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The analytical lens: developing undergraduate students' critical dispositions in undergraduate EAP writing courses

Abstract

This paper comprises findings from three parallel case studies within the broad framework of English for Academic Purposes (EAP). These provide results from classroom-based action research conducted over two years working with Semantics, Specialisation and axiological cosmologies from Legitimation Code Theory (LCT). Each author shares how one or both of these LCT dimensions have guided their practice in the teaching of English for academic writing and specifically, the development of their students' critical dispositions by teaching them how to apply lenses to analyse texts so that they may make informed judgements. Data from classroom interventions and student writing are provided. It is hoped that this paper elicits further discussion in the growing field of applying LCT and may draw attention to the role of the EAP teacher as expert in linguistics and the need to focus more on knowledge in EAP writing courses.

1. Introduction

The three parallel case study action research projects are from different academic contexts and were conducted between 2015 and 2017 at the Centre for English Language Communication at the National University of Singapore. The first case study explores semantics as a strategy for teaching how to use lenses for the theoretical framework section of an IMRaD (Introduction, Methods, Research and Discussion) research paper. The second is set in a standalone EAP module and describes the use of a systemic-functional linguistics-informed pedagogical tool as a lens to analyse academic discourse so learners can better understand the meanings including the assumptions, unsupported claims, or biases in texts. The third regards the embedding of LCT approaches for students engaged in writing hortatory blogs in a unit entitled Public Writing and Communication. Students are taught to explore 'axiological cosmologies' to understand how evaluative meanings form patterns of clusters that enable the writer to create a persuasive expository text. The authors, as lecturers and experts in the use of theoretical frameworks for pedagogical practice, draw on LCT to make valued knowledge practices in texts visible to students. One goal related to this is to provide knowledge to our students to develop their critical dispositions, so they may make informed judgements.

1. Literature review: context and theory

1.1 The Higher education curriculum

In 2000, Moore wrote:

The curriculum of the future should be the curriculum of knowledge. (33)

He argued that knowledge should be accessible to all members of society and, in this way, education should promote social and educational justice. However, we find that the educational climate for such an objective is not wholly welcoming. In many university settings, academic language courses tend to be void of a theoretical approach to education that places the teacher in the role of linguistic expert (Monbec 2018). Indeed, courses prominently feature notions such as grammatical accuracy instruction based on isolated clauses at the lexico-grammatical level or independent self-directed learning and study habits. Unfortunately, in these cases, the focus of instruction may first be decontextualised as extracts, which oversimplifies the meanings in the texts; and second, a theory of language or knowledge may even play a backseat role or be entirely absent. As many researchers have pointed out, focusing on common errors in a de-contextualised way is probably not effective (Cramer 2004; Patterson 2001; Tompkins 2002; Weaver, McNally, and Moerman 2001). Additionally, independent learning, although a useful process is often given too much focus detracting from the time spent with a qualified tutor as knowledge provider. For example, Tarone and Yule (1989) equate independent

learning to methods of learning rather than teaching (Benson and Voller 2013,7) taking the onus away from what the teacher does. In the case of independent learning instruction, what is being foregrounded is ‘the social circumstances of knowers’ (Maton 2014, 5), not knowledge. In contrast, the main goal of our research is to provide knowledge to students in the form of analytical lenses to enable them to deconstruct and judge information effectively. What we strive to do is move away from educational ‘knowledge blind-ness’ (Maton 2013). LCT as a sociological framework has guided our educational practices to do this.

2.2. LCT as a guide for curriculum design and delivery

The basic premise of Legitimation Code Theory (LCT) is that knowledge is power (Maton and Moore 2010; Wheelahan 2012). LCT is a toolkit for analysing socio-cultural practices and uncovering what constitutes the ‘rules of the game’ that provide the means to that power.

Ultimately, the goal is to develop a gaze or ‘a mode of thinking, acting and being’ (Dong, Maton, and Carvalho 2015, 8) through the explanatory power of the codes. In this research, as noted, we seek to develop our students’ critical gaze. We achieve this by applying the dimensions of Specialisation (including Cosmologies) and Semantics.

2.2.1. Specialisation and cosmologies

Specialisation refers to the reality that all human practices and beliefs are about, or positioned towards something, and thus involving relations to objects of focus, and are by someone, thereby concerned with relations to subjects. It is important as it determines principles of privilege in fields of practice. Practices that emphasise epistemic relation and downplay actors’ dispositions see specialised knowledge as the basis of achievement. Practices that emphasise social relations, and downplay epistemic relations, are represented by the knower codes (SR+). In the case of independent learning instruction, what is being foregrounded is knower rather than knowledge codes. Practices towards the ER+ end of the continuum provide more knowledge input and, in our view, might be defined as those developing a successful ‘gaze’ or as Dong, Maton, and Carvalho (2015) define it, ‘a mode of thinking, acting and being’ (p. 8).

For this paper, this represents achievement in critical analysis of text using a lens provided.

Knower codes can be explored in greater depth through the use of the concept of ‘axio-logical cosmologies’. Maton defines cosmologies as ‘constitutive features of social fields that underlie the way social actors and practices are differentially characterized and valued’ (152). Revealing how axiological constellations are formed in texts allows us to access the ‘moral ordering’ functioning within a text which ‘works to allocate ideas and authors to different poles of field, as either on side of good or evil’ (Maton 2008, 16). In order to make visible the moral ordering that underlies a text, we draw on the concept of axiological clusters which Tilakaratna and Szenes (forthcoming) identify as the smallest unit of axiological meaning that constitutes different ‘stances’. In identifying how clusters are formed, we can help students to understand the means by which experts and authors attempt to persuade the reader to align with a position on a particular issue. Drawing on the systemic functional linguistic framework of ‘appraisal’, which codes evaluative meaning in English discourse, Tilakaratna and Szenes (forthcoming) propose that an axio-logical cluster is composed of an item that is ‘evaluated’ by an item of ‘evaluation’ with a charging of either positive or negative meaning. The concept of ‘axiological cosmologies’ can therefore be used as an analytical lens for revealing how evaluation is used in text to persuade an audience to align with the author’s point of view. The analytical lens in this case is what constitutes ‘evaluation’ and specifically, what constitutes a ‘cluster’ or a repeated patterning of an item of evaluation (e.g. emotion or opinion) with the evaluated (person or thing).

