Embedding *Ubuntu* Principles into Dialectic Argumentation and Academic Writing

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Abstract

The purpose of this analysis is to highlight first-year science students' understandings and experiences of ubuntu epistemology in an argumentation-focused academic writing module called LST 110. The data acquisition methods of the study include administration of a short-answer questionnaire which surveyed students' perspectives of a newly implemented curriculum. In addition, students' reflective journal entries on translanguaging were analysed critically to assess their experiences of mastering argumentative concepts in a multilingual environment. Analysis of the narratives of most of the participants in this study indicates that their understanding and appreciation of ubuntu as practised through translanguaging increased. Some students also described ubuntu as an enabling principle for academic argumentation and teamwork across cultural borders. This analysis concludes by advocating the African epistemology of ubuntu, in its multitude of regional manifestations, as an effective, pedagogical tool for advancing dialectic arguments in multilingual science classrooms and academic writing.

Keywords: Ubuntu, dialectic argumentation, first-year students.

Print ISSN 1023-1757; Electronic ISSN: 2519-5476; DOI https://doi.org/10.29086/2519-5476/2020/sp36a4

1 Introduction

Throughout the globe there is interest in African epistemologies (Etta & Awukwo 2019) of which ubuntu, (Makalela 2018; Tagwerei 2020), in our perspective, is a necessary meta framework. Ubuntu philosophy is founded on principles that emphasise the humanness of all people and inter-relationships necessary for survival as a species on Earth. As far as the United States is concerned, and in the face of the #BlackLivesMatter and anti-racism protests, Tardif (2020) claims that ubuntu African epistemology is applicable in resolving the issue of police conflict with the citizenry in that nation. She declares that because 'ubuntu urges us to recognise the humanity of every individual rather than judg[ing] on the basis of group actions' (Tard 2020: 1), introducing American police to the epistemology's underlying principles may assist in de-escalating tensions with communities and foster relationships that are grounded on mutual respect and dignity. In 2020, members of the Unit for Academic Literacy at the University of Pretoria (UP) in South Africa who facilitate LST 110, an introductory argumentation module for first-year natural and agricultural science students, piloted a curriculum in which ubuntu was embedded as an operative principle for facilitating learning interactions among culturally diverse and budding scientists.

One of the key motives underlying the embedding of ubuntu epistemic principles into the curriculum is that as recently as 2016, the UP experienced violent clashes over a policy which saw English adopted as the primary language of instruction. These events disrupted teaching and learning. Ngoepe (2016: 1) reports that 'there was a stand-off' between students and 'scuffles broke out [...] over the institution's language policy'. In effect, language and linguistic mechanisms became variables of social dissonance on campus. The rich diversity of the UP students was a force of division, instead of cohesion, at the time. Table 1 reflects who the science cohort are in this mix of students. The institution registered about 36,547 undergraduates in 2020. Of this about 1,538 (4.2%) are first-year natural science students. More than half of the 2020 first-year students are white females. Black students, including Indians as well as descendants of Khoi, San and Griqua peoples, make up the minority of the 2020 intake (43.8%). While the focus of this analysis is not UP's science faculty's admission practices, it is quantitatively warrantable that, culturally, students of colour are in the minority in this Southern African University's first-year science domain.

Category and top four degrees	**Number of students out of 1,538**	**Percentage**
Number of females	1,034	67,2
Number of males	504	32,7
White students	863	56,1
Black students	504	32,7
Indian students	137	8,9
Coloured students	34	2,2

Table 1: LST 110 science students' gender and racial characteristics (von Fintel & Eybers 2020).

In recognising that first-year black students are the cultural minority in the University of Pretoria's Hatfield Natural and Agricultural Science (NAS) Faculty, while being sensitive to national calls for curriculum decolonisation, LST curriculum designers were called to reduce potential experiences methodically of racial and cultural alienation (Ogunwale & Oluwafemi 2014) that students may undergo in NAS lecture halls and labs. It was equally necessary to expose white students to epistemes from Africa that some of them may not have accessed previously in the educational domain. In this sense, one of the LST pedagogic goals was to generate epistemic plurality in the curriculum. Ganeri (2020: 2) conceptualises epistemic plurality as an approach to 'truth [that] is relative to the interests, perceptions, background, commitments, and values of disparate communal groups'. By drawing on Generi's (2020) construct of epistemological pluralism, LST 110 staff applied a translanguaging exercise which required students to define and translate argumentation-related concepts into their home or an additional language.

