



# HELTASA



HIGHER EDUCATION LEARNING & TEACHING ASSOCIATION OF SOUTHERN AFRICA

Teaching Advancement at Universities (TAU) project:

## **Electronic glossing of key disciplinary texts: scaffolding reading for students at the University of the Western Cape**

**Bassey E. Antia**

### **Identifying a teaching and learning problem**

The Teaching Advancement at Universities (TAU) programme afforded me the opportunity to work on a project aimed at enhancing students' engagement with disciplinary texts and improving institutional support for students in their literacy engagements. Although texts are crucial to the knowledge enterprise, there is a huge body of research that supports the claim that "[o]ne of the biggest problems in higher education, but one which is often not fully recognized by either students or lecturers until some way into academic courses, is the problem of reading" (Nel, Dreyer & Kopper 2004: 95). The significance of the problem derives from the centrality of texts and reading to teaching and learning in higher education. As has been pointed out, students are "exposed to a number of texts and textbooks that require independent reading" and which they "are expected to comprehend [...] so that they can analyse, critique, evaluate and synthesize information from various sources" (Bharuthram 2012: 205).

Pro-social justice discourses in education underscore the need to acknowledge relevant aspects of the macro context of our students (e.g. their location in collectivist, *ubuntu* cultures), as well as the knowledges, languages, and literacies which they bring to educational spaces. Regrettably, however, the disciplinary texts which students are expected to engage with, and the canonical literacy practices modelled for them, tend to do the following: fete individualistic text processing, determine what alternate knowledge perspectives are legitimised, promote monolingualism and monolingual literacies, etc.

Indeed, there are several pointers to the relative underpreparedness of higher education institutions in responding to concerns around students' reading. First, English is the principal language through which students have to access publications in content subjects, even though a majority of these students are not at home in English. The gravity of the situation is easily appreciated when it is recalled that, in any case, academic language (whether in English, isiXhosa or Afrikaans) is nobody's mother tongue (Bourdieu & Passeron 1995). Second, the observation that many of the texts used by our students originate from the global North and bear the imprint of especially the Coloniality of Knowledge (Behari-Leak & Goitsione 2019) implies that the psychological barrier of entrance to these texts may be unduly high for some of our students. If students are unable to recognise themselves, their communities and local knowledges in the texts they read, it is understandably so much more difficult for these texts to support a range of learning outcomes. Third, the observation that low academic literacy scores in the National Benchmark Tests taken prior to university admission reliably predict the academic fortunes of university students some four years later (Prince, Darlington & Dunlop 2017) suggests a need to rethink the effectiveness of institutional interventions evolved to enhance students' engagements with texts. Low Benchmark Test results for the sub-domains

of academic literacy, quantitative literacy and mathematical proficiency (NBT team/CETAP 2018) make it obvious why reading disciplinary texts is the concern it is.<sup>1</sup>

In part at least, the report of a cohort study by the Department of Education hints at consequences of the above concerns with reading. The report finds that “30% of the undergraduate intake drop out or are excluded at the end of their first year” (Scott 2009: 21). Another cohort study revealed that only 27% of students enrolled in 2006 graduated within regulation time, while 44% dropped out (CHE 2013). A study of two cohorts of engineering students, using National Benchmark Test data to track academic performance, found that “the Academic Literacy proficient group [in the Benchmark tests] was twice (52% vs 21%) as likely to graduate in minimum time compared to the non-proficient group. On the other hand, the Academic Literacy non-proficient group was three times (34% vs 10%) as likely to fail to graduate compared to the proficient group” (Prince, Darlington & Dunlop 2017: 260).

### **A sense of what needs to be done**

Prior to print technology, manuscripts circulated with the annotations made by successive readers, a practice which enriched each subsequent reading experience. Research on electronic or digital annotations has shown annotations to be invaluable for improving comprehension of the source materials, offering different perspectives, and for enhancing critical thinking. Annotations may explain word meanings, reformulate text segments, summarise content, interpret diagrams, relate the text to lived experience or to other texts, express agreement or disagreement with the text, be presented in multiple languages and in a range of other (non-linguistic) modalities, etc. The sharing of artifacts or records of reading in the form of annotations calls attention to the sociality of reading, a social process of meaning-making which activates readers rather than make them passive. Annotations in text have the potential of contextually modelling for students disciplinary expectations around the analysis, critique, evaluation and synthesis of information.

Incidentally, students are known to sometimes make multilingual and multimodal annotations on the margins or in between lines of texts (paper and electronic-based) they have to read for their studies. These notes are presumably useful to their authors, but not much attention has been given to how some of them can be harnessed and repurposed as electronic glosses to support reading by a wider student community.

