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# Determining the faculty specific academic literacies needs of first year university students: a mixed methods approach

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## ABSTRACT

For three decades to date, South African universities have been concerned about the levels of academic readiness, also known as the articulation gap, among first time entrants to higher education. The general opinion is that we need further reliable and valid indicators of how prepared high school leavers are to cope with the demands of academic education. This has necessitated both pre- and post-admission assessments, following the administration of which foundational academic support programmes are put in place to help students bridge the articulation gap. These support programmes have included those focusing on developing academic literacies, a multifaceted competence comprising the ability to cope with the discourse demands of academic education. The purpose of these support programmes requires that a proper needs analysis be carried out if they are to have a positive impact on students' effort to boost their ability to bridge the articulation gap. The aim of this article is to demonstrate how this needs analysis was accomplished for academic literacies through a combination of quantitative and qualitative means. It uses a sample of Law students (n=234) and students in the faculty of Economics and Management Sciences (EMS) (n=2944) at Stellenbosch University to accomplish the quantitative part, and a total of two EMS and three Law lecturer interviewees to realize the qualitative dimension.

**Keywords**: National Benchmark Tests Project (NBTP), National Benchmark Test in Academic Literacy (NBT AL), academic literacies, teaching and learning, needs analysis.

# 1. An adequate determination of lacks, wants and needs

Like other sub-disciplines of applied linguistics namely language policy and language assessment, language curriculum development, a component of the broader field of academic literacies, is underpinned by a set of design principles. Doing a language needs analysis to inform curriculum design is how several such principles are given positive form in language courses, as well as in the other applied linguistics artefacts that are involved here. While the design principles of theoretical defensibility and utility also come into play, the most prominent normative stimulus for doing a needs analysis before designing the language intervention is that of appropriateness and accessibility (Weideman 2017: 225).

For language curriculum design, the design principles that further allow us to flesh out and use the results of a language needs analysis include a consideration of the environment, goals, content and sequencing, finding a format and presenting materials, monitoring and assessing and evaluating a course (Nation & Macalister, 2010; Richards, 2001). As it applies to the language component of academic literacies, language needs analysis, is the specific focus of this article and therefore deserves a preliminary description as a matter sequence. Determining language needs is a process that experts in language curriculum design have found to comprise what they call 'lacks', 'necessities' and 'wants' (see Nation & Macalister, 2010; Richards, 2001). In brief, and as the name implies, the term 'lacks' refers to the basic reason for the existence of a course such as, for example, a perceived need to improve the academic reading and writing of students entering an English medium university. As the name of the concept also implies, 'necessities' refers to the language skills that need to be taught and learned in order for the aim of a course to be realized. Finally, 'wants' are the ideas that students have about what they want or do not want from a language course. Nation and Macalister (2010: 25) summarize these concepts as follows:

> Another way to look at needs is to make a major division between present knowledge and required knowledge, and objective needs and subjective needs. Very roughly, *Lacks* fit into *present knowledge*, *Necessities* fit into *required knowledge,* and *Wants* fit into *subjective needs.*

That this article is a contribution to a festschrift honouring her, it is appropriate to mention Carsten's (2010) ground-breaking work on domain specific language needs. The fields in question in this article – economic sciences and law – are indeed potentially different from the social sciences that she probed, and the methodology (the analysis of different genres in her case) is also not the same, but the concern is one that has been with us for some time: designing our language interventions in such a way that they are, as we have noted above, appropriate, accessible, theoretically defensible, useful, and potentially more effective as well.

At the time this article was written, Stellenbosch University Language Centre had been offering tailor-made academic literacies courses to students in most of the university's faculties.

Hitherto, the approach to needs analysis for these courses was largely an outcome of what a particular faculty thought was the kind of literacy that their students needed. The perspective on these needs, in other words, was predominantly that of the faculty to which the Language Centre would provide the service. While there is value in the qualitative input that these faculties had been providing, it could not be justified that they had been the only source of input for an adequate coverage of what needed to be taught. Besides, the way this information was arrived at was not underpinned by any structured and principled process of research, from the perspective of language learning and teaching, at least.

The aim of this article is to address this imbalance and consequently academically inadequate approach to needs analysis. It combines both a quantitative and a qualitative approach to determine the academic literacies needs of students in different faculties. The former method involved, as will be further explained below, using performance data from the National Benchmark Test of Academic Literacy (NBT AL) which Stellenbosch University had been using to measure generic levels of academic literacy among first year students, pre-admission to the institution. A description of this test is first necessary before the details of the qualitive approach are explained later.

## 2. The National Benchmark Test in Academic Literacy (The NBT AL)

The NBT AL is a product of the National Benchmark Tests Project (NBTP), a USAF (Universities South Africa) initiative that was mooted against the background of low levels of academic preparedness, now commonly known as the "articulation gap", often reported (e.g. Van Rensburg & Weideman 2002; CHE 2013) among the majority of students entering South African universities in the last three decades. The general aim of the project is to help alleviate this situation by developing tests of Academic Literacy, Quantitative Literacy and Mathematics that can measure the academic readiness of first year students at the point of entry to university. The objectives of the NBTP have been summarised as follows:

1. To assess the entry-level academic and quantitative literacy and mathematics proficiency of students.
2. To assess the relationship between Higher education (HE) entry level requirements and school-level exit outcomes.
3. To provide a service to HE institutions requiring additional information to assist in the admission (selection and placement) of students in appropriate curricular routes (regular, extended, augmented, or any other routes).
4. To assist with curriculum development, particularly in relation to foundation and augmented courses (or similar) (Griesel 2006: 4).