University students' capacities to understand and apply disciplinary concepts is a central process in argumentative and academic writing (Helmi, Rustaman, Tapilouw & Hidayat 2019). For this reason, the 2020 LST 110

curriculum aimed to solidify students' conceptual understanding by including their home languages in learning experiences. Students were also required to write an argumentative essay exam around designated topics that emphasise African or contemporary global scientific issues that are relevant to local contexts. Argumentative writing is a vital genre (Ferreti & Graham 2019) that scholars apply towards knowledge advancement in their research. In response to the national call in South Africa to decolonise disciplinary fields in institutions of higher learning, the LST 110 curriculum designers applied the ubuntu epistemology through incorporating students' home languages into the curriculum and exposed them to scientific developments which are global in character, but are also relevant to Africa's development.

This study is a critical reflection on an attempt to decolonise an academic literacy module, partially through allowing students to incorporate their home languages into the curriculum by means of a peer-assessed translanguaging task, and by exposing students to principles of global citizenship. The study concludes by examining critically the efficacy of ubuntu as an operative tool for enabling multicultural and multilingual learner interactions through written, dialectical argumentation. We acknowledge our use of ubuntu as an ostensibly catch-all term that aligns with the principles of decoloniality, translanguaging, and global citizenship. This simplification is not used to detract from ubuntu's complexity, but is rather used in this specific context in the interest of brevity.

2 Context and Methodology

LST 110 is a compulsory semester-long academic literacy module for students of the NAS Faculty at UP. Between 2018 and 2020, the module underwent a significant update in which its components built on each other explicitly and became known as 'Scaffolds'. These scaffolds, although presented during face-to-face lectures pre-Covid 19 lockdown, were also available to students online via UP's BlackBoard-based platform, clickUP. In 2020, the module was slated to contain seven Scaffolds. Each of these scaffolds was designed to aid students' progression from simple to complex processes affiliated with written argumentation (Carstens 2016). However, due to the shift to purely online learning undertaken as a result of the Covid-19 pandemic, the final two scaffolds were merged so as to be more accommodating to students and lecturers, and one of the assessments (Assessment 6: Essay outline) no longer

counted for marks and therefore was not expected to be submitted.

Below are the Scaffolds that formed the LST 110 module, as well as the assessments pertaining to each Scaffold.

	Focus	Assessment
Scaffold 1	To be a scientist in Africa	Reflective forum post (online submission)
Scaffold 2	Language and learning in Africa	Journal entry (online submission)
Scaffold 3	Translanguaging argumentation concepts	Translanguaging table (hard copy submission)
Scaffold 4	Arguing together	Poster (online submission)
Scaffold 5	Summarising arguments	Summary (online submission)
Scaffolds 6 and 7	Planning our arguments and argumentative essay	Argumentative essay (online submission)

Table 2: A breakdown of the components of the LST 110 Scaffolds.

Assessments like those of Scaffold 1 and 5, although individual, also required the student to comment meaningfully on the forum post of a peer.
The survey found under Scaffolds 6 and 7 gave students the option to answer questions based on either 'Ubuntu' (A) or 'Global orientations to science' (B). Their answers were posted to a forum. In completing this survey, students were invited to:

- Answer one of the question sets (A or B).
- Be honest.
- Be straightforward.
- Offer suggestions for improvement.

- Let each 'bullet' response be 5 sentences each.

The following comprise the questions students were required to answer if they chose Set A's questions on ubuntu:

- What is your understanding of 'ubuntu' at the end of the semester?

- Was 'ubuntu' an effective principle for facilitating your and your team's development in argumentation? Briefly discuss your views.

The following questions were posed to the students who chose Set B's questions on global orientations to science:

- To which extent did LST readings and activities increase your awareness of globally-related, scientific concerns? Briefly discuss your experience.

- To which extent did LST assessments develop your awareness of being a global citizen? Briefly discuss your view.

In addition, students were tasked with writing a reflective paragraph about their experiences in translanguaging argumentation concepts. These concepts are claim, warrant, stance, evidence and persuasion.

The survey was completed by a total of eleven students, nine of whom chose to complete Set A's questions on ubuntu, while two chose to answer Set B's questions on global orientations to science. Of the eleven students who participated in this final survey, four chose to remain anonymous. Five of the eleven participants submitted translanguaging reflections. Due to this, we will be concentrating only on the work provided by the remaining students: six responses to Set A's questions and one response to Set B's questions. It is important to note that our presentation and interpretation of data is from the agentic perspective of teachers in the course. It is therefore important to us to present students' experiences as emerging from diverse individuals and budding scientists who are adapting to the university as a new social environment. The students are valued as more than 'subjects' of a study. This is why we have chosen to name them. However, the names used here are pseudonyms to protect their true identities.

