# PERFORMANCE OF L1 AND L2 GRADE 6 SOUTH AFRICAN LEARNERS ON AN ASSESSMENT OF CORE ACADEMIC LANGUAGE SKILLS

Marco MacFarlane (ORCID: 0009-0008-4478-0543)
University of the Witwatersrand, South Africa

## ABSTRACT

*This study investigates the relationship between the linguistic background/s of South African Grade 6 learners and an instrument measuring Core Academic Language Skills (CALS). The learners' (n = 89) results were divided into two groups based on their most commonly spoken language (either English, L1 or a language other than English, L2). All learners in the study (and indeed the overwhelming majority of South African learners) attend school in an English language immersion setting, where English is the sole language of learning and teaching. The groups were assessed on the CALS-I-ZA, an instrument developed to measure CALS that has been validated in the South African context. This study found that in both the L1 and L2 groups, the CALS-I-ZA showed a strong association with both the provincial Maths Common Examination (r = 0.642) and the provincial Natural Sciences and Technology Examination (r = 0.650). Surprisingly, the home language variable either does not correlate or correlates only very weakly with the other variables, suggesting that L1 or L2 status alone is a weak or increasingly irrelevant predictor of academic success. This research concludes that the strong association between CALS and schooling results remains robust, regardless of L1 or L2 status, and thus, there is compelling evidence to begin deploying the construct as an instructional tool in South African classrooms.*

**KEYWORDS:** Academic language, academic literacy, core academic language skills, assessment

## INTRODUCTION

This research investigates the use of a novel assessment instrument, the CALS-I-ZA, in assessing Grade 6 South African learners from various language backgrounds. This instrument is based on the Core Academic Language Skills (CALS) construct operationalised in the United States by Uccelli et al. (2015) and normed for use in South Africa by MacFarlane et al. (2022).

The language of education and assessment in South Africa is overwhelmingly English and, to a lesser extent, Afrikaans (Alexander, 2010; Department of Basic Education, 2010; Maringe & Chiramba, 2021). The dominance of English in the South African education system places the vast majority of South African learners in an extremely difficult position since only a minority of the population, some 9.6% according to the latest official figures (StatsSA, 2022), speak English as a home language or mother tongue—hereafter referred to as their L1. This has wide-ranging consequences for learners and education in South Africa, not the least of which is that the country and its learners fare poorly (on aggregate) in international comparative tests of educational achievement (Howie et al., 2017; SAQMEC IV, 2017). Some would argue that significant inequality and inefficiency in the education system are the roots of such poor

performance, and indeed, it must be acknowledged that systemic and socioeconomic challenges cannot be disentangled from the overall performance of the schooling system (Spaull & Jansen, 2019). However, few would disagree that language must be among the factors informing this trend of South African learners' poor performance, on average.

Of particular relevance in the South African schooling system is the construct of Academic Language Proficiency as contrasted with that of Basic Communication Skills. The distinction between such categories of language use, first identified by Cummins (1976; 1979), has proven enormously influential in shaping our understanding of language use in academic settings, even though academic language remained a conceptually appealing construct that remained imprecisely defined until recently (Uccelli et al., 2015). This lack of precision in defining the construct of interest leads to a situation in which academic language proficiency is tested only indirectly and often accidentally in standardised assessments deployed at a school level. While the national curriculum for South Africa acknowledges the centrality of academic language in its introduction, it falls short of defining and operationalising the construct beyond this statement of intent:

> *The Home Language level provides for language proficiency that reflects the* **basic interpersonal communication skills** *required in social situations and the* **cognitive academic skills essential for learning across the curriculum.** (Department of Basic Education, 2011:8 [emphasis added])

Certainly, once South African learners move into higher education, the construct of academic language proficiency becomes acknowledged both as a determining factor in subsequent university performance (Yeld et al., 2012) and as a key *a priori* metric that might determine university admission/placement (Cliff, 2015). As Van der Merwe (2018: 1) states: *"When students enter university they need to use academic language to engage with content across disciplines".* While the focus on academic language proficiency (in English) is well supported in the South African Higher Education arena, it is not a skill set that is generally explicitly taught in these educational settings. Ultimately, higher education institutions begin interaction and educational intervention with learners/students after their formative schooling career is complete. The many programmes deployed at a University level to assist learners with the development and strengthening of academic language proficiency are valuable, but academic language skills are, in many ways, a prerequisite for University study. Thus, many such interventions may be too late for learners who struggle with academic language.

Another layer of complexity is added when considering that academic language proficiency is an evolving construct that is differentially expressed at different levels of a learner's educational journey (MacFarlane, Barr & Uccelli, 2022). Essentially, the academic language skills expected from a Grade 6 learner, for instance, would be different from those expected from a Grade 9 learner, which would, in turn, differ from the performance of a university student. This continuum of language skills becomes ever more elaborated over a person's lifetime and adds to the complexity of assessing a construct like academic language proficiency, as we must necessarily measure the construct differently and at different levels of complexity, depending on the assessed population. Ultimately, it is clear that academic language and colloquial language are on a continuum, with some features of both present in almost any linguistic construction, although some utterances have features that are inherently more or less academic (Snow & Uccelli, 2009; Snow, 2010). Ultimately, no language use is completely colloquial or *vice versa*, and features of the CALS construct (like, for example, linking ideas: "Get the ball *and* throw it to me") would be present even in playground communication. This argument should alert us to the depth of complexity in measuring a construct like academic language proficiency, which is dramatically bound by context

(location, home language, age range, usage intent, etc.). This continuum of language skills from colloquial to academic, which becomes ever more elaborate as a learner moves through the various stages of their educational journey, poses significant challenges to operationalisation and direct instruction. Simply put, what counts as academic language use for a Grade 6 learner would likely represent colloquial language use at the University level. Thus, the targeted measurement of and instruction in such skills must be implemented carefully and appropriately.

Hence, it seems measuring decontextualised utterances or instances of language usage alone would not reveal the operationalised construct of academic language proficiency. Ideally, a fully operationalised construct would reveal an underlying set of skills that, while becoming more elaborate over time, would allow for fundamental and stable tools for measuring and teaching academic language usage. Recently, the construct of Core Academic Language Skills (CALS) has been identified, which explicitly operationalises an empirically robust set of academic language skills. The construct and the version of the assessment instrument normed for South African learners (the CALS-I-ZA) have been empirically tested and found robust in the South African school setting (MacFarlane et al., 2022). CALS represents a constellation of school-relevant English-language skills of high utility that are relevant across the subject spectrum (Uccelli & Galloway, 2017). It is also targeted to measure academic language skills within a certain set of grade boundaries (Grades 4–8 in the current study) and may provide information on areas where focused instruction on particular skills could be successfully employed. However, the instrument once again remains an English-language-based assessment intended for use in the thoroughly multilingual classrooms of South Africa.