The construct of the NBT AL has three theoretical foundations (see Cliff & Yeld 2006). The first of these is the Bachman and Palmer (1996) model of language ability. Bachman and Palmer have (1996) described the ability to use language in any situation as being a result of

an interaction of organizational and pragmatic knowledge, the constituents of what they call language knowledge and strategic competence. In the view of Bachman and Palmer (1996), organizational knowledge involves a mastery of sentence level aspects of language use such as vocabulary and grammar as well as discourse level competencies of cohesion and coherence. Pragmatic knowledge, on the other hand, refers to the ability to use language appropriately in various contexts and social situations (Bachman and Palmer 1996). Strategic competence includes the goal setting, assessment and planning processes that regulate language use "behind the scenes" in all language use and communication situations (Bachman & Palmer 1996).

The second theoretical basis of the construct of the NBT AL (see Cliff & Yeld 2006) is Cummins's (1984, 1996, 2009) argument that the language skills required for communication in an academic setting pose a different cognitive challenge to users from those required for language use in social settings. These language skills have respectively been distinguished by Cummins as Cognitive Academic Language Proficiency (CALP) and Basic Interpersonal Communication Skills (BICS). Logically, the construct of the NBT AL was formulated with the view to measure the former type of language ability.

Lastly, the construct of the NBT AL is, according to the owners of this test, also informed by the 'academic literacies' model propounded by Lea and Street (2006). In this model, the ability to handle academic discourse is viewed broadly and as being multi-faceted as opposed to the restrictive manner in which it was approached by its predecessors, namely, the "study skills" and "academic socialisation" models. The focus of the "study skills" model is sentence level grammar which is assumed to be transferrable to all situations while the academic socialisation model epitomises what is commonly known as language for specific purposes in the broader field of applied linguistics. The latter model rests on the assumption that being able to handle academic discourse successfully simply requires familiarity with the discourse conventions of a particular discipline. Contrary to these two models, the "academic literacies" model is founded on the understanding that university students need to possess the ability to handle academic discourse differently in different contexts. In the words of Lea and Street (2006: 159), this model views "the curriculum as involving a variety of communicative practices, including genres, fields and disciplines … academic literacy practices is the requirement to switch practices between one setting and another, to deploy a repertoire of linguistic practices appropriate to each setting, …"

## 3. The construct and format of the NBT AL

On the basis of the three perspectives of language ability presented above, the construct underpinning the NBT AL has, according to the owners of the test, been formulated by Cliff and Yeld (2006: 20) as the ability to do the following:

- negotiate meaning at word, sentence, paragraph and whole-text level;
- understand discourse and argument structure and the text 'signals' that underlie this structure;
- extrapolate and draw inferences beyond what has been stated in text;
- separate essential from non-essential and super-ordinate from sub-ordinate information;

- understand and interpret visually encoded information, such as graphs, diagrams and flow-charts;
- understand and manipulate numerical information;
- understand the importance and authority of own voice;
- understand and encode the metaphorical, non-literal and idiomatic bases of language; and
- negotiate and analyse text genre.

For the purposes of responsible measurement and ultimate accountability, the construct presented above has been broken down into the subdomains captured in Table 1.

**Table 1:** The subdomains of academic literacy assessed in the NBT AL

| **Subdomain** | **Description** |
|---|---|
| Communicative function | Students' abilities to 'see' how parts of sentences / discourse define other parts; or are examples of ideas or are supports for arguments; or attempts to persuade. |
| Inferencing | Students' capacities to draw conclusions and apply insights, either based on what is stated in texts or is implied by these texts. |
| Vocabulary | Students' abilities to derive/work out word meanings from their context |
| Relations<br>1. Cohesion<br>2. Discourse | Students' capacities to 'see' the structure and organisation of discourse and argument, by paying attention – within and between paragraphs in text – to transitions in argument; superordinate and subordinate ideas; introductions and conclusions; logical development. |
| Essential/non-essential | Students' capacities to 'see' main ideas and supporting detail; statements and examples; facts and opinions; propositions and their arguments; being able to classify, categorise and 'label'. |
| Grammar/syntax | Students' abilities to 'see' / analyse the way in which sentence structure / word, phrase order affects meaning and emphasis in language. |
| Metaphor | Students' abilities to understand and work with metaphor in language. This includes their capacity to perceive language connotation, word play, ambiguity, idiomatic expressions, and so on. |
| Text genre | Students' abilities to perceive 'audience' in text and purpose in writing, including an ability to understand text register (formality / informality) and tone (didactic / informative / persuasive / etc.). |

(NBTP 2015)

The NBT AL comprises 75 four options multiple-choice items and is written at the same time and in the same paper as the Quantitative Literacy test. The items are designed with one most plausible option as the right answer in mind, and three distractors that are carefully designed to ensure that the whole test possesses the required ability to discriminate between test takers at all levels of ability. To borrow Cliff's (2015: 11) words, "test takers choose the most inclusive or plausible or reasonable answer from four options, where distracters have been specifically designed to be indicative of reading and reasoning misconceptions".