Student	Gender	Ethnicity	Age	Degree	Set A or Set B Questions Answered
Innocent	Male	Black	19	BSc	A
Andrew	Male	White	19	BSc	A
Siyanda	Male	Black	19	BSc	A
Tshepo	Male	Black	19	BSc	A
Amahle	Female	Black	18	BSc	A
Johan	Male	White	19	BSc	B
Thandiwe	Female	Black	17	BSc	A

Table 2: Gender and ethnic characteristics of the participants.

Due to the open-ended questions, and the unquantifiable nature of ubuntu, our study is necessarily qualitative, and so the fact that we are dealing with a relatively small sample of students is of little consequence. In line with our study's qualitative nature, we will apply a blend of methodologies in this article, essentially adhering to an interpretivist paradigm. One of these methodologies is that of narrative research, which is described as 'a methodology of studying individual lived experiences as a source of knowledge in and of itself that warrants deeper understanding' (Nasheeda *et al.* 2019: 1).

We will also reflect critically on the responses of the students in the sample, who have critically reflected on their learning throughout the semester, in order to gauge the effectiveness of the implementation of ubuntu in the LST 110 curriculum. It was our hope that the inclusion of ubuntu in the LST 110 curriculum would transform students' ways of knowing and understanding – particularly concerning academic literacy and argumentation concepts. As a subjective process, we agree with Jan Fook (1999) that

reflecting continually and critically on the supposed fundamentals of our module and facilitating transformation where necessary will contribute to making our professional practice as curriculum designers and lecturers in academic literacy more answerable to our disciplinary community. In terms of instruments used in this study, BlackBoard provides a variety; for this study, we refer to the students' use of the survey tool, the online forum, and the private journaling tool.

2.1 Decolonial Paradigm of Teaching and Learning

The decolonial paradigm (Ndlovu-Gatsheni 2020) is multifaceted and applicable to analyses of teaching, learning, and assessment in universities. A key decolonial tenet that is relevant to each of these pedagogic domains is that curricula in universities should draw on African epistemic modes and history in mainstream disciplinary instruction in order to chart Africa's future (Ndlovu-Gatsheni 2020). Omodan and Dube (2020: 15) argue that 'curricul[a] must be reconstructed to accommodate ethics and ethos of inclusivity, internalisation of indigenous knowledge [and] disengagement of the indignity of language'. In Fleuri and Fleuri's (2017: 1) outlook, epistemic pluralism in universities enables the 'deconstructing [of] racism and the myth of universality [by] recognising epistemic rationalities developed by indigenous communities'. The perspective of the LST 110 curriculum designers was that the application of a translanguaging assessment was one method of applying the principles of linguistic inclusivity (Gist-Mackey & Kingsford 2020) and epistemic pluralism by embedding cultural knowledge from students' languages into learning experiences. This method stems from the view of language as fulfilling instrumental and symbolic functions. Instrumentally, incorporating students' home languages into the LST 110 curriculum, in addition to English, aided in 'bind[ing] community groups and facilitat[ing] active participation' in online and physical learning spaces. Community groups, in the LST 110 context, refers to the collection of individuals and clusters of culturally diverse students who interact with each other through the medium of multiple languages.

Symbolically, the incorporation of students' home languages into the lecture hall and into an assessment was a methodical attempt to acknowledge their primary discourses which remain active in the ways they approach argumentation in the university as novice members. Primary discourses are,

> ways of combining and coordinating words, deeds, thoughts, values, bodies, objects, tools, and technologies [...] to enact and recognise [...] specific socially situated identities and activities (Gee 2001: 721).

By embedding students' primary discourses into the curriculum by means of a translanguaging assessment, LST 110 curriculum designers simultaneously aimed to achieve the module's and the Unit for Academic Literacy's mandate of inducting students into the application of secondary discourses. These are combinations of language, culture, and multiple modes of communicating that are necessary in and affiliated with knowledge production in higher education and expert domains (Mays 2008). The translanguaging assessment was also applied to enable LST 110 lecturers' *facilitation* of first-year students' transitions from applying primary discourses in the pre-university phase to their employment of secondary discourses at UP. This facilitation was undertaken through translanguaging by requiring students to translate and define argumentation-related concepts into their home or an additional language. Mochales and Moens (2011: 1) describe the taxonomy of concepts that constitutes argumentative writing 'argumentation mining'. An argumentative mine includes the content of arguments, linguistic structures of arguments, recognition of underlying beliefs of arguments, and the coherent presentation of arguments (Mochales & Moens 2011). The argumentative mine that was introduced in 2020 to LST 110 students in the curriculum, in their study guides, and which was incorporated into the translanguaging assessment are listed as follows:

- Claim
- Warrant
- Stance
- Evidence
- Persuasion

While incorporating indigenous African and students' home languages into the curriculum is affiliated methodically with the decolonial paradigm, it is only one feature of epistemic transformation and a curriculum that values epistemic pluralism (DiFrisco 2019). Meda (2020) conceptualises a decolonised curriculum as one that links mainstream disciplinary content in universities with Africa's development and future as much as it does

indigenous epistemic practices and languages. He states that a decolonised curriculum 'includes [...] knowledge which a particular country wants its citizens to learn, value and cherish' (Meda 2020: 90).

