their practical experience, very

well aware of the fact that there is a crucial link between the ELP and AP of their students, that they employ a variety of strategies to address associated problems, but that they feel these are often insufficient and ineffective in the face of students trying to learn in a second language. This study extends the research about the role of language as a cognitive tool in learning in the Engineering disciplines. It also provides an opportunity to rethink the hegemonic, normalised position of English in Engineering studies and consider possibilities to mobilise indigenous languages as resources for epistemological access in higher education.

Keywords: Technical and Vocational Education and Training (TVET), English Language Proficiency (ELP); Academic Performance (AP); Engineering; Language of Learning and Teaching; National Vocational Certificate (NC (V))

INTRODUCTION

Technical and Vocational Education and Training (TVET) colleges are considered to be a solution for the contradiction between South Africa's high youth unemployment rate and the country's skills shortages (National Planning Commission (NPC) 2012). As a result, student enrolments at TVET colleges increased by 105,9 per cent between 2010 and 2015 (Department of Higher Education and Training (DHET) 2017), with the aim of producing 30 000 artisans per year by 2030 (NPC 2012). However, although enrolments have increased in order to produce more artisans, low throughput and certification rates threaten the successful impact of TVET colleges.

National Vocational Certificate (NC (V)) programmes, presented at TVET colleges since 2007, provide educational and training opportunities to a great number of learners who do not have matric exemption and are not eligible for university study. To qualify for NC (V) entry, only a Grade 9 certificate is required (DHET 2010). As a result, the NC (V) programme usually attracts academically weak high school learners (Wedekind, Watson, and Buthelezi 2016). Most of these students come from poor schools that did not prepare them academically for the NC (V) curriculum (Mtwesi 2017; Papier 2009). It has been reported that only 2 per cent of students who start NC (V) courses complete the entire qualification within the minimum period of three years (Pienaar et al. 2016) and as early as 2009, Papier found that learners often lacked the necessary language and mathematical skills to be successful in the NC (V) course.

It is imperative for the TVET sector to fully understand and effectively address the causes of the low throughput and certification rates, of which one contributing factor is the problems associated with the language of teaching (Papier 2009). English is the Language of Learning and Teaching (LOLT) at all South African TVET colleges, however, the majority of the student population have indigenous home languages (DHET 2017). Research has shown the relationship between academic underachievement and learning in a second or an additional

language (Jordaan 2011, as cited in Cekiso, Tshotsho, and Masha 2015). Several South African and international studies found a relationship between English Language Proficiency (ELP) and the academic performance (AP) of school learners and university students where English was not the students' home language, but was the LOLT (Cekiso et al. 2015; Fakeye 2014; Ghenghesh 2015; Nash 2006; Racca and Lasaten 2016; Sadeghi et al. 2013; Schaap and Luwes 2013; Vinke and Jochems 1993). Existing research about ELP and AP focus on schools and universities, but there is a dearth of knowledge about the relationship between AP and ELP in the TVET sector, where the problem is critical.

This article reports on the qualitative phase of a mixed method study in which interviews were conducted with TVET staff involved in the teaching of Engineering students in order to obtain their perceptions about the relationship between ELP and AP, based on their practical experience in teaching students in NC (V) Engineering courses. This article will argue that the input of these TVET staff, who experience daily the challenges associated with TVET teaching, is critical to improving the throughput rate and the success of the students. In addition, it is important to understand these lecturers' perspectives on the role of the English language, as well as mother-tongue languages, in mastering their subject discipline. If ELP includes higher order language skills, and involves having the academic language required to understand subject content and to perform subject content tasks, it then becomes clear why ELP plays a role in English Additional Language (EAL) students' AP.

CONTEXT OF THE STUDY

The low certification rate of 35,5 per cent for NC (V) Level 2–4 Engineering programmes in 2017 at the TVET college where this study was conducted (Gordon 2018) is an indicator that there is a problem which could be related to language choice and literacy levels. English as LOLT may prevent these students from expressing their mastery of Engineering subject content, much of which is in fact very theoretical and is assessed in theoretical ways that demand English literacy skills.

