

# **TRANSLANGUAGING AS A VEHICLE FOR L2 ACQUISITION AND L1 DEVELOPMENT: STUDENTS' PERCEPTIONS**

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## **ABSTRACT**

The purpose of the article is to report on a project aimed at exploring the use of translanguaging as a strategy to support bi-/multilingual students in acquiring academic literacy in English while promoting the terminologisation of African languages through exploratory scientific talk. The topic is contextualised by juxtaposing multilingualism as a problem with multilingualism as a resource. This is followed by a discussion of translanguaging as an alternative to monolingual education. An overview is given of a number of empirical studies on translanguaging conducted in South Africa during the past 15 years. Subsequently, I discuss a research project that elicited students' opinions about translanguaging as a pedagogical strategy. Speakers of eight African languages, including Afrikaans, experienced cognitive and affective benefits. Despite some reservations, they also considered translanguaging to be a useful platform for creating technical terms in African languages, and were positive about future use.

**Keywords:** Academic literacy; L1 development; L2 acquisition; multilingualism; terminologisation; translanguaging.

## **1. PURPOSE AND FOCUS**

This paper explores the use of translanguaging as a pedagogy and a strategy to support bi-/multilingual students in acquiring higher cognitive literacies in English while at the same time promoting the use of the L1 in exploratory talk as well as formal discourse-specific talk and writing, with specific emphasis on the use of terminology.

The topic is contextualised by juxtaposing multilingualism as a problem and multilingualism as a resource, and then discussing translanguaging as an alternative to monolingual education practices. Thereafter, an overview is given of a number of empirical studies on translanguaging in Africa during the past 15 years. The research gaps that were identified constitute the bridge to the discussion of a small-scale research project aimed at establishing first-year university students' views on translanguaging as a pedagogical strategy and a vehicle for L1 terminologisation.

## **2. BACKGROUND**

Two interrelated issues serve as the primary rationale for this article: students' struggles to study through the medium of English, and government policy frameworks to promote the use of the African languages in higher education in order to facilitate conceptual access and social inclusion (Stroud and Kerfoot 2013, 396), or as phrased by Madiba (2013, 394) 'to open implementational and ideological spaces for multilingual education'.

Numerous researchers across the world have highlighted university students' struggle to cope with the demands of studying at university through the medium of a former colonial language that is either a foreign or a second language to them, for example Tsuneyoshi

(2005) – Japan; Erling and Hilgendorf (2006) – Germany; Hellekjaer (2009) – Norway; Kerklaan, Moreira and Boersma (2009) – Portugal; Crawford Camiciottolo (2010) – Italy; Evans and Morrison (2011) – Hong Kong; and Kagwesage (2013) – Rwanda. In South Africa, scholars such as Dalvit and De Klerk (2005), Weideman (2006), and Deyi, Simon and Ncobo (2007) have pointed to low academic literacy in English as one of the major causes of dropout among African students. The struggles of students for whom English is not an L1 is generally ascribed both to the expansion of English-medium teaching in response to globalisation (Joseph and Ramani 2012, 22), and the massification of higher education (Boughey 2000, 281; Evans and Morrisson 2011, 148). In South Africa, the apartheid-born system of Bantu Education, poorly trained teachers and dysfunctional schools have been added as contributory causes (Heugh 2000, 4–6).

Ruiz (1984, 27) makes a distinction between ‘language-as-problem’, ‘language-as-right’, and ‘language-as-resource’ approaches in language planning. In situations where a former colonial language is the medium of instruction, minority languages are often regarded as a problem (Ramani, Kekana and Modiba 2007, 208); however, in most countries of the world, multilingualism is the norm rather than the exception (Cummins 2000; Heugh and Skutnabb-Kangas 2010). This situation calls for strategies to be put in place that value language as a resource. Stronger and weaker interpretations of the language as a resource orientation are found among linguists. Joseph and Ramani (2004; 2012) adhere to a strong version. They argue that the mother tongue is the most effective route to attaining higher levels of academic cognition, and is immediately usable as a medium of instruction – not only after terminology and materials have been developed. In complementary (weaker) models, English remains the primary medium of instruction, and students may use their first languages as auxiliary mediums of learning (Madiba 2013, 394). Such models usually also encourage the development and use of terminology, albeit not as part of formal instruction.