By drawing on Meda's theory, the 2020 LST 110 curriculum introduced the principle of global citizenship to students. The actual concept was incorporated into their study guides and students were informed that their exposure (Clifford & Montgomery 2017) to global issues formed part of the LST 110 curriculum's teaching philosophy. Global citizenship education aims to highlight and incorporate into learning experiences the ways that nations have become historically and continue to be intertwined with each other economically and culturally (de Oliveira Andreotti 2014; Goren & Yemini 2017). Goren and Yemini (2017: 9-10) describe global citizenship education as embedding 'human rights and environmental problems [into the curriculum] to encourage advocacy and [...] critical thinking'. In her interrogation of the global citizenship construct, de Andreotti (2014), in reference to Dobson (2006), argues that curriculum designers must consider unequal relationships that persist between nations. De Andreotti (2014: 30) asserts that involving students in 'critical literacy' is an effective method for incorporating global citizenship principles into the curriculum. This is because, as a pedagogical tool, critical literacy practices in the lecture hall are 'based on the [...] assumption that all knowledge is partial and incomplete, constructed in [subjective] contexts [and] cultures' (de Andreotti 2014: 30). By exposing LST 110 students to scientific knowledge and arguments that are current in global contexts and relevant to Africa's development (Meda 2020), but which may vary in feature from some local and African epistemic practices, LST 110 curriculum designers attempted to decolonise the academic literacy curriculum by incorporating a global focus – specifically as related to the designation of course content and topics that were required in students' written dialectical arguments (argumentative topics are shared below).

2.1.1 Translanguaging as Ubuntu Pedagogy

The #AfrikaansMustFall, #FeesMustFall (Raghuram, Breines & Gunter 2020) and #RhodesMustFall (Van Reenen 2018) upheavals that occurred in South Africa's higher education sector continue to have resounding effects at UP. In considering theories of epistemic pluralism and inclusivity, it is evident that significant proportions of the student populace at UP, specifically, felt

alienated linguistically and culturally from each other and from curricula. The protests and violence that erupted indicated that nearly thirty years after the legal demise of the Apartheid legislation, boiling tensions continued to exist between cultural groups on campus. When UP's council and senate adopted the policy to approve English as the primary language of instruction, Alana Bailey, then-AfriForum (political organisation) Deputy CEO, stated that 'the decision is contrary to the spirit of the South African Constitution and international language rights' (Malingo 2016). Warranting a counter-stance, Economic Freedom Fighters (political organisation) spokesperson, Peter Keetse, responded to the policy by stating, '[T]he university [...] agrees [...] that in order to promote inclusivity and equality all students must be in one class and not be divided into two classes based on language' (Malingo 2016). Partially due to these visible tensions that linger in the current South African higher education dispensation, it was imperative for the LST 110 curriculum designers to respond to them in a way that minimised potential experiences of cultural tension and alienation during the times students were active in the module. Incorporating a translanguaging exercise into the curriculum was viewed as a viable pedagogic mechanism for getting culturally diverse students to communicate with each other by using multiple languages in physical and online interactions. By attempting to generate learning experiences that exposed students to each other's languages and diverse epistemic perspectives through translanguaging, the 2020 LST 110 curriculum applied what van Dyk (2020: 2) calls 'a dialogical [emphasis added] approach towards building relationships where people feel vulnerable [...] have fears, but also gain trust to contribute to meaningful dialogue with 'others''.

2.1.2 Critical Approaches to Ubuntu Epistemology in Higher Education

It is imperative to note that while we, the researchers, acknowledge principles affiliated with ubuntu epistemology, including human interdependence, communalism, and egalitarianism, it remains necessary to problematise its actual ontic efficacy in contemporary African society and higher education. Undoubtedly, individuals and communities in South Africa perceive and experience ubuntu in peculiar ways. Viviers and Mzondi (2016: 11) rightly state that 'it is […] not defensible to claim a […] single (dogmatic) Ubuntu to structure reality meaningfully'. Scholars of feminist ubuntu agree by insisting

that any analysis of the epistemology is incomplete without considering women's perspectives. Mangena (2009: 18) bemoans the reality that 'very little has been written about African women's place and relevance in hunhu or ubuntu ethics'. We share these perspectives to demonstrate our awareness that while ubuntu epistemology remains an active element of African society, social constructs including race, class, and gender can shape how scholars, including first-year students, approach the philosophy in the classroom.