## 4. Research problem and questions

The quantitative dimension of the analysis carried out in this article aimed to demonstrate how performance on the NBT AL could potentially be used to determine the academic literacies needs of university students. More specifically, it aimed to demonstrate how performance on the subdomains of academic literacy assessed in the NBT AL could be used as a means to inform academic literacies curricula for first year students in the Faculties of Law and Economic and Management Sciences (EMS) at Stellenbosch University, to supplement the input that these faculties have hitherto, provided towards the curricula offered by the Language Centre to their first-year students. For the purpose of triangulation and accomplishing the qualitative dimension of this article, the analysis carried out on the NBT AL performance data was supplemented by eliciting the views of lecturers teaching selected courses within these faculties on their perceived academic literacies-related difficulties faced by their students.

A study of this kind is necessary for two reasons. The first is that the NBT AL is a criterion-referenced test which has academic performance as the basis for its existence. This implies a positive relationship between student performance in this test and actual academic performance particularly in the first year of university education. It is precisely for this reason that Stellenbosch University and other universities in the country have used performance on the test for taking medium to high-stakes decisions. More specifically, the Faculties of Law and Medicine and Health Sciences at this university have used it for student selection while the other faculties have used it to obtain additional information for the purpose of placing students in extended degree programmes. It is important also that the test is validated for the access and placement decisions referred to above. The second reason for embarking on a study of this kind, which justifies the qualitative analysis carried out in the article, is that the NBT AL is a generic test which can realistically not be expected to provide all the information necessary for determining student academic literacies needs equally in all disciplines within different faculties. Other sources of this information such as lecturer perceptions of these needs, for example, are valuable. The difference between this approach and the one initially used by these faculties to determine the content of the academic literacies courses offered was that the interview questions used to elicit the input from the lecturers were designed from the perspective of language teaching expertise. The data generated were therefore an outcome of a more principled approach than was previously the case.

# 5. Methodology

The analysis combined quantitative and qualitative approaches to address the research problem. The data for the quantitative part, namely the participants' scores on the NBT subdomains of academic literacy and end of first year performance, were made available by the Institutional Research Unit of Stellenbosch University, after both institutional permission and ethical clearance were obtained from the relevant committees inside the institution. For the analysis of this data, a linear regression methodology was used to determine the predictive validity of the scores obtained on each of the subdomains of academic literacy assessed in the NBT AL, in relation to the end of first year average performance for the two groups of participants used in this study over a period of two years (2015-2016). The sample comprised 2 944 students from the EMS faculty and 234 from the Law faculty enrolled in their first year in the two years combined. The imbalance in the number of participants in the two groups is a result of the total number of first year students admitted to the faculties: The EMS faculty admits larger numbers of students every year as compared to the Law faculty.

The aim of this article was to determine which of these subdomains were the most relevant to the academic performance of each group of students and the extent to which this was the case. The argument for using subdomains of the NBT AL as indicators of potentially specific needs is that they comprise mostly functional elements of language, including some cognitive processes (distinguishing, inferencing, extrapolating), that may be generalizable across possibly different types of discourse. Secondly a total of five lecturers from the Faculties of Law (3) and Economic and Management Sciences (2) were interviewed to triangulate the results of the linear regression analysis referred to above, from the point of view of the lecturers who had taught first year students within the two faculties for five years, at least. Both institutional permission and ethical clearance were also sought and granted by the relevant internal ethics committee in this case.

# 6. Results

## Quantitative data analysis

The results of the linear regression analysis for the Law students for the two years (2015-2016) are presented in Figures 1 and 2, while those for the EMS group are captured in Figures 3 and 4.