During the past 15 years, various policies that emanated from the former Department of Education (2002; 2003; 2008) and the current Department of Higher Education and Training (2011; 2012; 2013) have attempted to give substance to the provisions of the SA Constitution with regard to language in education. Both the 2002 and 2003 documents overtly mention the development of scientific terminologies. The *Language policy for higher education* (2002) explicitly states that the use of South African languages other than Afrikaans and English should be considered as mediums of instruction in institutions of higher learning; while the report on the *Development of indigenous languages as mediums of instruction* (2003) adds that in order for the indigenous languages to be used as mediums of instruction at tertiary level their scientific terminologies need to be extended. The approach to facilitate such development is phrased in the *White paper for post-school education and training* (2013, 38) as ‘cross-disciplinary’; ‘a renewed focus on developing the African languages in universities’; and ‘one that integrates African languages into the formal programmes of institutions’.

One of the strategies that holds potential for both supporting the language as a resource orientation by empowering students to become proficient in the medium of instruction, and occupying the niches that governmental and institutional policies have created for scientific meaning making through students’ strongest languages, has become known as ‘translanguaging’. This strategy involves that at least two languages are used in a functionally integrated manner to mediate cognitive, social and affective processes in literacy and learning (Lewis, Jones and Baker 2012a, 642). The following section provides an overview of the notion of translanguaging, its history, and its main functions in educational contexts.

### **3. TRANSLANGUAGING**

#### **3.1 Translanguaging as an Action and a Process**

Recently, scholars of multilingualism have started viewing language as a process and an activity, rather than an entity (Wei 2011, 1; Gort 2015, 1). The act of 'languaging' involves that language users continually make strategic choices from all the semiotic resources at their disposal. Thus, a communicator's entire semiotic repertoire is present at all times, and he/she simultaneously draws upon different sets of language features (grammar, lexis, phonetics) from different languages or other semiotic systems. This view runs counter to traditional monoglossic policy and practice in education systems that privilege the standard variety of a national language, which is often a former colonial language (Garcia 2009).

The notion of translanguaging developed against the background of the historical separation of Welsh and English (Lewis et al. 2012a, 641). From the 1990s, the popularity of translanguaging in education started growing internationally, mainly spurred on by a growing view of bilingualism being an advantage, rather than a disadvantage. Initially, the focus was set on bilinguals, and particularly on the function of translanguaging to assist learners in accessing different linguistic features of two languages in order to mediate complex cognitive processes (Lewis et al. 2012a, 641). More recently, the focus has shifted to multilingual contexts, and the simultaneous use of more than two languages for both or either content and language teaching and learning (Makalela 2015, 201).

Baker (2011) discusses four potential educational advantages of translanguaging: to promote a deeper and fuller understanding of the subject matter; help the development of the weaker language; facilitate home-school links and co-operation; and help the integration of fluent speakers with early learners. Particularly the first two advantages may apply to content-integrated academic literacy learning in higher education. In addition, Garcia (2011, 147) has recently claimed that translanguaging is an essential 'metadiscursive regime' for students of the twenty-first century. This 'regime' may include knowledge and awareness of available strategies, and the ability to choose the most effective one; conscious application of learnt strategies; monitoring, evaluating and adjusting performance during an activity; and planning for future performance based on the evaluation of past performance. To the mentioned benefits Pavlenko and Norton (2007), Creese and Blackledge (2010) and Canagarajah (2011) add the establishment of identity positions, and the endorsement of using different languages and literacies simultaneously to engage the audience. Finally, translanguaging is also useful as a strategy for promoting concept literacy in higher education, while simultaneously providing a 'safe space' for experimenting with the creation and use of terminology in the African languages, as highlighted by the work of Madiba (2014) and Nkomo and Madiba (2011).

In the next section, I summarise a number of empirical studies on translanguaging in South Africa that have been published during the past 15 years, which demonstrate some of the advantages mentioned.

#### **3.2 Empirical Studies on Translanguaging in Higher Education in South Africa**

Van der Walt, Mabule and De Beer (2001) count among the first researchers to problematise the common perception that instruction has to be solely in the language of learning and teaching (English). The authors found 'responsible' code-switching (translanguaging) beneficial in improving students' understanding of subject material in Biology, Physical Science and Mathematics, while simultaneously improving learning and developing technical terms that can provide a bridge to the L1, and aid learning (ibid., 75).

