A COMPARATIVE ANALYSIS OF THE LINGUISTIC COMPLEXITY OF GRADE 12 ENGLISH HOME LANGUAGE AND ENGLISH FIRST ADDITIONAL LANGUAGE EXAMINATION PAPERS

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ABSTRACT

It is expected that English Home Language (Eng HL), as a subject, is more complex than English First Additional Language (Eng FAL). This article aims to uncover the reality of this expectation by comparatively investigating the linguistic complexity of texts used for reading comprehension and summaries in the final school exit examinations. The Coh-Metrix online platform was used to analyse a combined total of 24 Grade 12 final examination texts for Eng HL and Eng FAL ranging from 2008 to 2019. Five main indices relating to the word level, sentence, readability, lexical diversity and referential cohesion linguistic complexity were explored. The findings illustrated that the linguistic complexities of the texts used for reading comprehension and summary writing in the two subjects differ significantly, with Eng HL being more linguistically complex than Eng FAL texts. Furthermore, the Flesch-Kincaid Grade Level measure indicates the Eng FAL texts as two grades below the overall grade for Eng HL texts. Nonetheless, the linguistic complexity measures used in this article confirm the expectation that texts used in Eng HL reading comprehension and summary writing are more complex than those used in Eng FAL.

KEYWORDS: English first additional language (FAL), English home language (HL), Linguistic Complexity, Text Readability, Comprehension, LoLT, CAPS

INTRODUCTION

English as a subject is taught in South African schools as either a home language (Eng HL), first additional language (Eng FAL) or second additional language (Eng SAL). The English Curriculum and Assessment Policy Statement (CAPS) for Eng HL (Department of Basic Education, DBE, 2011a: 8) and the English CAPS for Eng FAL (DBE, 2011b: 8) state that the home language and first additional language labels refer to the levels of proficiency as opposed to the native/mother tongue and acquired or additional language distinction. This is because some home languages are not offered in certain schools; as such, the learners end up studying non-mother-tongue languages at the home language level (DBE, 2011a: 8; DBE, 2011b: 8). This trend is consistent throughout all languages offered at the aforementioned three levels in South African schools. For instance, Khetoa (2016: 16) uses Sesotho home language to describe Sesotho taken at a home language level by both mother-tongue speakers of Sesotho and those from other languages who have no access to education in their mother tongues at the school researched and end up studying Sesotho as their home language. Similarly, since the advent of Outcomes-Based Education (OBE) in South Africa, Eng HL has been offered to non-English mother-tongue learners (Moodley, 2007: 708).

According to Tshuma and Le Cordeur (2019: 106), English is used as a language of learning and teaching (LoLT) by 90% of learners in South African public schools. Currently, learners use languages other than English as LoLTs from the first to the third grade and switch to English LoLT in the fourth grade (DBE, 2015: 20; DBE, 2016: 11). In contradiction to Maruma's (2017: 8810) contention that Eng FAL is the language of learning and teaching in South African schools, English as a LoLT is not differentiated as Eng HL, Eng FAL or Eng SAL. That is, the level of English used for teaching and learning in classes, although adapted to cater for the needs of the second language learners, is not classified as being at a first additional language level. Kaiser (2018: 53) argues for the acknowledgement of the distinction between the language of learning and teaching and the language as subject matter. As such, Eng FAL as used in this article refers only to English as a subject and not as a LoLT.

In the school exit examination, three papers are written in the Eng HL and Eng FAL curriculum, namely (i) paper one, which covers comprehension and language structures; (ii) paper two, which centres on literature covering poetry, folk tales, drama, short stories and novels and (iii) paper three, which covers creative and transactional writing. This paper focuses on texts for reading comprehension, i.e., paper one. Eng SAL question paper texts are excluded from the discussions in this article because the Eng SAL final examination question papers are not consistently available online, making it difficult to compare them.

