



## **TVET POLYTECHNIC STAFF PERCEPTIONS ON THE AFFILIATION INVOLVING ENGLISH LANGUAGE SKILLS AND ACADEMIC PERFORMANCE AMONGST STUDENTS OF THE FOOD TECHNOLOGY DEPARTMENT, FPI**

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### **Abstract**

*The majority of undergraduate students that join in TVET polytechnics come from lower socioeconomic backgrounds and speak English as a second language; despite the fact that English is the medium of instruction at all TVET institutions in Nigeria. The majority of earlier research of this kind concentrated on colleges and universities. However, the relationship between academic performance (AP) and English language skills (ELS) in the polytechnic sector has not received as much attention; to fill up this gap, a checkup and interviews were done at The Federal Polytechnic Ilaro to look into correlations between the ELS and the poor AP of ND 2 Food Technology students in the Use of English II course. The study's initial quantitative phase showed that students' English Acquisition Skill is unquestionably highly connected with their output rate and success in specific validated past studies. This article focused on the study's qualitative component, which involved the investigators interviewing a few chosen lecturers in food technology. Finding revealed that the staff members who work everyday at the "coal appearance" of TVET training are acutely aware from personal experience that there is a critical link between the ELS and AP of their students. They employ a range of tactics to deal with associated problems, but they believe these are generally insufficient and ineffective when dealing with students who are attempting to learn a second language. This study offers a chance to reconsider the prevalent, conventionalized usage of English in science studies and to look into the use of native languages as sources for obtaining cognitive research in higher education.*

**Keywords:** Academic Performance (AP), English Language Skill (ELS), Technical and Vocational Education and Training (TVET), Use of English

### **Introduction**

The capacity to close the gap between Nigeria's high young unemployment rate and the lack of trained workers in the nation, technical and vocational education and training (TVET) institutions are highly valued (National Planning Commission, 2012). Although, enrollment has increased in order to produce more craftsmen, inadequate productivity and qualification rates still pose a danger to TVET institutions' ability to succeed in this regard.

Many students who do not qualify for admission into university for studies have access to educational and training opportunities through TVET Polytechnics' National Diploma Certificate (ND) courses. According to Mtwesi (2017) and Papier (2009), the bulk of these pupils attend subpar educational institutions that did not effectively prepare them for the ND curriculum. In accordance to research (Pienaar et al. 2016), only 2% of students who participated in the Use of English test scored above 55%. Papier also discovered that students frequently struggled to develop the language and math skills necessary to succeed in the ND courses starting as early as 2009.

In determining the reasons for the poor productivity and qualification inflation, it is crucial that the TVET sector has a solid understanding of the problem with teaching language (Papier, 2009). Given that English is the predominant language of instruction in the great majority of African TVET institutions, many students still speak their native tongues at home (DHET 2017). Studies have shown that acquiring more than one language is highly associated with academic underachievement (Jordaan 2011, cited in Cekiso, Tshotsho, & Masha 2015). Studies carried out in Nigeria and elsewhere, including those by Racca and Lasaten, Sadeghi et al., Schaap and Luwes, Vinke and Jochems, Fakeye and Ghenghesh, found a connection between the English Language Skill (ELS) and Academic Performance (AP) of educational organisations and learners in schools where English turned out to be the medium of instruction and learning but not the students' native tongue. Since most of the researches on ELS and AP have been done in universities and polytechnics, there is a paucity of knowledge on how AP and ELS interact in the TVET sector.

Interviews were conducted with TVET staff members to gain their perspectives on the connections with ELS and AP in light of their actual instructional interactions with students in ND Food Technology courses. This article's claims regarding the qualitative section of a mixed-method research investigation argue that improving throughput rates and



student performance depend greatly on the input of TVET personnel who deal with the challenges of TVET education on a daily basis. The perspectives of these lecturers on the use of mother-tongue languages and the English language in studying their respective subject disciplines should also be understood. It is obvious why ELS affects English as Additional Language (EAL), students' academic performance if ELS also entails higher-order language abilities and the academic language needed to comprehend subject material and carry out subject matter duties.

