Readability: A Major Issue in Language Learning
A Case Study

Muhammad Asim Mahmood, M.Phil.
Rashid Mahmood, M.Phil.
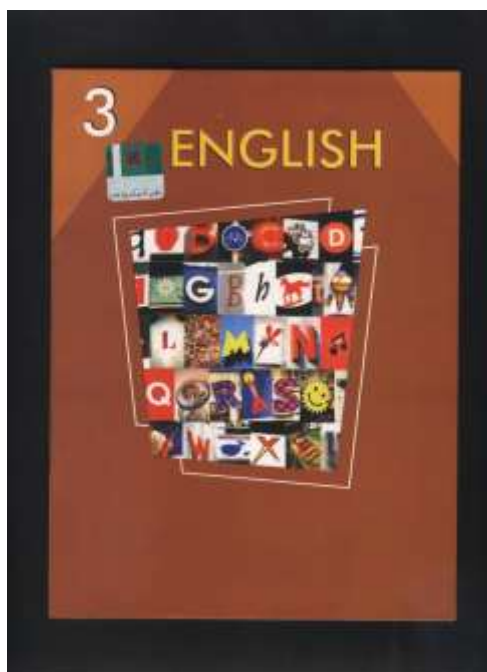
Abstract

Textbook plays a vital role in the successful working of any language programme. Textbooks

must be carefully planned. Linguistic and psychological principles must be applied for attaining good results. The present research aimed to make a corpus based evaluation of the textbook of English for class 3, used in the state-run primary schools to find out the reasons of the learners' inability to comprehend the text and their failure in the acquisition of English language. The yardstick applied to evaluate the text is the reading age of the text, and the level of difficulty of the text - lexical difficulty, determined by the length of sentence, number of new vocabulary items introduced in the book, and the number of syllables. The research proved that the book is well beyond the reading age and level of the students.

Introduction

Any organized teaching-learning situation can be basically construed as consisting of a specific curriculum which, in turn, would include the syllabus, the instructional materials and the transactional strategies. The ultimate efficacy of the learning situation would thus be dependent to a large extent on the relevance of each of these components in the context of the learner and the learning outcomes (Brumfit, 1984).

In the national context of Pakistan today (and all of South Asia), the significance of an appropriate curriculum becomes even more critical in view of the efforts towards universal primary education wherein the diversity of students' needs will inevitably become still greater and so will the need to adapt educational approaches to match curriculum, instruction and learner.

In the Pakistani situation (and all of South Asia), at the primary stage the textbook continues to be the most essential, in majority of cases the only aid in the hands of the teacher and the learner through which the given curriculum is transacted (Mahmood, 2001). This situation consequently places a heavy responsibility on the quality of the textbook for ensuring effective teaching-learning interactions and outcomes. For any instructional material to be effective, it has to be necessarily planned keeping in view the requirements of the learners particularly with reference to their age, their educational and cultural background, their immediate environment as well as their proficiency in the language which is the medium of instruction.

A large number of textbooks are being prepared in Pakistan every year, both at the Federal level and in the different provinces. The effectiveness of these textbooks is often restricted because of a lack of parity between the skill levels required by the textbooks and those available with the students (Mahmood, 2001). There is a dearth of research input or base to facilitate informed decisions regarding appropriateness and sequencing of content to match the linguistic competence of the target group (Mueen, 1992).

From the point of view of the quality of a textbook, its level of readability becomes a critical factor which could help or hamper the understanding or learning by the learner depending on the extent of match/mismatch between the linguistic competences demanded by the text and that available with the learner. There is an imperative need, therefore, for an in-depth corpus based study of the existing textbooks.

Readability

Readability has been defined as, the sum total of all those elements within a given piece of printed material that affects the success; a group of readers have with it. The success is the extent to which they understand it, read it at an optimum speed and find it interesting (Dale and Chall, 1949).

It could thus encompass several quantifiable and non-quantifiable dimensions including legibility of print, illustrations and colour, vocabulary, conceptual difficulty, syntax, text organisation, text redundancy, etc. For the purpose of this study, however, considering its limited scope and focus, readability has been considered in terms of Vocabulary, Conceptual difficulty and Syntax.

There are many ways of measuring the readability of a textbook. Four of them have been applied in this research, to determine, the reading age of the book, and the level of difficulty for the learners. The reasons for choosing these formulas specifically are:

1) "Fry' s Readability Graph" devised by Edward Fry (1977) is specifically for use with ESL texts (English as a second language) and is suitable for all ages from infant to upper secondary.

2) Power-Summer Kearl formula developed by Power, et.al.(1958) is the only formula suitable for primary age books.

3) "Flesh-Kincaid formula" developed by Kincaid, et.al. (1975) is a standard readability formula used by the US Government Department of Defense.