2.2.2. Semantic gravity

‘Semantics’ is a dimension from LCT that ‘conceives social fields of practice as semantic structures whose organizing principles are conceptualized as semantic codes comprising semantic gravity and semantic density’ (Maton 2014, 2). In his 2014 chapter, Maton defines and explains these semantic codes. It is not in the scope of this paper to discuss semantic density (SD). Semantic gravity (SG) refers to the extent to which meaning relates to its context. The stronger the semantic gravity (SG+), the more context-dependent the meaning; the weaker the semantic gravity (SG-), the less context-dependent. A in Figure 1 is referred to as a high flatline and is consistently abstract; B, a low-flatline, and is consistently concrete or empirical meaning. Shifts in meaning between these construct waves (C) specifically, semantic gravity waves (see Figure 1). The semantic range of C is significantly greater than in A or B profiles.

Using Semantics, it is possible to explore the relations that exist between knowledge structures. In the case of using an analytical lens as a framework such as Critical Race Theory (case study 1), systemic functional linguistics, or cosmologies and appraisal as part of (case studies 2 and 3), the analyst uses knowledge at the weak semantic gravity end of the continuum (SG-) to explain

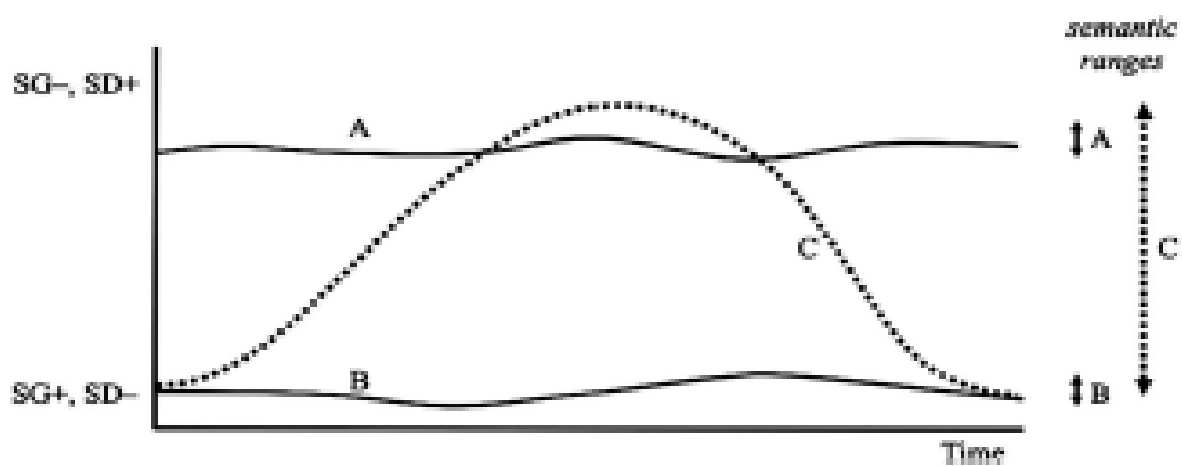


Figure 1. Diagram of semantic gravity profiles and ranges, adapted from Maton (2013, 13).

empirical phenomena or language items (knowledge structures at the stronger end or SG+). These lenses can be used in other contexts and for other texts and links can be made between these to develop further and more generalised knowledge. As Brooke (2017) points out in his paper on the application of semantic gravity waving to the use of theoretical frameworks for IMRaD research papers: ‘another reader from the field or from another field might apply the same lens to another related context; or try it for a very different context and make a comparison; the researcher might decide to use another lens for the same context, and so on’ (42). Semantic gravity is therefore a means for demonstrating to students the relations between knowledge structures and in particular how the application of a lens is carried out. It is thus developing students critical dispositions.

3. Findings

3.1. Case study 1

3.1.1. Research context

The first case study describes a Content and Language Integrated Learning course (CLIL) which explicitly teaches subject-specific lexis, general cross-curricular academic language, genre awareness and critical thinking dispositions. The module is a twelve-week course entitled Sport and Socialisation comprising forty-eight contact hours, of which one-point-five are through one-to-one consultations. The course provides input on conducting and writing academic, evidence-based research. For the main assessment task of Sport and Socialisation, students write a 2,500 to 3000-word social science research paper, also known as an IMRaD (introduction, methodology, results and discussion). As part

of their assignment in the course, students are required to adopt a stance and assimilate a theoretical framework as an analytical lens to study empirical data that they gather. The teaching of theoretical framework section was the context for the research. The main research question was: does a presentation of semantic gravity waving lead to an improvement in the application of a critical lens as well as the students' writing of a theoretical framework section for an IMRaD?

Three interventions occurred. The first during week six in the form of a classroom lecture on semantic gravity waving. An authentic theoretical framework section from an IMRaD was deconstructed in class and a semantic profiling provided as a visual scaffold. The objective of the lecture was to link students' present knowledge to semantic gravity waving. This was facilitated by discussing the use of the topic/ first sentence(s) to present the controlling idea of the theoretical framework at an abstract/conceptual level. Abstract general nouns for general reference are common for this such as power, discipline, and race. Then the controlling idea is developed. This might involve describing further; or comparing and contrasting concepts. It probably entails citing supporting evidence. It might also entail challenging or questioning information or perspectives relating to the controlling idea. Deictics such as this, these, one such ... ; and synonyms (research or one recent study) or hyponyms (e.g. athletes or football players); are also commonly used for this development. Next, there are degrees of exemplification. Terms such as for example or the findings demonstrate are common to illustrate the controlling idea. Finally, the rounding off or concluding sentence(s) normally summarises points made using abstract general nouns which act as synonyms to those already used in the beginning. There is often realised using linking words such as therefore; consequently; in sum. This helps to draw together the points made about the controlling idea. Two other meetings took place with participants as thirty-minute one-to-one consultations. These occurred at the end of in weeks seven and twelve. During these consultations, semi-structured interviews designed to elicit students' views on the impact of this pedagogical intervention were conducted. Students were informed that the research was occurring and consented freely. One main open question posed was: was the lecture on semantic gravity waving informative? If yes, in what way? If not, why not?

