

Revisiting the role of linguistic complexity in ESL reading comprehension

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ABSTRACT

This study investigated the two linguistic components positioned at the two ends of the continuum that influence ESL reading comprehension: lexical and syntactic features. Specifically, the present study aims to determine these two linguistic features of the texts most comprehensible to pupils. Sixty pupils from three grade levels (2, 4, and 6) were asked to read four texts with varying text difficulty level from which the most comprehensible text per grade level was identified after a comprehension test. The findings revealed that the pupils reading comprehension progressed as they advance in grade level. Moreover, the findings revealed that the lexical feature of the reading texts becomes more complex as grade level advances. This indicates that lexical features is a viable factor in determining the readability of the text; that is, as the lexical features of a reading text becomes more complex, the more difficult it is for learners to process such texts for comprehension. Unlike lexical features, the syntactic features of the selected reading texts exhibited an erratic pattern indicating that such features may not be a crucial factor in text readability and in reading comprehension as a whole.

Keywords: linguistic features; lexical features; syntactic features; readability; reading comprehension

INTRODUCTION

Reading comprehension has been a perennial issue and the subject of investigations in the realm of language teaching and learning as it involves complex processes and is influenced by multiple variables such as schema, age, and text itself. Despite the debates, researchers have agreed on some important variables that need to be considered for effective reading. These include decoding skills (Hinkel 2006), topic familiarity (Hudson 2007, Pulido 2007), learner's interest (Bügel & Buunk 1996), cultural background (Barry & Lazarte 1998), prior knowledge (Chen & Donin 1997), L2 linguistic knowledge (Bernhardt & Kamil 1995, Vandergrift 2006), and linguistic elements/features (i.e., syntactic and lexical features).

Linguistic features are deemed to have a contributory effect on the readability of a given text (Droop & Verhoeven 1998). One way to describe such features is by determining the linguistic complexity of a given text. Complexity refers to the level of advanced language (Skehan 2009). It is the “characteristics of utterances at the level of clause relations, that is, the use of conjunctions and, in particular, the presence of subordination” (Iwashita, Brown, McNamara, & O’Hagan 2008, p. 32). There were several proposed ways to measure complexity. Ellis (2009) argued that grammatical complexity (i.e. syntactic) is measured by the number of subordination or the mean number of clauses per T-unit. A T-unit is the shortest unit of a particular passage that contains one independent clause with its dependent clause/s and can be segmented without ‘leaving any sentence fragments as residue’ (Hunt 1970, p.189). Lexical complexity, on the one hand, is measured by the types (number of different words produced) and tokens (number of all words produced). For Iwashita et al. (2008), it is measured using the number of clauses per T-unit, number of dependent clauses versus the total number of clauses, number of verb phrases per T-unit, and mean length of

utterance. The first three are arguably the best measures to measure complexity (Wolfe-Quintero, Inagaki, & Kim 1998). Type measure is chosen to determine the vocabulary range used because it is hypothesised that advanced language speakers use more extensive vocabulary type range. In their study, their findings revealed that higher levels produced more T-units than those in the lower levels. However, the sheer difference is neutralised when clause ratio is applied. The highest level (i.e., level 5) posted a T-unit complexity of 1.58 compared to Levels 1 and 2 with 1.5, Level 3 with 1.87, and Level 4 with 1.89. Shorter and simpler sentences were frequently observed in lower levels while more complex sentences appeared frequently in higher levels. For Wolfe-Quintero et al. (1998), complexity can be best measured based on clauses per T-unit, number of dependent clauses per total clauses, or number of dependent clauses per T-unit.

With regard to lexical features, a consensus exists among L2 reading scholars (Alderson 2000, Folse 2006, Laufer & Sim 1985, Read 2000) that vocabulary knowledge is essential to reading comprehension. They even argued that knowledge of lexical items is a strong predictor of reading comprehension (Alderson 2000, Coady 1997, Pulido 2007, Read 2007) and writing skills (Lee & Muncie 2006). More particularly, Qian (2002) argued that both vocabulary size and depth dimensions play an important role in reading comprehension. He further explained that depth and breadth of vocabulary knowledge are closely and positively correlated with each other. More so, these two aspects are highly correlated to basic reading comprehension tasks. Thus, using vocabulary depth and breadth in combination would lead to better predictive power on reading performance than using each separately.

According to Qian (2002) and Vellutino (2003), it is highly probable that learners will better understand the concepts if very few rare words are used in a text. However, some researchers (e.g., Anderson & Davison 1986, Schmitt, Jiang, & Grabe 2011) question such claim. According to Anderson and Davison (1986), lexical complexity is not directly influencing the text readability because “most long, infrequent words are transparent derivatives and compounds that would not be expected to be difficult for the typical student by the time he/she reaches the middle grades”. In fact, as what Schmitt et al. (2011) asserted, unfamiliar words do not seem to adversely affect the comprehension of text by the learners unless the text is full of such unfamiliar words. Crossley, Louwerese, McCarthy, and McNamara (2007) further explained that simplifying lexical components of texts may actually be more problematic because the more common and simpler the word is, the more likely it possesses multiple meanings which can actually make the text more incomprehensible. A similar contention was earlier advocated by Widdowson (1978) claiming that lexical and syntactic simplification may actually be counterproductive as they may further complexify messages.

