



Lexical Inference as an Obstacle to Reading Comprehension at Senior Secondary Schools in Botswana

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ABSTRACT

The study carried out an investigation aimed at establishing the extent of the discrepancy between the vocabulary knowledge of secondary school students in Botswana and the vocabulary demands of their English language school texts. It also aimed at establishing the extent to which context is useful in assisting students to guess meanings of unknown words. Two tests were administered to the students. The first utilised twenty-five Multiple Choice questions to test vocabulary out of context. Before the students attempted the second test they read three different passages of text after which they were tested on the same vocabulary items as in Test 1. They also answered twenty-five Short Answer comprehension questions based on the texts. The conclusions reached from this investigation was that that context does not always assist students to guess meanings of unknown words and that it sometimes has a detrimental effect on guessing. This study makes proposals for pedagogy aimed at improving the students' vocabulary knowledge so that they can inference better.

Key words: Lexical inference, linguistic cues, inferencing, L1 learners, L2 learners, contextual guessing.

INTRODUCTION

The Role of English in the Senior Secondary School Curriculum

English is a global language that is no longer spoken only in the 'core' English speaking countries such as Britain and the United States of America. The language has become entrenched worldwide as a result of British colonialism, international interdependence, technological innovations, transport, communications and commerce (Phillipson 1992). As one of the major languages of communication in Botswana, English occupies a very prominent place as an official language and a medium of instruction at

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primary and secondary schools as well as institutions of higher learning. The prominent role that English plays in Botswana is articulated in various official documents such as the Revised National Policy on Education (RNPE) (Republic of Botswana 1994), and Education Blueprints. As part of the rationale for using English as a medium of instruction as well as recognising the language's prominent and significant place in the curriculum, the senior secondary school syllabus refers to English as "...an access language in technology and information services facilitating acquisition, creation and documentation of knowledge" (Ministry of Education 1996: ii). Hence some of the aims of the senior secondary curriculum are that at the end of the programme learners should have:

acquired attitudes and values, developed basic skills and understanding to allow for execution of rights and responsibilities as good citizens of Botswana and the world; developed foundation skills such as problem solving, critical thinking, communication, enquiring, team work/interpersonal skills to help them to be productive and adaptive to survive in a changing environment.

Specific to the senior secondary English language curriculum, the course should be able to help learners:

develop the ability to use English for effective communication; facilitate access to knowledge and conceptual awareness in relation to other subjects across the curriculum; develop positive attitudes of responsibility and co-operation through discussion, enquiry and group work; develop skills in thinking, enquiring, problem solving, creating, performing, judging, evaluating and communicating; prepare for their personal, social and economic future so that they can make a full contribution to a democratic society. (Ministry of Education 1996:iii)

To achieve the objectives above, the teaching methodology that is recommended for senior secondary school is the communicative approach. Features of this approach include integration of skills of listening, speaking, reading and writing; using language and activities that reflect real life situations; using learner centred activities and methods, as well as using authentic texts. In line with the communicative approach, content should be drawn from a range of sources that address the basic language skills of listening, speaking, reading and writing. In this context teachers are encouraged to utilise texts from other subjects in the curriculum that address emerging issues such as; HIV/AIDS, human rights, environmental issues, awareness of prejudice and bias in terms of gender, race, age and disability.

The Role of Vocabulary in Learning a Second Language

In view of the importance that language plays in developing people's ability to mean, I focus on the cultural resource of the technology of the written word as well as the ability to read with comprehension this written word. Ability to read the written word with comprehension manifests both

linguistic competence in terms of the stock of the lexicon that individuals command. Ability to access meanings of various texts especially in English, as espoused in the syllabus objectives mentioned above is one of the challenges of education in Botswana. The argument of this paper is that, in view of the fact that English is officially defined as a language of wider communication, learning, study and work, in which students are expected to participate as second language learners, unless the challenge to comprehend written texts through inferencing meanings of unknown words from context is addressed, the students will not benefit sufficiently from English as an access language in technology and information services facilitating the acquisition, creation and documentation of knowledge. In turn, the culture of reading, which is the sine qua non for developing an educated and informed citizenry will be undermined, thus weakening participation and full contribution to a democratic society.