CAPS documents for English in the FET phase prescribe that language teaching should follow a blend of text-based and Communicative Language Teaching (CLT) approaches (DBE, 2011a: 11; DBE, 2011b: 16; DBE, 2011c: 15). The CLT approach follows constructivist principles (Van der Walt, 2018: 179) which entail that linguistic issues such as grammar should be taught in clusters related to authentic contexts and topics (Met, 1998: 38). To this end, the texts chosen for reading comprehension in paper one in all language subjects in the FET phase are chosen from existing texts and not created for assessment purposes. The texts are then re-edited and adapted for the intended learners (DBE, 2017a; DBE, 2017b).

Given that learners taking Eng HL as a subject are expected to have higher English proficiency skills than those in Eng FAL (DBE, 2016: 10), it is assumed that there are differences between the linguistic complexity levels of the texts administered in Eng HL and those administered in Eng FAL reading comprehension and summary writing tasks. However, there is a paucity of literature on the linguistic complexity of the texts used for teaching and assessing reading comprehension and summary writing in South African schools. Thus, this article sets out to explore (i) the differences in the linguistic complexities of texts used in Eng HL and Eng FAL comprehension and summary texts and (ii) the consistency of the linguistic complexity in the texts administered in the Eng HL and Eng FAL reading comprehension and summary writing tasks. To ascertain this, the reading comprehension and summary texts used in the Grade 12 school exit final examination texts are explored for linguistic complexity.

LITERATURE REVIEW

The issue of proficiency and comprehension

Nel and Muller (2010: 636) state that Eng FAL teachers are not necessarily proficient enough to teach English. It follows that teachers' lack of proficiency negatively affects learning (Nel & Muller, 2010: 636; Taylor, 2014: 126). There are multiple possible justifications for teachers' lack of proficiency including Pretorius and Machets' (2004: 58) assertion that that teachers are not inclined to be readers. Nonetheless, this article focuses on national papers set

by undoubtedly proficient examiners with the ability to adapt comprehension texts for audiences as suggested by respective examination guidelines for additional languages (DBE 2017a; DBE 2017b). To this end, this article distances itself from discussions of teachers' proficiencies.

At the end of Grade 12, learners taking either Eng HL or Eng FAL are expected to be highly proficient and ready to use their proficiency in either workplaces or higher education institutions (DBE, 2011a: 8-9; DBE, 2011b: 8-9). Accordingly, Van Broekhuizen et al. (2016: vi) state that the Grade 12 marks should predict both access to and success in higher education. Unfortunately, as Van Rooy and Coetzee-Van Rooy (2015: 43) observe, English marks, especially the Eng FAL marks, do not predict success or lack thereof in higher education. Their study finds that a good predictor of success is the combined Grade 12 result. (Van Rooy & Coetzee-Van Rooy, 2015: 43)

Eng FAL has the highest enrolment figures in South African schools (Kaiser et al., 2010: 53; Mophosho et al., 2019: 60). This is reflected in the number of learners writing the final Grade 12 examinations. For instance, it had the highest enrolment in 2015 at 543 941 and in 2016 at 547 292 Grade 12 learners (Van der Walt, 2018: 172-3). Amongst others, Eng FAL is tailored for learners of basic English interpersonal communication proficiency levels while the Eng HL is tailored for those with a mastery of interpersonal English communication proficiency levels (DBE 2012, DBE 2016). This differentiation of proficiency levels is to ensure parity of English marks between the Eng FAL and Eng HL. Even so, Eng FAL learners attain lower marks than the Eng HL learners (Zano & Phatudi, 2019: 17). This hints at a possibility that learners in the Eng FAL subject are not at the proficiency level anticipated by the CAPS.

Causes for learners' lack of proficiency have been explored in other papers. For instance, Fleisch et al. (2017: 9) state that it can be credited to lacking essential elements in the foundation phase instructional programmes. Unfortunately, the missing elements are not explicated in their study. Nqoma et al. (2017: 8821) attribute the low proficiency to learners' backgrounds in that those from 'non-white' neighbourhoods and those who only use English at school end up with lower proficiencies. Even so, the problem of low language proficiency in learners is not exclusive to English or Eng FAL. For instance, in a case study of middle school reading in Northern Sotho HL and Eng FAL, Pretorius (2012: 87) found that Grade 6 learners had very weak comprehension skills in both subjects. Similarly, Fakude (2014: 959) finds that Sepedi HL Grade 7 learners' reading proficiency is low in both Sepedi HL and Eng FAL. In fact, some studies allude to Eng FAL being comprehended better than learners' African home languages (Pretorius & Mampuru, 2007: 53; Pretorius & Currin, 2010: 70). Nonetheless, it is essential to acknowledge that learners' levels of proficiency in English affect their comprehension of texts in both the Eng HL and Eng FAL language subjects. Therefore, the linguistic complexity of texts used to test learners in the respective language subjects must be justifiable in terms of the CAPS documents.