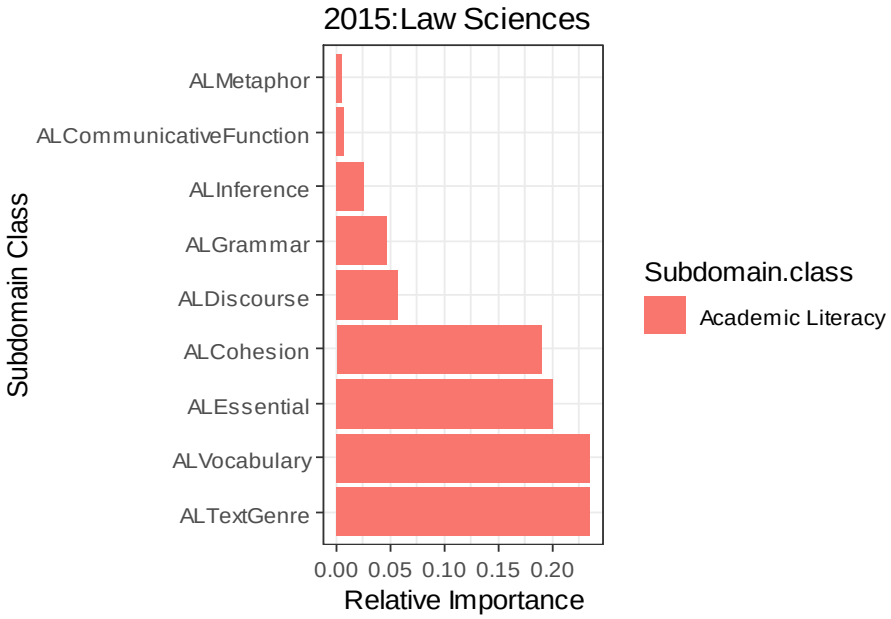


**Figure 1:** The relative importance of the NBT AL subdomains to the average performance of Law students in 2015

From the graph in Figure 1, it is evident that in the 2015 academic year, Text genre, Vocabulary, Essential versus non-essential information, and Sentence-level cohesion were the most influential subdomains of academic literacy on how first year students in the Law faculty performed on average at the end of that year.

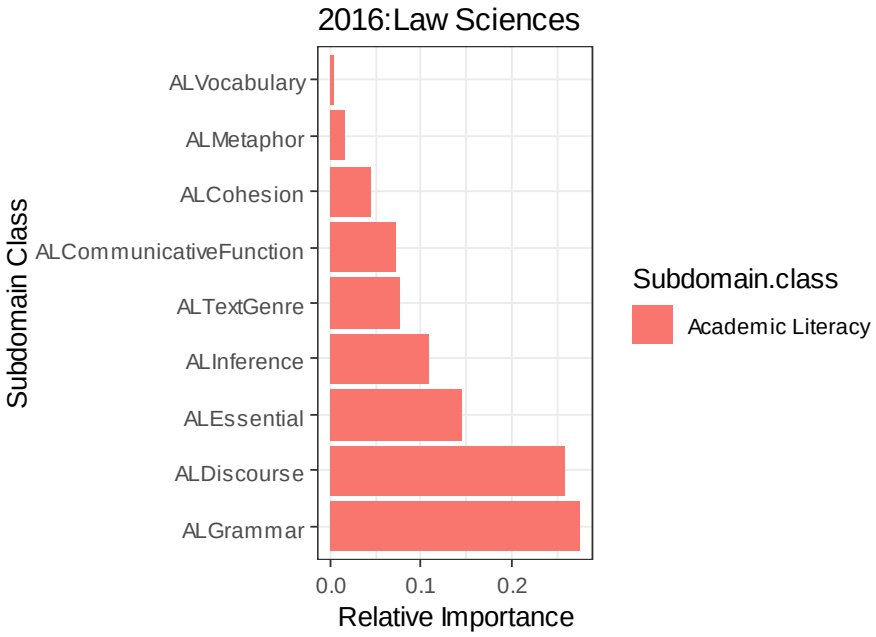


**Figure 2:** The relative importance of the NBT AL subdomains to the academic performance of Law students in 2016

From the graph in Figure 2, it can be seen that for the 2016 academic year, Grammar, Discourse level cohesion, and to a lesser extent, Essential versus non-essential information and

Inferencing were the most relevant subdomains of academic literacy to how Law students performed on average at the end of that year.

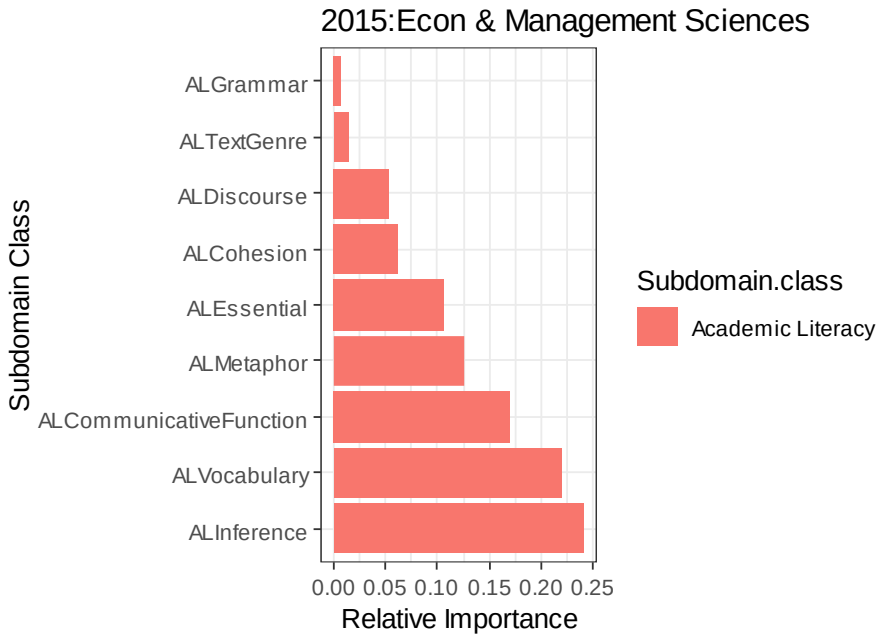


**Figure 3:** The relative importance of the NBT AL subdomains to the academic performance of EMS students in 2015

From the graph in Figure 3, it is clear that Inferencing, Vocabulary and Communicative function and to lesser extent, Metaphorical language and Essential versus non-essential information were the most relevant to the end of first year average performance for students in the Faculty of Economic and Management Sciences in 2015.

