

Unit 8 : Judging the reading level

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Introduction

Much of an editor's time is spent working on language, omitting, changing and adding words. Attention to language can turn an unattractive, difficult text into a clear, easy-to-read one. How can we tell that a text is too difficult? Unit 8 explains how to assess reading levels. What makes a text difficult or easy? In Unit 9 we shall consider changes to make in both language and style.

If you ask several teachers to assess the level of a text, you will get several different answers. We are all unreliable judges of the difficulty of written material. Readability tests can help us assess texts.

When you have completed this unit, you will be able to:

- * prepare, administer and score two kinds of readability test;
- * assess the significance of the results;
- * describe the functions of each test;
- * explain the uses and limitations of readability tests.

The unit introduces two tests, the Cloze procedure and the Fog Index. Many others are available, which you may already know, and prefer to use. All have limitations as well as uses, and these are discussed. The unit will take about 1 hour, and the assignment 45 minutes. Information about the educational background of your students will be helpful for the assignment.

Units 8 and 9 refer to the English language throughout. If you edit material in another language, try to work out how each point relates to that language. If you edit material in English for people who use it as a second language, note that, wherever a potential difficulty occurs, it will be more acute for second-language readers.

1. Difficult text

When we have difficulty with reading, we tend to blame ourselves for not concentrating. Very often, the fault is actually in the text itself. The exercise that follows will demonstrate this.

EXERCISE 1

The passage below is printed with several words missing. Write one word only in each of the spaces in the text. Guess the word that you think is in the complete text. Read the passage as often as you like and spend as long as you want on the exercise. When you have done as much as you can, look at the answers and count how many you have right.

What kind of distance-teaching institution do we need?

The strengths and weaknesses of distance teaching, which we have discussed above, to a large extent determine the nature of an institution set up to teach at a distance. It must find ways (1) combining the three approaches (2) print, broadcasting and occasional (3) -to-face tuition, which (4) its staple methods, into (5) effective teaching system. It (6) comes into being in (7) to provide for rapid (8) of educational opportunity at (9) cost. As far as (10) , it has to achieve (11) by using existing media, (12) and personnel. Its students (13) usually scattered and part-(14) Often its teachers - its (15) , its tutors, its broadcasters - (16) part-time too. It (17) its students through the (18) -time use of other (19)

For this reason an (20) feature of most distance-(21) institutions is their organised (22) with other organisations: broadcasting (23) , government departments, schools, colleges, (24) services. These can vary from (25) dependency on others, through (26) shared use of resources, (27) the provision of specified (28) to them. But very (29) distance-teaching agencies are (30) self-contained. Decisions about (31) degree of interdependence or (32) that they maintain in (33) various aspects of their (34) are vital for their (35) , and must be constantly (36)

Linked to these decisions (37) others about the balance (38) the employment of full-(39) and part-time staff (40) write and teach the (41) programmes. There are economic (42) sometimes quality advantages to (43) use of part-timers; (44) are control and speed (45) in favour of full-(46) The decisions any institution (47) vary from programme to (48) , from department to department (49) from time to time. They are - or should be - made in the light of educational quality, resources available and expected student numbers.

- | | |
|--------------------|-------------------|
| 1. of | 2. of |
| 3. face | 4. are |
| 5. an | 6. usually |
| 7. order | 8. expansion |
| 9. minimum | 10. possible |
| 11. this | 12. facilities |
| 13. are | 14. time |
| 15. writers | 16. are |
| 17. reaches | 18. part |
| 19. institutions | 20. important |
| 21. teaching | 22. relationships |
| 23. bodies | 24. extension |
| 25. total | 26. the |
| 27. to | 28. services |
| 29. few | 30. wholly |
| 31. the | 32. independence |
| 33. the | 34. work |
| 35. administrators | 36. reviewed |
| 37. are | 38. between |
| 39. time | 40. to |
| 41. institution's | 42. and |
| 43. the | 44. there |
| 45. arguments | 46. timers |
| 47. takes | 48. programme |
| 49. and | |

Comment

Did you find that exercise difficult? Most people find it very demanding. I will explain your score shortly. The test you have just done is called a Cloze test. It is a reliable way of predicting whether readers will understand the complete text from which extracts are taken. It can be used in other languages besides English.

The test works on a simple principle. In a piece of text, it is groups of words that convey the meaning. When we read, we actually look at words in groups rather than individually. If some words are left out, we can often guess what they are from the context, from the meaning of the rest of the sentence. In a Cloze test, words are omitted on a regular basis. If the passage is one which, when written in full, the reader could understand easily, then there is a high chance he or she will guess the correct words. If the language of the passage is too difficult, the meaning will elude the reader, and he or she will make numerous mistakes.

Your score in the exercise was probably over 50%. (Do not worry if you have a lower score; sometimes an individual gets a freak score on a single test.) What does that score mean? It indicates that you would read the complete text with understanding.

I made my prediction of your score for two reasons. First, I selected a passage whose subject matter was likely to interest you. (It is from IEC's manual The Administration of Distance Teaching Institutions). Second, I have done a further analysis of the text which suggests that it is only suitable for skilled readers. (I shall explain this analysis later.) So I deliberately selected a text with a reading level you would find manageable but not too easy.

This is the scoring system:

- over 50% - reader understands
- 35 - 50% - reader needs some help (sometimes called 'instructional level')
- under 35% - frustration

These are rough and ready measures, but quite adequate. Nobody would expect to guess every word correctly, but if a reader has over half right, he or she is struggling but with some help will make sense of it. With less than a third right, the passage is too difficult and the reader cannot make any good sense of it.