3.1.2. Data collection and analysis

Academic writing from sixty students (fifty-seven second years/ three third years), who come from Engineering, Science, Law, Business and Social Science faculties, were sampled for the research over four semesters throughout the 2016 and 2017 academic years. Written work from participants was analysed qualitatively using purposive sampling at the end of week five when students were writing draft research proposals. The main criterion for a well-written theoretical framework section was that there is a sufficient critical engagement with a social phenomenon. This means combining both abstract theoretical knowledge structures with sound empirical grounding to help to represent how that theory acts as an analytical lens. This grounding might be data from research provided in an academic journal or the depiction of a social phenomenon. In addition to that, four principle questions were asked. These were: Is the framework section initiated with appropriate abstract content dense with meaning (SG-/ SD+)? Are there terms that help to define that initial content? Is the topic then contextualised using more concrete knowledge structures such as an empirical example? Does the text conclude by shifting back to more abstract meanings (SG-/ SD+) again as more general notions are referred to?

From the analysis at the end of week five, three students, who particularly required input on semantic gravity waving, were selected as research participants. Then having conducted the lecture and received new proposal drafts at the end of week six, interview data eliciting students' views on semantic gravity waving and how it might facilitate an improvement in the writing of the framework section, were collected. Additionally, content analysis of the three students' texts at the end of week twelve was conducted using the same principle criterion and four questions. Extracts from one of these students at pre and post intervention stages are shared in the findings.

3.1.3. Findings

An example extract (text 1) considered weak during the pre-intervention stage, using the sampling criteria, is provided below:

Race is an important issue in American society and sport. Critical Race Theory (CRT) can be used to investigate black athlete activism in the American society. The Take a Knee movement was started by quarterback Colin Kaepernick who knelt in protest in 2016.

Kaepernick said: "I am not going to stand up to show pride in a flag for a country that oppresses black people and people of colour". Protests were seen not only at every NFL game but also at Wembley Stadium in the UK. In London, 24 players also took a knee. Activists argue that black athletes have a responsibility to speak out on social issues and causes today. Thus, CRT can be used as a framework to challenge these inequalities and critique anti-racism in sport.

In this example, although the framework section is initiated and concluded with abstract content dense with meaning (SG-/ SD+) with the references to race and Critical Race Theory (CRT), there is an insufficient critical engagement. Little abstract theoretical knowledge structures (SG-) are discussed. Further, although the empirical content (SG+) may help the reader to understand the basics of CRT as a framework, this content represents more than fifty percent of the content of the text (sixty-eight out of one-hundred and twenty-eight words). This is an over-contextualisation of the issue and an underrepresentation of the theoretical underpinnings of CRT. In sum, the level of abstraction is limited, and this devalues the academic tenor or voice.

The post-intervention text (text 2) at the end of week twelve, from the same student's IMRaD's theoretical framework section, is provided below.

Critical Race Theory asserts that the prevalence of racism in America is due to its majority white population, and it is a construct deeply embedded in the American society (Agyemang, Singer, and DeLorme 2010; Ladson-Billings 2004, 53). It explains that the laws in the US are constructed against people of colour. These laws maintain white supremacy and the regime within the US despite the constitution guaranteeing equal protection to people of colour. In accordance with this, Agyemang, Singer, and DeLorme (2010) found through his interviews that black male college athletes are aware of racism in America. They understand that race would always be an ongoing issue and because of that, they may need to be cautious with their words and actions. As pointed out by Darnell (2012), athletes face isolation from their team or condemnation by their organisation for promoting activism. Muhammad Ali, Tommie Smith, John Carlos and more recently, Colin Kaepernick, are individuals alienated due to their part in activism on the sporting stage (Todaro 2018). In contrast, a white US Women National Football player Megan Rapinoe, pledged her support for Kaepernick by kneeling during the national anthem but she was not met with any repercussions for her actions (Branum and Masland 2017). Therefore, it seems that the isolation of athletes stepping up against activism is exacerbated due to race (Moore 2017). Nevertheless, CRT activists argue that black athletes have a responsibility to speak out today and to challenge inequalities and critique racism through sport.

In this draft, there is greater context-independent, theoretical content and much less descriptive narrative. The result is a more criticality. There is also a more appropriate academic tenor. Specifically, the student explores abstract conceptual notions such as racism (SG-), Law (SG), white supremacy and equal protection. These are then explored through empirical research such as the work from Agyemang, Singer, and DeLorme (2010), Darnell (2012). Thus, citing more context-dependent knowledge structures (SG+). However, concrete context-dependent knowledge structures (SG+) are used to exemplify activism (e.g. Kaepernick and Rapinoe as reported by Branum and Masland 2017). Thus, the lens is applied effectively to the social phenomenon of the banded knee campaign. There is then a return to abstraction and the general social issue and CRT activism (SG-)

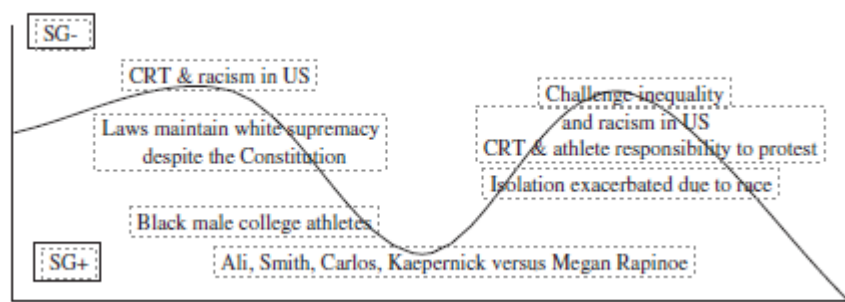


Figure 2. Diagram of Heuristic semantic gravity profile.

challenging racism (Moore 2017) and a final closing with a more general theme regarding race and inequality. This can be represented heuristically as a semantic wave profile as in Figure 2. As noted, a similar profiling was used for the initial lecture on semantic waving.