There are very few monolingual English classrooms in South Africa, and in this context, there is consequently only limited utility in understanding the functioning of CALS in a monolingual setting. Rather, the South African schooling system is characterised mainly as one that teaches and assesses learners in their additional language (L2),[1] English (Nugraha, 2018).

With the above in mind, this article explores the possibility of using the CALS construct and its associated assessment (the CALS-I-ZA) to make valid judgements about both L1 and L2 learners in South Africa.

## A BRIEF HISTORY OF LANGUAGE EDUCATION IN SOUTH AFRICA

Although the history of language education in South Africa is far too complex to reexamine in this paper, the reader should have some understanding of how English became the *de facto* language of instruction in an overwhelmingly multilingual nation like South Africa. Thus, below is an overview of key historical points to contextualise this research.

The recent history of South Africa is inextricably bound to language and language policy; indeed, the concept of *taalstryd*[2] was coined during the apartheid regime to describe a focused project to deliberately alter the linguistic profile of South Africans (Lanham, 1996). One of the great victories of democratic South Africa was the recognition within the South African Constitution (Act 108 of 1996) of eleven official languages. Theoretically, every learner is entitled to tuition in their home language if it is an official language; in reality, the South African schooling system favours English to an overwhelming degree (Nguyen, 2022). The historical reasons for this mismatch between the language status of the majority of the population and the Language of Learning and Teaching (LoLT) are complex, but among them

---

[1]For most South African learners, English is among the many languages they use in their daily lives. Thus, L2 does not refer to a second language but rather to a language that a learner uses in addition to their home language.

[2]Language struggle

are that under the Apartheid-era education system designed to oppress the non-white majority in South Africa (termed Bantu Education), learners were taught exclusively in home languages and nominally in English or Afrikaans (Lafon, 2009). The Afrikaans Medium Decree was issued in 1975 (which required many crucial subjects to be taught exclusively in Afrikaans) and led to deep resentment of the use of Afrikaans and a strong preference for tuition in English (Ndlovu, 2011)—a preference that culminated in the 1976 Soweto uprising, which was sparked by schoolchildren fighting for the right to be taught in English.

While the option of mother-tongue (L1) instruction is available for all South African learners between Grades 1 and 3, the Foundation Phase, from Grade 4 onwards, the instructional model moves to one of English immersion for the majority of South African learners. In an English immersion model, learners receive instruction solely in English, and all schooling takes place through this medium of instruction. This model of instruction has shown mixed results, with some studies showing overall negative outcomes for learners (Nguyen, 2022) while others have produced positive results (Swain & Cummins, 1979). In interpreting these results, it has been argued that the success of an immersion programme relies on the continued high status of the learners' L1 while they receive instruction only in their L2 (Cummins, 1996; Stroud, 2001). Essentially, these researchers have demonstrated that if the L1 of a learner is understood as a high-status language, an immersion programme in the L2 will have a lower chance of causing deleterious effects on the L1 while enjoying a greater chance of cementing skills within the L2. Conversely, if the L1 is considered or represented as a low-status language, the erosion of L1 skills is likely, along with lower levels of academic language skills in the L2 (Stroud, 2001; Mannish, 2019).

The evidence of language erosion above, if the language in question is not considered high status, is particularly worrying in the South African context. Abundant evidence exists that South African learners and parents perceive other official languages as having a lower status than English (Banda, 2000; Cekiso et al., 2015; Dyers, 2001). The immersion model is further complicated by the fact that the majority of teachers in South Africa speak English as their L2, with many having received instruction during the Bantu education period, and, as such, many teachers are themselves often poor models for correctly spoken and written English (Banda, 2000). As Mullis et al. (2016) state succinctly: *"South Africa has a history of poor teacher education, especially for African teachers"*. This low status of African languages, coupled with historically poor teacher education in South Africa, has resulted in persistent challenges in terms of learner performance. The following section deals with the history and outcomes of assessment in South Africa, but for now, it suffices to note that language instruction and policy have led to both intended (during the period of Bantu education) and unintended negative effects (on aggregate) in terms of learners' ability to use, learn, and complete assessments in English.

## ASSESSMENT IN SOUTH AFRICA

The narrative above will be of little surprise to any scholar with even a passing familiarity with South Africa's history and education system, but this aggregated viewpoint can disguise much of the development that has taken place within the system. Umalusi, the statutory body responsible for monitoring the quality of schooling and national school leaving assessments, has noted that in the initial days after the rise of democracy, the focus was on access to schooling, while quality concerns necessarily came after (Umalusi, 2015). In 2002, just 40% of five-year-old children were attending school in South Africa, a percentage that increased to 99% by 2012 and has since remained relatively stable (StatsSA, 2022), with an increase of 145% in a decade. This suggests that a very large proportion of schools in South Africa were built recently, serving communities that previously had little access to schooling, and given

those two factors, could be assumed situated in under-resourced communities. In short, much of the South African education system, just in terms of infrastructure, is inherently recent or emergent. Howie et al. (2017: 7) note that with *"access being at the top of Government's priority list, access has improved to the extent that primary education is almost universal"*. This focus on access to education proved remarkably successful regarding that specific aim, but an education system undergoing such rapid expansion while taking on learners and teachers in the most underprivileged quarters of the nation was necessarily forced to make quality a secondary concern (Umalusi, 2015).

Furthermore, a pronounced urban-rural division becomes evident regarding academic performance. As Umalusi (2015: 2) notes:

> *The general socio-economic profile of the provinces is intimately related to educational performance, with generally good educational outcomes being observed in socio-economically affluent provinces and poorer performance being observed in provinces that are economically depressed.* (Umalusi, 2015: 2)

This urban vs rural, or affluent vs impoverished, divide is extremely evident in schooling outcomes, whereby in 2012, 22% of all Quintile 1 schools (the poorest 20% of schools) did not achieve a single Bachelor's pass[3] on the National Senior Certificate, while in 99% of Quintile 5 schools (the most affluent 20% of schools) not a single learner did not achieve this pass level (Umalusi, 2015). Therefore, it is clear that the popular narrative of collapse in the South African schooling system does not remain entirely robust when faced with the disaggregation of the figures presented above. The need for a nuanced approach is crucial when analysing samples of learners in South Africa because of the extreme range of experiences that South African learners can expect from the schooling system. While many learners in South Africa endure a schooling experience of under-skilled teachers and dramatic resource constraints in terms of school infrastructure (McFarlane & Selebalo, 2019), others attend schools rated among the top 100 best schools in the world (Spear's, 2022).