In view of the foregoing, the next section will discuss the relationship between reading and vocabulary and the strategies that secondary school teachers use to improve the comprehension of texts their students read in the classroom.

The Relationship between Vocabulary Knowledge and Reading Comprehension

Several studies (Laufer 1987; Nation 2000; Schmitt 2000) have attempted to determine how much vocabulary a second language learner needs, in order to read with facility. In such studies, it has been argued that the more unknown words there are in a written text, the more difficult it will be to comprehend. This suggests that vocabulary size and reading comprehension are related, although the nature of this relationship is complex and dynamic (Paribakht and Wesche 1999). Nation (1999) argues that one way of looking at this relationship is to divide it up into two directions of effect, the effect of vocabulary knowledge on reading comprehension and the effect of reading comprehension on vocabulary knowledge or growth.

Laufer (1997) makes the claim that it is not possible for either L1 or L2 readers to comprehend texts written in English if they do not understand the vocabulary that makes up those texts. Research has consistently shown that adequate vocabulary knowledge strongly influences reading outcomes (Hirsch 2003; Beck, Perfetti, and McKeown 1982; Kelly, 1987; Stahl, 1983). The word variable is highly predictive of reading comprehension. If readers' text comprehension improves then the change can be attributed to an increase in vocabulary knowledge (Stahl 1983). This has implications for guessing meanings of unknown words in context as knowledge of more words reduces guessing and hence a reader can comprehend satisfactorily the text they are reading.

The Nature of Texts Read in the Classroom

The length of time senior secondary school students spend learning English as a subject or using it as a medium in other subjects of the curriculum is too short for them to be able to acquire all the words they will need both at school as well as in the world of work. Hence it is important to teach students strategies to use in reading texts containing unknown words so that they can make sense of texts they read either in the language classroom or in content subjects. In view of this, studies on vocabulary learning have shown that inferencing from context can be a major way of increasing vocabulary knowledge. However, for this to happen, the learner must have reached a certain level of language proficiency in order to use this strategy, including the ability to decode accurately and automatically the words in the text. In line with the communicative approach and to increase the vocabulary knowledge of students at secondary school level, so that they can begin to read in order to learn, they are often required to read different types of written texts (Moumakwa 2002). Some of these texts are drawn from the different subject disciplines like social studies, science, geography and history. The texts differ in subtle ways, typically conforming to ways of knowing and doing in these specific disciplines. The information and content of the discipline are shaped by what the discipline counts as knowledge. Some of the different texts that students read in the classroom include expository, narrative, argumentative, and descriptive. Expository texts for example are characterised by their factual information, and this information is often conveyed using multisyllabic technical words. These words make texts read at secondary level very difficult for students to understand. Bruna, Vann and Escudero (2007:38) concur by saying that “ a result of the nominalised nature of scientific language is lexical density” and that this makes scientific text difficult. Hence the way expository texts are constructed might pose challenges for students of English. For example, they may rely on cause/effect, compare-contrast, or sequencing. Unless students are familiar with text structure they cannot unravel meaning as contained in these texts, difficult words notwithstanding.

When students read different texts in the language classroom especially those drawn from content areas, they are expected to use different strategies. For example, they are supposed to notice that a narrative text has a beginning, middle and an ending, and should know the chronology of the events in the text as for example who does what to whom with what results. For argumentative texts they are expected to notice when the author is making a claim or a counter argument or taking an opposite point of view. Most importantly, learners are expected to be in a position to get the gist of the message, be able to tell the difference between main and peripheral ideas and to know the words that describe these ideas. After reading, students are expected to reflect, synthesise ideas across sources and make interpretations.

The challenge facing senior secondary school learners is that they might not be able to recognise the text structure and the information in the text because of inadequate vocabulary (Moumakwa 2002). Laufer (1997) argues that before deciding whether information in the paragraph is main or peripheral or which to ignore, then a reader should understand the information itself. She goes on to say that if this is not the case then readers might discard the pieces of information that they do not understand and not necessarily that which is unimportant. Some of the text factors that cause comprehension problems for L2 learners like those in Botswana classrooms include word morphology, phonological resemblance of the unknown word to that which is known, idioms, words with multiple meanings. For L2 learners of English this is a real challenge.