### **Context of the Study**

Gordon (2018) found that the TVET polytechnic where this study was done had a low 'B' and above grade rate of 35.5% for ND Level 2 Food Technology programmes in 2023, suggesting that there may be a problem with language preference and literacy levels. This is because English is the primary language for learning and teaching, it may be difficult for these students to demonstrate their understanding of the science topic, which is often highly theoretical and evaluated in ways that call for literacy in English.

The performance in the English language on the JAMB and WAEC exams is always taken into account before students sign up for ND. With the use of the Prevocational Learning Programme (PLP), a bridging module that the DHET trialled in 2018, aims to identify students with poor ELS and lead them to support. If properly implemented, WAEC and JAMB can offer the assistance required so that students' academic performance is less hindered by English. However, in reality, not all students who did not meet the minimum WAEC requirements (40%) are referred to the Prevocational Learning Programme. As a result, some students who are enrolled have lower levels of ELS than necessary and receive no support because their lecturers are unaware of their lower levels of the Prevocational Learning Programme.

In Nigeria, TVET institutes offer and frequently use the two exams. In contrast to other disciplines, just two components comprehension and language are used to evaluate ELS on either exam. However, Nigerian institutions employ metrics that evaluate every facet of language competence. For instance, the English Literacy Skills Assessment (ELSA) evaluates vocabulary in context, cloze process, spatial language and grammar, reading comprehension, and phonics skills (Krugel & Fourie 2014). This proficiency test, which can be utilised with TVET polytechnic students, enables a respondent's literacy abilities to be stated in terms of grades. In a setting where students are learning English, a student's strengths and weaknesses are identified.

### **Theoretical Framework**

The key to understanding English language skills and their significance in science vocational training is to comprehend the function and place of languages in learning and teaching. It will be examined how language is learned in schools and how it is used in disciplinary practice in the field of applied science. Numerous studies on the advantages of home language instruction have been conducted (Alexander 2003; Broom 2004; Cummins, Baker; Hornberger 2001; Gabela 2007; Lafon 2008; Skutnabb-Kangas 2014; Vygotsky 1986; Webb, Lafon, & Pare, 2010).

However, it is accepted that not all African TVET students would have had access to the best environments for studying their native tongues and acquiring the degree of English competence needed for postsecondary education. Students who learn in their native tongue can increase fundamental interpersonal communication and cognitive intellectual language ability (Cummins, 2000). Learning science and technology includes abstract concepts that usually lack context, necessitating the use of cognitive academic language. If children do not learn it in their mother tongue, it is very difficult to achieve cognitive academic language mastery in a second language (Cummins 2000; Ball 2010). This discrepancy between different levels of language competence and cognitive demands has contributed to the understanding of precisely why those who speak a second language of English or any language might seem to be fluent in the language but fall short when it comes to their capacity to engage in more cognitively demanding tasks. Learners continue to be at a disadvantage in their academic pursuits if they switch to studying a new language before obtaining Cognitive Academic Language Proficiency, especially if the new language subtractively replaces the native tongue. Nevertheless, it is also true that if students master their native language and use it as a tool for thought, individuals can apply their academic proficiency to any additional tongue (Cummins 2000; Ball 2010).

Learning science and scientific subjects presents unique difficulties, in addition to restrictions in cognitive language proficiency development. Some of the problems mentioned by Fang (2008) include abstraction and linguistic density.



According to Fang, the reader's cognitive burden is increased by the use of lengthy nouns and noun clauses, making it harder for them to understand the point that is being put forth. Science-related issues, like microbiological or physio-chemical qualities, are frequently relatively abstract and separated from daily life and common language. Oyoo (2017) contends that some words, like cryogenic rounding or sensory, have a distinct connotation in technical perspectives than the meaning that may be known in general use, which adds to the difficulty of particular scientific terms.