The fractured nature of the South African schooling system makes generalisations about assessment results (or indeed any aspects of schooling in the nation) exceptionally difficult. When national-level assessments are undertaken, such as the Progress in International Reading Literacy Study (Howie et al., 2017; Van Staden & Roux, 2022), one of the most challenging elements of the research design process is the process of determining a nationally representative sample. An extract from PIRLS (Howie et al., 2017: 32–33) is instructive in this regard:

> *The PIRLS 2016 Grade 5 sample was designed to be representative of Grade 5 learners from all the nine provinces… However, because the sample does not include [all] official languages, the sample cannot be generalised as a national representative sample overall.* (Howie et al., 2017: 32–33)

Globally, PIRLS is among the largest and most rigorous international assessments of learners; yet, after multiple iterations for over a decade and counting, it has not been possible to draw a nationally representative sample. Even the most recent PIRLS 2021 study (Van Staden & Roux, 2022) assessed the South African Grade 6 sample in English or Afrikaans rather than in the 11 official languages. This statement is not a criticism of the methods employed in PIRLS but is raised only to demonstrate that attempting analyses of the South African schooling system as an entity are, at best, extremely challenging and inevitably provide only a partial picture of select aspects of the system.

---

[3]A Bachelor's pass is understood as the minimum level of results required to attend University in South Africa

When aggregated figures are considered, South African learners generally fare poorly on large-scale standardised assessments (Howie et al., 2017; Mullis et al., 2020), but the aggregation approach will inevitably mainly measure the emerging and under-resourced parts of the system, inarguably because such schools are in the majority. Studies that show an aggregated trend, particularly when reported on in the popular media, can easily create expectations about all schools in South Africa that apply only to emerging and under-resourced schools because such schools are in the majority.

The argument above is important for this paper in particular since the sample group was selected from an urban public school in Johannesburg classified as Quintile 5 (the most well-resourced 20% of schools). Many readers, when approaching results drawn from a South African public school with a thoroughly multilingual learner population, might expect either overall low performance or a significant disparity in performance between L1 and L2 learners. Such expectations are not borne out in the results; indeed, the argument above should demonstrate that such expectations ignore the reality of multiple interdependent complex systems at provincial, local, and individual school levels that make an aggregated or overall view of South African schooling virtually impossible. While a picture of an average learner in South Africa can be derived numerically, the range of possible contexts for an individual South African learner is so vast that aggregate figures must be viewed through lenses that emphasise nuance, context, and individual variability.

## CORE ACADEMIC LANGUAGE SKILLS

One of the few universal truths about the South African (or indeed any) schooling system is that nearly all learning takes place in and through language, and the type of language employed by and expected from the learners is intrinsically academic, in general. A crucial, previously unanswerable question forms the basis of this fundamental truth, namely, what constitutes academic language. With the identification and validation of the CALS construct (Uccelli et al., 2015; MacFarlane et al., 2022), this question has now been (partially) answered. Where previously, it was possible to identify broadly defined categories of language use (academic/non-academic or colloquial), the development of CALS provides an operationalised set of discrete and assessable skills that have been shown to have a strong association with schooling outcomes (MacFarlane, 2022). The construct is not assumed to be innately comprehensive, as there is a high likelihood that the gamut of academic language as both a productive and receptive skill set goes beyond that which CALS identifies (Uccelli et al., 2015). However, the strength of CALS is that it provides an empirically robust starting point for the explicit assessment and teaching of academic language. Where previously, academic language was a categorical variable, the CALS construct allows for this variable to be operationalised and explicitly measured and taught as a defined skill set.

There is little opposition to the idea that academic language is fundamental to success in school and academic settings, but while this notion is unopposed, there has also been no clear way to incorporate direct instruction in or measurement of this fundamental skill set. Due to its vague categorical nature, academic language has long been recognised as fundamental to schooling while simultaneously being taught only implicitly because, until recently, it has been only vaguely operationalised. Before direct instruction in a skill set can be attempted, the skills that inform that construct must be explicitly identified, disaggregated, and operationalised. Knowing broadly that a text is inherently academic does not assist in demonstrating what features of the text place it into this category, and further, does not assist in providing learners with the skills required to produce academic texts themselves.

While the challenges of multilingualism in the South African schooling system cannot be understated, L1 English speakers will not automatically be proficient in the understanding and production of academic language due to their home language status alone. There is no expectation that learners in monolingual schooling systems will automatically be proficient consumers and producers of academic texts, and all the concerns about the necessity for instruction in this skill set remain in such contexts (Snow & Uccelli, 2009). Thus, in the South African context, we must guard against the assumption that we are trying to teach children to use English. While the curriculum and pedagogy of the South African schooling system are intrinsically English (in general), the CALS construct is emerging as fundamental to academic language usage across various languages and regions (Meneses et al., 2020; Uccelli et al., 2020; Galloway et al., 2020). This strongly suggests that CALS identifies and operationalises academic language skills as a category not bound to the specific language in which the skills are being deployed. CALS is becoming understood as a way to engage with and produce academic texts, not specifically academic texts in English, Spanish, SeSotho, etc. It is becoming clear that the production and comprehension of academic texts is a skill set that stands outside of a particular lexicon or language and, instead, is a way of approaching text using discrete and identifiable skills existing and being applicable independently of the target language.

While the description of the CALS-I-ZA instrument provides a full overview of the discrete skills in the section below, it is worthwhile listing the skills here to advance the current line of argument. The skills that make up the CALS construct are: Organising Argumentative Texts, Connecting Ideas, Tracking Themes, Comprehending Complex Sentences, Unpacking Words, Awareness of Academic Register, Identifying Epistemic Stance, and Understanding Metalinguistic Vocabulary (Uccelli et al., 2015). For any of these skills, the actual language in which the skill is deployed is a secondary issue; for example, the first item, Organising Argumentative Texts, whereby a learner is required to place a series of out-of-order sentences in the correct order to form a logical argument form. Such argument forms follow standard argumentative structures such as *modus ponens*[4] and similar standardised argument forms. Importantly, it must be understood that such argument forms can be symbolically represented as abstract formulae using propositional calculus (Patrick, 2009), which results in a formula for *modus ponens* as follows:

$$\frac{a \rightarrow b, a}{b}$$

This argument form, once symbolically represented, can be applied and understood in any target language. The skill of identifying the logical structure of the argument and placing the sentences in order requires decoding the language in which they are presented as a prerequisite, yet it is a skill that is also independent of the specific language beyond the decoding step.