Linguistic complexity

Linguistic complexity falls under the absolute branch of complexity otherwise referred to as objective and structural complexity (Housen et al., 2019: 4). Absolute complexity comprises three sub-branches, namely (i) propositional, (ii) discourse-interactional and (iii) linguistic complexity. According to Bulté and Housen (2012: 22), the construct of linguistic complexity does not have an agreed-upon definition. However, specific elements of linguistic complexity

can be generalised through existing literature. For instance, there is a general agreement that complexity should be differentiated from difficulty and other related terminology (Dahl, 2004: 40).

Linguistic complexity as explored in this article is divided into three sub-categories: (i) syntactic, (ii) lexical and (iii) morphological complexities. Syntactic complexity focuses on the formal properties of a text (Kyle, 2016: 8) and the sophistication thereof (Ai & Lu, 2013: 249). It is a subcategory of grammatical diversity that encompasses sentence, phrasal and clausal level complexity (Bulté & Housen, 2012: 25). The computational Coh-Metrix tool counts different phrases per 1000 words (Kyle, 2016: 22) using the Charniak parser (Charniak, 1997) which produces parse trees from underlying formal grammar (McCarthy, 2007: 53). The successful identification of the phrases depends on the correct parts of speech (POS) tags. The Penn Treebank (PTB) (Marcus et al., 1993) is used to identify POS tags in the Coh-Metrix. The tags are then assigned to each word using the Brill POS tagger (Brill, 1995). The Brill POS tagger is a natural language processing tool (McCarthy et al., 2007: 7; Graesser et al., 2004: 197). Interestingly, the Coh-Metrix POS tagger tags all the words including new words (Graesser et al., 2004: 197). This means that African names (nouns) in the texts used for comprehension and summary writing in the examinations explored in this study are also correctly tagged through syntactical contexts. For accuracy, each word is assigned only one POS tag (Graesser et al., 2011: 225).

To investigate lexical complexity, the indices of Lexical Diversity (LD), synonymous with lexical richness (Tweedie & Baayen, 1998), lexical variation (Read, 2000) and vocabulary richness (Hoover, 2003) are explored. These terms refer to a text's range and variety of vocabulary as opposed to the speaker or writer's potential vocabulary that is not used in said piece of text (McCarthy & Jarvis, 2007: 459). Although many attempts have been made to validate different indices for measuring LD, a fully valid and reliable measure seems intangible (McCarthy & Jarvis, 2007: 460). Even so, there are widely used measures of LD such as the type-token ratio (TTR). Although many alternatives (for example, Cvrček & Chlumská, 2015; Johansson, 2009; Malvern et al., 2004) have attempted to improve on TTR, when their solutions were tested, none of them proved flawless. To this end, McCarthy and Jarvis (2010: 391) advise that more than one measure be used to measure LD in order to yield the best result. The Coh-Metrix uses multiple measures such as the M (Maas, 1972), K (Yule, 1944), the D coefficient and D (Malvern et al., 2004). According to McCarthy and Jarvis (2007: 56), these are some of the most reliable measures for measuring LD.