Before students enrol for NC (V), the Performance Assessment of Competency Education (PACE) test is administered. This test is aimed at identifying students with low ELP in order to direct them to support, such as the Prevocational Learning Programme (PLP), a bridging module piloted by the DHET in 2018. If implemented successfully, PACE and PLP can provide the support needed so that English is less of a barrier to students' academic performance. But in practice not all the students who did not achieve the minimum requirements in the PACE test (40%) are referred to PLP, which means that students are enrolled who have lower levels of ELP than required and they are not offered any support as their lecturers are unaware of their

lower levels of ELP.

The only two placement tests available and in frequent use at TVET colleges in South Africa are the Competency and Placement (CAP) test and the PACE test (Taljaard 2013). Both of these tests assess ELP based on only two components, comprehension and language. South African universities, however, use measures that assess all of the aspects of language proficiency. For instance, the English Literacy Skills Assessment (ELSA) measures phonics skills, dictation, the language and grammar of spatial relation, reading comprehension, cloze procedure and vocabulary in context (Krugel and Fourie 2014). This proficiency test allows a respondent's literacy skills to be expressed in terms of grades and can therefore be used with TVET college students. Similar to the PACE and CAP tests, a student's strengths and weaknesses are diagnosed within an English language training environment.

THEORETICAL FRAMEWORK

Understanding the role and position of languages in learning and teaching is central to this study of English language proficiency and its place in Engineering vocational training. Two aspects of language learning will be explored, namely language learning in schools and language as part of Engineering disciplinary practice.

Much research exists about the benefits of home language instruction (Alexander 2003; Broom 2004; Cummins, Baker, and Hornberger 2001; Gabela 2007; Lafon 2008; Skutnabb-Kangas 2014; Vygotsky 1986; Webb, Lafon, and Pare 2010), but it is also acknowledged that few South African TVET students would have been exposed to optimal conditions during their primary and secondary schooling for home language learning and the development of English proficiency at a level needed for tertiary learning. Learning through a home language allows learners to achieve Basic Interpersonal Communication Skills, or BICS, while also developing Cognitive Academic Language Proficiency, or CALP (Cummins 2000). The abstract processes involved in learning science and technology require CALP thinking and skills as these processes are often decontextualised. If students do not develop CALP in their home language, it is very difficult to learn it in a second language (Cummins 2000; Ball 2010). This distinction between different levels of language and cognitive demand have gone some way to explain why second language speakers of English, or any language, might seem to be competent in the language but fall short in their ability to engage in more cognitively demanding tasks. If learners transition to learning in a new language without having developed CALP, they continue to be at a disadvantage in their educational journey, especially if the new language replaces the home language in a subtractive approach. The contrary holds true: if learners develop academic competency in their mother tongue, so that language is a tool for thinking, then this can be

transferred to any additional language (Cummins 2000; Ball 2010). In addition to limitations in developing CALP, learning science and scientific subjects present specific challenges. Abstraction and linguistic density are some of the challenges identified by Fang (2008). He suggests that the extended nouns and noun clauses result in a higher cognitive load for the reader, so that it is more difficult to follow the argument that is being presented. The topics of science are often removed from everyday life and everyday language and tend to be somewhat abstract, such as *electricity* or *laws of motion.* Added to the challenge of specific scientific terms, Oyoo (2017) argues that certain words, such a *matter* or *force,* have a different meaning in scientific or technical contexts than the meaning that might be known in everyday use.

All of this exacerbates the language challenges for students who enrol for NC (V) Engineering courses with high levels of technical training. Wedekind, Watson, and Buthelezi (2016) found that many prospective NC (V) Engineering students believe that literacy skills are not required for Engineering programmes because these programmes are very practical courses. Some authors even argue that mathematical problem solving and success in Engineering subjects do not require ELP (Arsad, Buniyamin, and Manad 2014), however they do require competency at a cognitive level in some language, even if it is not English.

Although supplementary instruction is offered in Mathematics and other Engineering subjects at TVET colleges, there are no support interventions for poor ELP. However, NC (V) students' academic performance in their subjects is measured primarily in terms of how they perform in tests and examinations conducted in English. If these assessments are theoretical rather than practical, then they require cognitive academic language of the students.