Aside from lexical features, some scholars also argue that syntactic features have contributory effect on text readability consequently affecting the learners’ reading comprehension. Generally, the syntactic features of a text are described through its syntactic complexity which refers to the quantity and quality of transformations utilised in a particular utterance (Distefano & Valencia 1980). Some researchers (e.g., Hunt 1970) have claimed that the more transformations are added to a sentence, the more complex it becomes; hence, the more difficult it can be processed for comprehension. However, such claim is opposed by Arya, Hiebert, and Pearson (2011) when they argued that one lengthy sentence is sometimes easier to understand than reading a series of short sentences. For example, the complex sentence ‘The teacher has sharp eyes which help her edit the students’ essay meticulously’ is more comprehensible than a series of simple sentences like ‘The teacher has eyes. Her eyes are sharp. Her eyes help her edit the students’ essay meticulously.’ Further, Davison, Wilson, and Herman (1986) convincingly argued that sentence length does not significantly influence

text readability. Their supposition was based on their study on the effects of syntactic connectives and organising cues on text comprehension. The findings revealed that Grade 7 readers (excluding the poor readers) were able to equally comprehend short and long texts.

Considering multiple variables, Laufer and Sim (1985) surmised that syntactic structure, discourse markers, subject matter, and knowledge of vocabulary (arranged in increasing importance) contribute to reading comprehension in EFL context. In short, they find that vocabulary is the strongest component that impacts reading comprehension; syntax, on the other hand, has the weakest contributory effect. This supposition has prompted the researcher to investigate the features of the two ends of the continuum as to their influence on ESL reading comprehension. Specifically, the present study aims to answer the following research questions: (1) What are the lexical features of the most comprehensible texts? (2) What are syntactic features of the most comprehensible texts?

METHODOLOGY

POPULATION AND SAMPLING

The subjects for the present study were obtained from the two private elementary schools in Metro Manila: one (1) Level 3 accredited and one (1) non-accredited school. The choice of school-respondents by accreditation level would provide a wider range of respondents with different linguistic and social backgrounds. Accreditation refers to an activity that leads to the issuance of a certificate of accredited status by an organised body of educational institutions attesting to the quality of educational programs and effectiveness of management and operations of schools (Revised Manual of Regulations for Private Schools in Basic Education, 2010). Hence, the higher the accredited status, the higher the quality of educational programs and institutional operations the school possesses. From these two schools, 60 participants were randomly selected from three even grade levels: Grade 2 pupils ($n = 20$) with mean age of 7.75, Grade 4 pupils ($n = 20$) with mean age of 9.65, and Grade 6 ($n = 20$) pupils with mean age of 11.85. Per grade level, 50% of the participants came from Level 3 accredited school and the other half from the non-accredited school. These pupils were convened in a room for the reading comprehension task.

TABLE 1. Age and grade level of participants

Grade	\bar{x}	n	SD
2	7.75	20	.44
4	9.65	20	.48
6	11.85	20	.36

With regard to the age of participants, the means indicate that they were at the standard age (i.e., the average age of pupils at a particular grade level from the point they entered kindergarten at age 5 or 6) of instructional level. Also, the standard deviation denotes a small variation of age differences since the subjects were selected by even grades, of which one grade level is the only disparity.

INSTRUMENTS

Around 60 texts were taken from the TAKS released tests of Texas Educational Agency (TEA), an educational agency that provides leadership, guidance, and resources for the schools to meet the educational needs of their respective students. More particularly, reading

texts were taken from this agency as it provides a wide array of standardised tests for various proficiency and instructional levels. This would allow the selection of the reading tests most appropriate for the target participants. The 60 texts were prescreened based on topic and cultural content; only 24 passed the prescreening. These 24 texts were then subjected to Flesch-Kincaid Grade Level Readability Formula to determine their difficulty level. Though Crossley et al. (2007) considered Flesch-Kincaid as a shallow-based readability formula, researchers including them, recognised that such a formula is a useful technique for the initial assessment of text difficulty (Agnihotri & Khanna 1991) and is helpful in selecting materials appropriate for the intended readers (Hamsik 1984). After determining the text readability level of the 24 texts, only eight graded reading texts were considered to best fit the target participants in terms of participants' background knowledge, interest in the subject, and familiarity with the material as well as the relevance, appropriacy, content, language, and length of the texts. These eight graded texts are as follows: Level 1 text - *A Beautiful Little Frog* (1.36), Level 2 text - *Where's Ella?* (2.28), Level 3 text - *Home Again* (3.11), Level 4 text - *Skateboard Tricks* (4.06), Level 5 text - *Saddle Up* (4.54), Level 6 text - *Sprinkles of Confetti* (5.96), Level 7 text - *A Great Accomplishment* (6.72), and Level 8 text - *Walk with Dignity* (8.38).