METHODOLOGY

Open access question papers for Eng HL and Eng FAL final (November) Grade 12 examinations were downloaded from the South African Department of Basic Education's online repository. Although the question papers are subdivided into Sections A, B and C, only Sections A and B were analysed in this article. Section C which presents advertisements, cartoons and the final text with errors for learners to fix were ignored. The texts in Sections A and B were copied into text files as suggested by Dowell et al. (2016: 85). Preparation of the text involved the removal of non-linguistic matter such as paragraph and line numbers. Some of the Section A texts did not have headings. Such texts require learners to suggest a heading for the text. Although the original heading is provided in the previously named memorandum (now called a marking guideline), it was left out because it does not form part of the question paper. The endnotes and any other characters were removed from the text. The headings were

punctuated to prevent sentencising into the first sentence in the respective texts. The texts were re-read against the original question paper texts to ensure that all the words had been copied correctly. Some corrections were effected. This 'cleaning' was carried out on all texts. The dataset consists of 24 question paper texts. The texts range from the year 2008 to the year 2019. The examination year, the total number of words extracted from each question paper and the total number of sentences from each question paper are presented in Table 1.

The Coh-Metrix 3.0 online platform was used in the analysis of the texts. The Coh-Metrix is publicly and freely available (http://141.225.61.35/cohmetrix2017) and outputs to text (.txt) format. The text format data were imported to *Excel* for analysis. The value of *P* was set at p>.05 for all statistical analyses. The Coh-Metrix analyses hundreds of language and discourse measures (Dowell et al., 2016: 75). Only those pertaining to linguistic complexity and three pertaining to text readability are explored in this article. The results are presented next.

RESULTS

Word-level complexity

Word-level linguistic complexity measures were explored. The results are presented in Table 1 below:

Table 1: Word-level linguistic complexity

	Total word count		Average syllable count		Average letters per word	
	HL	FAL	HL	FAL	HL	FAL
2008	1070	1140	1,54	1,42	4,67	4,32
2009	900	941	1,45	1,57	4,50	4,84
2010	1129	1063	1,61	1,49	4,84	4,66
2011	1076	989	1,61	1,57	4,86	4,96
2012	1227	959	1,60	1,50	4,68	4,60
2013	1187	904	1,67	1,52	4,90	4,64
2014	1147	896	1,61	1,66	4,83	5,03
2015	1207	944	1,59	1,54	4,93	4,64
2016	1171	967	1,65	1,48	5,01	4,68
2017	1194	987	1,70	1,56	5,05	4,68
2018	1146	893	1,76	1,55	5,26	4,88
2019	1199	874	1,67	1,57	5,01	4,84

Although the text lengths are recommended by the respective CAPS documents for Eng HL and Eng FAL, for purposes of consistency, differences are explored in this article. Eng HL (M=1137.75, SD=89.63) compared to Eng FAL (M=963.08, SD=76.43) revealed significantly higher word counts for the Eng HL texts (*t*=4.07, *P*=.002). No significant difference in syllable means (*t*=6.30, *P*=.05) was observed between Eng HL (M=1.62, SD=0.08) and Eng FAL (M=1.53, SD=0.06). Furthermore, Eng HL (M=4.88, SD=0.20) demonstrated a significantly higher number of letters per word (*t*=8.24, *P*=.04) compared to Eng FAL (M=4.73, SD=0.19).

Sentence-level complexity

Sentence-level linguistic complexity measures were explored. The results are presented in Table 2 below.

Table 2: Sentence-level linguistic complexity

	Total sentences		Average sentence length	
	HL	FAL	HL	FAL
2008	65	64	16,46	17,81
2009	56	56	16,07	16,80
2010	59	81	19,14	13,12
2011	67	55	16,06	17,98
2012	58	63	21,16	15,22
2013	85	48	13,97	18,83
2014	58	53	19,78	16,91
2015	78	66	15,47	14,30
2016	56	54	20,91	17,91
2017	57	58	20,95	17,02
2018	72	55	15,92	16,24
2019	66	54	18,17	16,19

Eng HL (M=64.75, SD=9.45) compared to Eng FAL (M=58.92, SD=8.65) revealed statistically higher sentence counts (t=0.13, P=.002). Furthermore, Eng HL (M=17.84, SD=2.49) compared to Eng FAL (M=16.53, SD=1.65) demonstrated statistically higher means for sentence lengths (t=0.14, P=.01). Similar to the word-level complexity indices, the sentence-level complexity indices point towards a difference between the Eng HL and Eng FAL linguistic complexity.

Readability complexity

Since the texts are intended for reading comprehension, it is worthwhile to consider the readability scores from the Coh-Metrix. The results are presented in Table 3 below.