Similarly, if we examine the second skill within the CALS construct—Connecting Ideas—it becomes evident that while the connectives/conjunctions within any one language are lexically bound, their function within language is innately generic and cross-linguistic. All languages require ways of defining relationships between concepts, and the skill of understanding how these linguistic connectives define the relationship between inter/intra-sentential concepts goes far beyond decoding the words themselves.

---

[4]**If A then B. A. Therefore B**. Expressed in natural language, *modus ponens* would create an argument as follows: If <u>it is daytime</u> then <u>the sun is up</u>. It is <u>daytime</u>. Therefore, <u>the sun is up.</u>

Thus, the truth of academic language usage is revealed as being a skill set that describes how language is used and deployed academically and not how *a* language is used.

## RESEARCH QUESTIONS

*Research Question 1:*

To what extent is the CALS-I-ZA instrument associated with academic performance in L1 and L2 learners?

*Research Question 2:*

What are the differences in performance in L1 and L2 learners on the CALS-I-ZA instrument?

## THEORETICAL FRAMEWORK

This research and the CALS construct more broadly embraces the paradigm of sociocultural pragmatics—a view that regards language and language use as being embedded in (and inseparable from) the context/s in which they are developed and used (Halliday & Matthiessen, 2004; Heath, 2012; Ravid & Tolchinsky, 2002; Snow & Uccelli, 2009; Uccelli et al., 2015). This view entails that language use and language learning are lifelong endeavours prompted by the contexts in which they are deployed or encountered. Due to the embeddedness of language within a particular culture or context (the context of the playground, the context of the home, the context of the classroom, etc.), some language forms and functions are either more or less appropriate in a specified context. Crucial to this viewpoint is that language learning is never complete; rather, language skills are an ever-evolving construct that is constantly shaped and reshaped by the environment in which it is encountered and deployed. The ability to adapt language usage to context is termed *rhetorical flexibility* (Ravid & Tolchinsky, 2002). The concept has been extended by Uccelli et al. (2020) to include a critical awareness of the power relations embedded in social contexts and to acknowledge that language use is never neutral. This understanding is termed *critical rhetorical flexibility*.

This paper embeds itself in the paradigms of sociocultural pragmatism and critical rhetorical flexibility as they are particularly relevant in a country like South Africa, where the education system was deliberately shaped for decades as a tool of cultural control (Bantu education). Critical rhetorical flexibility represents an understanding that a skilled language user in one context might lack the linguistic skills necessary to operate efficiently in a different context and that this discrepancy is merely a skill set that could be developed through training and exposure to the expected outputs in that specific context (Uccelli et al., 2020).

## METHODS

The CALS-I-ZA instrument was previously localised for the South African context, and the instrument and underlying CALS construct were validated on a moderately sized (n = 285) sample of South African learners (MacFarlane, Barr & Uccelli, 2022). The instrument has been normed on Grade 4 to Grade 8 learners and found appropriate for that age range (Uccelli et al., 2015). With both the instrument and the construct proving to remain robust when utilised in South Africa, it then became necessary to establish the functioning of the instrument when analysed in L1 and L2 learners. This entailed both a comparison of the functioning of the instrument when attempted by L1 and L2 learners and a comparison of the same learners' performance on the provincial Gauteng Common Examinations.

**Instruments**

The primary instrument in this study was the CALS-I-ZA, a derivation of the original CALS instrument, the CALS-I, which was developed in the United States (Uccelli et al., 2015). The instrument consists of eight sub-tests detailed as follows:

1. Organising Argumentative Texts: This sub-test requires learners to organise four to six fragments of a brief essay, with each fragment introduced by a common marker such as "in my opinion", "one reason", "in conclusion", etc. The fragments are organised into a typical argumentative text that follows a conventional argumentative text structure. This text type is among the most prevalent in academic discourse (Rex, Thomas & Engel, 2010) and skills in structuring narratives have been shown to have a positive association with reading comprehension (Oakhill & Cain, 2000). Organising argumentative texts is hypothesised to be positively associated with the ability to comprehend and organise academic writing (Uccelli et al., 2015).

2. Connecting Ideas: In this subtest, learners are asked to select the missing marker from among four options (e.g., "Sam broke his leg _____, he continues to play cricket." consequently, nevertheless, namely, thus). This demonstrates skills in understanding school-relevant words that connect ideas and using those words to organise intra-sentential relations correctly. These types of discourse markers have been shown to affect receptive skills such as the processing of and learning from academic texts (Meyer & Poon, 2001; Hyönä & Lorch, 2004).

3. Tracking Themes: Students are asked to match the underlined texts with their antecedents by selecting among three options (e.g., "China resisted the move for change. In 1989, students protested to demand changes, but the army opposed those changes. Troops were sent to stop **the movement**.") This task aims to assess each learner's ability to understand conceptual anaphora, which are used to encapsulate a complex idea or collection of ideas (Biber, Conrad & Reppen, 1998). Skills in resolving such conceptual anaphora have been positively associated with reading comprehension (García et al., 2015).

4. Comprehending Complex Sentences: In this subtest, the administrator reads a sentence and learners are asked to select the picture that corresponds to the target sentence. Four pictures are presented, three of which depict sentences altered by a grammatical element (e.g., "The boy the dog sees is running."). This allows learners to demonstrate their ability to use syntactic cues in a sentence to comprehend precise meaning, a skill that has been positively associated with reading comprehension (Mokhtari & Thompson, 2006; Taylor, Greenberg, Laures-Gore & Wise, 2011).

5. Unpacking Words: The administrator reads a morphologically derived word followed by an incomplete sentence, and learners are asked to complete the sentence by extracting the base from the derived word (e.g., Activity. "The children are very _____."). The ability to decompose morphologically complex words has been positively associated with reading comprehension (Carlisle, 2000; Lesaux & Kieffer, 2010).

6. Awareness of Academic Register: Learners are asked to identify the most academic definition from a set of three definitions of the same familiar word. Knowledge of the language of formal and academic definitions has been identified as a predictor of later academic success (Kurland & Snow, 1997).