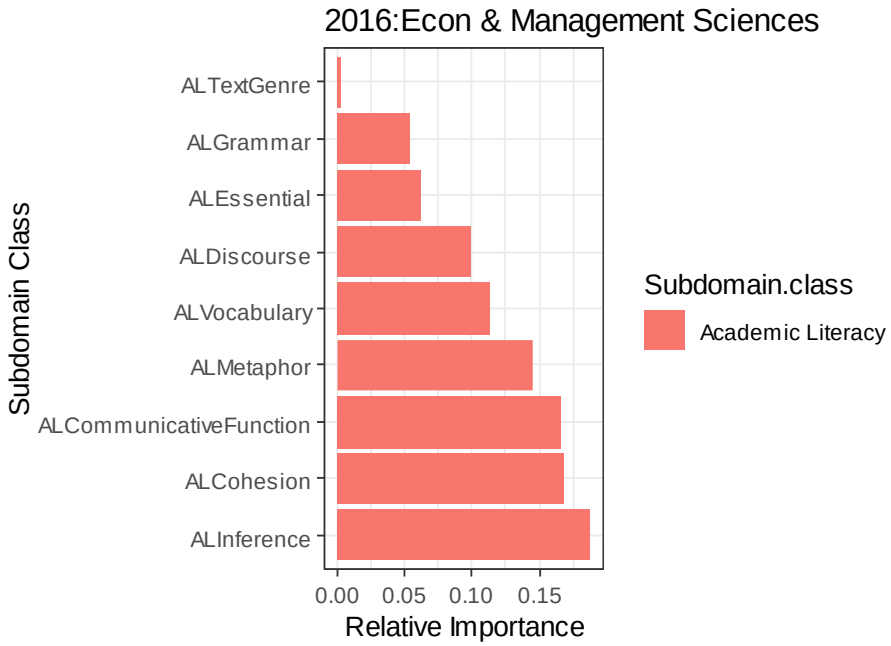


**Figure 4:** The relative importance of the NBT AL subdomains to the academic performance of EMS students in 2016

From the graph in Figure 4, it can be seen that for the 2016 academic year, Inferencing, Sentence-level cohesion, Communicative function, Metaphorical language, Vocabulary and Coherence were the most important to how students in the EMS Faculty performed on average at the end of that year.

## Qualitative data analysis

From the qualitative data collected from the Law faculty lecturers, a number of typical language-related challenges for the students in that faculty emerged. The first was that these students tended to try to use law-related terminology and its accompanying complex sentence structures in their written response to assessments, when their understanding of such terminology and sentence structures was evidently poor. The obvious result of this shortcoming is that their answers to test and examination questions are meaningless. In the words of one of the lecturers from this faculty,

> I find that they try and sound clever and then they use language which make them actually not get their point across. They really try to use too many words, they're very verbose and they try to use complicated sentence structures or complicated language, because they think that they have to sound clever and then they don't get the message across.

This lecturer adds further that,

> … they would use terminology that they think they know what it means and it isn't always … Their understanding isn't always very accurate. So they would also say sometimes perhaps the exact opposite of what it really is, what they're supposed to be saying.

A broad knowledge of academic vocabulary and discipline-specific terminology is an obviously critical factor in effective reading and writing, two of the language skills through which university education is mainly accomplished. This is even more so the case for Law students, whose profession, as will again be demonstrated below, requires accurate usage of language for successfully handling legal cases.

Related to the challenge of poor vocabulary and terminology knowledge was the second issue raised by the interviewees: that the students' sentence-level grammar competence was not always adequate. This impacted negatively on their ability to present written argumentation, a skill which is also at the heart of successful lawyering. This is what one of them said:

> but what I find now is that many second-language speakers have to answer in English and they don't get the grammar correct …

The lecturer went on to argue convincingly that sentence-level grammar is crucially important in law because incorrect language use at all levels is often a source of loopholes in legal arguments and a reason why court cases are often lost. She explained that sentence-level

grammatical items such as prepositions, modal verbs and articles, for example, make a huge difference to the outcome of court cases depending on whether they are used correctly or incorrectly to convey the intended meaning:

> … You know, sometimes even a preposition can make a difference in law. You really have to be technically correct. And they would say to me, but it's the same thing. It's not. In law, it really does make a difference … I know of an insurance case that's going on now about the word 'should' that's used in a clause. That's the nature of our job, unfortunately.

Added to this, was the students' inability to communicate clearly at discourse level in their writing as opposed to when they speak. Writing meaningfully at the level of the whole text is an obvious ingredient of meaningful and successful argumentation. This is how the lecturer referred to above explained the discourse-level difficulties with writing that her students had:

> … you can see they really are struggling with getting … There is an understanding perhaps of the law, but trying to get that message across in the English language is quite difficult… They all think they have to stand up in court and argue and, you know, talk. And it's not, you know, it's about writing, it's about getting your point across on a piece of paper or computer screen or whatever.