Table 3: Readability complexity

	Flesch Reading Ease (FRE)		*Flesch-Kincaid Grade level* (FKGL)		*Coh-Metrix L2 Readability*	
	HL	FAL	HL	FAL	HL	FAL
2008	59,59	69,05	9,04	8,05	12,43	18,60
2009	67,60	56,62	7,82	9,54	16,42	11,24
2010	51,21	67,80	10,87	7,06	14,87	13,27
2011	54,16	55,42	9,70	10,00	11,42	18,34
2012	50,43	64,91	11,48	7,99	12,64	16,95
2013	51,29	59,55	9,57	9,63	13,26	18,19
2014	50,90	49,49	11,07	10,56	10,61	15,29
2015	56,45	62,03	9,23	8,16	14,40	18,69
2016	46,27	63,11	12,00	8,91	13,58	15,16
2017	41,50	57,50	12,68	9,47	13,18	17,02
2018	41,45	59,65	11,43	8,97	8,67	12,35
2019	46,86	57,33	11,24	9,28	12,84	15,27

Although the Flesch Reading Ease is criticised for its failure to account for semantics and its inconsistency in that different computer-based measures thereof produce different readings (Hartley, 2016), the measure is still widely used. Indeed, the Flesch Reading Ease and the Flesch-Kincaid Grade Level are preferred for their easy access (Jindal & MacDermid, 2017: 85). According to Solnyshkina et al. (2014: 67), the Coh-Metrix computes the Flesch Reading Ease with the following formula: FRE = 206.835 - 1.015 x ASL (average sentence length) - 84.6 x ASW (average number of syllables per word).

Overall, no significant difference is found for Eng HL (M=51.47, SD= 7.43) and Eng FAL (M=60.21, SD=5.53) as far as Flesch Reading Ease scores (*t*=0.004, *P*=.11) are concerned. The Flesch Reading Ease calculates a text's level of difficulty and outputs a number between 0 and 100 with lower scores indicating lower readability and higher scores indicating higher readability (Denning et al., 2016, p551; Burke & Greenberg, 2010, p35). The scales indicate orthographical difficulty levels and disregard the meaning. Nevertheless, the Eng HL scores range between 41.5 (difficult) and 67.6 (average) with an average of 51.47, which is fairly difficult. The Eng FAL scores range between 49.49 (difficult) and 69.05 (average) with an average of 60.21.

Interestingly, since 2014 (three years into the implementation of the CAPS syllabus), Eng HL has had higher Flesch-Kincaid Grade levels than Eng FAL. Overall, Eng HL (M=10.51, SD= 1.42) compared to Eng FAL (M=8.97, SD=0.99) demonstrates significantly higher Flesch-Kincaid Grade levels (*t*=0.006, *P*=.03). Finally, Eng HL (M=12.86, SD= 2.02) demonstrates significantly lower Coh-Metrix L2 readability scores (*t*= 0.004, *P*=.005) compared to Eng FAL L2 (M=15.86, SD= 2.54). The Eng HL score for the Flesch-Kincaid Readability Grade levels averages to the 10th grade while the Eng FAL averages to the 8th grade.

Lexical complexity

Lexical complexity was explored through two LD measures, namely, (i) the TTR (type-token ratio) and (ii) the *VOCD*. TTR was subdivided into content words and all words. The results are presented in Table 4 below:

Table 4: Lexical Diversity Measures

	TTR content words		TTR all words		*VOCD*	
	HL	**FAL**	**HL**	**FAL**	**HL**	**FAL**
2008	0.77	0.72	0.47	0.44	126.83	122.55
2009	0.73	0.74	0.44	0.5	89.59	135.22
2010	0.68	0.78	0.43	0.5	119.60	150.46
2011	0.69	0.67	0.46	0.5	120.49	138.14
2012	0.74	0.69	0.45	0.45	118.22	124.94
2013	0.67	0.70	0.41	0.48	118.31	136.78
2014	0.72	0.67	0.46	0.46	136.25	114.11
2015	0.70	0.69	0.46	0.43	140.85	112.13
2016	0.66	0.57	0.44	0.41	123.18	99.88
2017	0.67	0.7	0.41	0.45	113.1	121.62
2018	0.72	0.71	0.48	0.48	133.045	117.52
2019	0.70	0.69	0.44	0.46	119.37	144.62