Accompanying each reading text are the 10 comprehension questions of varying types (recall, factual, inference, and prediction) which were validated by two reading and applied linguistics experts. These two evaluators have extensive experience in both research and teaching particularly in the pupils that are of the same level of the participants. Since the questions included in the reading tests were standardised already, the role of the evaluators was to ensure the appropriacy of questions for the target participants. Their comments revealed that the questions were, indeed, appropriate. Moreover, they suggested that the font size of the reading tests be formatted accordingly; that is, using font 12 for the reading tests assigned to grade 6 participants, font 14 for the grade 4 reading tests, and font 16 for grade 2 reading tests. Further, the eight reading texts were distributed in an overlapping manner. Aside from practical purposes, overlapping was done to confirm whether there is an increasing reading comprehension ability of participants by grade level. Using the pupils' test scores on the selected texts, the findings revealed that, indeed, their reading comprehension ability increases with grade level. Texts 1 to 4 were assigned to Grade 2 pupils for comprehension test; texts 3 to 6 to Grade 4 pupils; and texts 5 to 8 to Grade 6 pupils.

PROCEDURE

All respondents were convened to one venue on one specific date. They were then asked to read the assigned texts to their group; that is, Grade 2 pupils read texts 1 to 4, Grade 4 pupils read texts 3 to 6, and Grade 6 pupils read texts 5 to 8. A reading test administration script with explicit guidelines for tasks was used to ensure uniformity of instructions given to the participants. Participants were given one hour to finish the reading and the answering of the test. The pupils finished the task 10 minutes earlier. Finally, all papers were collected, checked, and tabulated.

The tabulated scores of pupils in the reading test for four selected reading texts per grade level were subjected to distributional statistics to determine the most comprehensible text per grade level. The results revealed that reading texts 2, 3, and 5 were found most comprehensible for Grades 2, 4, and 6, respectively. The computation also reveals that there was a steady increase in the level of most comprehensible texts which indicates that text difficulty increases with grade level.

After the process, text analysis of the lexical and syntactic features followed. The present study adopted the linguistic complexity analysis scheme from Justice et al. (2006) for

these two linguistic features. The lexical features were analysed based on the morphemes used, and types (number of different words produced) and tokens (number of all words produced) observed in the selected texts. Specifically, it involved total number of content words in the most comprehensible texts (TNW), total number of different content words in the most comprehensible texts (NDW), and total number of morphemes in the most comprehensible texts (TNM). The content words included in the counting are nouns, main verbs, adjectives, and adverbs. Further, syntactic features were analysed using the following variables: total number of T-units in the most comprehensible texts (LENGTH), average number of words in T-units of the most comprehensible texts (MLT-W), total number of T-units containing an independent clause and one or more dependent clauses in the most comprehensible texts (COMPLEX), total number of coordinating conjunctions or COORD, total number of subordinating conjunctions or SUBORD, and proportion of complex T-units (PROPCOMPLEX) which is obtained when COMPLEX is divided by LENGTH.

RESULTS AND DISCUSSION

LEXICAL FEATURES

The present study investigated the lexical and syntactic features of the most comprehensible texts and their possible implications. The findings revealed that the means of TNW, TNM, and NDW steadily increase as text level increases. These findings strengthen the claim of Gömleksiz (2001) and Sticht and James (1984) that as students progress to a higher grade level, they can handle more complicated and advanced linguistic input—in this case, the lexical features of the reading text. It can also be surmised that the difference between the two successive even grade levels may provide a valid estimate for lexical features that pupils in Grades 1, 3, 5 can handle.

TABLE 2. Means of lexical features for most comprehensible texts by grade level

Grade Level	Text Level	TNW	TNM	NDW
Grade 2	2	77	102	62
Grade 4	3	133	173	90
Grade 6	5	176	258	120

Looking at the morphological features of the most comprehensible texts, the words that are used in these texts for all grade levels are inflected with *-s* for plural nouns, *'s* for possession, *-s* for third person singular present tense, *-ed* for past tense of regular verbs, *-ing* for present participle, *-en* for past participle, and *-er* for comparative degree. Since only three texts were subjected for analysis, minimal samples for inflected words were obtained with an exclusion of *-est* as the inflectional morpheme for superlative degree; however, the irregular adjective *best* appeared in the reading text for Grade 4. Likewise, words to denote a comparative degree did not appear in texts 2 and 3, with only a single occurrence in text 5. This occurrence may be due to the type of reading texts provided for the pupils, which are all narratives. Also, the inflected words are dense with *-ed* morpheme in all levels, coupled with *-s* to denote plural nouns and singular main verbs in text 5. In general, the most comprehensible texts are packed with words inflected with *-s*, *-ed*, and *-ing*.