3.1.4. Implications of the research

During semi-structured interview, students reported that this strategy helped them to engage in evidence-based writing as it explicitly demonstrates how knowledge structures (SG+/-) are realised together. More specifically, by focusing on semantic gravity, students were able to learn how to critically analyse a social phenomenon. In the student example provided, the lens was Critical Race Theory and it was used to explore political activism in sport. The role of the teacher as expert and the application of a knowledge-oriented curriculum have been crucial for this development of students' critical dispositions.

3.2. Case study 2

3.2.1. Research context

The second case study is set in a standalone English for Academic Purposes module and describes the use of a systemic-functional linguistics-informed pedagogical tool as a lens to analyse academic discourse. The purpose of the module is to equip learners with an understanding and practice of academic writing. The groups are mixed disciplinary which constitutes a challenge as the syllabus has to be 'wide-angle' or General, and not disciplinary specific. In order to foster students' critical understanding of their new discourse environment, the curriculum was designed to emphasise epistemic relations: a focus on knowledge about academic meaning-making. To do this and following several similar initiatives at tertiary levels (Dreyfus et al. 2016; Rose et al. 2008; Drury and Jones 2010; Coffin and Donohue 2014), SFL/Genre pedagogy is used. As part of the SFL/Genre based approach, the Teaching and Learning cycle (Martin and Rose 2008) is adopted. The cycle leans on a rich and empirically derived body of knowledge about language and the way it functions to make the abstract and decontextualised meanings so typical of the university setting. This pedagogy is a knowledge code, because knowledge of language and meaning-making is the focus of the curriculum, rather than skills (as can often be the case in EAP programmes (Cowley-Haselden and Monbec Forthcoming)).

SFL is a useful tool for developing students' critical thinking skills because it conceptualises ideology as encompassing the entire architecture of language from genres to the smallest items. The Sydney School is concerned with redistributing control to learners by showing them the way language reflects, shapes and consolidates ideology (Rose 2010). In the EAP module, language is taught as a context-dependent resource for meaning-making. The Knowledge About Language (KAL) provided to students through the semester is organised into four meaning-making toolkits and students are provided with multiple exposure/analysis to emphasise language as a system of choices dependent on ideology. The KAL taught consists of the language systems that are used in academic meaning-

making (cohesion, appraisal, logical relations, and experiential meanings) across most disciplines. The last toolkit focusses on interpersonal meanings that are engaged to express the evaluation, stance and power relations among actors. This case study focusses on the fourth toolkit (shown in Table 1), that of interpersonal meanings to show how students who are equipped with this knowledge about the concrete linguistic ways evaluative and stance meanings are made in academic writing may be better able to critically analyse texts in academia and beyond.

The other important aspect of this approach is its attention to the syllabus structure to enable transfer across to the students' various disciplines. Using semantic gravity, it can be shown how knowledge items in a syllabus relate to the immediate context or are more abstract. Using the KAL in the table, students are exposed to items of knowledge at a fairly abstract level. The toolkits (or systems in SFL terms) are not concrete items, but rather abstract concepts which can be deployed in a range of discourse, and even other semiotic systems such as visuals or math. Plotted on a semantic wave, this is how the element of context is taken into account in the syllabus design (Figure 3).

This approach enables students to first build a strong, theoretically-informed knowledge about academic meaning making which enables them to 'see behind the scenes' of the texts they read in their discipline. Secondly, it enables them to connect this body of language to their own disciplinary contexts in a systematic manner (which is often a great challenge of wide angle EAP modules).

To show impact of the approach, we take an example from a student's lab report written in a year one core Life Science module. Since the purpose of the EAP module is to equip students with academic literacy skills which can serve them in their discipline, it is important to measure impact in the discipline (rather than in the writing done in the EAP module). Lab reports are very common assignment types in scientific disciplines

Table 1. SFL-informed toolkit for evaluative meanings.

Function/Purpose	Linguistic systems and features (examples in blue)
To present your views persuasively by show caution and tentativeness when presenting arguments and interpretation, by referring and commenting on sources	<p>Evaluation/Appraisal</p> <ul style="list-style-type: none"> • Hedging and Modality: <ul style="list-style-type: none"> Modals: may, might, could Adverbs: perhaps, probably Quantifiers: some Verbs: appear to + V/ seem to + V/ tend to + V Other expressions : x is likely to + V/ there's a tendency for x to + V • Reporting structures: The research report concludes [that + SV]. As Jones (2010) argues, ... According to Zhang (2009), ... • Endorsing and distancing <ul style="list-style-type: none"> Evaluative reporting verbs: daim, suggest, demonstrate ... Intensifying/limiting adverbs: clearly, unambiguously, strongly/ somewhat, to a certain extent Concessive clauses: although ... while.

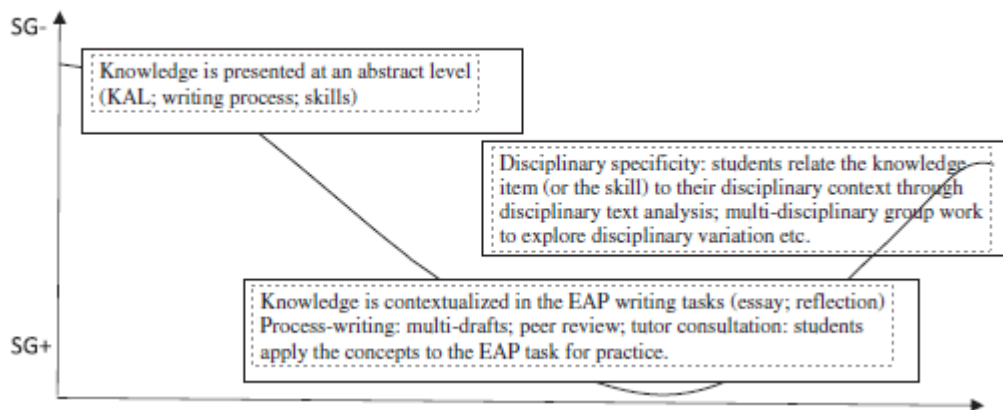


Figure 3. Semantic gravity for the EGAP curriculum.