Van der Walt and Dornbrack (2011) explored the strategies and coping mechanisms that successful Afrikaans-English bilingual students employ to mediate cognitively

challenging material. Qualitative content analysis of individual interviews and post-intervention questionnaires with 11 PGCE students brought to light that despite the emotional and physical strain students suffered by studying through a second language (ibid., 95), they persevered and obtained high levels of fluency in the language of learning and teaching (LOLT), among other things by using various strategies of translanguaging.

Paxton's (2009) research in an academic literacy module within an extended programme (ibid., 351) revealed that the students were generally very positive about the opportunity to discuss difficult concepts in their mother tongues during tutorials. She concludes that giving L2 students access to the concepts they need for exploring ideas and concepts in both English and their primary languages, 'using a range of languages and discourses to negotiate the meaning of unfamiliar terms', constitutes an important pedagogy that needs to be incorporated in curricula (ibid., 356).

The focus of Madiba's (2010; 2014) research was 'the role of multilingual glossaries in providing scaffolding for concept literacy in different disciplines at tertiary level' (Madiba 2014, 68). In a pilot project, an English glossary, translated into the other 10 South African languages, was used as input to facilitate concept literacy through translanguaging between English, IsiXhosa and Tshivenda (ibid., 70). Drawing upon their multilingual and multiliterate resources, mixing them with English to learn and explain the meanings of concepts, and combining translanguaging with other multimodal resources proved to be a productive strategy to promote discussion and deeper understanding of the concepts at hand.

Joseph and Ramani (2004, 254) and Ramani et al. (2007) demonstrate how students enrolled for a bilingual bachelor's degree in English and Multilingualism were guided from basic interpersonal communication, through exploratory talk about academic topics, to higher-level academic literacies through the medium of the L1 (Sepedi) (Joseph and Ramani 2004, 254). Going beyond the suggestions by Paxton and Madiba, they recommend that learners should be allowed to experience the need for higher levels of the L1 while struggling to use the L1 in order to grapple with academic concepts. They conclude that terminologisation is not a prerequisite for L1 instruction at university level (Ramani et al. 2007, 218).

Makalela's research (2014; 2015) focuses on the learning of an additional language at university level, more specifically on establishing the effectiveness of a fluid communicative language practice among Nguni speakers learning Sepedi. Main findings from his research were that 'the use of translanguaging approaches in the Sepedi class dismantles ethno-linguistic divisions of the past' (Makalela 2014, 102), and that the methodology was liberating for speakers of historically marginalised languages, and affirmed the fluid linguistic identities of their speakers. His follow-up study (2015) confirmed these findings, and indicated that translanguaging practices authenticated students' multilingual identities, created an emotionally safe environment, and improved their oral reading competencies.

The studies outlined above have in common that they all emphasise the advantage of translanguaging in mediating cognitively challenging material that has to be learnt through the medium of a second language (English). Van der Walt et al. (2001), Ramani et al. (2007), Paxton (2009), and Madiba (2010; 2014) also mention the benefits of creating and/or using subject-field terminology in the L1 or strongest language to support conceptualisation, while Makalela (2014; 2015) highlights gains in identity formation and social cohesion. However, although all these studies contributed to better understanding of some of the benefits of translanguaging, none of them attempted to elicit students' perceptions with regard to the gains of the strategy in terms of learning and literacy. The small-scale research project on which I report in this paper was particularly aimed at gaining an overview of the opinions of students from different linguistic backgrounds about the use of translanguaging as a tool to

facilitate concept literacy using both English and the L1, while becoming academically literate in English.

## **4. RESEARCH PROJECT OF RESTRICTED SCOPE**

### **4.1 Context**

When the research was conducted at the particular university, the official mediums of instruction were still English *and* Afrikaans. Tuition was offered in Afrikaans in core modules, with demand and economic justification serving as additional considerations. However, English had already become the preferred LOLT.

The languages in which academic literacy interventions were offered depended on the requirements of the faculties that prescribed such modules. Some faculties opted for interventions in both English and Afrikaans, while others opted for English only, sometimes irrespective of whether the students chose English or Afrikaans as their preferred LOLT. In the BSc programme in Construction Economics, students could choose Afrikaans or English as an LOLT upon enrolment, and at first-year level they were divided into English and Afrikaans tuition groups. An academic literacy module (ALL 122) served as an adjunct to a module in Building Science (BWT 110), and was taught in English to both groups (the English group comprising approximately 90 students and the Afrikaans group comprising approximately 60 students). The entire population of students registered for BSc programmes in Construction Economics in the first semester of 2015 was sampled initially, but later the monolingual English speakers were excluded from the sample.