The idea behind my TAU project was that by eliciting, processing and sharing students’ annotations (on their study materials), a number of objectives such as the following could be achieved: ‘localising’ the language of texts for students, recontextualising text content where appropriate, de-centering sources of meaning-making, and enhancing metacognition through the comparison of perspectives in annotated texts. It was also hoped that a successful demonstration of proof of concept would ultimately lead to a widespread uptake of annotation as useful practice in learning and teaching.

Groups of students in two disciplines who had been approached through their lecturers subsequently reported that their work commitments were such that they would be unable to participate as originally envisaged. This necessitated a change of disciplines, a scaling down of the original project scope, the recruitment of postgraduate research students to work on aspects of the project, and the incorporation of capacity-building to research annotations as a new goal.

---

<sup>1</sup> Academic Literacy, for instance, includes the ability to: “identify and track points and claims being made in texts (...); understand and evaluate the evidence that is used to support claims made by writers of texts; extrapolate and draw inferences and conclusions from what is stated or given in text; understand vocabulary, including vocabulary related to academic study, in their contexts”; Quantitative literacy includes ability to “read and interpret tables, graphs, charts and text and integrate information from different sources”, etc. (NBT team/CETAP 2018: 4).

## What has been done

First, with funding from UWC, under the University Capacity Development Grant initiative, two day-long workshops were held to raise awareness on annotating texts, and to build capacity for studying them. Insights on annotations from student and staff perspectives were obtained. A body of relevant theoretical knowledge associated with key theorists was assembled, including work by Wolfe & Neuwirth, Wolfe, Langer, Liberg, Kiewra, Vygotsky, Lantolf, Bakhtin, Shanahan & Shanahan, Lea & Street, Garcia, Makalela, Roby, Salem, Harris, Pablé & Hutton, Makoni, Iedema, Herring, Koehler & Mishra, Herrington, McKenney, Reeves et al, etc.

Second, data providing insight into the potentials of electronic glosses on students' reading have been obtained. Data have been collected and analysed in respect of sample texts in psychology and medical biosciences. Text segments considered difficult to understand by first year students were identified; glosses from more advanced students were provided; both objective data (answering a set of questions based on the respective texts) and subjective data (reflections on the experience of reading) were elicited from students reading disciplinary texts under two conditions: a glossed text and a non-glossed text condition.

Thirdly, access to commercial software that supports electronic annotation of texts was successfully negotiated. The software allows annotations relevant to a specific text to be stored and made available as autolinks when the text is being read. See figure 1, where the phrase "to restore balance" (previously determined to be difficult to understand) is glossed into isiXhosa in the pop up.

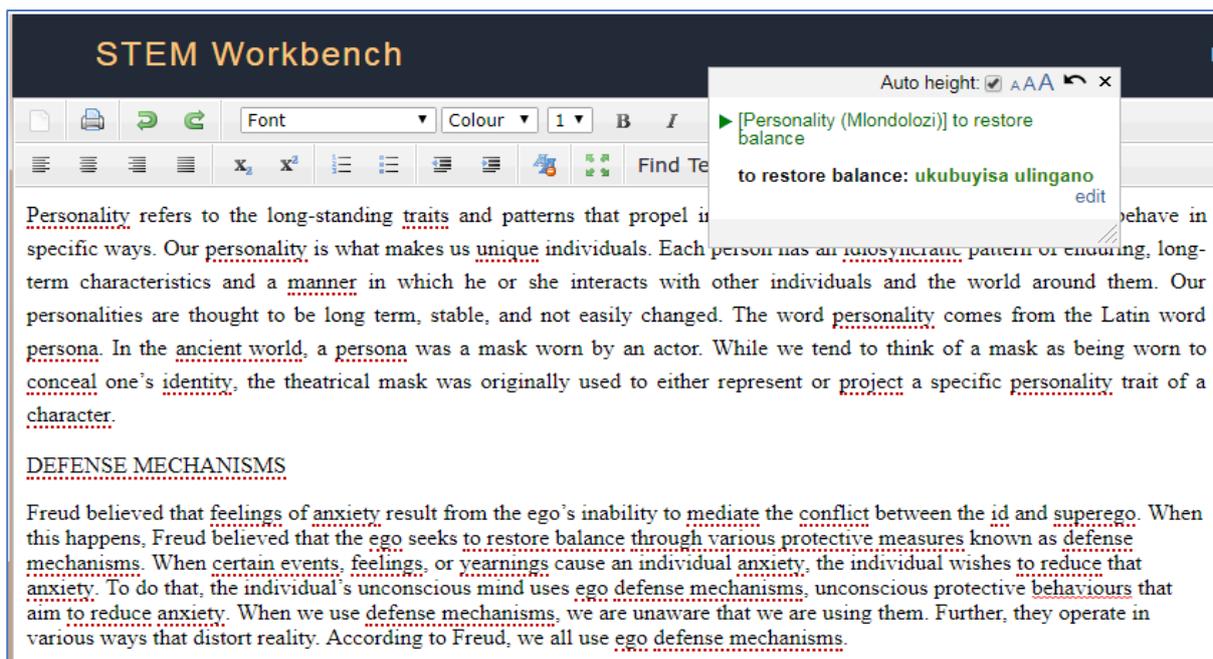


Figure 1: Sample of text with autolinks (underlined items) indicating text bits for which annotations exist, and a sample annotation in respect of "to restore balance" popping up.