(Nesi and Gardner 2012) and present significant challenges for students, notably regarding the interpersonal meanings expressed. While Science writing can be perceived as skirting any evaluative meanings or personal opinion and is often portrayed as being objective and impersonal (Lemke 1990), in fact scientific is often persuasive and engages a range of evaluative meanings, albeit often hidden from immediate view (Dreyfus et al. 2016; Hood 2005; Hood 2010; Hao and Humphrey 2009). Evaluative meanings become more prominent in the later years of undergraduate studies when students are not only required to display understanding of the core knowledge of their discipline, but also have to critique it and create it. The EAP module and its focus on KAL made several resources visible to the students, especially those that may constitute a new way of writing for these students transitioning from the high school writing culture to the university more challenging contexts. Using sources to develop a text, engaging stance and distancing as well endorsing features, and making tentative meanings were all shown as essential to academic writing.

3.2.2. Data collection and analysis

Written work from 12 students who took the EAP module were analysed for the interpersonal resources. The participants came from Math, Life Science, Engineering and Chemistry. The students were also interviewed around their disciplinary text to explore the ways they link the linguistic resources to the specific context.

3.2.3. Findings

The findings showed that 10 of the 12 participants were using the interpersonal toolkit in the discussion section of their lab reports and were clearly linking the need for the resource to express a meaning of tentativeness in the interpretation of the results. An overview of the results is shown in Table 2 and one example follows. The blue ticks indicate the student has both said the feature was used and showed them in their text. Red indicates the student has not used the feature because the context did not warrant it (Dr Strange wrote a Math proof).

Lucy, a year 1 Life Science student, discussed a Molecular Genetics module Lab report on Agarose Gel Electrophoresis in which she expressed a range of interpretative meanings to explain why the results were not all as she expected. The hedging features are high-lighted in green in the extract below. The student also uses a range of in-text citation types and supports her claims by aligning the literature to

Table 2. Overall use of the interpersonal toolkit.

	Dr Strange	Yena	Kali	Ben	Reena	Lucy	Sobek	Julia	Walter	Igor	Paul	Jane	Total mention/12 participants
Referencing/reporting structure	✓	-	✓	-	-	✓	-	-	✓	-	✓	-	5
Synthesizing with Distancing and endorsing	✓	-	-	✓	✓	-	-	-	✓	-	✓	-	5
Hedging	✓	-	✓	✓	✓	✓	✓	✓	✓	-	✓	-	9

her findings and these are bolded.

For the “neat” sample of genomic DNA in lane 8 from Figure 1, the thick band found at 23,130 base pair row indicates a high concentration of DNA fragments of that particular length. Perhaps if the gel was run for a longer time, there might be a thinner band or more spread out bands of DNA molecules as larger DNA molecules require more time to move through the agarose gel. The region of fragments found to be smaller than or equal to 2,027 base pair can be seen as a smear, possibly due to contamination of RNA molecules in the undiluted sample of genomic DNA. This is supported by Oswald (2007) who reported that RNA runs “as a low molecular weight smear”. As RNA molecules are smaller in size compared to DNA molecules (Alberts et al., 2002), it means they are lighter in terms of molecular weight thus they are able to move through the microscopic pores in the 0.7% gel at a faster rate than the DNA fragments. Hence, RNA could have been extracted from the E.coli along with the genomic DNA, during Practical 1.

The student was also able to explain the context that prompted this deliberate choice of feature, as shown in the quote below:

Like it suggests, you can’t say IT IS coz I’m also not sure, whether my interpretation is correct.

Additionally, she showed deliberate choices between information or author-prominent citations, explaining that an author-prominent citation is useful to boost her interpretation. Although Lucy did not mention that she used distancing or endorsing and could not remember the feature, she shows that she is able to use external sources to support her interpretation.

Most of them I put them at the end, apart from this one “This is supported why”...I want to show that my interpretation [is correct].

Interpersonal meanings are at the heart of academic meaning-making. The tentativeness that the student expresses about her own experimental results and the skilful way in which she refers to the literature are key to the expected degree of tentativeness and the understated per-suasiveness in scientific discourse. Providing a visible knowledge of the way these meanings are made has equipped the student with the tools to mean academically in her discipline.

This section has described how an EAP module may boost its epistemic orientation by providing explicit knowledge about language which is then used as an analytical lens for disciplinary discourse. It has indicated how this knowledge orientation may provide the underlying codes to undergraduates who are becoming acculturated in their discipline, sharpening their awareness and understanding of the way meanings are made in academia. The example provided shows that when knowledge is taught at abstract as well as concrete levels, students may be better able to apply it in future contexts, even if the context is very different. This author strongly believes that equipping students with a concrete linguistic lens through which to critically analyse the texts they encounter in and beyond academia is of crucial importance.