TABLE 3. List of words and their inflectional morphemes in the most comprehensible texts

Inflectional Morpheme	Grade 2	Grade 4	Grade 6
-s (plural noun)	things, tricks	ears, signs	doctors, dreams, heads, horses, hugs, legs, lessons, years, woods, trails, medals, movements, muscles, 1960s, Olympics, things, times
's (possession)	family's	dog's, neighbor's, puppy's	rider's
-s (third person singular present tense)	gets	lives	feels, gives, hops, jumps, leads, lives, looks, loves, means, receives, thinks, walks
-ed (past tense of regular verbs)	hired, looked, opened, played, rushed, scared, showed, smiled, turned, wanted, yelled	asked, delighted, filled, giggled, laughed, opened, patted, peered, played, scratched, showed, smiled, stopped, thumped, walked, watched	called, disabled, helped, learned, lifted, loved, named, scared, used
-ing (present participle)	calling, going, seeing, watching	crying, hanging, licking, looking, moving, running, walking	
-en (past participle)	told	made, said, told	become, built, made
-er (comparative degree)			stronger

In terms of derivational morphemes, text 2 contains only adjectival morphemes such as *-ious* (*furious*) and *-ic* (*terrific*); text 3 contains *-er* (*owner*), *-y* (*fuzzy*), and *-ly* (*wiggly*); text 5 includes *-ly* (*usually*), *-ment* (*movement*), *-ance* (*assistance*), *-ness* (*illness*), and *-ship* (*relationship*). The findings also reveal that the derivational morphemes in text 2 are limited to *-y* and *-ful* for adjectives and *-ly* for adverbs. These grammatical categories function as modifiers which mean that adjectival morphemes developed earlier than other lexical-forming morphemes but are denser in text 3. Derivational morphemes significantly increased in text 5 with additional morphemes such as *-ion*, *-ation*, *-ance*, and *-ment* for nominal morphemes and *-ic*, *-ive*, *-ish* for adjectival morphemes. This also means that pupils can handle more complex derivational morphemes as they progress in grade level. There seems to be a smooth transition as well of morphemes from one grade level to another.

The absence or presence of derivational morphemes may be attributed to the kind of reading texts used in gauging the most comprehensible text for each even grade level. Interestingly, adjectival morphemes like *-ious*, *ic*, *-y*, and *-ly* seem to develop in the earlier years, nominal morphemes appeared in text 3, while all other derivational are available in text 5. This finding shows a modest trend of what derivational morphemes acquired earlier and later and opens another avenue of research to determine the validity of what derivational morphemes develop earlier and later.

In general, the trend that was established in this study is that the words in the most comprehensible texts mainly consist of one to two morphemes in all grade levels. Only few three-morpheme words were found in all of the texts (*e.g.*, text 2: *indoors*, *outdoors*; text 3: *neighborhood*, *displaying*; and text 5: *improved*, *resolved*, and *movements*). Further, there are no four-morpheme lexical items in all most comprehensible texts. However, it can be surmised that multi-morphemed (*i.e.*, two or more morphemes) lexical items are higher in texts 3 and 5 which are the most comprehensible texts for grades 4 and 6, respectively. These

findings may indicate that number of morphemes per word may be a crucial element in making the text more comprehensible to a particular group of pupils; that is, the more advanced the pupils are, the higher the number of morphemes per word that they can accommodate and process. Such findings challenge the claim of Anderson and Davison (1986) that complexity of lexical features does not directly influence text readability.

Going beyond the morpheme level, majority of the words used in the reading texts are single words with few instances of two words in all most comprehensible texts (*text 2: backyard and doorbell; text 3: backyard; and text 5: self-confidence and wheelchair*). These two-word lexical items are very few that they do not complicate nor impede the comprehension of the reading texts. Hence, Schmitt et al. (2011) was correct to say that more advanced lexical features would not be detrimental to comprehension as long as they are at the minimum number.

Finally, quantitative findings indicate that lexical features advance steadily as the reading text is used for higher readers. Likewise, a certain trend that reading texts for grade school pupils contain familiar words, as indicated by the words marked by common inflections, has been uncovered. There is also a trend of derivational morphemes for earlier grades and for the later grade; that is, adjectival morphemes are used in the earlier grades and other kinds, in the higher grade. This is another manifestation that pupils progress lexically as they advance in grade level. Moreover, the number of morphemes is limited from one to three in the reading texts. Interestingly, most of the reading texts consist of one to two morphemes and single words, though there are a few instances of two words.

SYNTACTIC FEATURES

The syntactic features of the reading texts in terms of LENGTH, MLT-W, MLT-M, COMPLEX, COORD, SUBORD, and PROPCOMPLEX do not indicate a steady increase as text level and grade level advances. The deviation in a steady increase can be attributed to the nature of the reading texts which are all narrative. Similar to the findings of Crowhurst and Piche (1979), narratives manifest an erratic pattern in relation to syntactic features; that is, a narrative reading text efficiently comprehended by higher grade levels with better comprehension skills may manifest less complicated syntactic features compared to texts efficiently comprehensible to lower grade levels with lower reading comprehension skills.

TABLE 4. Syntactic features of selected reading texts

Text Level	Grade Level	LENGTH	MLT-W	MLT-M	COMPLEX	COORD	SUBORD	PROP COMPLEX
2	2	21	3.66	4.86	5	4	5	.24
3	4	37	3.59	4.68	11	3	13	.30
5	6	37	4.76	6.97	8	1	8	.22

As shown in Table 4, all syntactic features of the reading texts, except LENGTH, show an irregular pattern; one feature may be highest at any of the identified grade and text level. Thus, LENGTH is definitely less dense in the text 2 and obviously static in texts 3 and 5. This suggests that LENGTH is not a significant feature in determining text readability. Whether LENGTH is short in one grade level, shortened or lengthened in a higher level, or static in the following level, this does not affect text readability. Thus, readability cannot be attributed to LENGTH.