2.1.3 Intersections between Decoloniality, Ubuntu, and Dialectical Argumentation

Discussions that emerge from the decolonial paradigm may be uncomfortable when addressing sensitive issues. However, there is evidence that contemporary South Africa remains fractured along intersections of culture, language, and race. Mwaniki (2018: 27) observes that South Africa 'is a trove of iconoclasm because of the different […] social, political and economic groupings [vying] for dominance'. While Mwaniki's (2018) claim of cultural dissonance in South Africa is warrantable, it should alert curriculum designers to the need to apply pedagogic methods that enable critical thinking, problem solving, and argumentation, in ways that avoid conflict and unreasonableness. Van Dyk (2020), in reference to Friedman (2002) and Buber (1957), suggests that language use, specifically dialogical engagements, can create a new reality. As an ontological claim, LST 110 curriculum designers aimed to create new, albeit temporary, realities (Van Dyk 2020) in the lecture hall and online spaces where students may engage in dialectical argumentation by drawing on their identities, cultures, and languages.

Betz (2008: 26) conceptualises dialectical argumentation as 'debates [which] consist of arguments and theses'. Dialectical argumentation differs from emotive quarrels where the objective is 'to win' and undesirable behaviour including physical conflict and verbal insults may be acceptable (Ghebru & Ogunniyi 2017: 52). While the 2016 student protests at UP revolved around valid linguistic concerns, undoubtedly, they were quarrelsome in character. In lieu of linguistic tensions that simmer beneath the surface of campuses, universities have a responsibility to instruct students in how to apply effectively modes of argumentation (Fan & Toni 2014) around contentious issues that are destructive neither to human bodies, nor the built and natural environments. The LST 110 curriculum in 2020 aimed to achieve

the goal of activating argumentation around contentious issues in a culturally diverse cohort of students by employing translanguaging of argumentation concepts and by getting students to argue dialectically with each other and their lecturers through argumentative writing. The 2020 argumentative topics which were also exam essay options were as follows:

- Are humans prepared for the repercussions of climate change?
- Robots should be given the right to kill across borders.
- Africa is effectively applying technology learned from abroad to confront its challenges.
- Animals do not deserve any rights.
- Scientists should be allowed to clone human beings.
- Does Africa possess the scientific knowledge to be a global leader in research?
- Euthanasia must be legalised.
- Vegetarianism should replace meat eating.
- Africa must stop relying on fossil fuel for energy.
- Animals are not patients. They are animals.
- Human population control should be imposed on the African continent.
- Other planets: should they be colonised?
- Is Genetically modified food (GM food) Africa's solution to hunger?
- Contact learning should be replaced by Artificial Intelligence.
- Industrial hemp should replace global deforestation.

3 Intersections of Academic Writing and Dialectical Argumentation

Academic writing is the communicative interface between researchers' stances in argumentation and their reading audience. Indeed, the knowledge economy (Asongu, Tchamyou, & Acha-anyi 2020) to which universities are affiliated is constituted significantly by the publication of *written* arguments and texts. As an expert mode of communicating and constituent of secondary discourses (Gee 2001), academic writing that includes argumentation is a new practice for some first-year students. Bangeni and Greenbaum (2019) highlight numerous challenges that first-year students experience when attempting to argue through academic writing. They summarise students' struggles as relating to the following features of academic literacy: 'Extreme conciseness [...], impersonality such as the use of the third person, conditional sentences, pompous tone, dull tone [...] and precise terminology' (Bangeni & Greenbaum 2019: 4). Novice students and senior scholars cannot avoid employing these academic literacy conventions, whether in publishing peer-reviewed articles or through submitting essays. A challenge and objective of the LST 110 curriculum designers, in addition to effectively embedding ubuntu principles and students' identities into the curriculum, was to select an appropriate exam mode for assessment that required students to apply the argumentation concepts they learned through translanguaging and which necessitated the application of academic literacy practices for written dialectical argumentation (Bangeni & Greenbaum 2019). An argumentative essay was selected as an effective assessment for assessing students' written dialectical argumentation while also evaluating their application of the acquired argumentative concepts. An argumentative essay was adopted due to the LST 110 curriculum designers' perspectives that it allowed students to demonstrate mastery of lower and higher order learning objectives (see Figure 1).