7. Identifying Epistemic Stance: The administrator reads a set of claims from 'scientists' that include a stance marker. Learners are then asked to determine how sure each scientist is about the claim they have made (e.g., "The rock appears to be from space." Yes, Maybe Yes, Maybe No, No). Skills in identifying the epistemic stance of a writer

have been positively associated with the comprehension of academic texts (Uccelli et al., 2015).

8. Understanding Metalinguistic Vocabulary: The administrator reads two sentences from an informational article followed by a one-sentence reaction by a respondent. Learners are then asked to select one word that best describes the respondent's reaction from a list of four possible options (e.g., opposing, quoting, describing, exaggerating). The ability to understand words that label or qualify language or thinking moves has been positively associated with reading comprehension (Kieffer & Lesaux, 2012).

(Above extract adapted from Uccelli & Galloway, 2017)

The instrument used as a comparator and proxy for academic performance was the Gauteng Common Examinations developed by the Gauteng Department of Education. The common examinations are run annually in all Gauteng public schools at the Grade 6 level by the Provincial Education Department, making them a direct proxy for schooling results for Grade 6. Two common examinations were utilised: the mathematics examination and the natural sciences and technology examination (Gauteng Department of Education, 2016). It should be noted that it was important for this study to compare the CALS-I-ZA against a measure of general academic performance, not against performance on other language assessments. A language instrument that correlates with other measures of language proficiency is perhaps useful, but the intention of CALS is to predict general academic performance, not isolated language skills.

While the common examinations are not standardised or normed assessments, the choice of these instruments was because such assessments are administered across all public schools in the province and, thus, provide a common comparator. Assessments other than the common examinations in Grade 6 (and generally, for earlier grades of schooling) are normally developed internally at each school and, thus, do not provide a basis for analysing learners' academic performance across different schools. Therefore, while the validity and reliability of the common examinations are unknown, they are nonetheless developed as measures of academic performance and keyed directly to the national curriculum by the provincial authorities. In this study, it is the relationship between the results of the CALS-I-ZA and the common examinations that is of interest, rather than the actual quantum of the common examination scores. Since the common examinations represent actual schooling outcomes as measured by the provincial government, a strong association between CALS and the common examinations would indicate that CALS is predictive of schooling outcomes.

**Participants**

The sample included 89 Grade 6 learners in two English medium public schools. The two urban public schools were in the Gauteng province, and both schools were classified as Quintile 4.[5] Randomisation of learners was not possible, given they were already in fixed classes and grades, and, of course, their language backgrounds were also preexisting variables. The schools in question both had catchment areas covering fairly affluent as well as low-income areas and, thus, the sampled learners were from a mix of socioeconomic and linguistic backgrounds. Fourteen different home languages were reported within the sample. Despite the diversity evidenced within the schools, the sample was necessarily convenience-based and manipulation of the preexisting groups was not possible.

---

[5]Both the sample size and choice of Quintile 4 schools were determined by the need to obtain ethical clearance to access learners' provincial schooling results from the provincial education department.

The sample of 89 learners was somewhat skewed in favour of female learners, containing 36 (40.4%) male learners and 53 (59.6%) female learners. Two questions were included in the demographic information portion of the CALS-I-ZA to provide information on learners' language status: "What language(s) do you speak at home the most?" and "What language(s) do people in your home speak the most?". Due to the extreme diversity of linguistic backgrounds present in South African urban classrooms, asking learners what their home or first language is could easily produce answers about learners' ethnic heritage language/s but not discern the language/s most commonly spoken by people in the home and social situations. For example, a learner whose home language is IsiZulu might not be able to use that language with the same level of proficiency as another language they encounter more frequently in their daily lives. Many families do not use their heritage languages for communication in the home, and this study was concerned with the language/s within which the learners were most proficient rather than what their familial heritage language/s might be.

The assumption was that learners who did not list English as one of their most commonly spoken languages as well as being spoken at home would thus have English as their L2. Based on this assumption, 38 (42.7%) learners were classified as having English as their L2, while the remaining 51 (57.3%) were understood as L1 learners. Within the L2 group in the sample, no dominant home languages were reported, with the set of languages including isiZulu, isiXhosa, Sepedi, SeSotho, TshiTsonga, SeTswana, Afrikaans, Igbo, Urdu, German, Shona, Malagasy and Bemba.

**Analytic Plan**

It was necessary to perform a correlation analysis using Pearson's product-moment correlation coefficient to answer the first research question, comparing the variables of the maths common examination, the natural science and technology (NST) common examination, the CALS-I-ZA (percentage score derived from the CALS-I-ZA instrument), and home language status (English as L1 or L2). In this analysis, the maths and NST common examination (Annual National Assessments) results stand in as a proxy for schooling performance.

The second research question required the use of an independent sample t-test to determine any significant differences between the groups on the variables of interest in this study (maths common examination, NST common examination, CALS-I-ZA, and home languages).

All data were analysed using *SPSS Statistics 26*.

**RESULTS AND DISCUSSION**

Descriptive statistics were derived for all variables of interest and are presented in Table 1 below.

**Table 1**

| Descriptive Statistics | | | | | |
|---|---|---|---|---|---|
| Home Language | | N | Mean | Std. Deviation | Std. Error Mean |
| Maths Common Exam Mark | L1 | 50 | 67,64 | 15,15 | 2,14 |
| | L2 | 39 | 59,08 | 13,81 | 2,21 |
| NST Common Exam Mark | L1 | 50 | 81,74 | 11,24 | 1,59 |
| | L2 | 39 | 78,97 | 11,52 | 1,85 |
| CALS-I-ZA | L1 | 50 | 67,61 | 13,39 | 1,89 |
| | L2 | 39 | 58,32 | 15,83 | 2,53 |

The pattern of the results obtained on the maths common examination and the CALS-I-ZA correspond substantially, with the mean scores and standard deviations nearly mirroring one another. The language groups were coded as being in the L1 (English as a home language) or the L2 (English as a second language) groups and it becomes apparent that the L2 group performed at a lower level than the L1 group on both the maths and CALS scores.

The NST scores revealed that this examination was less challenging for the candidates in general than the other assessments, with negligible differences in scores between the L1 and L2 groups.

A correlation analysis was undertaken to determine the strength of the relationships between the variables. Table 2 presents the summarised results below.