All other features exemplified in the reading texts have means distributed irregularly by grade levels. This finding upholds the claims of Arya et al. (2011) and Davison and Green (1988) that syntactic complexity does not drive text difficulty and that syntax is not by itself a

complex element in comprehension. In short, longer sentences are often easier to understand than shorter ones. Moreover, the MLT-W and MLT-M as syntactic features do not lend high difference of means; that is both MLT-W and MLT-M of texts 2 and 3 are relatively similar. Hence, there seems to be no definite measure in determining readability in terms of syntactic features. Research should explore other syntactic measures that would indicate significant effect on readability.

In relation to regards other components of syntactic features, SUBORD, COMPLEX, and PROPCOMPLEX appeared to be highest in text 3. This indicates that text 3 which is the most comprehensible text for Grade 4 pupils is the most complicated. This debunks the idea that the more complicated syntactic features is difficult to process; hence, it supports the claim of Laufer and Sim (1985) that syntax is indeed in the lower end of the continuum that influences reading comprehension. However, it can also be noted in the findings that as subordination increases, coordination decreases. This may indicate that, in some way or the other, texts 3 and 5 are more complicated syntactically than text 2.

The coordinating conjunctions used in the reading texts are *and* and *but*, the same coordinating conjunctions mostly used by the pupils in their narratives. The coordinating conjunction *so* and the conjunctive adverb *then* were not used as COORD. However, in all of the texts, *then* was used as a transitional device and not as a connector of two independent clauses (e.g. *Then Dennis began seeing things that looked strange.*). It is, therefore, conclusive that the very minimal use of connectors in all of the texts and their irregular means imply that pupils found texts with a minimum use of connectors readable. Since COORD and SUBORD are measures of complexity, as well as COMPLEX and PROPCOMPLEX, the texts processed through the Flesch-Kincaid Grade Level Readability Formula were found readable due to the minimal use of complexity measures. Likewise, the subordinating conjunctions used in the texts are the following:

TABLE 5. Subordinating conjunctions used in the reading texts

Text 2	Text 3	Text 5
because, until, if, that, when	as, when, where, if, while, until, that, as soon as	because, although, that, after, where, when, as if

The extracted subordinating conjunctions from the reading texts also appear mostly in the pupils' narratives. Just like the narratives, text 2 contains single-word subordinators and a variation of two to three-word subordinators in texts 3 and 5. The list of subordinators, though very minimal, may be used as reference as to what subordinators are manageable among grade school pupils. Subordinating conjunctions are denser in text 3; thus, it yields the highest COMPLEX and PROPCOMPLEX means. This implies that SUBORD does not contribute to the syntactic development of the reading texts fed in the Flesch-Kincaid Grade Level Readability Formula. Below are some constructions taken from the texts to illustrate the use of SUBORD:

Text 2: *Dennis was happy because he wanted to earn some money./ (1 T-unit)*

Text 3: *As they were hanging a sign across the street on their neighbor's fence, a boy came running up./ (1 T-unit)*

Text 5: *Although she used a wheelchair, Hartel resolved to get back on her horse Jubilee./ (1 T-unit)*

Given these results, there is a minimal use of COORD and SUBORD which lead to minimal and irregular means of COMPLEX and PROPCOMPLEX. This implies that since the syntactic features in question are measures of syntactic complexity, it is therefore definite

that what is comprehensible among grade school pupils are reading texts that have minimal connectives that lessen syntactic complexity. Furthermore, the syntactic structure of the reading texts contains phrases and clauses—both dependent and independent. However, most of the constructions are simple which explain a very low complex construction in the reading texts. This means that syntactic structures for grade school pupils are simple though there are a few instances of complex construction. The simplification of syntactic construction contributes to the readability of the reading texts.

CONCLUSION

The present study analysed the lexical and syntactic features of the reading texts most comprehensible to Grades 2, 4 and 6 (i.e., text 2, 3 and 5, respectively). From the findings presented in this study, it can be concluded that the pupils' reading comprehension progressed as they advance in grade level. Moreover, it can also be posited that the lexical features of the reading texts becomes more complex as grade level advances. This indicates that lexical features is a viable factor in determining the difficulty level of reading texts; that is, the more complex the lexical features of a reading text are, the more it becomes difficult for learners to process for comprehension. These findings lend support to the claim of Gömleksiz (2001) and Sticht and James (1984) that as learners advance in grade level, the higher the chances that they can handle more complicated and advanced linguistic input. Unlike lexical features, the syntactic features of the selected reading texts exhibited an erratic pattern which can be attributed to the varying syntactic features any narrative texts (Crowhurst & Piche 1979). These results indicate that syntactic features may not be a crucial factor in determining text readability and in comprehending texts similar to what Arya et al. (2011) and Davison and Green (1988) have argued.

Pedagogically speaking, the findings of the present study have several implications for materials preparation and language teaching. First, if the aim of the teaching is to make the reading materials more comprehensible to the pupils, text manipulation should zero in on lexical features more than syntactic features especially if the type of text is narrative. Second, if the aim of teaching is to expose pupils to a variety of lexical and syntactic features that could potentially help them to progress linguistically, it is logical to construe that texts should not just be delimited to narratives; that is, allowing learners to be exposed to other text types, such as expository texts. Third, the findings of this study may have a significant impact on how reading materials are selected for textbooks and other instructional materials.