For students enrolling in ND Food Technology classes with high levels of technical training, all of these make language difficulties worse. Wedekind and Buthelezi (2016) discovered that many potential science students think that because these curricula are so practical, reading skills are not necessary for Applied Sciences studies. According to other authors, completing mathematical equations and succeeding in science classes don't even require ELS (Arsad, B. & Manad, 2014), but they do necessitate cognitive linguistic proficiency in verbal communication, even if it isn't English.

There are no support interventions for substandard ELS in TVET institutions, although supplemental instruction is provided in Mathematics and other Science topics. However, how well ND students perform on tests and exams that are given in English is the main metric used to assess their academic performance in their studies. The use of cognitive academic language by the students is necessary if these assessments are abstract rather than realistic.

## **Methodology**

This article is part of a bigger study that aims to ascertain how ELS and AP relate to one another among ND 2 Food Technology students at a TVET polytechnic, (The Federal Polytechnic Ilaro). Phase one of the data gathering involved a mixed-method approach. This involved the administration of the Use of English test, a questionnaire, and an assessment of the student's academic records and results. Ten unique semi-structured interviews with ND2 Use of English, Food Technology, and Mathematics lecturers were conducted as part of Phase Two's qualitative data collection. All students take the Use of English and Mathematics because they are required courses for the ND programme. Prior to the start of the research, all institutional and private stakeholders granted the necessary ethics approvals. All interviewees gave their informed consent before participating on a voluntary, confidential basis.

The results from the qualitative portion of the study are especially covered in this article, which also includes information from interviews with lecturers. owing to the constrained extent of this piece of writing, do it to say that the quantitative stage of the study, based on undergraduate data, confirmed prior beliefs that there is, in fact, a connection between ELS and AP among TVET ND II Food Technology students, as it is partially demonstrated by the actuality that only 10% of the NDII student illustration for this study's test-takers performed exceptionally well.

Ninety two percent (92%) of the student sample was made up of Nigerian students, of whom 88% claimed to speak Yoruba. Most students in the present Nigerian primary and secondary school system would have had education in both Yoruba and English up until Grade 3, but primarily English instruction beginning in Grade 4. Due to insufficient Yoruba training, these pupils had fewer possibilities to acquire higher level language abilities in their own tongue. As a result, they were unable to transfer their higher order language skills also known as cognitive academic language proficiency from their native tongue to English, which may have made it difficult for them to become proficient in the language (Cummins et al. 2001).

Sixty eight percent (68%) of the student sample claimed to have attended underprivileged schools in towns or rural areas. Children who went to poor schools are more probable to have poorer levels of English as a Second Language (ESL) than scholars who did not due to their classmates' limited exposure to the language (Gabela 2007). English is rarely used outside of the classroom in underfunded schools, and it is also not often properly maintained as the Language of Learning and Teaching inside the classroom (Broom 2004). More information about the quantitative phase of this study can be found in Stander's research in 2021.

However, to summarise and put the teaching environments of the lecturers interviewed in Phase two into context, it was discovered that a certain level of ELS (52%) is connected with headway in the ND classes, that the poorer a student's ELS is, the more likely it is that it will be a hurdle to their academic achievement, and that there is a greater correlation between ELS and progression. Significant connections between each subject and students' proficiency in



the use of English were also discovered. The quantitative first phase's questions were carried over into the phase two's individual semi-structured interviews with lecturers.

The results from Phase one therefore used as conversation starters in the interviews with lecturers. We questioned Food Technology subject lecturers and non-science lecturers (Use of English and Maths, both of which were required for NDII students) about their perspectives on the value of English for engineering students because there were significant correlations between English and each subject in the qualitative study. Despite frequently mentioning the connection between mathematics and achievement in science courses, Food Technology professors generally don't seem to view ELS as a need for academic success in science courses. In order to determine whether ELS is required for these speakers' subjects, it was necessary to get their opinions.