Lexical inferencing as a reading strategy

Chikalanga (1993) defines inferencing as the cognitive process a reader goes through to obtain the implicit meaning of a written text. Hence it is a compensatory strategy for both skilled L1 and L2 reading comprehension (Bialystok 1983). Since reading is an interaction between the reader and the text, then in interpreting the text the reader uses textual information as well as background knowledge. Arguing from a schema-theoretic model, Carrell (1983) posits that the reader uses three types of schemata to interpret a text namely: knowledge of the language, knowledge of the topic, as well as background knowledge. Haastrup (1987) says that lexical inferencing involves “making informed guesses as to the meaning of a word in light of all available linguistic cues in combination with the learner’s general knowledge of the world, her awareness of context and her relevant linguistic knowledge”. This definition implies that a sentence or lexical item is influenced by the particular linguistic context in which it is placed making lexical items very highly sensitive to discourse constraints (Brown and Yule 1983). This gives words their meaning potential and learner’s interpretation of given texts become secure if the context contains enough cues to assist them in making intelligent guesses. The more clues in the context the more successful the guessing will be. Success in guessing will lead to comprehension of the particular text being read but if the context contains too many unknown words; this will affect comprehension in a negative way.

Learner’s Inferencing Procedures

Hence, when L2 readers meet an unknown word in context, they have to make the following choices: to ignore the word, look it up in a dictionary, ask someone its meaning, or try to guess at its meaning. If they attempt to guess

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then they are aware that they do not know the meaning of the particular target word. If such awareness is not there, then no attempt is made to infer the missing meaning. This is what happens when learners meet idioms, words with multiple meanings, and words with similar forms (Huckin and Bloch 1993).

Laufer (1987) argues that it should be appreciated that context does not always contain clues that can be exploited. Contextual clues can also be unusable, and if the clues to the target words are in the words that are themselves unknown, then as far as the learner is concerned they do not exist as they cannot be utilised. Hence, for effective guessing to take place, learners should utilise a variety of processing strategies, ranging from local clues such as graphemic identification to global clues such as the use of contextual meanings and the integration of information contained in the different paragraphs of the text being read. Nation (1999) posits that a good guesser uses a variety of clues, checks various types of clues against each other, does not allow word form to play too large a part and does not arrive at a guess prematurely. Unless the context is constrained or there is a relationship with a known word identifiable on the basis of form and supported by context, there is little chance of guessing the correct meaning. This shows that contextual guessing is quite unreliable and tends to yield only partial meanings of words.

Knowledge of the world is also a prerequisite to successful guessing from context. This refers to the learner's general socio-cultural knowledge. De Beaugrande (1980:30) says that "the question of how people know what is going on in a text is a specialised case of the question of how people know what is going on in the world at all". This means that learners bring with them to the inferencing task; expectations, perceptions, experiences as well as knowledge. If the learner's experiences are limited or he does not share the same background with the author then this will incapacitate his interpretive abilities. Adequate background knowledge of subject matter is also a condition for successful guessing although it should be borne in mind that reader's expectations and concepts might be different from those of the author of the text. Furthermore, the context must be rich in clues to enable guessing with the most easily utilisable clues in close proximity with the target word (Haynes 1993; Li 1988; Nation 1999).

In conclusion, it should be said that lexical guessing is not an easy task to perform even when there are clues in the context. Read (2000) argues that learners can be led astray by guesses that are based on partial knowledge and their failure to check their preliminary guesses against the wider context. Proficiency in L2 is a good predictor of success in reading and a large sight vocabulary is also a pre-requisite. All in all, the conditions below should be observed if learners are expected to use the guessing strategy:

- It should not be taken for granted that every context has clues (Laufer 1997).

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- It should not be taken for granted that if clues are available, then they can be utilised or that they are automatically relevant or useful (Sokmen 1997).
- It should be borne in mind that those clues that are in close proximity to the target word are easily utilisable than those that are far (Haynes 1993).
- If there are many relevant clues in the context, then guessing becomes easier (Nation 1999; Schmitt 1997).
- If there are too many unknown words in the context then guessing becomes difficult (Horst, Cobb and Meara 1998; Sokmen 1997).
- Knowledge of subject matter plays a positive role in successful guessing (Laufer 1997; Steffenson and Joag-Dev 1984).