REFERENCES

- Agnihotri, R. & Khanna, A. (1991). Evaluating the readability of school textbooks: An Indian study. *Journal of Reading*, 35 (4), 282-288.
- Alderson, J. (2000). *Assessing reading*. Cambridge: Cambridge University Press.
- Anderson, R. & Davison, A. (1986). *Conceptual and empirical bases of readability formulas*. USA: Bolt, Beranek and Newman.
- Arya, D., Hiebert, E., & Pearson, P. (2011). The effects of syntactic and lexical complexity on the comprehension of elementary science texts. *International Electronic Journal of Elementary Education*, 4 (1), 107-125.
- Barry, S., & Lazarte, A. (1998). Evidence for mental models: How do prior knowledge, syntactic complexity, and reading topic affect inference generation in a recall task for nonnative readers of Spanish? *Modern Language Journal*, 82, 176–193.
- Bernhardt, E. & Kamil, M. (1995). Interpreting relationships between L1 and L2 reading: Consolidating the linguistic interdependent hypothesis. *Applied Linguistics*, 16, 15-34.

- Bügel, K., & Buunk, B. P. (1996). Sex differences in foreign language text comprehension: The role of interests and prior knowledge. *Modern Language Journal*, 80 (1), 15-30.
- Coady, J. (1997). L2 vocabulary acquisition: A synthesis of the research. In J. Coady, and T. Huckin (Eds.), *Second language vocabulary acquisition* (pp. 273-290). Cambridge: Cambridge University Press.
- Chen, Q., & Donin, J. (1997). Discourse processing of first and second language biology texts: Effects of language proficiency and domainspecific knowledge. *Modern Language Journal*, 81, 209–227.
- Crossley, S., Louwrese, M., McCarthy, P., & McNamara, D. (2007). A linguistic analysis of simplified and authentic texts. *Modern Language Journal*, 91, 15–30.
- Crowhurst, M., & Piche, G. (1979). Audience and mode of discourse effects on syntactic complexity in writing at two grade levels. *Research in the Teaching of English*, 13, 101-109.
- Davison, A. & Green, G. (1988). Introduction: In A. Davison & G. M. Green (Eds.), *Linguistic complexity and text comprehension: Readability issue reconsidered*, (pp. 1-4). Hillsdale NJ: Erlbaum.
- Davison, A., Wilson, P., & Herman, G. (1986). *Effects of syntactic connectives and organizing cues on text comprehension*. Champaign, IL: Center for the Study of Reading.
- Distefano, P. & Valencia, S. (1980). The effects of syntactic maturity on comprehension of graded reading passages. *Journal of Educational Research*, 73 (5), 247.
- Droop, M. & Verhoeven, L. (1998). Background knowledge, linguistic complexity and second language reading comprehension. *Journal of Literacy Research*, 30(2), 253-271.
- Ellis, R. (2009). The differential effects of three types of task planning on the fluency, complexity, and accuracy in L2 oral production. *Applied Linguistics*, 30 (4), 474-509.
- Folse, K. (2006). The effect of type of written exercise on L2 vocabulary retention. *TESOL Quarterly*, 40 (2), 273-293.
- Gömlöksiz, M. N. (2001). The effects of age and motivation factors on second language acquisition. *Firat University Journal of Social Science*, 11(2), 219–224.
- Hamsik, M. (1984). Reading, readability, and the ESL reader. Unpublished doctoral dissertation, University of South Florida.
- Hinkel, E. (2006). Current perspectives on teaching the four skills. *TESOL Quarterly*, 40 (1), 109-131.
- Hudson, T. (2007). *Teaching second language reading*. New York: Oxford University Press.
- Hunt, K. (1970). Syntactic maturity in schoolchildren and adults. *Monographs of the Society for Research in Child Development*, 35 (1). Chicago: University of Chicago Press.
- Iwashita, N., Brown, A., McNamara, T. & O'Hagan, S. (2008). Assessed levels of second language speaking proficiency: How distinct? *Applied Linguistics*, 29 (1), 24-49.
- Justice, L. et al. (2006). The index of narrative microstructure: A clinical tool for analyzing school-age children's narrative performances. *American Journal of Speech-Language Pathology*, 15, 177–191.
- Laufer, B., & Sim, D. (1985). Taking the easy way out: Non-use and misuse of contextual clues in EFL reading comprehension. *English Teaching Forum*, 23, 7–10, 22.
- Lee, S. & Muncie, J. (2006). From receptive to productive: Improving ESL learners' use of vocabulary in a postreading composition task. *TESOL Quarterly*, 40, 295-320.
- Pulido, D. (2007). The effects of topic familiarity and passage sight vocabulary on L2 lexical inferencing and retention through reading. *Applied Linguistics*, 28 (1), 66-86.
- Qian, D. (2002). Investigating the relationship between vocabulary knowledge and academic reading performance: An assessment perspective. *Language Learning*, 52, 513-536.
- Read, J. (2000). *Assessing vocabulary*. Cambridge: Cambridge University Press.
- Revised Manual of Regulations for Private Schools in Basic Education (2010). DepEd Order No. 88, s. 2010. Retrieved from <http://www.bgsu.edu/downloads/lib/file40389.pdf>
- Schmitt, N., Jiang, X. & Grabe, W. (2011). The percentage of words known in a text and reading comprehension. *The Modern Language Journal*, 95 (1), 26-43.
- Skehan, P. (2009). Modelling second language performance: Integrating complexity, accuracy, fluency, and lexis. *Applied Linguistics*, 30 (4), 510-532.
- Sticht, T., & James, J. (1984). Listening and reading. In P. Pearson (Ed.), *Handbook of research on reading* (pp. 293–317). New York: Longman.
- TAKS Released Tests. Texas, USA: Texas Education Agency. Retrieved October 20, 2010, from <http://www.tea.state.tx.us/student.assessment/taks/released-tests/>
- Vandergrift, L. (2006). Second language listening: Listening ability or language proficiency. *Modern Language Journal*, 90 (1), 6-18.
- Vellutino, F. (2003). Individual differences as sources of variability in reading comprehension in elementary school children. In A. Sweet & C. Snow (Eds.), *Rethinking reading comprehension*, (pp. 51-81). New York: Guilford Press.
- Widdowson, H. (1978). *Teaching language as communication*. Oxford: Oxford University Press.