One of the major assignments in Building Science 110 was writing a report on a visit to a construction site. For this report, students needed to conduct a brief literature review on the different elements and/or phases of house-building, and compare observations as well as information obtained through interviews on site with their synthesis of theory and best practices. Through this application, students had to demonstrate an understanding of construction methods, planning and management processes. The main purpose of the adjunct module in academic literacy (ALL 122) was to equip the students with the necessary skills to cope with the process of gathering information, transforming information and presenting information in the report.

Two years of teaching ALL 122 provided me with first-hand experience of students' struggles to produce written work at a CALP level – particularly those with Afrikaans and African languages as mother tongues. Problems occur both at the surface level (grammar, lexis, spelling, referencing, formatting) and at deeper cognitive levels (structuring and linking paragraphs and sections, synthesising the literature, and integrating theory and application). In 2015 I included additional tasks to scaffold reading and understanding of academic articles as well as structuring of knowledge. One of the scaffolded tasks included comprehension reading of an academic article entitled *Implementing a waste management plan during the construction phase of a project: A case study* (McDonald and Smithers 1998). Translanguaging, translation and information visualisation (concept mapping) were used as part of the scaffolding to assist students in collaboratively understanding the concept of waste management. I was particularly interested in finding out:

1. how effective translanguaging is as a meaning making strategy in academic literacy interventions;
2. what students' attitudes are towards translanguaging as a pedagogical strategy;
3. how effective translanguaging is in facilitating L2 development (English);
4. how effective translanguaging is in facilitating L1 development and terminologisation in particular; and

5. what students' attitudes are towards creating subject-field terms in the African languages, which may facilitate communication in the L1.

## 4.2 Research Site

The students in the English and the Afrikaans groups were requested to form groups of three to ten students who shared the same mother tongue/strongest language. Each group was given a partially completed concept map on which the most important concepts and sub-concepts were labeled by means of English terms, to allow controlled discussion across groups. This step in the scaffolding exercise was combined with matching English definitions from a randomised list with their associated terms. Next, each group had to supply translation equivalents in the L1 for the given English terms, and also translate the definitions into the L1. Students were encouraged to use the mother tongue/strongest language, or a mix of English and the L1, to converse – as long as the medium of conversation assisted them to better understand the concepts and negotiate the definitions with their group members. In recent research, Jones and Lewis (as quoted in Lewis et al. 2012b, 659) identified a combination of translation and translanguaging as an important practice in bilingual classrooms in Wales. One of the types of translation activities included the translation of subject-related terminology.

The students who attended the English class on the day data collection took place consisted of 9 IsiXhosa speakers, 7 IsiZulu, 10 Sepedi, 7 Setswana, 4 each of Xitsonga and Tshivenda, and 16 English speakers. The English mother tongue students took part in the concept mapping exercise, but were not required to participate in the translanguaging and term-creation activities. Therefore the total number of students sampled in the English group was 41. The sample for the Afrikaans group comprised the 55 students who attended class on the day of data collection.

## 4.3 Data Collection

After the students had completed the multilingual concept mapping task (in both classes), they were requested to respond in writing to a semi-structured survey questionnaire, comprising the following questions:

1. Has the strategy of translanguaging assisted you in making sense of the concept of waste management? Support your answer by giving reasons.
2. Do you think you will use the strategy during your small group discussions throughout the semester?
3. Has the strategy of translanguaging assisted you in developing competence and confidence in your weaker language (English)? Support your answer by giving reasons.
4. Do you think that the strategy of translanguaging could provide a platform for creating technical terms in your mother tongue/strongest language?
5. Would you use the terms that you have created? When/where?

## 4.4 Data Analysis

The data were first analysed 'by hand', using a data table in MSWord, to derive an overview of the content. Preliminary codes were typed in rows inserted below each record. The table was then converted to a pdf file and uploaded to a hermeneutic unit in the qualitative content analysis program Atlas.ti. All the data were then recoded in Atlas.ti. The 'final' codes were saved in the 'code manager' of the program. An output file containing all the codes and quotes was subsequently generated, saved and printed. The printout was re-read several

times, followed by various cycles of thematic clustering until a coherent picture arose. The code families were then entered into Atlas.ti and linked to the related codes. It became clear that the responses to questions 1 and 2, and 4 and 5 could be combined under one theme, while question 3 required a theme of its own. The rationale was that questions 1 and 2 both probed students' response to the value of translinguaging as a meaning-making strategy, and questions 4 and 5 both pivoted on students' attitudes towards terminologisation in the African languages, while question 3 dealt with development of the L2. Themes 1 and 2 comprised two codes each (positive and negative responses to the relevant questions), while theme 3 comprised four codes: positive and negative appraisals of terminologisation with regard to two dimensions, translinguaging as a platform for terminologisation and intention to use the terms created during translinguaging.