The Study

It has already been said that students at secondary school are expected to read different types of texts. However, if they do not possess adequate vocabulary, as it appears to be the case with senior secondary school students in Botswana to deal effectively with these English language school texts it would not be possible for them to benefit from using English to perceive, interpret, raise questions and process information. Hence the objective of the research that I conducted was to investigate the extent of the discrepancy between the vocabulary knowledge of senior secondary school students in Botswana and the vocabulary demands of their English language school texts (Moumakwa 2002). More precisely, the study examined whether senior secondary school students possessed adequate vocabulary to deal with texts presented in the language classroom as well as whether they could use context to deal with unknown words. The following research questions were formulated to answer the questions:

Research Questions

Q1: What is the extent of the discrepancy between vocabulary knowledge of Senior Secondary School students in Botswana and the vocabulary demands of their English Language school texts?

Q2: What is the effect of this difference upon the ability of Senior Secondary School students to demonstrate comprehension of their English Language school texts?

Q3: To what extent is context helpful in enabling Senior Secondary School students in Botswana to guess meanings of unknown words?

METHODOLOGY

The study was conducted in four senior secondary schools in the southern region of Botswana. One hundred and ninety-eight students from the four schools participated in the study. Two tests were administered to the students. The first utilised twenty-five multiple choice questions to test vocabulary out of context. The second test was administered a week after the first test. Before the students attempted the second test they read three different passages of text. The reading passages were selected from existing English language course books recommended for Form 4 in Botswana senior secondary schools. After reading the texts the students were tested on the same vocabulary items as in the first test. They also answered twenty-five short answer questions.

RESULTS AND DISCUSSION

Test 1: Vocabulary Out of Context

The results showed that there is a discrepancy between the vocabulary knowledge of Form 4 students in Botswana and the vocabulary demands of their English language school texts. More than half of the vocabulary items were inaccessible to half of the students who sat for the tests. The results should be interpreted with caution however. The study did not test vocabulary knowledge per se only difficult words. It is not surprising therefore that the students did badly in the test.

However, indirect assumptions can be made that the students who participated in the present study knew too few words from their texts, a fact borne out by the low scores. The students at times based their guesses on the form of the word. If the words started in the same way or had the same endings or sounded similar then the guess was made on the basis of these features. This agrees with a study reported in the literature where Haynes's (1993) students guessed words wrongly because they were based on word form or phonological resemblance to the unknown word. These are words that Laufer (1997:25) has termed 'words you think you know.'

Students in Botswana classrooms cannot utilise the guessing strategy effectively, not because they do not possess the potential to do so, but because they are not given the opportunity to be autonomous guessers. This state of affairs reveals the power relationships between teachers and students. Guessing brings about an element of independence on the part of the students since it implies making independent decisions as to what a word means and relying less on the teacher as a compendium of knowledge, (Moumakwa 2002).

This independent thinking by students threatens the status quo in that teachers will no longer be seen as authority figures in the sense of having 'unique access' to the English language. To maintain the status quo therefore, it seems to be the case that students should not resort to guessing but rely on teachers to provide them with meanings of words. This scenario is also in line with the ideology of language as 'fixed' and therefore requiring the authority of the teacher to validate meanings of words. Teachers therefore enjoy their position in the classroom that puts them on a 'pedestal' as all knowing and the students as ignorant. The result is students whose cognitive abilities are suppressed and not allowed to develop. This is contradictory to the principles of learner centredness that is supposed to be inculcated in the students through communicative approaches to teaching.

If teachers deny the students the opportunity to be independent guessers then it means that they will not be able to develop proficiency in the language to enable them to deal with texts with understanding. Inability to comprehend these texts means that the students will not be able to understand the issues discussed therein including emerging issues of which they have to understand and contribute their opinions as to how to deal with the challenges inherent in them. For example they would not develop critical and analytic skills to be able to deal with issues in content area texts such as environmental issues because they would not possess the language to express their opinions.