Another interviewee from the same faculty added that an observation which meant that part of the reason for her students' failure to write meaningfully was that they were unable to write for the reader:

> … students think, ooh but the lecturer knows what I mean. So they wouldn't say it exactly, they wouldn't really express it clearly or as succinctly or as fully as they should, because they think, you know …

It is common knowledge among writing instruction professionals that empathy, a writer's ability to put themselves in a reader's shoes, underpins all meaningful writing.

The third language-related challenge also evident in how Law students respond to questions is their inability to make inferences or read between the lines or understand what is stated beyond the text. This is also a crucial aspect of understanding and by extension, pursuing arguments which, as pointed out earlier, are key to the law profession. This is how one of the interviewed Marriage Law lecturers explained it:

> … So this morning I repeated it again. I had that on there and I said, somebody did come to me after Monday's lecture and she said to me, so this means that if you are a same-sex couple you can't get married as a child, but you can if you are of different sex. I said, yes, actually, that's what you needed to understand, that is inference. That you have to read that which isn't there … So I think the first years have got the ability to do that to some extent, but it's also not something that I think we test at first-year level as much as we do at Master's or final year, you know, more advanced ... As they progress in their studies I think it becomes more important that they make those inferences and understand what is not being said in the text.

The fourth issue relates to the students' ability to make meaning-related connections between different court cases presented to them in the form of written text and even between different parts of the same court case also presented in the written mode. This ability can also not be divorced from the overall coherence in comprehension and argumentation abilities that are conventionally required of Law students.

> … So you would have one court saying one thing, the next court takes that statement and develops …You know, to add some things to it or take it apart or criticise it or agrees with it, but just take it another … So those are definitely things that they need to, when they read cases, they definitely need to understand the one court did this, the other one developed the point further or disagreed or something like that.

The fifth challenge that emerged from the interviews relates to law as a 'foreign' kind of discourse which students struggle to grapple with upon entry to a law degree programme at university. One interviewee rightly explained how foreign the law language and text types were to students as a result of the fact that no school subject in South Africa is related to university law studies in a way that could familiarize students with what they will encounter in their law studies at university. This interviewee contrasted this with the natural sciences disciplines at university, for example, where students would have studied physics, chemistry and maths prior to their admission and start of their studies of these disciplines. This is how she put it:

> but I think one of the outlying things about law is that no student at school has exposure to law and the law way of thinking. Whereas in most other faculties and most other fields, there's at least some exposure. So if you're doing science, you've done science at school or maths or accounting or whatever the case might be. But with law it's a way of thinking and a way of dealing with information and using sources and using authorities and writing and arguing and all the rest which is very specialised…But the way of thinking, I see it as a whole new language. A whole new landscape that students have to learn to negotiate and a whole … Yes, just the way arguments work and what makes a good argument and a good … All that type of stuff and how, as I say, how you use authority. It's nothing like any school subject.

Lastly, it emerged also that law students tended to memorize information instead of processing it and making it part of their own knowledge base. This, one interviewee observed, was evident in how students were unable to apply what they learn in different contexts. This was particularly evident in how poorly students responded to questions requiring them to distinguish between typical assessment words such as Explain, Distinguish, Compare, Argue etc.:

> … With law, you have to process a large quantity of stuff, so there you've got your parrot fashion stuff. That's almost taken as a given, you know this stuff … Then you have to do this "what applies", that's another level of thinking. Then you have to think, okay, I know that it's in this ballpark, now I have to distinguish the relevant from the irrelevant, even within this ballpark. And now I have to apply and I have to come up with a good, systematic argument when I'm applying and then I have

> to conclude and I have to sort of shoot down the arguments that I don't want to support for this particular thing … So I mean, that's many levels above the parrot fashion and students don't have a chance to practise that, let alone in the context of a discipline, a very discipline-specific way of thinking.

From the data collected from the EMS faculty, a number of language-related challenges for the students in that faculty were also evident. The first is that students' understanding of the communicative function of typical assessment terms is poor. This point was also made with regard to the law students earlier. This is how one of the interviewees explained it:

> …. We expect students to understand the distinction between certain terms. For example, distinguish between, we want them to contrast. If we say explain or describe, we would want a distinction in the depth in terms of which the student would then answer the question. So those are things that they also learn as they go along.

Added to this was the observation that discipline-specific technical terms and concepts and how such terms and concepts could be applied in practice was also poor. This also echoes the last finding about the law students dealt with above. Although the occurrence of this challenge clearly manifested itself differently from the way it did in the case of the law students, the competence underlying the required understanding is the same. This is how one of the interviewees expressed this observation:

> ….So, the student is very good at giving back the information that is in the textbook, but we actually do not see the comprehension of the terms or the understanding of the term that the student uses.
>
> …. So, we would often want the student to demonstrate understanding and place the term in the context or apply the understanding of the term in a context, so the student would get the term and maybe the definition right, but the application would sometimes be lacking.