The type-token ratio (TTR) divides the total vocabulary used in the document by the document size (Covington & McFall, 2008). Therefore, one must be wary of the text lengths

compared (Cvrček & Chlumská, 2015: 315). As observed in Table 4, Eng HL (M=0.7, SD=0.03) compared to Eng FAL (M=0.69, SD=0.05) demonstrated significantly higher content word lemmas (*t*=0.59, *P*=.002). Even so, Eng HL (M=0.45, SD=0.02) compared to Eng FAL (M=0.46, SD=0.03) demonstrated a significantly lower TTR for all words (*t*=0.25, *P*=.002). This result for overall TTR is consistent with the concern that longer texts (in this case the significantly longer Eng HL texts) score lower type-token ratios than shorter texts (Cvrček & Chlumská, 2015: 315).

The *VOCD* counters the challenge of text length observed in the TTR outputs (McCarthy & Jarvis, 2010: 383). Higher *D* values indicate higher lexical diversity (McCarthy & Jarvis 2007: 464; McCarthy & Jarvis, 2010: 383). The Eng HL *VOCD* (M=121.57, SD=13.06) compared to the FAL *VOCD* (M=126.5, SD=14.82) reveals a lower average (*t*=0.4, *P*=.0002). That is, Eng HL texts show lower lexical diversity compared to Eng FAL text.

Referential Cohesion

The Coh-Metrix analyses four indices for referential cohesion, namely, (i) noun, (ii) stem, (iii) argument and (iv) content overlap. All four indices are considered in this study. The adjacent sentences noun overlap evaluates whether the noun in the exact form appears in adjacent sentences and then calculates the averages of these occurrences. The overall noun overlap evaluates repetitions of the noun in the exact form over different sentences spread out in the text. The results are presented in Tables 5 and 6 below:

Table 5: Adjacent sentences and overall noun and word-stem overlaps

	Adjacent sentences noun overlap		Overall noun overlap		Adjacent sentences stem overlap		Overall stem overlap	
	HL	FAL	HL	FAL	HL	FAL	HL	FAL
2008	0,09	0,38	0,08	0,25	0,17	0,44	0,12	0,29
2009	0,20	0,40	0,16	0,25	0,24	0,44	0,23	0,33
2010	0,33	0,14	0,20	0,10	0,41	0,21	0,31	0,16
2011	0,33	0,35	0,21	0,26	0,39	0,54	0,26	0,39
2012	0,32	0,32	0,21	0,21	0,46	0,45	0,34	0,28
2013	0,33	0,36	0,26	0,24	0,39	0,45	0,30	0,28
2014	0,23	0,52	0,13	0,37	0,37	0,58	0,23	0,45
2015	0,25	0,11	0,15	0,07	0,29	0,23	0,23	0,15
2016	0,40	0,74	0,29	0,61	0,53	0,77	0,43	0,65
2017	0,45	0,33	0,25	0,25	0,64	0,39	0,42	0,29
2018	0,18	0,41	0,19	0,27	0,28	0,57	0,29	0,43
2019	0,32	0,25	0,18	0,14	0,42	0,38	0,23	0,24

Eng HL (M=0.29, SD=0.10) compared to Eng FAL (M=0.36, SD=0.16) revealed significantly lower adjacent sentences noun overlaps (*t*=0.21, *P*=.004). Similarly, Eng HL (M=0.19, SD=0.06) compared to Eng FAL (M=0.25, SD=0.14) demonstrated significantly lower noun overlaps in all sentences (*t*=0.21, *P*=.001). This would mean that the Eng HL texts offer fewer clues (in the form of repetition), which would make them more difficult to understand.