Test 2: Reading Comprehension and Vocabulary

The performance of the students improved in Test 2 when there were contexts from which to draw. However the scores indicated that as in Test 1, the students had problems using the guessing strategy. Context assisted students to infer meanings of eighteen out of the twenty-five items accurately. However, for seven of the items, the reverse situation obtained. Context had a detrimental effect on guessing. They also had problems answering short answer questions as the scores for this part were also low.

To some extent, the results indicated that there was a relationship between vocabulary knowledge and reading comprehension, although the nature of this relationship was not a straightforward one. The students in the present study knew too few words so they could not comprehend their texts effectively. Laufer and Sim (1985) argue that students often regard words as landmarks of meaning when they are interpreting texts. As most of the words were inaccessible to most of the students in the present study, they could not be used as landmarks of meaning and comprehension problems resulted.

The percentage of known to unknown vocabulary in a text is one of the most important factors that determine text difficulty (Schmitt 2000). It can therefore be said that the 'difficult' words were important for comprehension and that is why students performed badly in the tests because the meanings of most of the words tested were not known. It has already been mentioned that for students to be able to guess effectively then they should know about 95%

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of the text, thus the need to reduce the density of unknown words, especially if they happen to be in close proximity with each other (Laufer, 1997). Most students who participated in the study did not perform well because they were not familiar with most of the words that made up the texts they read.

Secondly, background knowledge of subject matter or topic did not compensate for low vocabulary proficiency. It appears that Botswana students were familiar with the text topics presented in the study, but mere familiarity cannot guarantee comprehension, the input should be comprehensible. Comprehension failure may also have been caused by the students' wrong perceptions of ideas presented in the text. Schemata should not just be present but it should be activated appropriately (Carrell 1988).

However, the fact that the students could attribute meanings to some of the words shows that they are capable of utilising the guessing strategy if appropriate texts and teaching methods are offered. Why we learn, what we learn and how we learn are equally important. Appropriate texts can only be utilised in a lesson whose focus is guessing meanings of words from context if the teachers themselves are aware that not all texts lend themselves to the guessing strategy. If this awareness is present then it will take a skilled teacher to guide the students to practice using the strategy. The danger facing teachers who teach students how to compensate for their inadequate vocabulary knowledge through lexical inferencing strategy is that if texts are drawn from content subjects, then the tendency might be to lose focus of the objectives of the lesson, and dwell too much on teaching the content to the detriment of the guessing strategy. Integrating disciplines is important but teachers should be aware of the fact that although the students should be in a position to understand and problematise emerging issues contained in the texts read in their lessons, sometimes a clear division should be made between using these texts as tools for developing the guessing strategy, as opposed to developing or teaching content. Teachers should also make students see that the way words are interpreted is significantly influenced by the context in which they occur.

CONCLUSION

Findings from this study have shown that senior secondary school students in Botswana know too few words (Moumakwa 2002) of English to be able to mean, perceive, interpret, raise questions and process information and derive meanings about the nature, significance and implications of various issues and contexts as espoused by different official documents that recognize the importance of English as a language of wider communication. Hence learning in this language does not appear to prepare learners to; develop their attitudes and behavioural patterns in interacting with the environment in a manner that is protective, preserving and nurturing; to acquire attitudes and values, develop basic skills and understanding to allow for execution of

rights and responsibilities as good citizens of Botswana and the world (Republic of Botswana 1996). This is because these students are taught in or through a language that is foreign and for which most of them do not have access because of their limited vocabularies. Mere exposure to English is not adequate for students to acquire the vocabulary they need in order to read to learn. The ability to read the written word with comprehension manifests both lexical and linguistic competence. Hence students should be taught effective reading strategies well. In this context, and in view of the fact that English is often defined as a language of wider communication, learning, study and work in which students should participate as L2 learners, unless the challenge to comprehend written texts through inferencing meanings of unknown words from context is addressed, students will not benefit from English as an access language in technology and information services, facilitating the acquisition, creation and documentation of knowledge. Hence one can say that at present, instead of the teaching and learning of English preparing senior secondary school students to participate in the development of their country once they join their communities, the school experience is somewhat a psychologically, cognitively and educationally depriving situation. This means that the objectives mentioned elsewhere in this paper as espoused by the syllabus remain an ideal.

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