4) "McLaughlin's 'SMOG' Formula" devised by McLaughlin(1969), gives higher values than the other formulae because McLaughlin wanted it to predict the necessary level for 100% comprehension of the text.

How Much New Vocabulary?

The purpose of education is to enhance the knowledge of the learners. This is to be done through the introduction of new items in the textbook. There is difference of opinion, as how much new items should be introduced at one particular level. Language items, which are used frequently, should be introduced in the beginning and the less frequent, gradually at a later stage.

Different frequency lists are prepared by the linguists. One of the more widely known word-counts is the "General Service List of English Words" compiled and edited by West (1953), compiling 2000 most commonly used words in English. Later research found that 80% of the language used by the native speakers is covered by the first 1000 words.

The increase in vocabulary should be gradual, so that there may be a natural flow of language and vocabulary from one class to the other. The vocabulary items once used must be repeated

for reinforcement and revision (Low, 1989).

Gairns and Redman (1995) suggested that there should not be more than 7 to 8 new items in a lesson that also is for the native speaker of language. Carter and McCarthy (1988) have recommended 2% new/ unknown words in a lesson. If the text is full of new / unknown words it would become difficult for the young learners and they will soon be disappointed. So at the primary level, the number of new and unknown vocabulary items should be as low as possible. This will give confidence to the young language learners.

Structural Difficulty

Readability is not a matter only of vocabulary. Structural difficulty is another factor in this regard. It can be assessed by readability index. New grammatical forms may cause problems.

One of the major causes of structural difficulty at the primary level and beyond is sentence length and complexity, which can make relationships between the various pairs of the text difficult for the reader to sort out. The shorter, the sentence, near to the basic sentence structure, the better, the comprehension of language would be (Johnson: 1982).

While writing textbooks for the second language learners, one thing must be kept in mind that pupils prefer to read below their reading level. Research by Klare (1985) shows that they retain more in these circumstances. "For a pupil to read independently, the reading level of the text should be two years below the pupils reading level" Klare (1985). Klare also found that if there is little motivation, as in the case under study, differences in readability affect the student's comprehension even more strongly.

Textbook of English for Class 3 in Punjab, Pakistan

The reading age of the textbook for class 3 has been determined by using four of the famous readability formulas. The criterion for determining the results varies from one formula to the other. The results are given as under;

A) ''Fry's Readability Graph"

Average number of sentences per 100 words = y = 9
Average number of syllables per 100 words =x = 132

Fry Graph for estimating Reading Ages (grade level)
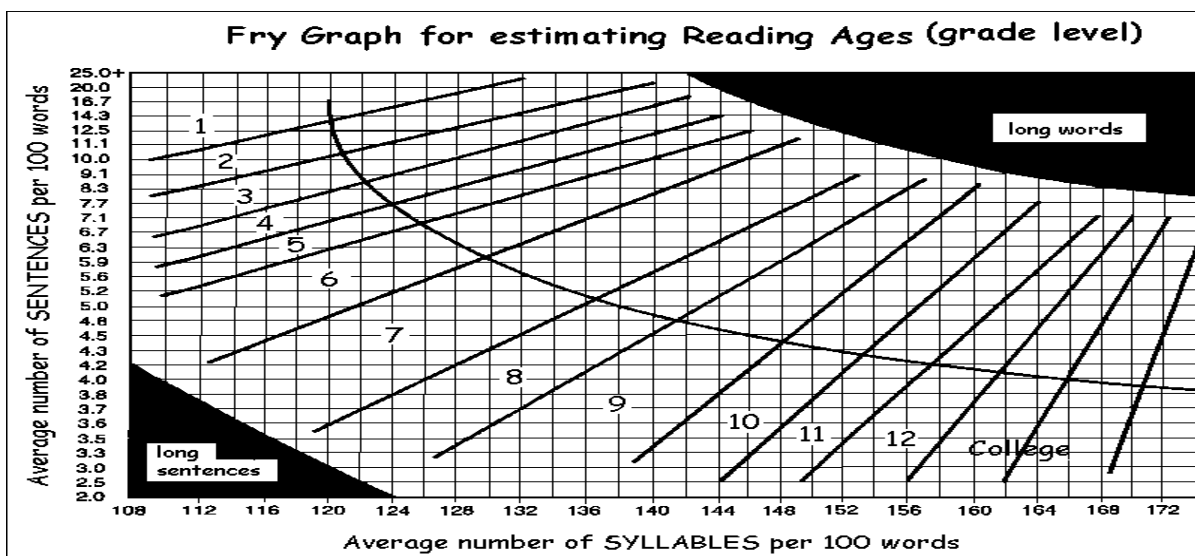
According to Fry's graph the reading age of the book is about 8 years.

The graph shows that the vocabulary used in the textbook is more difficult.