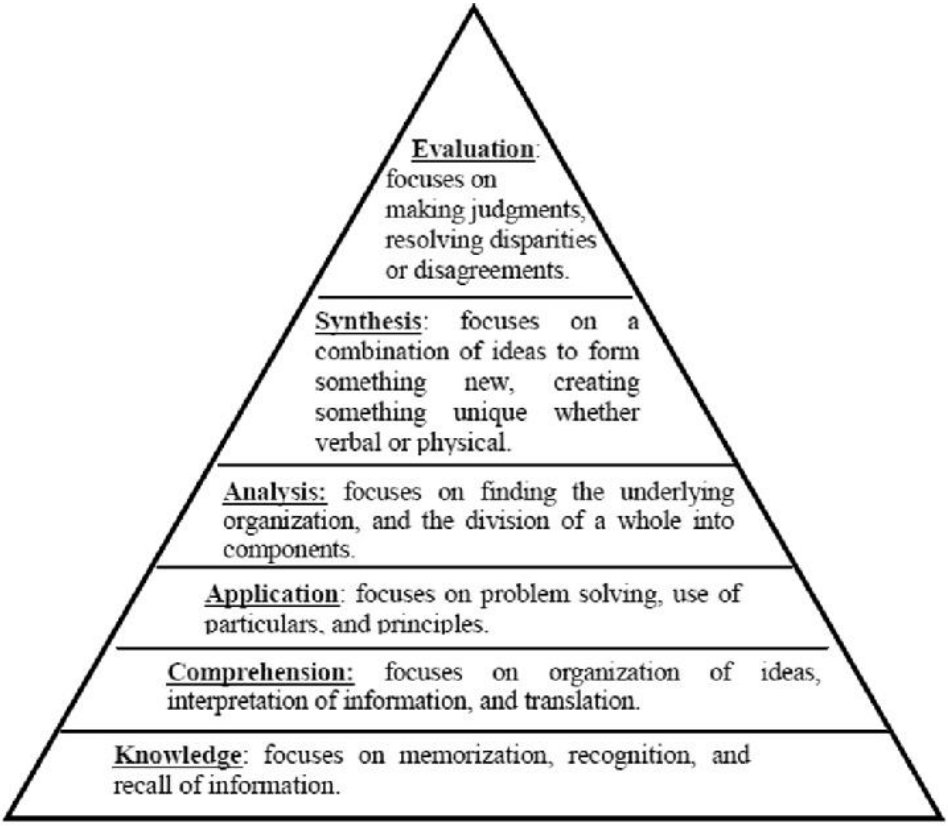

Figure 1: Bloom's taxonomy (Yahya 2017).

According to Bloom (1956), evaluations of the efficacy of learning assessments can be hierarchically structured according to a taxonomy which identifies lower and higher order cognitive functions. Previous iterations of the LST 110 final assessment were multiple choice exams. Located at the end of the semester, these assessments focused predominantly on lower-order thinking, including memorisation and 'measuring' students' capacities to untangle tricky sentence-level puzzles. In 2020, the LST 110 curriculum designers elected to abandon the multiple-choice exam and replace it with an argumentative essay for the following reasons. In addition to their emphasis on assessing lower order thinking (Yahya 2017), such assessments often leave

students with no valuable feedback towards improving their writing aside from their scores; they also leave room for guessing (Roediger & Marsh 2005). Multiple-choice assessments are also viewed as discriminatory against second-language and additional-language speakers in South African universities as *some* students, as in UP's context, do not possess the grammatical capacities as those students whose home language and cultural upbringing reflect the same language of assessment and its positivist underpinnings (Sanderson 2010). Reducing potential discrimination against speakers of English as an additional language by replacing the multiple-choice exam with an argumentative writing task was an essential decolonial strategy. This is because the multiple-choice exam did not conform to the inclusive multilingual and ubuntu ethos of the LST 110 curriculum of 2020. It was therefore necessary to decolonise assessment practices in the LST 110 curriculum by introducing an assessment that did not present threats to speakers of African languages and languages other than English. Application of an argumentative essay exam as a final tier in a scaffolded curriculum, in the view of the 2020 LST 110 curriculum designers, fulfilled this purpose by challenging students to generate knowledge through using concepts accessed in their mother tongues and by creating opportunities for them to be exposed to academic vulnerabilities that Van Dyk (2020) claims are essential for the advancement of dialectical argumentation. The researchers of this study acknowledge that multiple-choice question (MCQ) assessments can be tailored in an Afrocentric way that adopts ubuntu principles when applied collaboratively in pairs and peer groups. We equally value syntactical insights that MCQ assessments provide regarding students' written capacities. Undeniably, skill in the domain of syntax is required to warrant argumentative claims effectively (Carstens & Fletcher 2009). Our stance remains that this mode of assessment should feature early in the semester as a lower tier in a scaffolded curriculum for the purpose of solidifying students' conceptual understanding which is essential for subsequent higher-order tiers and assessments. Examples of upper-tier assessments that require higher-order thinking include video and multimodal productions as well as argumentative essays and report writing.