The quantitative portion of the study did not find a significant correlation between these two factors and ELS, despite the literature's strong support that attending a disadvantaged school and not receiving home language instruction in the early grades are associated with lower levels of ELS. We therefore asked lecturers what variables they thought affected students' ELS. Planning potential interventions could result from identifying these aspects. The quantitative results also showed that subjects with a higher qualitative component are more closely related to ELS than ones with a higher quantitative component. Therefore, lecturers were questioned regarding the theoretical versus the practical facets of their disciplines. The Use of English test results in the quantitative phase made it evident that the majority of registered students had lower levels of ELS, and as a result, lecturers were questioned about the support methods they used to address the language barrier that students in their classrooms experienced. When asked if they thought home language training at the university would help students achieve better academic outcomes, some professors mentioned using the students' native tongues.

Interview data was captured, transcribed, categorised, and organised into themes and subthemes. For the individual interviews, a non-random convenience selection method was utilised, and lecturers were chosen depending on their availability and willingness to take part. Interviews were conducted with five lecturers: three in English (Lecturers 1, 3, and 5), six in Food Technology (Lecturers 2, 4, 6, 7, 9 and 10), and one in Mathematics (Lecturer 8). The following subthemes are used to group the findings: the value of ELS for engineering students, the ELS of ND2 food technology students, the theoretical versus practical components of the ND programme, providing support for the development of ELS, and the function of home language instruction.

## **Results**

### **NDII Food Technology Lecturers' Insights on ELS and AP**

This paper has concentrated on the qualitative interview data that demonstrated instructors are acutely aware of the vitally significant relationship between their students' ELS levels and AP, based on their practical experience

### **Significance of ELS**

For science students, English is essential because it is the Language of Learning and Teaching (LOLT) and a common language around the world, according to lecturers. ELS is crucial for Food Technology students who want to advance their professions, according to Lecturer 3 (English). Only Lecturer 10 said that low ELS did not affect students' performance in his course, which is Food Technology, the most applicable and quantitative of the science subjects. The minimal need for other ND courses was 6 Credits, whereas their department had tighter entrance standards, particularly for matric applicants. Therefore, food technology students would have mastered a level of English competence prior to admission and would require less language assistance.

According to lecturers, having inadequate ELS will inhibit students from doing well in their own topics. Additionally, students would have trouble comprehending the subject matter. Lecturer 2 pointed out that ELS is crucial for success in both the academic and practical aspects of his topic, such as comprehending drawings. There is no way you can escape English, he declared. Some professors stated that ELS is crucial for their courses because indigenous languages don't have enough scientific and mathematical vocabulary. Lecturers emphasised the need for effective ELS, particularly in exams and examinations where students must formally demonstrate their knowledge. When it comes to written exams, tests, and assessments, lecturer 4 observed that "they do not know how to interpret, because there is a word in that question that they have never heard or there is an English concept like 'describe'."



Lecturers claimed that because students did not read for comprehension during formal tests and examinations, they misunderstood the questions and gave erroneous responses. They observed that their students struggled to explain concepts in tests and examinations, that their answers were frequently constrained by their poor ELS and poor vocabulary, and that their ELS was frequently too poor for them to perform higher order skills (such as the instruction to "apply") required in an examination. According to Cummins et al. (2001), science problems are further decontextualized in exams and assessments with no cognitive support, hence it is to be expected that these scenarios would call for high degrees of cognitive thinking. While the other lecturers believed that ND2 students mainly lacked the higher order language skills necessary for formal tests and examinations, Lecturers 4 and 2 claimed that they believed students lacked both basic interpersonal communication skills (BICS) and cognitive academic language proficiency (CALP).