METHODOLOGY

The larger study on which this article is based aimed to determine the relationship between ELP and AP among NC (V) Level 2 (L2) Engineering students at a TVET college in the Eastern Cape during 2019. A mixed-method approach was used with Phase One of the data collection being quantitative. This included an academic record review of students' results, a questionnaire and the administering of the PACE test. In Phase Two, the qualitative data collection involved ten individual semi-structured interviews with NC (V) L2 English First Additional Language (EFAL) lecturers, Engineering, Life Orientation and Mathematics lecturers. English, Mathematics and Life Orientation are compulsory subjects in the NC (V) course and thus taken by all students. The qualitative phase of the study was affected by COVID-19 considerations (national lockdown and the closure of schools and campuses) and necessitated the original plan for personal face to face interviews to be changed to telephonic interviews. All relevant ethics approvals were obtained from all institutional and individual

parties before research commenced. Participation was voluntary and confidential and informed consent was obtained from all interview participants.

This article specifically reports on findings from the qualitative phase of the study and therefore reports insights gained from lecturer interviews. Due to the limited scope of an article like this, suffice it to say here that the quantitative phase of the study, based on student data, confirmed existing opinions that there is indeed a relationship between ELP and AP among TVET NC (V) Engineering L2 students, as in part evidenced by the fact that only 3 per cent of the student sample for this study who started NC (V) L2 in 2017 graduated from the three-year course at the end of 2019.

Ninety two percent of the student sample were Black African students of which 88 per cent indicated they were isiXhosa-speaking. In the current South African primary and secondary schooling system, most of the student population would have received instruction in isiXhosa up until Grade 3, but from Grade 4 would have received instruction in English or Afrikaans. These students had fewer opportunities to develop higher order skills in their mother tongue, because they did not receive instruction in isiXhosa for long enough. They could therefore not transfer higher order language skills, or CALP, in their home language to English which could have resulted in them struggling to gain proficiency in English (Cummins et al. 2001).

Sixty-eight percent of the student sample reported attending disadvantaged schools in rural or township areas. There is strong evidence in the literature that shows that students who attended disadvantaged schools are more likely to have lower levels of ELP, because of the limited exposure to English that learners who attended these schools have (Gabela 2007; Probyn 2006; 2009). Not only is English rarely used outside the classroom at disadvantaged schools, it is also not strictly adhered to as the LOLT within the classroom (Broom 2004). Details about the quantitative phase of this study can be obtained elsewhere (Stander 2021), but in summary, and to contextualise the teaching conditions of the lecturers interviewed in Phase Two, it was found that a certain level of ELP (52%) is associated with progression in the NC (V) course, that the lower the student's ELP is, the greater the extent to which it would be a barrier to the student's academic achievement and thus the greater the association between ELP and academic performance. There were also significant correlations between students' performance in EFAL L2 and each individual subject.

Findings from the quantitative first phase informed the types of questions that were asked during the individual semi-structured interviews with lecturers in Phase Two. The results from Phase One therefore acted as prompts for discussion during the interviews with lecturers. Engineering subject lecturers (Engineering and Related Design Civil Engineering Mechatronics

Electrical Engineering) and non-Engineering lecturers (English Life Orientation and Maths, all compulsory for NC (V) L2 students) were asked about their views on the importance of English for Engineering students as significant correlations were found in the qualitative study between English and each subject. Although Engineering lecturers often mentioned the link between Mathematics and success in Engineering subjects, they generally seem to not regard ELP as a prerequisite for academic success in Engineering courses. It was therefore necessary to obtain these lecturers' views on whether ELP is necessary to succeed in their subjects. Although there is strong evidence in the literature that attending a disadvantaged school and not receiving home language instruction in the early grades are associated with lower levels of ELP, the quantitative component of the study did not find a significant association between these two factors and ELP. Lecturers were therefore asked which factors they believed influenced students' ELP. The identification of these factors could lead to planning possible interventions. Furthermore, the quantitative findings revealed that subjects that have a greater qualitative component are more closely associated with ELP than subjects that are more quantitative. Lecturers were therefore asked about the theoretical versus the practical aspects of their subjects. It was clear from the PACE test results in the quantitative phase that most students who were enrolled had lower levels of ELP and consequently lecturers were asked about what support strategies they implemented to deal with the language barrier faced by students in their classes. Some lecturers mentioned making use of students' home languages and they were asked whether they believed home language instruction at the college would allow students to achieve better academic results.