## Appraisal and next steps

The TAU project has been impactful in several ways. Firstly, the awareness-raising and capacity-building workshops achieved the intended goals, with participants feeling empowered to research annotations, highlighting the individual benefits of annotation, and underscoring what was seen as the imperative of sharing annotations. Sample comments:

- *The Retreat made Prof Antia's research project more understandable and relateable. I gained a lot of insight into how one ought to read and the levels of reading that are there. I got a deeper*

*understanding of what annotations could be used for and how they would benefit students that are to follow after us. I got a chance to give back to my community through annotations and Prof Antia.*

- *Some of the lessons that I derived from the retreat are: Annotations by students are not only beneficial to the annotator but can also be of use to future readers, hence there is a need to repurpose annotations by making them available to the public.*

Secondly, feedback from participants in the reading experiments confirms the benefits of electronically glossed texts. For instance, in the assessment tasks, performance was frequently better in the glossed text condition; also reading effort was better channelled towards making sense of the text (rather than consulting dictionaries and identifying text-appropriate meanings). Sample comments:

- *I found it like, it's so perfect. To such an extent that when you have to go to Google, Google will give you many like... examples of... even like many different words that will also like make you feel like more confused. You have to... you see like this one you are using, this tool, it just goes straight... it will give you the background and you also understand the meaning of the word.*
- *indincedile le definition ye-defense mechanisms yesiXhosa ngoba bendizolahleka kule paragraph yokugqibela ngaphandle kwayo” (“the Xhosa definition of defense mechanisms helped, I would not have understood the last paragraph without it)*

Thirdly, a spin-off of one of the workshops is that I am working with a lecturer to trial text annotation in assessment contexts; that is, encouraging students to annotate (take-home) assessment tasks prior to writing up their answers. In part, the idea is to determine how questions or instructions are processed, and what knowledge databases are activated.

In spite of the limitations, my TAU project has demonstrated proof of concept. It has provided a basis for me to undertake a number of further iterations, which accommodate a much wider scope of issues in annotation than has been possible within the TAU phase. Further iterations along with envisaged publication and dissemination activities should facilitate the uptake of text annotation as useful practice in the teaching and learning context outlined at the beginning of this report.

## References

- Behari-Leak, K. & Mokou, G. (2019). Disrupting Metaphors of Coloniality to Mediate Social Inclusion in the Global South. *International Journal for Academic Development*, Vol 24 (2), 135-147.
- Bharuthram, S. (2012). Making a Case for the Teaching of Reading across the Curriculum in Higher Education. *South African Journal of Education*, Vol 32, 205-214
- Bourdieu, P., & Passeron, J.-C. (1995). Introduction: Language and the Relationship to Language in the Teaching Situation. In P. Bourdieu, J.-C. Passeron & M. de Saint Martin (eds.) *Academic discourse: Linguistic Misunderstanding and Professorial Power*. Cambridge: Polity Press, 1-34.
- CHE/Council on Higher Education (2013). A Proposal for Undergraduate Curriculum Reform in South Africa: The case for a Flexible Curriculum Structure. Pretoria: Council on Higher Education.
- NBT team/CETAP (2018). The National Benchmark Tests National Report. 2018 Intake Cycle. Cape Town/UCT: Centre for Educational Testing for Access and Placement.

Nel, C., Dreyer, C. and Kopper, M. (2004). An Analysis of the Reading Profiles of First-Year Students at Potchefstroom University: A Cross-Sectional Study and a Case Study. *South African Journal of Education*, Vol 24(1) 95 – 103.

Scott, I. (2009). First-Year Experience as Terrain of Failure or Platform for Development? Critical Choices for Higher Education. In Leibowitz, B., van der Merwe, A, van Schalkwyk, S. (eds.) *Focus on First-Year Success: Perspectives Emerging from South Africa and Beyond*. Stellenbosch: SunMedia, 17 – 36.

Prince, R., Darlington, M and Dunlop, J. (2017). School-leaving and University Entrance Assessments in Explaining Performance in Engineering Studies. *Proceedings of the Fourth Biennial Conference of the South African Society for Engineering Education*. Cape Town, 14 – 15 June, 2017, 250 – 263.