Both Lecturer 7 and Lecturer 2 expressed the opinion that some of their students' ELS was so subpar that it hindered them from answering questions in class and taking part in unstructured discussions. In order to put it plainly, Lecturer 2 stated, "Some of them are afraid of the language." "Some of them definitely know the answer, but they don't have the confidence in the second language to answer it," another person remarked. Additionally, they fear being teased by their friends and classmates. Students are frequently prevented from participating in class discussions and communicating with the lecturer because of this.

### **Features which influence ELS**

Lecturers found a variety of variables that affect ELS. The socioeconomic position, exposure to English, and quality of instruction at the school level was the most important factors. The bulk of their students are from Nigeria, thus lecturers are well aware that English is not their mother tongue and that this may be a contributing reason to their low English language proficiency (ELS). Many times, these pupils only encounter English in the classroom. The significance of the role that instructors have in a student's ELS was discussed in lectures 3, 4, and 5. One participant asserted that educators should not engage in rote teaching and learning but rather explicitly teach cognitive academic language proficiency skills; another participant argued that it is the duty of the educator to help students become fluent in English; a third participant believed that students are influenced by the attitudes of their previous educators.

According to existing research (Howie et al. 2017; Webb et al. 2010), students from ex-model C schools have superior ELS than students from schools in rural and township areas. Both Lecturers 4 and 7 shared this opinion. One person asserted that "the people from the old model C schools or the good schools will have a far better ability to use the language and will be a far greater amount of confidence." Another person said, "I believe that schools play a crucial role, yet pupils from remote areas do not always attend schools and do poorly. A few years ago, I had a pupil who was from Nkwagu in Ebonyi State. However, that girl had amazing linguistic skills. Despite attending a decent school in a rural area, the lecturer credited her strong English language skills to having a superb English teacher

### **Theoretical in opposition to practical works**

The ND program's difference between theoretical and practical works which are supposed to be largely practical but are actually highly theoretical is one theme that stood out as particularly significant. Lecturer 6 complained that classes were very theoretical and lacked adequate practicals. According to Lecturer 2, just 30 to 38 percent of his topic required practical labour. However, lecturers concurred that since students must have theoretical knowledge in order to complete the practical portions of their courses and must formally explain in English what they did while practising, ELS is crucial for success in both the theoretical and practical parts of science courses. It takes time and support to develop a level of competency in cognitively demanding abstract language needed to use theory to describe practical elements of science (Ball 2010).

The fact that instructors who did not teach science courses to students was another significant conclusion of this research. Even though most Science lecturers indicated that ELS was a challenge for their students, none of them reported approaching English lecturers for help, highlighting the absence of interaction amongst lecturers regarding the ELS of their students. Even though they are aware that ELS and AP are connected, non-language lecturers were unable to explain how English lecturers may assist students with Science topics when asked. Science lecturers frequently view non-science courses as something that must be endured or tolerated rather than as a tool that could help students manage their science coursework.



## **Support Approaches**

The majority of lecturers agreed that providing extra assistance to students with weak ELS was a good idea. In her break periods, Lecturer 5 mentioned that she helped pupils with low ELS. She advised adding an extra English lesson after school hours so that pupils may rehearse using the language since the majority didn't have much exposure to it at home. Both Lecturers 1 and 3 expressed hesitancy about offering additional assistance, with Lecturer 3 stating, "I would question what I would actually be teaching them. You know, sometimes it's evident that I lack the necessary abilities for remedial. The English classes, according to Lecturer 9, are where students will genuinely study the language itself in addition to what they will learn for their careers.

By asking students questions in English about the material they had studied, Lecturer 2 claimed to be able to identify students with weak English language skills. By having them read a passage from the textbook, another person was able to identify the students who had trouble with English during the LOLT. When Lecturer 6 noticed that her pupils lacked the vocabulary necessary for her subject, she advised them to look up challenging words in a dictionary. She realised that she didn't always have the time to help pupils overcome their language barriers, but she made visual aids to help students understand words, which also took more time and effort.