Data obtained from interviews were recorded, transcribed, categorised and sorted into themes and subthemes. Non-random, convenience sampling was used for the individual interviews and lecturers were selected based on their willingness and availability to participate. Three English lecturers were interviewed (Lecturers 1, 3 and 5), two Life Orientation (LO) lecturers (Lecturer 4 and 7), four Engineering lecturers (Lecturer 2, 6, 9 and 10) and one Mathematics lecturer (Lecturer 8). Findings are reported here under the following subthemes: the importance of ELP for Engineering students, the ELP of NC (V) L2 Engineering students, the theoretical versus practical components of the NC (V) programme, the rendering of assistance in developing ELP, and the role of home language instruction.

NC (V) ENGINEERING LECTURERS' PERCEPTIONS ABOUT ELP AND AP

This article has focused on the qualitative interview data which showed that lecturers, from their practical experience, are acutely aware of the critically significant relationship between their students' ELP levels and AP.

Importance of ELP

Lecturers mentioned that English is crucially important for Engineering students because it is the Language of Learning and Teaching (LOLT) and a global communication medium. Lecturer 3 (English) said that ELP is important for Engineering students who want to further their careers.

Only Lecturer 10 (notably in Mechatronics, the most practical and quantitative of the Engineering subjects) said that poor ELP did not limit the performance of students in his subject. He also mentioned that their department applied stricter admission criteria when students applied, notably matric, whereas Grade 9 was the minimum requirement for other NC (V) courses. Mechatronics students would therefore have reached a level of proficiency in English before admission so would need less language support.

Lecturers indicated that if students had poor ELP, it would prevent them from performing well in their own subjects. Students would also struggle to understand the content of their subjects. Lecturer 2 (Engineering) noted that ELP is not only essential to perform well in the theoretical parts of his subject, but also in the practical parts such as understanding drawings. He said, “There is no way that you can run away from English”. Some lecturers indicated that ELP is important for their subjects since there is a lack of mathematical terms and Engineering content in indigenous languages.

Lecturers stressed that it is especially in tests and examinations where good ELP is required as students then have to formally communicate their understanding. Lecturer 4 (LO) noted, “When it comes to the written exam, or tests and assessments, they do not know how to interpret, because, in that question, there’s a word that they have never heard or there is an English concept like ‘describe’”. Lecturers said that in formal tests and examinations, students did not read for understanding; they consequently misinterpreted the questions and provided incorrect answers. They noted that their students’ ELP was often too poor to perform higher order skills (such as the instruction to “apply”) required in an examination, that they struggled to explain concepts in tests and examinations and that their answers were often limited because of their poor ELP and poor vocabulary. In exams and tests Engineering problems are further decontextualized with little cognitive support so it is to be expected that these situations would require high levels of cognitive thinking, as indicated by Cummins et al. (2001).

Lecturer 4 (LO) and Lecturer 2 (Engineering) said that they thought students lacked both Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP) skills, whereas the others felt that L2 students mainly lacked the higher order language skills required for formal tests and examinations. Lecturer 7 (LO) and Lecturer

2 (Engineering) mentioned that they felt that some of their students had such poor ELP that it prevented them from responding to questions in class and from participating in informal class discussions. Lecturer 2 (Engineering) succinctly summarised it by saying, "Some of them are afraid of the language". Another noted, "Some of them definitely know the answer, but they don't have the confidence in the second language to answer it. They're also afraid of being laughed at by their mates, their fellow students." This often prevents students from participating in classroom discussions and from interacting with the lecturer.