This challenge is not new in the language teaching literature. Part of the reason for this is that writers use different ways of signalling that they are using or defining a technical term or concept. Some of these ways are explicit while others are implicit. In both these cases, students often struggle to realize that a technical term and its definition are being presented. This is also quite common with instances of comparison and contrast and cause and effect, for example. In the case of these features of text organization also, writers use explicit markers of discourse in some cases and do not in others. Students often struggle to understand what is being compared to or contrasted with what or distinguish between a cause and its effect.

The second observation in relation to the EMS students was a discourse-level challenge which encapsulates the ability to separate essential from non-essential information, coherence, cohesion, grammar and inferencing. In this case, one of the interviewees from the faculty explained that test questions are often preceded by an opening statement wherein students are required to answer more than one part of the same question. The interviewee further explained that students would often respond to the opening statement and not the question itself or respond

only to one part of a question that requires them to answer more than just that part. Here is how they explained it:

> So, typically what we would have on Business Management first year level, we would have one question with three sub-sections. We would ask him or her, the student, to necessarily explain what the particular term means, identify from the text an example and indicate how it can be applied in practice as an example…
>
> So often the students in their haste probably do not read and identify all the sub-sections of the question. So when there are three, we expect three types of responses to one question, the student might answer the question inadequately, in other words, only answer one or two of the three sections of a question …

Thirdly, also pointed out about the law students earlier, students' proficiency in spoken language is stronger than their ability to use language to communicate in writing. This is partly due to their lack of sense of audience and the resultant tendency to write for themselves instead of the targeted reader.

> Another experience that I encountered with my students is that students are more able to verbalise their answers, but when it comes to reading the question and responding in written format, they do not convey full meaning of what they want to say.
>
> So, the disadvantage then of a written test as opposed to an oral test, is an oral test you get the opportunity to ask the student to clarify what he meant when he said a particular thing. In a written format, if the understanding is not clear, I do not have opportunity to ask him to further elaborate on his understanding because it is lacking in the manner in which he or she has put it on paper.

Another observation made regarding the students in the EMS faculty is their inability to recognize the different meanings that the same word can have as dictated by the different contexts in which it is used. One interviewee attributed this to the status of English as an additional language among the students and the resultant negative transfer of word meaning from their first languages: This is how the lecturer explained it:

> So, in that process of translating, they would sometimes consult a dictionary and use the wrong … the incorrect translation for a term. There's more than one meaning to a term and they would then use the incorrect translation for that term. …That is particularly if you have a term and it has an adjective or let's say a verb or a noun meaning to the same term, or there are more than different contexts in which the term can be used and the term is expressed incorrectly in the context that the student has written it.

The fourth issue is the use of fragments, also known as incomplete sentences in everyday language.

> At a higher level sometimes we've encountered students not completing their sentences or the sentence is incomplete in terms of the technical structure of what the sentence …

This is a problem related to grammar, which is common among speakers of English as an additional language, and which can potentially impede meaning in student writing.

## 7. Discussion

From the quantitative analysis carried out in this article, it is clear that the different subcomponents of the construct of academic literacy measured by the NBT AL predicted end of first year performance differentially for students in the two faculties from which the data was collected. It is evident also that there was no consistency in terms of which of these subcomponents were the most important or relevant in the academic performance of the 2015 and 2016 Law student cohorts. In 2015, Text genre, Vocabulary, Essential versus non-essential information, and Sentence-level cohesion appear to have been predictively better for this group of students in 2015 while Grammar, Discourse level cohesion, and to a lesser extent, Essential versus non-essential information take this position for the 2016 cohort. The same inconsistency was evidently the case with the results of the analysis for the EMS students. In the case of this group, Inferencing, Vocabulary and Communicative function and to a lesser extent, Metaphorical language were at the forefront of relative importance to the academic performance of the group in 2015 while Inferencing, Cohesion, Communicative function and Metaphorical language took this role in the average performance of this group in 2016. These are the results of the subdomain level regression analysis even though Stellenbosch University students performed consistently on this test in the two years focused on in this article. All faculties, except Education and Theology, obtained high median scores at the subdomain level and performed well on the whole test overall. This performance was consistently the same across the two years. This is evidence of the test's reliability across the two different samples. It seems safe therefore, for one to exonerate the test itself from the predictive differential validity evident in the results of the linear regression presented earlier. Instead, the shortcoming could very likely have been an outcome of the inconsistency in the assessment procedures used for the outcome variable, the end of first year average performance. This is a very difficult challenge to deal with because as the outcome variable, the end of year average performance is arrived at by computing student scores from the different courses whose assessment process cannot be equated with ease. This would be a cumbersome exercise to try to carry out in practice. It should be pointed out, however, that this does not render the role of average performance as an outcome variable entirely useless in studies of this kind. The results from such studies can always be triangulated in other ways possible.

It is for this reason that in order to deal with the inconsistencies of the results of the linear regressions carried out on the set of scores obtained by the two groups of students in 2015 and 2016, a qualitative dimension was added to the study. Experienced first year lecturers in the two faculties of interest were interviewed to triangulate the results of the quantitative analysis that were dealt with earlier. From these interviews, several observations were made that would

contribute valuably towards informing the faculty-specific literacies that students would benefit from. For the law students, the first relates to their ability to handle law-specific terminology in their studies. This is a reminder of the need for discipline-specific literacies to be prioritized over generic ones if students are to benefit fully from them (see Jacobs 2013; Lea & Street 2006; Boughey & McKenna 2016).