By employing an argumentative essay exam as a final module assessment, the LST 110 curriculum designers also aimed to *evaluate* students' capacities to apply principles of argumentation through academic literacy practices towards knowledge production at the first-year level. Shahriari and Shadloo (2019) claim that argumentative essays include all features of

dialectical interactions. These features incorporate the interlocutors' adoption of an argumentative stance, using language persuasively and appealing to shared knowledge domains with the reading audience (Shahriari & Shadloo 2019). The perspective of the LST 110 curriculum designers was that, in addition to incorporating these argumentation conventions, an argumentative essay exam would enable the assessors to evaluate (not measure) students' application of the upper tiers of Bloom's (1956) taxonomy (see Figure 1). Through writing argumentatively, students were afforded opportunities to synthesise their knowledge of argumentative principles that were translated into their home languages earlier in the semester while applying academic literacy practices simultaneously to warrant and persuade their lecturers and each other dialectically of their stances regarding argumentative topics. Lastly, an argumentative essay exam was adopted due to its capacity to focus on arguments and readings that are relevant to Africa and global citizenship-related scientific issues. The ensuing analysis shares students' reflections and our introspection on the efficacy of the application of translanguaging and argumentative essay writing as assessment practices which draw on principles of ubuntu, decoloniality, and dialectical argumentation.

4 Results and Discussion

Students' responses to the incorporation of ubuntu in the LST 110 curriculum were overwhelmingly positive. Through collaborating with their peers in order to understand and engage in dialogue about specific argumentative terms, among other group-related activities, students acknowledged the cultural differences between them and their respective interpretations of common terms. Expressing this sentiment, student Innocent states:

> I remember when we did our team poster assessment, the level of professionalism was on another level and that motivated me to always walk under the path of Ubuntu. My team and I managed to do everything in a polite and professional state, all because of Ubuntu. I am what I am now because my team contributed a lot of potential during the theme Argumentation.

Innocent reflects how students reached a place of appreciation for their differences, seeing the value in being able to expand upon their initial understandings and definitions of argumentation terms through the incorporation of the insight of their peers, realising that their identities are not singular, but ever-evolving and informed by their interactions with others. Our

perspective is this appreciation emerged partially due to the activation of ubuntu communal principles in the curriculum. Throughout the responses, students alluded to feeling a sense of community in the module, which was especially valued once the South African Government declared the first 'hard' lockdown in light of Covid-19. This sense of community was brought about not only by the group work that took place prior to the lockdown, but also through the requirement in online submissions for students to comment meaningfully on the post of a peer, and was further aided by the implementation of an online discussion board where students could post any questions relating to the module, receive responses, and read the questions and answers in other threads during lockdown. Reflecting this sense of community, Andrew declares:

Being an adult and having to do everything by myself, 'ubuntu' has reassured me that I was not alone in this big change [switching to university from secondary school] and I had others to rely on so that we could get through the semester together. The Covid-19 pandemic has also shown me how the sense of 'ubuntu' is very prevalent.

With respect to the participants' experiences of translanguaging argumentation concepts in multilingual peer teams, the majority reported that they benefitted from the learning activity. Andrew states: 'My experience in concept formation was very interesting. For the first time I got to incorporate my mother tongue in writing my assignments'. He acknowledges that, as an Afrikaans-speaker, he was challenged linguistically because 'some words were hard to translate directly' into English. Innocent expresses a similar reflection on translanguaging. He recalls: 'This assignment was quite interesting but also a bit challenging, as Sotho has always been my home language but never a language of instruction in a school environment'. Innocent notes that after translanguaging he is aware that 'the translation […] definitions would have to be spoken regarding a certain context in order to correlate with the English definitions [because] translating can change an entire meaning of a certain word'. From a concept-solidification perspective, translanguaging was an effective pedagogic strategy (Carstens 2016). The exercise coerced students to approach argumentation concepts from within their primary discourse while considering their applications in the context of the expert university sphere.

Students who answered the questions pertaining to 'Global orientations to science' (Set B's questions) were more critical of the module.