3.3. Case study 3

3.3.1. Research context

The final case study reports on the embedding of SFL and LCT approaches to teaching ‘persuasion’ in a unit titled Public Writing and Communication. The unit is taught to all undergraduate students across the Faculty of Arts and Social Sciences at NUS comprising approximately 700 students per

semester and is seen as a companion to a similar undergraduate unit on academic writing. The purpose of the course is to enable students to engage effectively with the public. Drawing on the concept of a 'rhetorical situation' from Bitzer (1968) and Aristotle's rhetorical appeals, the course focuses on the teaching of a persuasive writing task produced in the form of a 'blog' submission. Using SFL approaches of genre pedagogy, the types of blogs students are expected to produce can be classified as 'hortatory expositions' that require the writer to persuade someone to do something (Martin and Rose 2008). Students write the blogs as group assignments with each student contributing a 600-800-word blog post to a thematic blog in which 2 to 3 students persuade their audience to enact social change. In order to 'persuade' the audience, course coordinators draw on Aristotle's rhetorical appeals, which are subsequently simplified to refer to three domains of meaning which are used to shape public communication texts: the first 'pathos' refers to 'emotion' or emotional appeals, while 'logos' refers to 'logic' and finally, 'ethos' is interpreted as 'credibility'. Students are expected to successfully use these rhetorical appeals to persuade their audiences to take action.

The blog focuses on a social issue and features a 'call to action' as a concluding stage in the genre which attempts to persuade the audience to take action to resolve the issue that students focus on. One of the difficulties that students face when attempting to find a social issue to critique is that information is very carefully controlled by the Singapore government and therefore, overtly critiquing or drawing attention to certain social issues could potentially be controversial. As a communitarian society, Singaporeans are required to act on behalf of the collective good (Lim 2016) and therefore, as first year undergraduate students, identifying social issues and critiquing government efforts (or the lack thereof) is incredibly challenging for the students. Part of the problem lies in the fact that students lack the appropriate understanding of how persuasive texts use linguistic resources to convince the audience to align with a particular value position or perspective on a social issue or how to enter the debate about a specific social issue in order to engage with public discourse. The main research question was: does making visible evaluative resources and formation of clusters in hortatory expositions lead to an improvement in the application of 'pathos' in the student's blog post?

This case study outlines an intervention in the form of an online tutorial (in week 4) that was created to operationalise the concept of 'pathos' or emotional appeals and to show how this type of appeal can be used as the basis for persuading an audience to align with the author's point of view so that they are more amenable to the 'call to action' that the authors conclude their blog posts with. In order to operationalise 'pathos', the well-established framework of appraisal from systemic functional linguistics (Martin and White 2005) was used to analyse evaluative language in a blog posted on the social action blog AWARE (Association of Women for Action and Research), a Singapore based blog advocating for Women's Rights. The selected blog post 'Single parents need more inclusive policies on public housing' addresses the social issue of government subsidised public housing access which is predominantly reserved for married couples and excludes single parents including divorcees.

The purpose of the tutorial was to allow students to move from their intuitive understanding of what constitutes 'pathos' to making visible for students the evaluative resources that are present in the text. The video was interactive, requiring students to pause and engage systematically in text analysis and coding. In order to show how these evaluative resources are used in order to 'persuade' the audience, the LCT concept of clusters was used. Clusters of axiological meaning can be defined as the repeated patterning of an item of evaluation (e.g. emotion or opinion) with the evaluated (person or thing). Appraisal and clusters have been used to explore 'hidden values' in texts in order to uncover the manner in which texts align or disalign with particular value positions through repeated patterning of positive or negative evaluations with the evaluated (see for instance Tilakaratna and Szenes 2017; Tilakaratna and Szenes, forthcoming). Assignments were collected after the semester concluded and all the marks were finalised, and participant consent was gathered retrospectively from all students whose assignments were selected for further analysis.

3.3.2. Data collection and analysis

Blog posts from 90 students from Faculty of Arts and Social Sciences (6 classes in total) that were submitted as the final written assessment for the unit were analysed. The focus was on identifying blogs that received the highest scores and were most persuasive in their call for social action. The blogs were qualitatively analysed for their use of evaluative resources using the appraisal framework from systemic functional linguistics (Martin and White 2005). In addition, patterns of these evaluative resources that focus on a single evaluated person or thing were identified in order to determine whether clusters of evaluative meaning were present in the texts. The presence of explicit evaluative meaning and the use of these meanings to repeatedly target specific groups of people in assessing their behaviour (positive or negatively) or evaluating things (such as policies, laws, advocacy efforts) were used as the basis for determining how successfully students use evaluative resources as a means of aligning their audience to a specific point of view. The questions guiding the analysis were: Do students use explicit evaluative resources? Do they repeatedly target positively people or things that they align with and negatively people or things they disalign with? Is there a clear ‘point of view’ that emerges from the blog text that is explicitly persuasive?

From each class across the semester approximately 2 students received an ‘A-grade’. Analysis of the evaluative resources used by these students repeatedly showed the use of explicit evaluative resources and a patterning of these resources to clusters of positive or negative meaning. Below, the manner in which an excellent student utilises these resources is shared.

3.3.3. Findings

The heuristic model used to make students aware of how clusters require students to identify instances of evaluative meaning in the text and to associate these meanings with their potential targets or sources of these evaluative meanings as shown in Table 3.

Table 3. Identifying the source and targets of evaluation.

Negative :	Targets of evaluation
serious difficulties	What is creating difficulties?
faced problems	Who is facing problems?
unrealistic income ceilings	What kinds of problems?
long debarment periods	
a lack of transparency and darity	
stress	Who is experiencing ... ?
uncertainty	
financial pressure	
overcrowding	
tension	
frustration	What is ... ?
poorly explained	
uncertain processes	
multiple applications or appeals	Who needs to make ... ?

These targets or the ‘evaluated’ and the evaluation that targets them form clusters of axiological meaning. Identifying these allows the text’s reader to achieve a clear understanding of how the authors choose to use evaluative meaning to influence their audience’s understanding of the social issue of public housing access as it applies to single parents in the context of Singapore. The analysis showed students that positive meaning is entirely restricted to evaluating the actions of the group authoring the blog and advocating for better conditions for single mothers. This can be contrasted with the types of evaluative meaning that are associated with the single mothers and processes and policies. More specifically, deriving from the appraisal framework (Martin and White 2005), it is evident that single mothers are the source of a series of emotions while processes and policies are critiqued for

being ‘complex’ in composition and therefore function as a type of opinion that can be sourced to the blog authors and the single mothers.