B) "Power-Summer Kearl Formula"

Average sentence length = L = 9
Number of syllables per 100 words = N = 132
Grade level = (L * 0.0778) + (N * 0.0455) — 2.2029
= (9 * 0.0778) + (132* 0.0455) — 2.2029   *
= (0.7002) + (6.006) — 2.2029
= 6.7062 — 2.2029   '
Grade level = 4.5033
Reading age = (L* 0.0778) + (N * 0.0455) + 2.7971
- 6.7062 + 2.7971
Reading age = 9.5033

C) "Flesh-Kincaid Formula"

Average sentence length = L = 9 words Average number of syllables per word = N = 1.32
Grade level = (L * 0.39) + (N * 11.8) — 15.59
= (9 * 0.039) + (1.32 * 11.8) — 15.59
= 3.12 + 15.546-15.59 Grade level = 3.076 Reading age = (L* 0.39) + (N * 11.8) — 10.59
= 3.12+15.546-10.59 Reading age = 8.076

D) "McLaughlin's 'SMOG' Formula"

Three samples, of ten consecutive sentences each, from the book were collected.

Total number of sentences collected = 30
Number of words with 3 or more syllables = N = 11
Grade level = (square root of N) + 3
   = 3.3166 + 3
Grade level =6.3166
Reading age= (square root of IN) + 8 years
   =3.3166 + 8
Reading age = 11.3166

Another method for finding grade level by Smog formula is to look up the approximate grade level on the SMOG Conversion Table:

SMOG Conversion Table

Total Word Count	Polysyllabic	Approximate Grade Level (+1.5 Grades)
1-6		5
7-12		6
13-20		7
21-30		8
31-42		9
43-56		10
57-72		11
73-90		12
91-110		13
111-132		14
133-156		15
157-182		16
183-210		17
211-240		18

According to this table the approximate grade of the book is 6.

The data is collected in the form of tables and is discussed here.

Table no. 1

Particulars of book 3		
1	Pages	46
2	Lessons	20
3	Pictures	92
4	Sentences	543
5	Words	3374
6	Exercises	10
7	Poems.	05

Table no.2   Number of words per sentence

Number of words per sentence		
1—3	213	6.3%
4—6	1313	38.9%
7—9	1071	31.7%
10—12	393	11.6%
12—15	231	6.8%
16-18	66	02%
19-21	40	1.2%
27	47	1.4%

Table no.3   Progression of Vocabulary from Book 1 to 3

Sr#	POS	B1	B2	B2	B3	B3
		New	Repeat	New	Repeat	New
1	Proper noun	02	—	43	09	20
2.	Common noun	60	34	152	61	193
3	Collective noun		—	01	01	—
4	Pronoun		—	16	12	11
5	Verb		--	51	14	130
6	Helping verb		—	04	03	13
7	Article		—	50	03	—
8	Adjective		—	07	12	58
9	Adverb		—	09	04	16
10	Preposition		—	07	05	12
11	Conjunction		—	02	01	02
12	interjection		—	01	01	02

Table no.4   Average Sentence Length

Average Sentence Length	Book 2	Book 3
	5 words	9 words

Average number of new words per chapter is = 450/25 = 18
 Percentage of new words = 450/3370 * 100 = 13.35 words per chapter

Results

1. The results show that the book is well beyond the reading age and grade level of the students. The book may be appropriate for class 5 students but by no means appropriate for class three.

2. The load of vocabulary is very heavy. This raises the difficulty level of the book and the students are all the time busy in knowing the new vocabulary. There are about 450 new words introduced in the book.

3. The amount of new vocabulary introduced per chapter is 13%, that is 18 words per chapter against the recommended limit of 2 % or 7 to 8 words per chapter.

4. The average sentence length used in the textbook is 9 words, which is very high against the recommended sentence length for this level that according to Edward Fry is 5 to 7 words per sentence (Fry, 1977).

5. Very little vocabulary is repeated for revision and review.

6. There is a wide gap between book 2 and book 3. The texts require a jump in reading age of four years (or perhaps even more).

7. This book might be suitable for the native speakers of English but, in Pakistan, with the little role and exposure of the learners to the English language, the present book is far from achieving the avowed claims.

Conclusion

The research shows that the book is far above the reading age of the students of class 3. The number of vocabulary items is very large. Introduction of a huge number of new lexical items makes the textbook difficult for the young learners of English as a second language.

The fact must be kept in mind that everything written by native speakers might not be equally good for the second/foreign language learners.

While writing course materials for second language learners, the social conditions, linguistic situation, the needs and reading age of the learners should be considered.

The reading age of the book should be at least one or two year lower than the actual reading age of the students. The word and sentence length should also be according to grade and reading level of the learners.

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Muhammad Asim Mahmood, M.Phil.
Assistant Professor
Government College University
Faisalabad 38000
Pakistan
masimrai@gmail.com

Rashid Mahmood, M.Phil.
Assistant Professor
Government College University
Faisalabad 38000
Pakistan
ch.raashidmahmood@gmail.com