Wolfe-Quintero K., Inagaki, S. & Kim, H. (1998). *Second language development in writing: Measures of fluency, accuracy, and complexity*. Hawaii: University of Hawaii Press.

APPENDIX

Sample Comprehension Test for Grade 2 Pupils

Taken from TAKS Released Tests

<http://www.tea.state.tx.us/student.assessment/taks/released-tests/>

SKATEBOARD TRICKS

by Michael Porter

There was no doubt about it. The new kid who was moving in next door to Jason was good. Jason sat on the front steps of his house. He had watched in admiration as the new kid jumped out of the movers' truck that was parked in the driveway and right onto a skateboard. Wearing a bright red helmet and knee and elbow pads, the kid had traveled quickly down the sidewalk in front of Jason's house, weaving around anything in the way.

As Jason watched, Mrs. Tutel's fluffy little white dog suddenly ran out onto the sidewalk. The kid jumped his skateboard over the ball of fur and flipped the skateboard up into his hands, just like a professional. Then he grabbed the leash and set off to return the runaway dog. "Wow!" Jason exclaimed. "I need to learn how to do those cool tricks!"

After returning the dog to Mrs. Tutel, the kid rode his skateboard back to his house. Jason saw the kid make his way between workers who were carrying boxes and chairs into his new home. Jason felt shy about talking to the new kid, but he wanted to find out where that kid had learned to skateboard so well.

Jason sat on the porch steps, waiting for the kid to come back out. When he did, he was still wearing his helmet and other gear, and he was carrying the skateboard under one arm. Jason got up his courage and walked over to the new kid. "Hey, I saw you riding your skateboard," Jason said. "You're good."

The kid smiled and quietly said, "Thanks."

"Where are you from?" Jason asked.

"California," the kid answered.

Jason nodded and said, "My name's Jason."

The helmet came off, and Jason watched long brown hair tumble down. The kid said, "I'm Amanda."

Jason almost swallowed his gum. The new kid was a girl! After a few seconds he finally managed to say, "Hi."

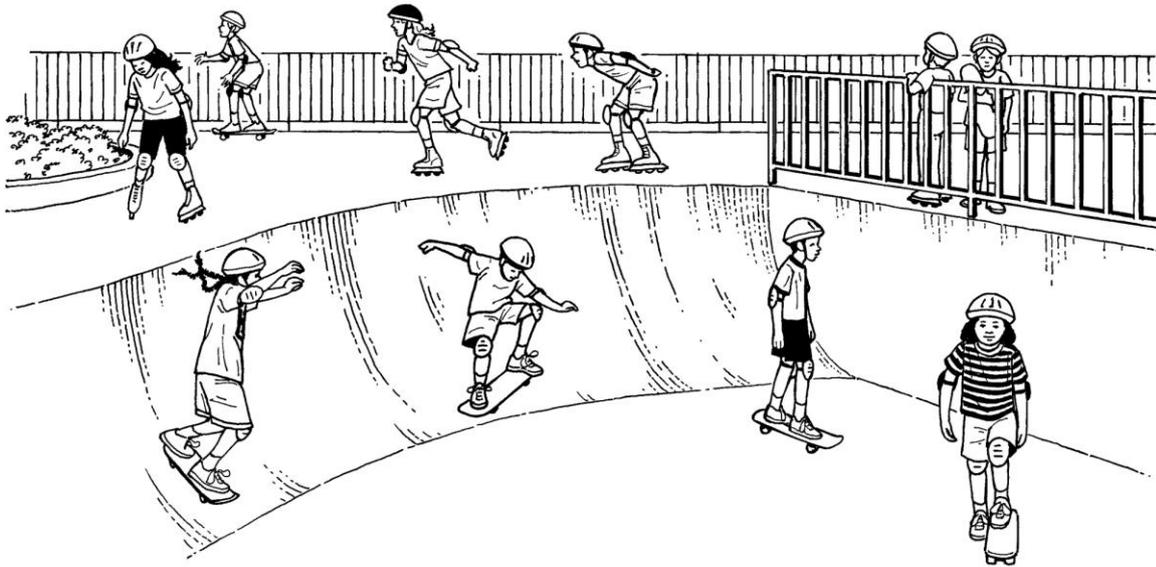
"My mom told me that there's a skate park in the neighborhood. Is that right?" Amanda asked.