The student example extract used in this section to explore how students use similar clusters of meaning comes from a high-scoring student’s final assignment submission. The student blogs about the criminal justice system in Singapore, which she argues is punitive and less effective than the ‘restorative’ justice system in Finland. In order to critique the Singapore criminal justice system she begins by overviewing the Singapore reintegration of ex-offenders in the extract below (evaluative meaning in bold, targets underlined):

Singapore’s efforts in the reintegration of ex-offenders into society are commendable. Organisations like the Singapore Corporation of Rehabilitative Enterprises (SCORE) have made a noteworthy impact on the employment rates of ex-offenders – in 2015 alone there was a 7.3% increase (Ng 2017) in the percentage of employers working with SCORE to hire more ex-convicts. Moreover, the Yellow Ribbon project (YRP) has been lauded by the Penal Reform International (King 2012) for its events that aim to bridge the social distance between ex-offenders and the general public.

As in the AWARE sample blog that was used to model the use of evaluative resources in social action blog posts, the student uses explicit positive evaluation ‘commendable’, ‘note-worthy’ and ‘lauded’ to evaluate Singapore’s efforts at reintegrating ex-offenders, creating a cluster of positive meaning. The student then creates an opposing cluster of meaning that shows that Singapore’s system, while progressive, is still in need of revision and change. Following the use of a concessive conjunction ‘yet’ in the paragraph that follows, she reverses the charging of first cluster of meaning from positive to negative. Notably, the student attributes the critique of the criminal justice system as ‘incredibly punitive’ to an external source through the use of referencing and through the use of quotation marks in order to distance herself from this strong critique (e.g. King 2012). She expands on this critique by using another external resource that critiques Singapore’s criminal justice system for its ‘stigmatisation’ offenders and the ‘still existing prejudice’ against ex-offenders (evaluative meaning in bold, targets underlined):

Yet while our reintegration methods have been praised as more progressive than most countries, in its international 2012 diagnostics of the reintegration of ex-inmates, the same organisation that praised our YRP, also criticised the Singapore justice system for being “incredibly punitive” (King 2012). As such, despite the efforts by the various organisations in Singapore, studies like the 2016 paper, “Factors Contributing towards Stigmatisation of Offenders in Singapore” (Tan, Chu, and Tan 2016), illuminate the still existing prejudice against ex-convicts.

These two opposing clusters of meaning that the student creates in her blog post represent the complexity of the argument that the student puts forward. It also allows her to draw on experts in critiquing the existing system and outline its gaps using evaluation (both positive and negative) in highlighting the issues that are inherent within the criminal justice system. The creation of two clusters of meaning show not only that the student is capable of critical thought that allows her to put forward a balanced perspective but also of anticipating and engaging with any counter arguments to the potential critiques of the existing system.

3.3.4. Implications of the research

Module feedback from students mentioned the usefulness of an explicit framework to make visible the resources that successful writers use in persuading their audience. As students are apprenticed into writing academically for four years over the course of undergraduate studies, the ability to master transferrable tools such as identifying, classifying and clustering evaluative meaning in text also allows students to understand and master the persuasive writing in expository texts that are highly valued in higher education.

4. Conclusion

The paper aims to demonstrate through the research that there is a fundamental place for theoretical knowledge in the curriculum. It also seeks to show the importance of the teacher’s role in this. With

the application of the LCT dimension of Specialisation, specialised knowledge can be viewed as the basis of achievement. Using Semantics, students can be guided to use that knowledge and to apply it as a lens. Focusing on clusters can help to understand how explicit evaluative meaning can be used for the purpose of persuading the reader to align with the author's point of view. In sum, as educationalists, it is important to demonstrate the value of strong epistemic relations (ER+). The importance of language and knowledge as objects of study, and linked to that, the status of the teacher as expert, are key to a successful EAP curriculum.

References

- Agyemang, K., J. N. Singer, and J. DeLorme. 2010. "An Exploratory Study of Black Male College Athletes' Perceptions on Race and Athlete Activism." *International Review for the Sociology of Sport* 45 (4): 419–435.
- Benson, P., and P. Voller, eds. 2013. *Autonomy and Independence in Language Learning*. London: Longman.
- Bitzer, L. 1968. "The Rhetorical Situation." *Philosophy & Rhetoric* 1: 1–14.
- Branum, C., and T. Masland. 2017. "Critical Library Management: Administrating for Equity." *OLA Quarterly* 23 (2): 28–36.
- Brooke, M. 2017. "Using 'Semantic Waves' to Guide Students Through the Research Process: From Adopting a Stance to Sound Cohesive Academic Writing." *Asian Journal of the Scholarship of Teaching and Learning* 7(1):37–66.
- Coffin, C., and J. P. Donohue. 2014. *A Language as Social Semiotic-Based Approach to Teaching and Learning in Higher Education*. Language Learning Monograph Series. Malden, MA: John Wiley & Sons Inc.
- Cowley-Haselden, S., and L. Monbec. Forthcoming. "Emancipating Ourselves from Mental Slavery: Affording Knowledge in Our Practice." *BALEAP 2017 Conference Proceedings*, Bristol, UK Cramer, R. L. 2004. *The Language Arts: A Balanced Approach to Teaching Reading, Writing, Listening, Talking, and Thinking*. Old Tappan, NJ: Pearson Education.
- Darnell, S. 2012. *Sport for Development and Peace: A Critical Sociology*. New York: A&C Black.
- Dong, A., K. Maton, and L. Carvalho. 2015. "The Structuring of Design Knowledge." *The Routledge Companion to Design Research*, 38–49. London: Routledge.
- Dreyfus, S. J., S. Humphrey, A. Mahboob, and J. R. Martin. 2016. *Genre Pedagogy in Higher Education: The SLATE Project*. Basingstoke: Palgrave Macmillan.
- Drury, H., and J. Jones. 2010. "Transforming the Teaching of Report Writing in Science and Engineering Through Online Learning Environment, WRiSE (Write Reports in Science and Engineering)." *Proceedings of the 27th Annual Conference of the Australasian Society for Computers in Tertiary Education (ASCILITE), Curriculum, Technology and Transformation for an Unknown Future*, New South Wales, Australia.
- Hao, J., and S. Humphrey. 2009. "The Role of 'Coupling' in Biological Experimental Reports."