The adjacent sentences stem overlap index evaluates whether similar word stems appear in adjacent sentences and then calculates the averages of these occurrences. The overall stem

overlap evaluates repetitions of word stems over different sentences spread out in the text. The words from the same stem need not be identical. Eng HL (M=0.38, SD=0.13) compared to Eng FAL (M=0.45, SD=0.15) revealed significantly lower stem overlaps in adjacent sentences (*t*=0.23, *P*=.026). Moreover, Eng HL (M=0.28, SD=0.09) compared to Eng FAL (M=0.33, SD=0.14) demonstrated significantly lower stem overlaps in all sentences (*t*=0.34, *P*=.009). As such, the noun and stem overlap point towards a difference between the Eng HL and Eng FAL with the latter having a higher mean for overlaps and consequently better opportunities for comprehension.

The argument and content overlap results are presented in Table 6 below:

Table 6: Argument and content overlap

	Adjacent sentences argument overlap		Overall argument overlap		Adjacent sentences content word overlap		Overall content word overlap	
	HL	FAL	HL	FAL	HL	FAL	HL	FAL
2008	0,23	0,70	0,22	0,55	0,04	0,11	0,04	0,09
2009	0,36	0,49	0,32	0,39	0,08	0,07	0,06	0,06
2010	0,55	0,40	0,39	0,36	0,11	0,07	0,06	0,06
2011	0,39	0,61	0,28	0,44	0,08	0,11	0,05	0,07
2012	0,58	0,44	0,41	0,32	0,10	0,08	0,07	0,06
2013	0,43	0,64	0,35	0,46	0,09	0,10	0,07	0,07
2014	0,42	0,60	0,28	0,46	0,05	0,09	0,04	0,06
2015	0,34	0,45	0,27	0,35	0,06	0,07	0,04	0,07
2016	0,62	0,76	0,44	0,65	0,08	0,13	0,05	0,10
2017	0,54	0,44	0,33	0,36	0,11	0,08	0,07	0,06
2018	0,24	0,61	0,27	0,53	0,04	0,10	0,04	0,07
2019	0,46	0,47	0,28	0,31	0,07	0,08	0,05	0,06

In the adjacent sentences, the argument overlap index evaluates whether nouns and pronouns appear in adjacent sentences and then calculates the averages of these occurrences. The overall argument overlap evaluates repetitions of nouns and pronouns over different sentences spread throughout the text. Unlike the noun overlap index, where the noun must be in the exact form, the argument overlap considers plural and singular forms as similar. Eng HL (M=0.43, SD=0.13) compared to Eng FAL (M=0.55, SD=0.12) demonstrated significantly lower argument overlaps in all adjacent sentences (*t*=0.025, *P*=.01). Moreover, Eng HL (M=0.32, SD=0.07) compared to Eng FAL (M=0.43, SD=0.10) demonstrated significantly lower argument overlaps in all sentences (*t*=0.005, *P*=.006). That is, overall, there are lower argument overlaps in Eng HL texts than Eng FAL texts, which increases the difficulty level of Eng HL texts.

The adjacent content word overlap evaluates whether similar content words appear in adjacent sentences and then calculates the average of these occurrences. The overall content word overlap evaluates repetitions of the similar content words over different sentences spread throughout the text. Eng HL (M=0.08, SD=0.03) demonstrated significantly lower content word overlaps in all adjacent sentences (*t*=0.12, *P*=.004) compared to Eng FAL (M=0.09, SD=0.02). Finally, Eng HL (M=0.05, SD=0.01) compared to Eng FAL (M=0.07, SD=0.01) demonstrated significantly lower content word overlaps in all sentences (*t*=0.008, *P*=.006). The following section discusses these results.

DISCUSSION

The lengths of texts administered in both the Eng HL and the Eng FAL examinations are generally within the CAPS suggested word ranges. However, although it is important to note the significant difference between the lengths of the Eng FAL and the Eng HL texts, it is also worth noting that previous studies have dismissed the effect of text length on text comprehension (c.f. Mehrpour & Riazi, 2004: 10; Jalilehvand, 2012: 333).