**Table 2**

| Correlations | | Maths Common Exam Mark | NST Common Exam Mark | Home Language | CALS-I-ZA |
|---|---|---|---|---|---|
| Maths Common Exam Mark | Pearson Correlation | 1 | .625** | .283** | .642** |
| | Sig. (two-tailed) | | .000 | .007 | .000 |
| | N | 89 | 89 | 89 | 89 |
| NST Common Exam Mark | Pearson Correlation | .625** | 1 | .121 | .650** |
| | Sig. (two-tailed) | .000 | | .258 | .000 |
| | N | 89 | 89 | 89 | 89 |
| Home Language | Pearson Correlation | .283** | .121 | 1 | .306** |
| | Sig. (two-tailed) | .007 | .258 | | .004 |
| | N | 89 | 89 | 89 | 89 |
| CALS-I-ZA | Pearson Correlation | .642** | .650** | .306** | 1 |
| | Sig. (two-tailed) | .000 | .000 | .004 | |
| | N | 89 | 89 | 89 | 89 |
| **. Correlation is significant at the 0.01 level (two-tailed). | | | | | |

The results of the correlation analysis reveal a moderately strong relationship between the maths and NST common examinations (r = .625) and similarly, a moderately strong relationship between the maths and CALS-I-ZA (r-.642) and the NST and the CALS-I-ZA (r = .65). All these correlations are significant with *p* at .01. Thus, the CALS-I-ZA has a significant and moderately strong relationship with both common examinations, which

provides strong evidence of a predictive relationship between CALS-I-ZA and schooling results.

The weak relationship between the home language variable and the other results is significant. The results indicate no relationship between the NST examination and home language. While home language remains significantly related to the results of the CALS-I-ZA and the maths examination, the strength of the relationship is very low at r = .283 for Maths and r = .306 for CALS-I-ZA.

This result supports the argument that the skill set represented by CALS exhibits a strong linear relationship with schooling outcomes, irrespective of the language status of the learners. This further shows that home language has only a weak or insignificant relationship with the learners' academic outcomes and CALS scores.

It was important to test if there were significant differences in performance for the L1 and L2 groups on the various assessments, and for this task, an independent samples t-test was employed. Although several of the learners shared a grade, most did not share the same classroom and were split between two different schools, thus ruling out the use of a related samples t-test.

**Table 3**

| Independent Samples Test | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Levene's test for equality of variances | | T-test for equality of means | | | | | | |
| | | F | Sig. | t | df | Sig. (two-tailed) $p$ | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| Maths Common Exam Mark | Equal variances assumed | 0,965 | 0,329 | 2,749 | 87 | 0,007 | 8,563 | 3,115 | 2,372 | 14,754 |
| NST Common Exam Mark | Equal variances assumed | 0,065 | 0,799 | 1,139 | 87 | 0,258 | 2,766 | 2,427 | -2,059 | 7,591 |
| CALS-I-ZA | Equal variances assumed | 1,726 | 0,192 | 2,997 | 87 | 0,004 | 9,287 | 3,098 | 3,129 | 15,446 |

Table 3 above shows that the L1 and L2 groups performed significantly differently on both the maths common examination and the CALS-I-ZA. Unexpectedly, this difference was not evident in the NST common examination, and it was not possible to subdivide the language groups using their performances on this measure. This might be evidence that the L1 and L2 groups are moving closer together in terms of their academic performances but similarly, it might merely be evidence that this particular measure does not discriminate effectively. Ultimately, it is expected that the L2 group will perform at a lower level than the L1 group on such assessments precisely because the L2 group face the additional challenge of working in

an additional language. In all cases, the CALS-I-ZA emerged with the strongest relationship with schooling results on either of the two comparator assessments.

## CONCLUSION

This paper demonstrates that the CALS construct has a strong relationship with schooling results in the context of an English-language-based schooling system while having only a limited degree of association with the home language status of learners. This argues strongly that the CALS skill set might have a degree of lexical independence in that it is not directly associated with a specific language or lexicon. It is also clear that the CALS construct is functioning comparably in both the L1 and L2 groups in this study. It is still challenging to make more general claims about the CALS construct from this study alone, as the sample size was relatively small ($n = 89$) and further research is required to confirm the trends that emerged in this paper.

The preliminary trend identified is cause for optimism; however, since the CALS construct has the potential not only to be used as an assessment to predict later schooling success, the fully operationalised and specified nature of CALS should also make it a strong basis for the development of instructional tools and pedagogy. While the language status of the South African schooling system and learner populations has been discussed at length above, many of the concerns raised would be addressed by an explicit method for teaching academic language skills that is not concerned specifically with teaching English.

None of the skills identified in the CALS construct are necessarily English language skills and are indeed generic in their design, such that they could be deployed in any target language. That is not to say that teaching English in South Africa is fruitless; of course, no linguistic skill set can be deployed if the individual does not have a command of the language in which such skills must be demonstrated. Instead, the results of the analyses conducted in this paper strengthen the argument that (in South Africa) English language skills are necessary but not sufficient for the development and deployment of proficient academic language skills. The results further raise the likelihood that such skills could be taught in any language and could be transposed into any language that is the target language of the schooling system in question.

The great benefit of the CALS construct is that it is both highly specified and fully operationalised. As noted previously, the instrument was normed for Grade 4 to Grade 8 learners, and thus, Grade 6 was explicitly chosen as an appropriate level to measure these skills. This allows for the larger construct of academic language to be deconstructed into directly assessable sub-skills. No researchers working with the CALS construct claim that the construct is exhaustive, and indeed, as further research is conducted, additional generic academic language skills will likely be identified and incorporated into CALS. The construct is not yet comprehensive, but this is no barrier to its use; indeed, the results of this paper demonstrate that CALS provides robust information about learners' language skills, which is strongly associated with their schooling outcomes. Further, CALS clearly maintains this association with schooling outcomes, irrespective of the language status of the learners being assessed. Thus, the question raised in the very first line of this paper can be answered in the affirmative: Yes, it is possible to assess learners in South Africa from diverse language backgrounds using only English-language-based instruments, with a caveat regarding measuring such performance in English. Since the South African schooling system forces most learners down the path of English immersion, it is of great value to have an instrument that could allow us to predict how learners would perform academically when tested in that language.