Jason shrugged. He knew Amanda was really good at riding a skateboard, and he could learn some things from her, like that flip she had just done. But he didn't want his friends to know he was learning something from a girl. His friends would tease him forever! Then he had an idea. "It's not too far, but you have to wear your helmet and knee and elbow pads," Jason said.

"No problem," Amanda said. "Let me ask my parents if I can go."

As Amanda ran inside to get permission from her parents, Jason stared down at his feet. "If she can just keep her helmet on, everything will be fine," he thought to himself.

Amanda came running out of her house, and she and Jason stopped by his house so he could get his gear and his parents' permission. Then they rode away.



The park was filled with kids, some riding on skateboards and others on skates. Several guys waved to Jason as he showed Amanda around. Soon, though, Amanda was showing everyone what she could do on her skateboard. Sometimes she looked as if she were flying in the air. Jason began to panic when he realized that all his friends had stopped skating and were watching her, especially his best friend Patrick. Jason wondered if he could sneak out of the park without anyone noticing.

“That’s awesome!” Patrick said, skating over to Jason.

“Just moved in next door to me today,” Jason said.

“Do you think I could learn some of those tricks?” Patrick wondered aloud. “I always crash when I try to flip my skateboard like that.”

Jason took a deep breath and motioned Amanda over to him and Patrick. If Patrick judged Amanda on her skating abilities rather than on the fact that she was a girl, then things would be all right. Jason just hoped that Patrick would decide Amanda was O.K.

As Amanda skated up to the two boys and took off her helmet, Jason tried to think of what to say. Before he could open his mouth, Patrick said, “Wow, I never met a girl who could skate like that—or even a boy! Can you teach me that flip trick?”

— *Krazy Kids, December 2004*

Questions:

31. Where does Amanda want Jason to take her?
 - A. Jason’s house
 - B. The skate park
 - C. Mrs. Tutel’s house
 - D. A neighborhood park

32. Jason wants to meet his new neighbor because he wants to —
 - A. learn where the new kid is from
 - B. know how the kid learned to skateboard so well
 - C. take the kid to the skate park
 - D. have the new kid meet his friends

33. What do Jason and Amanda do right before going to the skate park?
 - A. Ask for permission
 - B. Catch a neighbor’s dog
 - C. Help carry boxes
 - D. Meet new people

34. Which is the best summary of this selection?

- A. Jason is pleased that his new neighbor is great at skateboarding. Jason learns that the new kid is a girl but wants her to teach him a few skateboard tricks anyway. Jason worries about what his friends at the park will think, but his friends want to learn from Amanda, too.
 - B. Jason takes the new kid in his neighborhood to the skate park. While there, Jason sees many friends who are skating and skateboarding. His friends are surprised by the skateboard tricks the new kid is able to do.
 - C. A new kid moves into Jason's neighborhood. The kid is very good at skateboarding. Jason watches the kid jump over a white dog and move through a crowd of workers. Finally Jason goes to meet the neighbor and learns that the new kid is a girl.
 - D. When Jason agrees to take Amanda to the skate park, she must wear a helmet and knee and elbow pads. Jason hopes that his friends won't learn that Amanda is a girl, but when she meets Jason's friends, everyone sees who she is.
35. Which of the following hides the fact that the new kid is a girl?
- A. Knee pads
 - B. Skateboard
 - C. Elbow pads
 - D. Helmet
36. The reader can tell that Jason —
- A. doesn't know any girls who can skateboard as well as Amanda can
 - B. goes to the skate park with his friends every day
 - C. wishes Patrick had seen Amanda jump over the runaway dog
 - D. hasn't had much time to practice on his skateboard
37. In paragraph 10, Jason almost swallows his gum because he is —
- A. expecting the new kid to be a boy
 - B. nervous about having a new neighbor
 - C. excited about the skateboard tricks he will learn
 - D. angry that Amanda didn't tell him she was a girl
38. What happens after Jason and Amanda get to the skate park?
- A. Amanda searches for her knee and elbow pads.
 - B. Jason and Amanda put on their gear.
 - C. People stop to watch Amanda on her skateboard.
 - D. Jason and Amanda ask for permission to go skateboarding.
39. What is Jason's main problem at the skate park?
- A. Amanda has not taught him any skateboard tricks.
 - B. He doesn't want his friends to learn the truth about Amanda.
 - C. His friends are watching Amanda instead of talking to him.
 - D. Amanda continues to do difficult tricks.
40. The reader can tell that Jason and Amanda will probably —
- A. get in trouble with their parents
 - B. find Mrs. Tutel's dog in the neighborhood
 - C. help the workers carry boxes to Amanda's house
 - D. return to the park another day