After reading through all the quotes subsumed under each code, I compiled a data table containing the three themes, the eight codes, and their supporting quotes. This led me to embark on an a posteriori coding cycle to label the different types of support provided by students. The final coding scheme (represented as Table 1) reflects the outcome of the entire coding process.

**Table 1: Coding scheme**

Theme 1: Meaning making	Theme 2: L2 development	Theme 3: L1 development (terminologisation)	
<p><b>Code 1</b> +Translinguaging assisted students in making sense of the concept of waste management</p> <ul style="list-style-type: none"> <li>• <i>Seeing the bigger picture</i></li> <li>• <i>Discriminating between concepts</i></li> <li>• <i>Simplifying complex concepts</i></li> <li>• <i>Expressing own conceptual understandings</i></li> </ul>	<p><b>Code 3</b> +Translinguaging assisted students in developing competence and confidence in their weaker language (English)</p> <ul style="list-style-type: none"> <li>• <i>Expansion of English vocabulary</i></li> <li>• <i>Improved confidence in using English</i></li> </ul>	<p><b>Code 5</b> +Translinguaging can serve as a platform to create terms in the African languages</p> <ul style="list-style-type: none"> <li>• <i>Communication (making yourself understood)</i></li> <li>• <i>Agency</i></li> </ul>	<p><b>Code 7</b> +Intention to use L1 terms in future</p> <ul style="list-style-type: none"> <li>• <i>Social cohesion among speakers of different African languages</i></li> <li>• <i>Social cohesion among members of the same language community (identity)</i></li> </ul>
<p><b>Code 2</b> -Translinguaging did NOT assist students in making sense of the concept of waste management</p> <ul style="list-style-type: none"> <li>• <i>L1 (dialectal) variation</i></li> <li>• <i>L1 complexity</i></li> <li>• <i>Lack of specialised vocabulary in L1</i></li> <li>• <i>English is my strongest language</i></li> <li>• <i>English is the language of scientific communication</i></li> </ul>	<p><b>Code 4</b> -Translinguaging DID NOT assist students in developing competence and confidence in English</p> <ul style="list-style-type: none"> <li>• <i>English is my strongest language</i></li> </ul>	<p><b>Code 6</b> -Translinguaging is NOT likely to serve as a platform to create terms in the African languages</p> <ul style="list-style-type: none"> <li>• <i>L1 complexity</i></li> <li>• <i>English is the universal language</i></li> </ul>	<p><b>Code 8</b> - NO Intention to use L1 terms in future</p> <ul style="list-style-type: none"> <li>• <i>L1 complexity</i></li> <li>• <i>L1 (dialectal) variation</i></li> </ul>

## 4.5 Discussion of Findings

### 4.5.1 Theme 1: Meaning making

#### 4.5.1.1 Code 1: Translanguaging assisted students in making sense of the concept of waste management

The majority of students in the English and the Afrikaans groups reported positive experiences of translanguaging (question 1). In their responses to questions 1 and 2, 78 students indicated that translanguaging helped them to better understand the concept at hand (28 from a total of 41 in the English group, and 50 from a total of 55 in the Afrikaans group). Salient reasons include that it assisted them to understand ‘the bigger picture’ of waste management, to distinguish between different types of waste management and to simplify complex concepts. Apart from these receptive gains, students also mentioned production – the advantage of better expressing their own conceptual understandings. The following quotes exemplify the prominent categories of supporting information:

#### Seeing the bigger picture

- (1) Yes, it has improved my total understanding of the concept. [Tshivenda]
- (2) Yes, it expanded my mind in the concept waste management. [Sepedi]
- (3) Yes, hearing and reading certain concepts in a language that comes naturally to me. It is easier to form a global picture of something, when it is explained to me in my language of choice. [Afrikaans]

#### Discriminating between concepts

- (4) Yes, by using my home language it was easier to explain, understand and relate the terms to everyday activities. [Sepedi]
- (5) I have learned in my language which is Sepedi the difference between other concepts used on site in English, like re-use, incineration, second-hand use and refill.
- (6) Yes, by hearing it in my own language I can better distinguish between different concepts in waste management. [Afrikaans]