The second relates to their competence to handle sentence-level grammar. It is well known by now that academic literacies is more than just language ability in general and sentence-level grammar specifically. It is clear from the observation made and explanation proffered by the Law Faculty lecturers, however, that a focus on the teaching of grammar in the context of law needs a lot more attention as part of academic literacies support for law students than might have been the case to date. The importance of the finding from the interviews that sentence-level grammatical competence is a technical means through which legal cases can either be won or lost cannot be overlooked.

The third observation has to do with the students' lack of the competence required to communicate in writing at the level of a whole text. Given the legal loopholes that result from vocabulary and grammatical inaccuracy, successful legal practice hinges even more on the ability to write effectively for an audience. This is a finding that validates the whole construct of academic literacy measured by the NBT AL and which should inform any effort to support students with writing in the context of legal studies.

The fourth finding for this group of students is that they were unable to make inferences when they read legal texts. The importance of inferencing in understanding academic texts can also not be overemphasized. A student who cannot read and understand what is stated between the lines and beyond a text is unlikely to gain wholistic comprehension of that text. A finding related to this was that students were unable to make connections between parts of a case and related cases. This boils down to their ability to read cohesively and coherently, an area of focus by the NBT AL also. Next was the observation that law courses at university are not preceded by any high school subject – like maths and physics in the natural sciences, for example, – which could serve as a foundation for university students and thereby render law courses a less foreign territory for them. This underlines the importance of paying attention to law genres when designing a literacies course for these students. The last finding relates to the law students' tendency to memorise information and their inability to apply it in response to assessment questions, as a function of their poor understanding of the communicative function of the words used to ask these questions. Students' understanding of the communicative function of words is key to their ability to apply what they learn in a different context when required to do so. This is the essence of the purpose of formal education.

The findings from a qualitative analysis carried out with regard to the EMS students are common to those that emerged for the law students in several respects. The first is that the

former also have difficulties demonstrating understanding of the communicative function of words such as Distinguish, Discuss, Elaborate etc. that are typically used in assessment. A focus on the communicative function of words of this kind should therefore be a constituent of any effort to address the literacies needs of students in this faculty. Carstens's (2010) study on the variety of genres utilised in the social sciences confirms the importance of a correct understanding by students of communicative function.

The second relates to the EMS students' poor understanding of technical terminology and the resultant inability to apply it correctly in different contexts. This means that a teaching of how to approach and process technical terminology should be one of the foci of the academic literacies course offered to them by the Language Centre at Stellenbosch University. The third is an assortment of discourse related qualities, a mastery of which makes complete text comprehension and production possible; separating essential from non-essential information, coherence, cohesion, grammar and inferencing. These will also need to be taken into account when designing a faculty specific academic literacy course for these students. This finding largely also validates the construct underpinning the NBT AL from a qualitative perspective, at least. A related finding in the case of these students also is their general inability to distinguish between spoken and written language and to write for an audience. Thus, empathy in writing is clearly a skill that academic literacies efforts for these students will need to prioritize. Further related to this, are the two last findings: that students in the EMS faculty are unable to see how context can determine the meaning of words, and their tendency to write incomplete sentences, also known as fragments. Both these shortcomings have implications for competence in reading and writing for academic purposes. So, grammar and vocabulary development are a must for academic literacies instruction in the EMS faculty.

## 8. Conclusion

Low student completion rates have been the greatest concern for the higher education sector in South Africa since a decade before the advent of democracy in 1994. The dawn of the democratic era meant that the doors of higher education opened for students whose poor schooling background would make it impossible for them to access tertiary institutions in the apartheid years. A result of this massification has been that universities have had to grapple with these students' inability to cope with the demands of academic education. A further result has been the introduction of pre- and post-admission standardized assessments aimed at providing additional information about the evident articulation gap between the South African high school and university education, as well as subsequent extra academic support for those students identified as academically needy by the assessment. Logically, there should be a connection between what is assessed and what is taught, subsequently. Not only does this make it necessary for this assessment to be validated, it is also crucial that the extent to which what

is assessed is relevant to student performance in different disciplinary contexts is established. It is for this reason that this article sought to determine how the subcomponents of academic literacy measured by a widely used test of academic literacy predicted end of first year academic performance for first year students enrolled in two faculties at Stellenbosch University. The results were intended to serve as the basis for delineating the academic literacies needs of the students in the two faculties. As a way to triangulate these results, qualitative data were collected through structured interviews of lecturers teaching in the two faculties. This was very important to do in light of the shifting relative importance of the subcomponents referred to earlier to the outcome variable namely, academic performance at the end of the two years in which the data for the study were collected. The findings from the quantitative and qualitative analyses reported corroborate and supplement each other with adequate credibility to serve as the basis for determining the literacies needs of the two groups of students. The one weakness of the study with mentioning, however, is that the sample of the lecturers interviewed is not large enough to be representative of the two faculties. This was not the focus of this article though. A different study will have to be carried out to accomplish that. What the present article sought to do was to show how a needs analysis informed by both qualitative and quantitative research data could be carried out.

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