Factors which influence ELP

A number of factors that influence ELP were identified by lecturers. Most prominent among these were exposure to English, quality of teaching at school level, a learner's attitude and socioeconomic status. Lecturers are highly aware of the fact that since the majority of their students are African, English is not their home language and that the lack of exposure to English in their homes and in their communities may be a contributing factor to their poor ELP. Such students are often only exposed to English in the classroom. Lecturer 3 (English), Lecturer 4 and (LO) Lecturer 5 (English) spoke of the significance of the role that educators play in a student's ELP. One said that teachers should not engage in rote teaching and learning but should explicitly teach CALP skills; another said that it is the responsibility of the educator to assist students to become fluent in English, while another felt that students are influenced by their previous educators' attitudes.

Existing literature suggests that students from ex-model C schools have better ELP than students from schools in rural and township areas (Howie et al. 2017; Webb et al. 2010). Lecturer 4 (LO) and Lecturer 7 (LO) also held this view. One said, "The people from the old model C schools or the good schools will have a far better ability of using the language and will be far more confident". Another stated, "I think the role the school plays is vital, yet it is not only schools from the rural areas where students come and they have bad proficiency. I had a student a few years ago, she was from Umtata, from Umtata! But that girl, her language ability was brilliant." The lecturer attributed her good ELP to having a good English teacher at a good school, despite the school being in a rural area.

Theoretical versus practical components

One theme that emerged as especially significant is the discrepancies between theoretical and practical aspects of the NC (V) programme, which is supposed to be mostly practical, but is, in effect, highly theoretical. Lecturer 6 (Engineering) said that subjects were too theoretical and that practicals were insufficient. Lecturer 2 (Engineering) said that only 30 per cent to 38 per

cent of his subject involved practical work. But lecturers agreed that students required theoretical knowledge in order to do the practical parts of their subjects and that students are required to explain formally in English what they did practically, therefore ELP is essential to perform well in the theoretical and practical components of Engineering subjects. Using theory to explain practical aspects of Engineering requires a degree of competence in cognitively challenging abstract language which takes time and support to master (Ball 2010).

Another important finding of this study is that non-Engineering subject lecturers were unfamiliar with the content of students' Engineering subjects. The lack of interaction among lecturers in terms of the ELP of their students was further evident in that, although most Engineering lecturers suggested that ELP was a challenge for their students, none of them reported asking for assistance from English lecturers. When prompted, non-language lecturers were unable to indicate the role that English lecturers could play in helping students with Engineering subjects, even though they know that ELP and AP are linked. Engineering lecturers tend to perceive the non-Engineering subjects as something that must be endured or tolerated and not as a resource that could be used to assist students to cope with their Engineering studies.

Support strategies

Lecturers were generally in support of students with poor ELP being offered extra support. Lecturer 5 (English) indicated that she assisted students who had poor ELP during her break times. She suggested that an extra English class be offered after college hours to allow students to practise English as most lacked exposure to the language at home. Lecturer 1 (English) and Lecturer 3 (English) reported being uncertain about providing extra support, with Lecturer 3 (English) saying, "I would wonder what I would actually be teaching them. You know like, sometimes, obviously I really do not have the skills for remedial". Lecturer 9 (Engineering) indicated that he encouraged students to attend the English classes, "Because it is where they will actually learn the language itself besides on our vocational side".

Lecturer 2 (Engineering) indicated that he was able to assess who had poor ELP, by asking students questions in English based on the work covered. Another determined which students struggled with English as the LOLT by asking them to read a section from the textbook. Lecturer 6 (Engineering) encouraged students to look up difficult words in a dictionary when she realised that they lacked the required vocabulary for her subject. She acknowledged that she did not always have the time available to deal with the language barrier students faced, but she created visual aids to simplify words, which also took additional time and effort. Lecturer 9 (Engineering), an isiXhosa-speaking Engineering lecturer, aware of the language challenges faced by students, said he explained the work in isiXhosa if students did not understand a section of the work. Only Lecturer 10 (Engineering) did not have a strategy to deal with students

who lacked basic ELP skills. He said he referred students to his senior who then had to deal with the issue.