A Yoruba-speaking science educator named educator 9 remarked that if a student had trouble understanding a certain area of the work, he would explain it to them in Yoruba. The only lecturer without a plan for dealing with students who lacked basic English language proficiency was lecturer number ten. He claimed that after referring students to his senior, the latter had to handle the situation.

The majority of professors' ignorance of their students' Use of English scores prevents them from providing adequate help, which is a noteworthy finding. The results her students received for the Use of English test were only known to Lecturer 5 (English). She claimed that she provided therapy to pupils who did not pass the test. The test's value was viewed differently by different lecturers. "Whether it is reliable, I am not 100% sure, if it is used effectively," said Lecturer 3 (English). Because it was computer-based, Lecturer 1 (English) thought it wasn't a reliable indicator of the students' ability level. She argued that it was unfair to students who had no prior computer experience and offered an alternative to the computer-based test.

## **Use of Domicile Languages**

Using students' native languages for education and learning is an excellent concept, according to the majority of professors, while some have concerns about how it is done. Some thought that teaching difficult subjects like mathematics in Yoruba would help students learn more and boost their self-confidence. The eighth maths lecturer said, "I think that if you receive education in your [home] language you are a lot more comfortable and feel you understand better," while the seventh lecturer said, "If students interact with one another, it's always in their mother tongue which is easier for them." Others thought that teaching students their native tongue would prevent them from learning English well.

Despite being opposed to teaching a whole subject in first language, lecturer 4 indicated that challenging concepts or aspects of a subject may be taught in first language to facilitate increased clarity, understanding, and interpretation. One lecturer noted that she established a relaxed classroom atmosphere where language mixing was permitted. Then, eager to show their grasp, students actively participate in class debates. She estimated that while 60% to 70% of her pupils were effective communicators, only 30% of them have cognitive academic language proficiency. Lecturer 8 observed that when students were still having trouble understanding, she would ask one of the students to describe how they interact with one another.

Using Yoruba to make the lecture more humorous, Lecturer 2 stated that he disapproved the usage of First Language for official learning objectives. When everyone in the class was fluent in Yoruba, Lecturer 9 said he would use that language to explain the assignment, but "if there is a portion who is maybe Hausa, Igbo, or different tribes, that's not going to be nice, because now they don't understand Yoruba." It would be challenging for pupils to obtain home language teaching because not all of the technical phrases were available in Yoruba, according to lecturers. Additionally, students would receive less exposure to English, which would be problematic because tests



were administered in English without the lecturer present to clarify and because students would be expected to communicate in English at work. For these reasons, ELS goes beyond certification to equip students for their desired careers.

### **Discussion**

A majority of teachers seem to be aware of the language challenges that many of their students face and that getting beyond them will help students advance. These ideas are demonstrated in the various strategies they have created to assist these youngsters. The bulk of these include language training, whether it be done so through speaking in their original tongue, checking students' understanding with questions, reading from a textbook, or using a dictionary. The creation of visual aids to support conceptual learning, as suggested by Cummins' theories from 2000, will aid in scaffolding students' learning and encourage independent thought. It would seem that professors could do a better job of helping their students by using the information from the Use of English evaluations. This appears to be connected to how unevenly the exam is given, in that not all students are required to take it, and whether or not it is a valid measure of language proficiency. If the goal of the test is to identify pupils who need linguistic support to achieve academically, these problems must be fixed.

The experts' assessment is that a new placement test that provides a more thorough evaluation of ELS is necessary. In order to place students in the appropriate programme, such as ND or HND, where they may get effective and appropriate support, a placement exam like this one should be used to identify a student's ELS readiness and to assess their language development needs. Due to the fact that the majority of ND students communicate an additional language different from the TVET Standard of Instruction and Learning within their homes, it is essential to accurately assess their developmental requirements and provide support.