Linguistics and the Human Sciences 5 (2): 169–195.

Hood, S. 2005. “The co-Patterning of Attitude and Field in Academic Writing: What Gets Evaluated How?” *Australian Review of Applied Linguistics*. Series S 19: 23–40.

Hood, S. 2010. *Appraising Research: Evaluation in Academic Writing*. New York: Cambridge University Press.

King, R. D. 2012. “An International Perspective of how Other Countries Prepare Their Prisoners for Release.” In *Handbook on Prisons*, edited by Y. Jewkes, B. Crewe, and J. Bennett, 95–122. New York: Routledge.

Ladson-Billings, G. 2004. “Just What is Critical Race Theory and What’s It Doing in a Nice Field Like Education.” In *The Routledge Falmer Reader in Multicultural Education*, edited by G. Ladson-Billings, and D. Gillborn, 49–67. Oxford: Routledge-Falmer.

Lemke, J. L. 1990. *Talking Science: Language, Learning and Values*. Norwood, NJ: Ablex.

Lim, L. 2016. *Knowledge, Control and Critical Thinking in Singapore: State Ideology and the Politics of Pedagogic Recontextualization*. London: Routledge.

Martin, J. R., and D. Rose. 2008. *Genre Relations: Mapping Culture*. Sydney: Equinox.

Martin, J. R., and P. R. R. White. 2005. *The Evaluation of Language: Appraisal in English*. Hampshire: Palgrave Macmillan.

Maton, K. 2008. *Knowledge-building: How can we Create Powerful and Influential Ideas?* Paper Presented at *Disciplinary, Knowledge and Language: An International Symposium*. Sydney: The University of Sydney.

Maton, K. 2013. “Making Semantic Waves: A key to Cumulative Knowledge-Building.” *Linguistics and Education* 24 (1): 8–22.

Maton, K. 2014. “Building Powerful Knowledge: The Significance of Semantic Waves.” In *Knowledge and the Future of the Curriculum*, edited by B. Barrett, and E. Rata, 181–197. London: Palgrave Macmillan. *Palgrave Studies in Excellence and Equity in Global Education*. Maton, K., and R. Moore, eds. 2010. *Social Realism, Knowledge and the Sociology of Education: Coalitions of the Mind*. London: Continuum.

Monbec, L. 2018. “Designing an EAP Curriculum for Transfer: a Focus on Knowledge.” *Journal of Academic Language and Learning* 12 (2): A88–A101.

Moore, R. 2000. “For Knowledge: Tradition, Progressivism and Progress in Education – Reconstructing the Curriculum Debate.” *Cambridge Journal of Education* 30 (1): 17–36.

Moore, L. 2017. *We Will Win the Day: The Civil Rights Movement, the Black Athlete, and the Quest for Equality*. Santa Barbara, CA: ABC-CLIO.

Nesi, H., and S. Gardner. 2012. *Genres Across the Disciplines: Student Writing in Higher Education*. Cambridge: Cambridge University Press.

- Ng, H. 2017. "More Inmates Secure Jobs Before Release; Employers Show Greater Support in Hiring Them: Singapore Prison Service." *Straits Times* online. Accessed September 2018. <https://www.straitstimes.com/singapore/courts-crime/more-inmates-secure-jobs-before-release-employers-show-greater-support-in>.
- Patterson, N. G. 2001. "Just the Facts: Research and Theory About Grammar Instruction." *Voices From the Middle* 8 (3): 50–55.
- Rose, D. 2010. "Genre in the Sydney School." In *The Routledge Handbook of Discourse Analysis*, edited by J. P. Gee, and M. Handford, 1–16. London: Routledge.
- Rose, D., M. Rose, S. Farrington, and S. Page. 2008. "Scaffolding Academic Literacy with Indigenous Health Sciences Students: An Evaluative Study." *Journal of English for Academic Purposes* 7 (3): 165–179. doi:10.1016/j.jeap.2008.05.004.
- Tan, X. X., C. M. Chu, and G. Tan. 2016. "Factors Contributing Towards Stigmatisation of Offenders in Singapore." *Psychiatry, Psychology and Law* 23: 956–969.
- Tarone, E., and G. Yule. 1989. *Focus on the Language Learner: Approaches to Identifying and Meeting the Needs of Second Language Learners*. Oxford: Oxford University Press.
- Tilakaratna, N., and E. Szenes. 2017. "The Linguistic Construction of Critical 'Self-Reflection' in Social Work and Business." In *Transforming Contexts: Papers from the 44th International Systemic Functional Congress*, edited by P. Chapell and J. Knox, 61–66. Woollongong: The Organising Committee of the 44th International Systemic Functional Congress.
- Tilakaratna, N., and E. Szenes. forthcoming. "(Un)Critical Reflection: Uncovering Hidden Disciplinary Values in Social Work and Business Reflective Writing Assignments." In *Building Knowledge in Higher Education: Enhancing Teaching and Learning with Legitimation Code Theory*, edited by C. Winberg, S. McKenna, and K. Wilmot. Routledge.
- Todaro, P. Jan. 2018. "The NFL: How the Hegemonic Elite are Ruining the Greatest Sport on Earth." *The Global Critical Media Literacy Project*. Accessed September 2018. <http://gcml.org/>
- Tompkins, G. E. 2002. "Struggling Readers are Struggling Writers, Too." *Reading & Writing Quarterly* 18 (2): 175–193.
- Weaver, C., C. McNally, and S. Moerman. 2001. "To Grammar or Not to Grammar: That is Not the Question!" *Voices From the Middle* 8(3):17–33.
- Wheelahan, L. 2012. *Why Knowledge Matters in Curriculum: A Social Realist Argument*. New York: Routledge