#### Simplifying complex concepts

- (7) Yes, because it makes the concept more simple since I have been discussing it in my mother tongue with my group mates. [IsiZulu]
- (8) Yes, because it made me understand the concept more and it made it easier to know what it is all about. [Sepedi]
- (9) Yes, breaking down waste management in your motherstongue [sic] makes it easier to understand in some instances. [Afrikaans]

#### Expressing own conceptual understandings

- (10) I felt that I was able to express my ideas and thoughts. [Xitsonga]
- (11) If I were speaking to the workers on site. It would help to make their lives easier and for them to understand more. [Sepedi]
- (12) To help those who don’t understand the English technical terms on site. The mother tongue terms could be very useful. [IsiZulu]



Although the first two questions of the questionnaire dealt with meaning making, a number of students mentioned that translanguaging *created a safe space for meaning making* within a community of L1 speakers, as exemplified by the following quotes:

(13) Yes, I know my home language [Sepedi] better and more and have less fear of grammar [sic] and sentence construction.

(14) Yes, the big English words were hard, and I didn't understand all of them. I am more comfortable with my group in Afrikaans and therefore understood it better.

(15) The terms and phrases in my language are more understandable as I did Setswana as a home language at school and speak the language on a regular basis as well as read literature books in Setswana.

It is important to note that students mentioned conceptualisation not only in their answers to questions 1 and 2, but also often in their responses to questions 4 and 5. Although these responses were strictly speaking irrelevant, they give an impression of the salience of the understanding and communication of concepts during the process of translanguaging.

#### *4.5.1.2 Code 2: Translanguaging did NOT assist students in making sense of the concept of waste management*

Twenty-one students (15 from the English group; 6 from the Afrikaans group) indicated that they did *not* experience translanguaging as a helpful strategy. These students either reported that there was no benefit to them, or that translanguaging actually complicated their understanding. The reasons given most frequently were that there is much internal variation in the African languages, that the L1 is too 'complex' to allow meaningful translanguaging, and the lack of specialised vocabulary in the L1:

##### L1 variation

(16) Xhosa varies depending where you are in SA.

(17) IsiXhosa is a very broad language and so it is not easy to find the best word for what you want.

(18) IsiXhosa is branched.

##### L1 complexity

(19) Xhosa is too complex.

(20) No, it has not helped. It just made concepts more difficult because isiXhosa is too complex.

(21) No, I find my home language difficult and it was hard for me to translate most of the English [sic] words which involves waste management to Tshivenda.

##### Lack of specialised vocabulary in L1

(22) No, because of the fact that English has a lot of synonyms and Sepedi has limited words. It therefore made it challenging to come up with the correct word without using a phrase.

(23) No, it made me realise how my language has a shortage of some terms especially regarding waste, so it made it even more complicated. [Setswana]

(24) No, the translation from English to Sepedi is difficult as many words have a similar function, just changing of a couple of words changes the whole meaning.

Some of the students shifted the focus away from the inadequacies of the L1 to their own proficiency in English: These students regard *English as their strongest language*, particularly because they studied through the medium of English from very early on in their careers. Those who did not take their mother tongue as a school subject never acquired written skills in the L1:

(25) I feel more confident speaking English. It has always been my stronger language. [Setswana]

(26) English has been a part of my life. I was taught in English [sic] so understand terms in English better than in Xhosa.

(27) Zulu is in actual fact my weaker language. I understood the concept better in English.

A considerable number of students indicated that because *English is the language of scientific communication*, it is not beneficial to use the vernacular for academic communication:

(28) English is the universal language, there is no need for technical terms in mother tongue (Yes I know I sound ignorant). [Sepedi]

(29) I would make them [terms in the Xitsonga] sound more like the English language because that's the language that everyone is used to.

(30) By understanding the words/ideas in your home language [Afrikaans], you can learn the English [sic] terms, and learn the meaning of it. One day in the future it will benefit [sic] me, because it is the most common language.

It is interesting to note that the English LOLT group's responses to question 2 were slightly less positive than their responses to question 1: 20 students reported conceptual gains, 5 were uncertain, and 16 were appreciative of the strategy of translanguaging. Among the Afrikaans group, 49 of the 55 were positive, while 2 were uncertain and 4 felt that they would not use the strategy. The majority of positive responses emphasise understanding. Other reasons for positive responses include facilitation of collaborative planning and confidence building, especially among members of the Afrikaans group. Negative responses from the English group centred on the multilingual composition of the student groups; the fact that English is their strongest language; and internal variation in the L1.