A significant finding is that most lecturers are not aware of their students' PACE scores and therefore could not offer appropriate support. Only Lecturer 5 (English) was familiar with the results that her students achieved for the PACE test. She said she offered counselling to students who failed the PACE test. Lecturers had mixed views on whether the PACE test was valuable. Lecturer 3 (English) stated, "Whether, it's reliable, I am not 100% sure, if it is used effectively". Lecturer 1 (English) believed that it was not an accurate predictor of students' level of proficiency, because it was computer-based. She maintained that it disadvantaged students who lacked exposure to computers and suggested an alternative to the computer-based PACE test. She noted that they are aware that some students get accepted for NC (V) without ever having completed a PACE test, while others who fail the PACE test get accepted into NC (V) and successfully complete the course.

Use of home languages

Lecturers were generally in favour of students' home languages being used for teaching and learning purposes, but some expressed their concerns about the way in which they are used. Some felt that difficult subjects like Mathematics should be taught in isiXhosa and that if students were taught in their home languages, they would understand the content of their subjects better and be more confident. Lecturer 8 (Mathematics) said, "I think that if you receive education in your [home] language you are a lot more comfortable, you feel you understand better"; Lecturer 7 (LO) said "if students interact with one another, it's always in their mother tongue which is easier for them". Others believed that receiving home language instruction would prevent students from becoming fluent in English. Lecturer 4 (LO) suggested that difficult sections or concepts of a subject could be taught in isiXhosa that would allow for greater clarity, understanding and interpretation, but was against an entire subject being taught in isiXhosa. One lecturer mentioned that she created an informal classroom environment where the mixing of languages was allowed. Students then eagerly participate in classroom discussions and in this way demonstrate their understanding. She felt that 60 per cent to 70 per cent of her students were good communicators, but that only about 30 per cent had CALP. Lecturer 8 (Mathematics) noted that when students still lacked understanding, she would ask an isiXhosa speaking student who understood the work to explain the particular section of the work to the rest of the class in isiXhosa.

One isiXhosa speaking lecturer, Lecturer 2 (Engineering), mentioned that he discouraged the use of isiXhosa for formal learning purposes, though he used isiXhosa to create humour in the class. Lecturer 9 (Engineering) mentioned that when the entire class was isiXhosa speaking,

he would use this language to explain the work, but "if there is a portion who is maybe Coloureds, Indian, different races, that's not going to be nice, because now they don't understand Xhosa". Lecturers indicated that because not all of the technical terms were available in isiXhosa it would be difficult for students to receive home language instruction. In addition, students would be less exposed to English, which would be problematic as assessments took place in English when the lecturer would not be available to explain and also because students would be expected to communicate in English in the world of work, so ELP is not just aimed at certification, but to empower students for their chosen careers.

DISCUSSION AND RECOMMENDATIONS

All lecturers seem to be aware of the language challenges that the majority of their students face and that addressing these would go some way to improving student success and throughput. This mindfulness is reflected in the various strategies they have devised to support these students. Most of these include a language component, whether it be using their mother-tongue, asking questions so that students could show their understanding, reading from the textbook and using a dictionary. Creating visual charts to support conceptual learning would go some way to scaffolding their learning and moving towards independent cognitive engagement according to Cummins' theories (2000).

It would seem that lecturers do not use the information from the PACE tests to better support their students. This appears to be linked to uneven application of the test, in that not all students are required to do it, and whether it is an accurate measurement of language proficiency. If the goal of the test is to identify those who need language support to be successful in their studies, then these concerns would need to be addressed. Based on the lecturers' feedback, it seems that a revised placement test, that provides a more comprehensive assessment of ELP, is needed. Such a placement test should be used to assess student readiness in terms of ELP, and to identify a student's language developmental needs in order for the student to be placed in the correct programme, either NC (V) or PLP, so that effective and appropriate support can be provided to the student.

The fact that the home language of most NC (V) students is different from the TVET LOLT, and that most of these learners come from disadvantaged schools and therefore enter their tertiary studies at a disadvantage, further supports the need to effectively assess developmental needs and offer support. Because the NC (V) programme attracts students who have been disadvantaged, it would not be fair to strictly apply pre-course competency testing as it would just prevent these learners from studying further and becoming financially, professionally and socially secure. Testing should be used as a placement mechanism to identify those who need support and should not prevent students from further study. This would prevent

the loss of promising artisans from entering the Engineering discipline.