They suggested that although the module invited them to engage in research beyond their field of study, they were desirous of even more freedom to explore – to not be bound by a single topic for the rest of the semester. They felt somewhat constricted by the biology-centric research topics (the selected one was then used for three consecutive assessments/scaffolds), although they appreciated that the field of biology is, as Johan put it, 'very important for the wellbeing of the world'. Similar to the sentiments shared in the responses to the survey on the incorporation of ubuntu into the module (Set A's questions), students developed a global awareness of the research problems and outputs of other African countries – countries that they feel they otherwise would not have considered due to the tendency to focus on the country they live in (i.e. South Africa) or on the Global North. These results suggest the successful incorporation of the decolonial project in the transformation of the LST 110 module – successful in the fact that it was done, but more importantly, in the fact that students were conscious of the new awareness they had gained.

In 2020, the average argumentative essay and exam mark for LST 110 students was 68.5%. This is an increase from the 2019 essay average mark of 62%. Even though it may be argued quantitatively that the 2020 curriculum improved the quality of students' written arguments, the close proximity between the 2019 and 2020 evaluations of students is significant. I t indicates that, specifically in relation to the curriculum's top Scaffold and teaching outcome of developing students' competencies in written argumentation by way of the ubuntu philosophy, there is need for more improvement. In our critical retrospection on the efficacy of the 2020 curriculum, we acknowledge that teaching, learning, and assessment methods need to be further developed or altered in the 2021 academic year if, quantitatively, students' averages for the argumentative essay exam are to increase. However, qualitatively, LST 110 curriculum designers agree that switching from an MCQ exam to an argumentative essay increased the overall difficulty of the final assessment and, in turn, the module as a whole. Whereas previous MCQ iterations of the LST 110 exam enabled students to pass with little to no studying, supplemented with reviewing the online ICELDA (Institutional Centre for Language Development and Assessment) assessment memos, memorisation, and guessing, in 2020 this was not possible. Instead, students were required to investigate their argumentative topics through multiple sources and access expert voices and data in order to generate dialectically warrants through writing.

5 Conclusion

Explicit embedding of the ubuntu epistemology into an academic literacy curriculum for first-year natural science students is an effective teaching method to facilitate learning interactions among a culturally and linguistically diverse cohort. It is applicable beyond Africa's borders. In a faculty that is multi-disciplined, such as the Natural and Agricultural Sciences Faculty at UP, content and argumentative foci should be inter- or multi-disciplinary and not, as some students rightly pointed out, centrically aligned to a particular field of study. The possibilities for incorporating multi-disciplinary content exist if the academic literacy model adopts a 'generic' (Carstens & Fletcher 2009b) approach which LST 110 currently does. Students' disciplinary and professional identities should interweave with in-class argumentation and the foci of assessments. The ubuntu method of argumentation development does create teaching and assessment spaces in which instructors' and students' identities and languages can be inserted directly into attempts to master the teaching and learning of written argumentation by way of academic literacy practices. However, in academic literacy curricula that are structured according to learning scaffolds with an argumentative essay as the top tier, it is recommended that all incorporation of students' cultures and agency into the curriculum is related directly to the objective of developing their conceptualisation, design, and writing of the actual and final argumentative essay exam. In this way, the principle of ubuntu may aid in decolonising teaching, learning, and assessment activities through direct linkage of students' cultural identities to focus on academic writing and dialectical argumentation. As a final remark, embedding ubuntu epistemology into an academic literacy curriculum should not be perceived as distracting from the core aims of modules aimed at developing first-year students. In 2019, LST 110 students wrote an ICELDA (Institutional Centre for Language Development and Assessment) multiple-choice assessment as a final exam and the average mark was 68%. This mark mirrors the 68.5% average mark students received for the 2020 argumentative essay exam. Part of the significance of this close proximity between the 2019 and 2020 performances of students is in the revelation that adopting a written argumentative exam which incorporates principles of ubuntu, such as being community-focused and dialectical in nature, has not compromised the validity of the LST 110 module's final mode of assessment and the fairness of its level of difficulty. Instead, it asserts that African

epistemologies may challenge students dialectically in a manner which induces and necessitates equal rigour through the application of academic literacy practices when compared to western individualistic modes of assessment, such as the MCQ. As Carstens (2013: 109) reasonably claims in her construct of effective academic literacy practices and which, in our view, embodies the principle of ubuntu, 'collaboration [i]s the key to integration of language and content in academic literacy interventions'.

Acknowledgements
The authors express gratitude for the ethical consent granted to this project by the Humanities Faculty Research Ethics Committee of the University of Pretoria and the Research Chair of the Unit for Academic Literacy. The authors dedicate this article to Professor Adelia Carstens.

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Ubuntu Principles in Dialectic Argumentation and Academic Writing

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