The explicit nature of CALS provides further possibilities; however, by rendering these fundamental academic language skills explicit, it also allows for direct instruction in the skill

set. If these skills are directly testable, inevitably, they are also directly teachable. The evidence that the skill set is also lexically independent provides the hope that the mastery of CALS could be a skill set that is directly transferrable from one language to another. Indeed, the results of this study suggest a strong possibility that the CALS skill set represents fundamental ways of using language for academic purposes and not using a specific language for this purpose. In conclusion, this research has shown that the CALS construct can validly be used to assess academic language skills in L1 and L2 South African learners and remains a strong predictor of academic success in both groups.

## REFERENCE LIST

Alexander, N. 2010. Schooling in and for the New South Africa. *Focus: The Journal of the Helen Suzman Foundation*, 56, 7–13. [Online] Available at: https://hsf.org.za/publications/focus/focus-56-february-2010-on-learning-and-teaching/schooling-in-and-for-the-new-south-africa [Accessed 22 October 2022].

Banda, F. 2000. The dilemma of the mother tongue: Prospects for multilingual education in South Africa. *Language, Culture and Curriculum*, 13(1), 56–66.

Biber, D, Conrad, S & Reppen, R. 1998. *Corpus linguistics: investigating language structure and use*. New York, NY: Cambridge University Press.

Carlisle, JF. 2000. Awareness of the structure and meaning of morphologically complex words: Impact on reading. *Reading and Writing*, 12, 169–190.

Cekiso, M, Tshotsho, B & Masha, R. 2015. English language proficiency as a predictor of academic achievement among primary English First Additional Language learners in South Africa. *International Journal of Educational Sciences*, 9, 325–333.

Cliff, A. 2015. The National Benchmark Test in Academic Literacy: How might it be used to support teaching in higher education? *Language Matters*, 46(1), 3–21.

Cummins, J. 1976. The influence of bilingualism on cognitive growth: A synthesis of research findings and explanatory hypothesis (Working papers on bilingualism, 9). [Online] Available at: https://files.eric.ed.gov/fulltext/ED125311.pdf [Accessed 22 October 2022].

Cummins, J. 1979. Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research*, 49(2), 222–251. [Online] Available at: https://doi.org/10.2307/1169960

Department of Basic Education. 2010. The status of the language of learning and teaching (LOLT) in South African public schools: a quantitative overview. Pretoria: Government Printing Works. [Online] Available at: https://evaluations.dpme.gov.za/evaluations/135 [Accessed 22 October 2022].

Department of Basic Education. 2011. Curriculum and Assessment Policy Statements, Grades 4–6. Government Printing Works: Pretoria.

Department of Basic Education. 2021. National Assessments. [Online] Available at: https://www.education.gov.za/ [Accessed 22 October 2022].

Dyers, C. 2001. Language, identity and nationhood: Language use and attitudes among Xhosa students at the University of the Western Cape, South Africa. Doctoral dissertation, University of the Western Cape.

Galloway, E, Uccelli, P, Aguilar, G & Barr, C. 2020. Exploring the cross-linguistic contribution of Spanish and English academic language skills to English text comprehension for middle-grade dual language learners. *AERA Open*, 6, DOI:10.1177/233285841989257

García, JR, Bustos, A & Sánchez, E. 2015. The contribution of knowledge about anaphors, organisational signals and refutations to reading comprehension. *Journal of Research in Reading*, 38(4), 405–427. https://doi.org/10.1111/1467-9817.12021

Gauteng Department of Education. 2016. Common Examinations. Retrieved on 20 February 2018, from https://education.gauteng.gov.za/pages/Exam-Papers.aspx

Halliday, MAK & Matthiessen, C. 2004. *An introduction to functional grammar*. London: Routledge. https://doi.org/10.4324/9780203783771

Heath, SB. 2012. *Words at work and play: Three decades in family and community life* . New York, NY: Cambridge University Press.

Hyönä, J & Lorch, RF. 2004. Effects of topic headings on text processing: Evidence from adult readers' eye fixation patterns. *Learning and Instruction*, 14(2), 131–152. https://doi.org/10.1016/j.learninstruc.2004.01.001

Howie, SJ, Combrinck, C, Roux, K, Tshele, M, Mokoena, GM & McLeod-Palane, N. 2017. PIRLS Literacy 2016 Progress in International Reading Literacy Study 2016: South African Children's Reading Literacy Achievement. Pretoria: Centre for Evaluation and Assessment.

Hoadley, U & Muller, J. 2014. Testing, testing: Investigating the epistemic potential of systemic tests. Retrieved from https://nicspaull.files.wordpress.com/2016/01/hoadley-muller-testing-testing.pdf

Kieffer, MJ & Lesaux, NK. 2012. Knowledge of words, knowledge about words: Dimensions of vocabulary in first and second language learners in sixth grade. *Reading and Writing: An Interdisciplinary Journal*, 25(2), 347–373. https://doi.org/10.1007/s11145-010-9272-9

Kurland, BF & Snow, CE. 1997. Longitudinal measurement of growth in definitional skill. *Journal of Child Language*, 24(3), 603–625. https://doi.org/10.1017/s0305000997003243

Lafon, M & UK Department for International Development. 2009. The impact of language on educational access in South Africa. http://lst-iiep.iiep-unesco.org/cgi-bin/wwwi32.exe/[in=epidoc1.in]/?t2000=027918/(100)

Lanham, L. 1996. A history of English in South Africa. In V. de Klerk (Ed), *Focus on South Africa*, 19–34. Amsterdam: John Benjamins Publishing Company.

Lesaux, NK & Kieffer, MJ. 2010. Exploring sources of reading comprehension difficulties among language minority learners and their classmates in early adolescence. *American Educational Research Journal*, 47(3), 596–632. https://doi.org/10.3102/0002831209355469

MacFarlane, M, Barr, C & Uccelli, P. 2022. Core academic language skills: Validating a construct in linguistically dissimilar settings. *The Language Learning Journal*, 50(1), 89–102. https://doi.org/10.1080/09571736.2019.1705880

MacFarlane, M. 2023. Core academic language skills as a predictor of academic success in Grade 6 South African learners. In publication.

Mannish, S. 2019. Lived experiences of a high-status language in a low-status medium: Swedish bilingual students' investment in English mother tongue instruction. Institutionen för Språkdidaktik: Stockholm University.

Maringe, F & Chiramba, O. 2021. Systematic reviews in basic education in South Africa: The gold standard of evidence for educational decision-making. In F. Maringe (Ed), *Systematic reviews of research in basic education in South Africa*. Johannesburg: African Sun Media.