#### **4.5.2 Theme 2: L2 development**

Van der Walt (2013, 113) is convinced that a 'third space', as was provided in the context of the present research, 'offers the possibility of linking academic literacy development in the powerful LOLT with the use of "non-standard", home or community languages'. Thus, there could be gains for both the L1 and the L2. Overall, more than 70% of the students thought that their English skills had improved as a result of translanguaging. However, internally there was a large difference between the responses of the English and the Afrikaans groups. Fifty out of the 55 Afrikaans L1 students thought that their English improved, whereas only 21 of the 41 students in the English group reported positive experiences of L2 development.

#### 4.5.2.1 Code 3: Translanguaging assisted students in developing competence and confidence in their weaker language (English)

The most important gain reported by the Afrikaans group was *expansion of their English vocabulary*, and the second most important gain was *improved confidence in using English*, as exemplified by the following quotes:

(31) Yes, it made my vocabulary of English much beter [sic] and understanding it. [Afrikaans]

(32) Yes, I learned new words and feel much comfortable with the language and more confident in doing tasks in English. [Afrikaans]

(33) Yes, by doing so I learn the meaning of new English words and I am becoming more comfortable doing work in English. [Afrikaans]

#### 4.5.2.2 Code 4: Translanguaging did NOT assist students in developing competence and confidence in English

The majority of those who did *not* feel that their English (L2) had developed through translanguaging were from the English group (15, as opposed to 5 from the Afrikaans group). The majority of the negative responses centred on the respondents' belief that *English is their strongest language*, usually as a result of their schooling history:

(34) Because it is more easier to communicate in english [sic] than in IsiXhosa. I never studied IsiXhosa.

(35) I'm used to English as it is what I have learnt from pre-school. [Sepedi]

(36) No, english [sic] is not my weaker language in fact my mother tongue [Tshivenda] is weaker.

### 4.5.3 Theme 3: L1 development (terminologisation)

Responses to the questions on L1 development was only explored with regard to the English group (n = 41), since Afrikaans already possesses a fully developed scientific terminology in the field of Building Science. The existence of a bilingual *Building Dictionary*, of which the first edition was published in 1960, may serve as a justification for this claim.

#### 4.5.3.1 Code 5: Translanguaging can serve as a platform to create terms in the African languages

Seventy-five per cent of students in the English group indicated that they were positive about translanguaging as a platform to create technical terms in the African languages. One of the prominent reasons for a positive attitude towards term creation was *facilitation of understanding* (6 responses). Another reason that featured a few times was a sense of *agency* connected to contributions with regard to term creation in the L1:

Communication (making yourself understood)

(37) The words I can use them in the presences of the people who are speaking my mother tongue in order to understand each other. [Xitsonga]

(38) Yes, because it will increase the rate of understanding. [Sepedi]

## Agency

(39) Yes, because the strategy has made me feel that it is possible for me to create technical terms in Sepedi.

(40) Yes, we can help to broaden our knowledge in our mother language. [Sepedi]

(41) Yes, we need to do it because right now most terms are derived from the English language. [Setswana]

### 4.5.3.2 Code 6: *Translanguaging is NOT likely to serve as a platform to create terms in the African languages*

Reservations (negative responses) expressed by students were that term creation in the African languages is a complex process and that English is the universal language.

#### L1 complexity

(42) After making up or creating ideas in Xitsonga I feel it is much easier to then translate back to English.

(43) We had to think long and hard about translating the terms of which I am still not sure if I understood them. [IsiXhosa]

#### English is the universal language

(44) No, I do not think so. English is the universal language, there is no need for technical terms in mother tongue (Yes I know I sound ignorant). [Setswana]

### 4.5.3.3 Code 7: *Intention to use L1 terms in future*

Just over half of the English group expressed a positive inclination towards the use of newly created terms in the African languages; 10% were neutral, and just over a third indicated a reluctance to use L1 terms. The positive responses were clustered around the sub-themes of social cohesion between speakers of different African languages (Ubuntu) and speakers of the same African language (identity):

#### Social cohesion among speakers of different African languages (Ubuntu)

(45) I would use them in such a way that would help our mother language and these terms could be used by other people of different languages. [Sepedi]

(46) I believe it [IsiZulu] would prove to be useful on site in order to communicate with workers who struggle with nonAfrican [sic] languages.