The substantial difference in average word lengths between the Eng HL and Eng FAL texts is attributed to the significantly higher use of content words in the Eng HL as opposed to the Eng FAL texts. In addition, longer sentences are observed in the Eng HL texts. Both longer sentences and longer words are associated with higher overall linguistic complexity. For instance, longer words are associated with longer writing and reading times and affect the information retained by the reader, thereby proving linguistically more complex and inconvenient for the reader (Sigurd et al., 2004). Additionally, longer sentences have a direct impact on dysfluency (Ratner & Sih, 1987: 278). Moreover, many studies have proven that lists of longer words are more difficult to recall than those of shorter words (Lovatt et al., 2000; Jalbert, 2011). This indicates that the Eng HL texts pose more challenges to learners than the Eng FAL texts. As a result, it is concluded that the linguistic complexity of Eng HL texts—when considered in this light—is higher than that of Eng FAL texts.

It is important to note that the readability metrics explored in this article do not predict the comprehensibility of texts as they are based solely on quantifiable text characteristics that do not predict relational text complexity or provide semantic analyses. Although the grades indicated by the FRE (Flesch Reading Ease) and FKGL (Flesch-Kincaid Grade Level) are merely estimates (Hoke, 1999: 15) of the American school systems (Kaur et al., 2018), the differences in grades illustrate a huge gap in the readability of Eng HL and Eng FAL texts. This is consistent with the significantly lower Coh-Metrix L2 Readability scores for Eng HL. That is, the Eng HL texts are of lower readability and therefore linguistically more complex than the Eng FAL texts.

According to Crossley and McNamara (2008: 441) texts simplified for second language learners, in this case, the Eng FAL texts, rely on the use of frequent and familiar words. In this way, overlaps between sentences help the reader form coherent representations of the text (McNamara et al., 2011: 233). The Eng HL texts' noun, stem, argument and content word overlaps are significantly lower than the Eng FAL texts for both adjacent and proportional sentences. As such, the Eng HL text is not simplified for learners as there is no evidence of any attempt at improving cohesion and overlaps in the text. Referential cohesion as discussed in this article refers to the relatedness of persons and objects (McNamara et al., 2010: 292). Thus, the significantly lower referential cohesion in the Eng HL texts demonstrates lower relations between persons and objects in the texts, thereby indicating higher linguistic complexity.

According to Van der Walt (2018: 175), the formats of most tests in lower grades follow that of the final school exit examinations. As such, it is expected that the *level* of exit examination texts reflects the expected level at the Further Education and Training phase. That is, if the Grade 12 Eng HL texts are more linguistically complex than the Eng FAL texts, a similar trend may be observed in lower grades. The concern then is the level of linguistic complexity of the texts used in the FET phase. Since the huge gap in linguistic complexity in the Grade

12 texts might be prevalent even in lower grades, it seems unreasonable to expect Eng FAL learners to perform at the same level of proficiency with Eng HL learners when they get to higher education institutions where there are no distinctions between first, second and foreign languages.

Although absolute linguistic complexity affects text comprehension, the results of this article do not generalise text comprehensibility. However, higher referential cohesion in Eng FAL texts improves text comprehension and reading speed (Crossley & McNamara, 2008: 413). As such, the clear differences in the linguistic complexities of Eng FAL and Eng HL texts indicate that the low marks in Eng FAL may not be caused by overly complex texts.

CONCLUSION

Given the overall low marks in Eng FAL, this article aimed to explore whether the linguistic complexity of the texts used for reading comprehension and summary writing was of a consistent level and if they are differentiated from those of the Eng HL texts. Five aspects of linguistic complexity, namely, word-level, sentence level, readability, lexical diversity and referential cohesion complexity were investigated. All five aspects investigated in this article point towards a significant difference between the Eng HL and Eng FAL texts for comprehension and summary writing. It is worth noting, however, that these results are limited to the theories of linguistic complexity as adopted in the computational Coh-Metrix tool. Furthermore, given that many other aspects were not analysed in this short article, the results herein are limited to the five aspects considered.

This article calls for more research that will further the discussions herein by, amongst other things, investigating the comprehensibility of the texts used for comprehension and summary writing using more indices and other validated methods of investigating linguistic complexity to ascertain the linguistic complexity differences and similarities. This should be done to help improve the quality of texts used for comprehension and summaries in both the Grade 12 examinations and those of the lower grades. Furthermore, the readability of both the educational texts discussed in this article and more varied types using more indices could be explored.

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