McFarlane, R & Selebalo, H. 2019. #FixOurSchools: The State of infrastructure provision in South Africa's public schools. #FixOurSchools: The state of infrastructure provision in South Africa's public schools – TIMSS SA (timss-sa.org)

Meyer, BJF & Poon, LW. 2001. Effects of structure strategy training and signaling on recall of text. *Journal of Educational Psychology*, 93(1), 141–159. https://doi.org/10.1037/0022-0663.93.1.141

Mokhtari, K & Thompson, HB. 2006. How problems of reading fluency and comprehension are related to difficulties in syntactic awareness skills among fifth graders. *Reading Research and Instruction*, 46(1), 73–94. https://doi.org/10.1080/19388070609558461

Mullis, IVS, Martin, MO, Goh, S & COTTER, K. (Eds). 2016. TIMSS 2015 Encyclopedia: Education policy and curriculum in mathematics and science. Retrieved from Boston College, TIMSS & PIRLS International Study Center. website: http://timssandpirls.bc.edu/timss2015/encyclopedia

Mullis, IVS, Martin, MO, Foy, P, Kelly, DL & Fishbein, B. 2020. TIMSS 2019 International results in mathematics and science. Retrieved from Boston College, TIMSS & PIRLS International Study Center website: https://timssandpirls.bc.edu/timss2019/international-results/

Ndlovu, SM. 2011 "The Soweto Uprising". *The Road to Democracy in South Africa* Vol. 2. South African Democracy Education Trust.

Nguyen, L-A. 2022. Subtractive bilingualism among children in immigrant families, family cohesion and acculturation: a critical overview. *Leviathan: Interdisciplinary Journal in English*, (8), 52–63. https://doi.org/10.7146/lev82022132073

Nugraha, SI. 2018. The language-in-education policy in South Africa: A gap between policy and efficacy. Proceedings of the Eleventh Conference on Applied Linguistics (CONAPLIN 2018). https://doi.org/10.2991/conaplin-18.2019.321

Oakhill, J & CAIN, K. 2000. Children's difficulties in text comprehension: Assessing causal issues. *Journal of Deaf Studies and Deaf Education*, 5(1), 51–59. https://doi.org/10.1093/deafed/5.1.51

Patrick, JH. 2014. *A concise introduction to logic*, 12th Edition. Cengage Learning: Boston.

Ravid, D & Tolchinsky, L. 2002. Developing linguistic literacy: A comprehensive model. *Journal of Child Language* , *29* (2), 417–447. doi: 10.1017/S0305000902005111

Rex, LA, Thomas, EE & Engel, S. 2010. Applying Toulmin: teaching logical reasoning and argumentative writing. *The English Journal*, 99(6), 56–62. Available at http://www.jstor.org/stable/20787669 [Accessed 20 October 2022].

The Southern and Eastern Africa Consortium for Monitoring Education Quality (SACMEQ). 2017. The SACMEQ IV Project in South Africa: A Study of the Conditions of Schooling and the Quality of Education.

Snow, CE & Uccelli, P. 2009. The challenge of academic language. In DR Olson & N Torrance (Eds), *The Cambridge handbook of literacy*, 112–133. Cambridge: Cambridge University Press.

Snow, CE. 2010. Academic language and the challenge of reading for learning about science. *Science*, 328(5977), 450–452. Available at https://www.researchgate.net/publication/43299100_Academic_Language_and_the_Challenge_of_Reading_for_Learning_About_Science [Accessed 20 October 2022].

Spaull, N & Jansen, JD. 2019. *South African schooling: The enigma of inequality*. Switzerland: Springer Nature.

Spear's Schools Index. 2022. *Schools Index - Spears500*. Schools Index - Spears500

Statistics South Africa. 2020. General Household Survey, 2019. Available at http://www.statssa.gov.za/?page_id=1859 [Accessed 29 March 2022].

Statistics South Africa. 2022 General household survey 2021. Pretoria, Cape Town: Statistics South Africa.

Stroud, C. 2001. African mother tongues and the politics of language: linguistic citizenship versus linguistic human rights. *Journal of Multilingual and Multicultural Development*, 22(4), 339–355.

Swain, M & Cummins, J. 1979. Bilingualism, cognitive functioning and education. *Language Teaching & Linguistics: Abstracts*, 12, 4–18.

Taylor, NA, Greenberg, D, Laures-Gore, J & Wise, JC. 2012. Exploring the syntactic skills of struggling adult readers. *Reading and Writing: An Interdisciplinary Journal*, 25(6), 1385–1402. https://doi.org/10.1007/s11145-011-9324-9

Uccelli, P, Barr, CD, Dobbs, CL, Galloway, EP, Meneses, A & Sánchez, E. 2015. Core academic language skills: An expanded operational construct and a novel instrument to chart school-relevant language proficiency in preadolescent and adolescent learners. *Applied Psycholinguistics*, 36(5), 1077–1109. https://doi.org/10.1017/S014271641400006X

Uccelli, P & Galloway, EP. 2017. Academic language across content areas: lessons from an innovative assessment and from students' reflections about language. *Journal of Adolescent and Adult Literacy*, 60(4), 395–404. https://doi.org/10.1002/jaal.553

Uccelli, P, Phillips-Galloway, E, Aguilar, G & Allen, M. 2020. Amplifying and affirming students' voices through CALS-informed instruction. *Theory into Practice*, 59(1), 75–88. https://doi.org/10.1080/00405841.2019.1665413

UMALUSI. 2015. Indicators Report 2008-2013: National Senior Certificate. Pretoria. Retrieved from https://www.umalusi.org.za/docs/reports/2015/Indicators-Report-2008-2013.pdf

Van Staden, S & Roux, K. 2022. South Africa chapter. In Reynolds, KA, E Wry, IVS Mullis, & M von Davier. (Eds). *PIRLS 2021 Encyclopedia: Education Policy and Curriculum in Reading.* Retrieved from Boston College, TIMSS & PIRLS International Study Center website: https://pirls2021.org/encyclopedia

Yeld, N, Prince, R, Cliff, A & Bohlmann, C. 2012. The National Benchmark Tests Project report. Cape Town, South Africa: Centre for Higher Education, University of Cape Town.

**BIOGRAPHICAL NOTE**

**Marco MacFarlane** is the Director of Research at the Quality Council for Trades and Occupations - one of the three statutory education Quality Councils in South Africa. This article represents an output from his PhD thesis conducted at the University of the Witwatersrand. His research interests include academic language, particularly the relationship between language policy and its effects when expressed in schools. E-mail address: marco.macfarlane@gmail.com.