Following the introduction of a new placement assessment, students should be informed about their performance and should be offered counselling to help them to understand their abilities and language needs to ensure that they take responsibility for their own development in order to assure success in their studies, but also, upon certification, for success in the working world of their chosen field. Secondly, lecturers should also be informed about students' proficiency assessments results before teaching commences so that they can structure their lessons and assessments accordingly. This would require that the assessment results be recorded and be accessible to all lecturers on the electronic mark system for NC (V) students.

Lecturers indicated that they understandably do not have the resources or time to assist struggling students with improving their ELP. Additional support should therefore be in the form of formal language training, for example a literacy support module, such as that recommended by Van Rooy and Coetzee-Van Rooy (2015), as well as in lecturers adapting their teaching methods based on their students' level of ELP. A language support module should be compulsory for all students who score below 50 per cent for the placement test and should explicitly teach CALP skills. It is also recommended that all NC (V) L3 and L4 students could be offered this module with the focus on academic literacy for their Engineering subjects, but that it could be voluntary for those students with scores higher than 50 per cent.

In the field of New Literacies Studies (NLS) it is held that students must demonstrate success in disciplinary literacy practices (Barton, Hamilton, and Ivanic 2000). These include, within the Engineering field, communicating for safety purposes, writing technical reports, doing research, writing Engineering terms, using Engineering terminology, articulating ideas and reading drawings and technical reports with ease. This will be most successfully achieved in TVET NC (V) programmes if there is collaboration between language lecturers and Engineering lecturers. It is therefore important that non-language lecturers should receive language training and assistance in incorporating ELP tools and strategies into their teaching methods and approaches. Similarly, is also important that non-Engineering subject lecturers should be trained to be more aware of what their students are learning in Engineering subjects, so that they can adapt their teaching to incorporate relevant examples and discussions. This type of peer teacher training could be carried out among lecturers and may include training to develop higher order skills such as comparing, classifying, analysing, evaluating and inferring in Engineering students. Lecturers could also be taught teaching strategies that can assist students in understanding concepts through providing context, for example with videos, pictures, diagrams and hands-on experience. Lecturers should also receive training in teaching within a multilingual context, which would involve allowing students to discuss new concepts in their home language with their peers, code switching and mixing languages in a creative way

when teaching and translating sections of the work to students' home languages. This would go some way to redressing the displacement of indigenous languages from academic contexts (Mdzanga and Moeng 2021).

As early as 2009 Papier found that the NC (V) curriculum was too theoretical and academically challenging for a course that is supposed to be practical. Yet at the time of this study NC (V) remains largely theoretical. Engineering lecturers indicated that in their experience ELP was indeed an essential requirement for even the practical aspects of their subjects and that poor English reading and writing skills prevent students from demonstrating that they have mastered the required practical learning outcomes. Ultimately, a revision of the NC (V) curriculum is necessary in order for multiple literacies to be evaluated and assessed most effectively, but pressure on DHET for such curriculum reform must come from colleges and from the industry that employs TVET students. Likewise, it is important that there should be pressure placed on DHET to increase the development of indigenous languages as modes of teaching at tertiary level. The purpose would be to augment English as a teaching medium and as an international professional communication medium and not to replace it. To empower students through the use of their mother tongue to achieve and succeed in their studies and work lives will benefit not only the students themselves but will also broaden the professional knowledge base and will help to alleviate the national skills and youth unemployment crises. The use of for example isiXhosa in technical disciplines will also contribute to developing the position of indigenous languages in Engineering studies.

Though much research has been conducted about the relationship between AP and ELP, there have not been previous studies about this in the South African TVET context and specifically among NC (V) Engineering students. In addressing this gap, this study provides a foundation for further research in this field. This study extends the research about the role of language as a cognitive tool in learning in the Engineering disciplines. It also provides an opportunity to rethink the hegemonic, normalised position of English in Engineering studies and consider possibilities to mobilise indigenous languages as resources for epistemological access in higher education (Mdzanga and Moeng 2021). More work needs to be done in this area.

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