(47) To help those who don't understand the English technical terms on site IsiZulu could be very useful.

#### Social cohesion among members of the same language community (identity)

(48) By trying to speak to people on site who speak the same language as myself, thus making communication a lot easier. [Tshivenda]

(49) If I were speaking to the workers on site. It would help to make their lives easier and for them to understand more if I spoke to them in their home language. [Sepedi]

(50) I could use these terms when communicating with people who speak my language on site. [Setswana]

#### 4.5.3.4 Code 8: *NO Intention to use L1 terms in future*

Responses reflecting a negative attitude towards future use of the created L1 terms include that *the African languages are 'complex'*, and that there is a considerable amount of *internal variation*. Thus it is easier for them to revert to the English term:

##### L1 complexity

(51) I wouldn't be able to use them effectively because I find it much easier to use the English term. [Sepedi]

(52) I cannot use the terms because they actually complicate understanding. [Setswana]

##### L1 variation

(53) I would not be able to. Xhosa is broad and varies depending on where you live in South Africa. It would be difficult to communicate.

## 5. CONCLUDING REMARKS

From the content analysis, it is clear that L2 speakers of English from all the represented language groups found the strategy of translanguaging to be beneficial. Overall, cognitive gains featured as the most prominent benefit to students. The majority felt that the process scaffolded their understanding of the concept of waste management (and its sub-concepts) by painting the bigger picture, simplifying complex concepts, helping them to differentiate between related concepts, and to express conceptual content. Only the IsiXhosa L1 group repeatedly voiced the opinion that using their mother tongue complicated instead of simplified their understanding. This finding resonates with Deumert's observation (as quoted in Dyers and Davids 2015, 21) that speakers of IsiXhosa prefer to use English in texting, as IsiXhosa is regarded to be 'difficult', 'complicated' and 'deep'.

Apart from meaning making, students also highlighted affective gains, such as the space to experiment with language in a safe environment, and collaboration. The speakers of African languages emphasised the benefit of creating a safe environment for experimenting with the L1, whereas Afrikaans speakers emphasised the opportunities for using the L2 in a non-threatening environment, and collaboration. These findings resonate with three of the potential educational advantages of translanguaging mentioned by Lewis et al. (2012a, 645): a deeper and fuller understanding of the subject matter; the possible development of the weaker language (concurrent development of L2 ability and subject content); and co-operation.

The Afrikaans mother tongue group was more homogeneously in favour of translanguaging than the English group. A possible explanation for this is that the exposure of the Afrikaans group to English as a scientific language had been limited, since all higher cognitive level activities had been performed in Afrikaans prior to enrolment at the university. In contrast, the speakers of African languages received tuition in English for at least nine years. However, factors such as growing up in print-poor environments, parents not engaging in stimulating cognitive activities, early submersion in English (subtractive bilingualism), inadequately trained teachers and dysfunctional schools may have caused inadequate development of academic literacy in both the L1 and the L2. The fact that speakers of African languages were accustomed to English as a medium of instruction may have caused them to consider their English as adequate for academic discourse.

Despite reservations among some students in the English group, two thirds expressed support for L1 terminologisation. The primary support included social cohesion among

speakers of different African languages (Ubuntu) and social cohesion among speakers of the same language (identity). Reasons for a lack of enthusiasm for terminologisation include perceived lack of existing terms in the L1 (terminological gaps); perceived lack of standardisation in the L1 due to internal (dialectal) variation; and perceived complexity of the L1 (which may be due to a lack of terms, necessitating complex syntactic constructions to convey the meaning).

It is not clear from the research what roles students could play in the process of extending the use of the African languages in scientific text and talk. Stroud and Kerfoot (2013, 402) are confident that translanguaging 'can contribute to building academic registers in African languages through bottom-up processes in which students are co-creators of knowledge'. Madiba (2014, 78), on the other hand, believes that glossaries should be compiled by lexicographers, but linked to pedagogical activities, with feedback obtained from students and other users on a regular basis. Two students in the survey voiced the opinion that subject-field experts who understand the African languages should be responsible for term creation, and that it should not be left in the hands of students.

Overall, the findings of the study suggest that translanguaging is a useful tool to perform multiple pedagogical functions in multilingual contexts, and may contribute towards the intellectualisation of the African languages through creation of new terms as well as through trialling terms created by experts.

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