Additionally, because they frequently attend underfunded institutions and start their tertiary education at a disadvantage, it is even more crucial. Since the ND programme attracts students who have experienced disadvantage, it would not be fair to impose strict pre-course competency testing requirements because doing so would only prevent these students from completing their degree and obtaining financial, professional, and social security. Testing shouldn't prevent students from continuing their education; rather, it should be used to assess who needs help and as a placement tool. As a result, the science industry would lose some brilliant craftspeople.

Students should be informed of their results following the introduction of an additional placement evaluation and should be given counselling to assist them understand their skills and language requirements. In order to succeed in their studies and once they have earned their certification in their chosen sector, they will have to take responsibility for their own development. Prior to the start of class, lecturers should be aware of the outcomes of the students' proficiency examinations in order to properly arrange their courses and assessments. Due to this, it will be necessary to record and make available to all professors the electronic mark system for ND students' assessments.

Lecturers stated that it is understandable if they do not have the time or resources to help struggling students improve their ELS. Therefore, further assistance should take the shape of formal language instruction, such as a literacy support module like the one suggested by Van Rooy and Coetzee-Van Rooy (2015), as well as lecturers customising their teaching strategies based on their students' ELS proficiency. All students who receive a placement test score below 50% should be required to take a language support module that explicitly teaches cognitive academic language proficiency abilities. Additionally, it is suggested that this module, which focuses on academic literacy for science courses, be made available to all ND students, with the option of opting out for those with scores higher than 50%.

Students are expected to succeed in disciplinary literacy practises, according to the area of New Literacies Studies (NLS) (Barton, Hamilton, & Ivanic 2000). In the sphere of applied science, these include communicating for safety reasons, producing technical reports, doing research, utilising scientific language, writing scientific terms, expressing ideas clearly, and fluently reading drawings and technical reports. If language lecturers and science instructors work together, this will be accomplished in TVET ND programmes most successfully. It is crucial that non-language lecturers acquire language instruction and support in integrating ELS tools and strategies into their instructional methodologies. It is also critical that lecturers of disciplines other than science receive training to help them understand what their students are studying in science classes so they may modify their instruction to include pertinent examples and discussions. This kind of peer teacher training might take place amongst professors and could



involve instruction on how to help science students develop higher order abilities like comparing, classifying, analysing, evaluating, and inferring.

Lecturers may also be taught instructional techniques that help students grasp concepts by placing them in context, such as through the use of films, images, diagrams, and hands-on activities. Lecturers should also receive training in how to teach in a multilingual setting, which would entail allowing students to discuss new ideas with their peers in their native tongue, using code switching and other inventive language combinations when instructing, and translating portions of the work into the students' native tongues. The exclusion of native languages from academic settings would be somewhat remedied by doing this (Mdzanga and Moeng 2021).

ND is still essentially a theoretical concept as at the time of this study. A lack of English comprehension and lettering abilities prevents students from representing that they have acquired the necessary practical knowledge outcomes, according to science instructors, who stated that in their experience, ELS was in fact an important requirement for even the practical portions of their topics. In order to evaluate and assess multiple literacies most effectively, a rewrite of the ND curriculum is ultimately required; however, pressure for this curriculum modification on the sector of Higher Education and Training must come from organisations that hire TVET students

### **Conclusion**

It is crucial to put pressure on the sector of Higher Education and Training to expand the use of indigenous languages as teaching tools at the tertiary level. Instead of replacing English as a teaching and professional communication tool, the goal would be to supplement it. It will be advantageous for students themselves, the professional knowledge base, and the nation's skills and youth unemployment crises if students are given the tools they need to succeed in their studies and careers through the use of their mother tongue. Yoruba usage in technical domains, for instance, will help indigenous languages gain more recognition in science research.

In summary, this work serves as a starting point for additional study in this area. The research on the utilization of language as a cognitive aid for learning in the science disciplines is expanded by this study. Additionally, it offers a chance to reevaluate the dominant, normalised role of English in Science studies and investigate ways that indigenous languages may be mobilized as resources for epistemic access in higher education (Mdzanga & Moeng 2021). In this area, more work still needs to be done.

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