2. Levels of difficulty

I suggested that the text in Exercise 1 was only suitable for a skilled reader. I was implying the text was difficult. What makes it difficult? In English, there are two factors which have a profound effect: vocabulary and sentence structure. The more uncommon words and complex sentences there are in a passage, the more difficult it will be to understand. The passage in the exercise contains several long words; about one in five of the words is three or more syllables in length. The sentences are complex, too; most of them are about twenty words long.

The difficulty lies within the passage. People, however, vary in their ability to deal with difficult passages. Those who have reached an advanced level in their studies can usually make sense of difficult texts, although they may have to concentrate hard. Those with less experience of study may have a restricted vocabulary and lack the skill to follow complicated syntax. Poor readers will be quite unable to follow the meaning of a difficult text.

We therefore need to match the level of difficulty of texts to the reading ability of our students. To do this we need some way of classifying levels of text and levels of readers. This is rather difficult as most existing scales have been developed for schoolchildren, while most of you will be working with adults. I suggest a classification below which is not perfect, but has been found useful by editors and writers I have worked with.

level of text	level of reader
1. very easy	poor (literate, but with very little primary schooling, or its equivalent)
2. easy	average (has several years primary schooling, or its equivalent)
3. quite difficult	good (has studied at secondary level or its equivalent)
4. difficult	advanced (has some post-secondary or higher education or its equivalent)

Can you imagine what it feels like to be an average reader struggling with a difficult text? It is important to make sure that the level of the text matches the level of the student. Cloze tests are a useful way to

discover if you have a good match, and we will now discuss when and how you could use them.

3. When to use a Cloze test

There are three ways you may find Cloze tests useful.

- a. General information: your institution may lack information about the reading abilities of its students, and research using Cloze tests can fill this gap. Select several passages at different levels and grade them for difficulty (see section 8 below). Identify a number of students, randomly selected so they are representative of your student body. Each student completes one test, an equal number completing tests at each level. An analysis of the results should suggest the level that is most suitable for your students.
- b. Assessing a course: you may want to find out whether a particular course - a new one or an existing one - is at a suitable reading level. You can ask students to complete tests on a number of passages. You will probably only use Cloze tests for this purpose when there is some doubt about a course, as it would be too laborious to conduct the tests as a matter of routine.
- c. Training writers: you can use a Cloze test to demonstrate to a writer that students will have reading difficulties. Writers seldom believe that what they have written is too difficult, and the results of Cloze tests can be a startling revelation.

4. How to prepare and use a Cloze test

First, select three passages from different parts of the text. The passages should be about 250 words long and should, as far as possible, be continuous prose. Each passage should be able to stand on its own, and the subject of it should be reasonably familiar and interesting to the readers. Avoid passages that contain many proper names.

Give each passage a title. Then delete words regularly, leaving the first and last sentences complete. Count words joined by a hyphen as two words. Surprisingly, it does not matter exactly how often you make the deletions, but every fifth word is a common choice. Delete every seventh word for second-language readers. Whatever you choose, the deletions must be regular.

Have the passage retyped with equal spaces where a word is missing. Make sure the spaces are big enough to accommodate handwriting. Give each space a number, to make checking easy.

Find several students to do the test. They should be similar in background, education and interests to your target audience. You need about 10 readers for each passage. Give the instructions for the test very carefully. Emphasise that you are testing the passage and not the readers. Explain that they must write one, and only one, word in each space, and point out that they can take as long as they like.

I have already explained how to score. You may have wondered why I only allowed the same word as that in the original and no synonyms. It makes marking quicker, and avoids arguments over whether one word is identical in meaning to another. Allowing synonyms makes very little difference to

the score. If you prefer, you may allow them in your tests.

The Cloze test can be used in other languages. If you want to use it, you will have to seek local advice on the recommended rate of deletions.

5. The limits of its usefulness

A Cloze test provides reliable guidance on whether students will follow the meaning of a text. There are, however, several drawbacks:

- a. You need to find suitable readers to do the test. This can be difficult and time-consuming.
- b. Preparing, administering and scoring the tests involves a good deal of work. Sometimes that work is out of proportion with the value of the results.
- c. Students may get discouraged if they find a test difficult. There is a risk that such students will abandon their studies.

These drawbacks should not deter you from using Cloze tests. They suggest, however, that we also need tests of a different kind which do not display these disadvantages. The next sections of the unit introduce one such test.

6. Applying a readability formula

A readability formula allows you to calculate a score which indicates the readability level of a text.

A formula checks text in a mechanical way. It does not offer any guarantee that text will be understood, but it gives rough and ready guidance on whether it is at the right level.

Many formulae have been developed and several are in common use. This section introduces the Fog Index, but if you already know and use a different formula, there is no need to change. The Fog Index is no more reliable than several other formulae; I prefer it because it is remarkably quick to apply. The version I use contains some adaptations and is called the Modified Fog Index (MFI for short).

Like most other formulae, the MFI looks at the crucial variables in English vocabulary and sentence structure. In order to measure the difficulty of vocabulary, we count all words of three or more syllables. Most uncommon words in English are long, so this is good enough as a measure. In order to estimate the difficulty of sentence structure, we find the average length of sentences in a passage. Long sentences are likely to be more complex and difficult than short ones.

We shall now calculate the readability score of the text you used for the Cloze test.

EXERCISE 2

Here is the text. You do not even need to read it through. Follow the instructions below.

The strengths and weaknesses of distance teaching, which we have discussed above, to a large extent determine the nature of an institution set up to teach at a distance. It must find ways of combining the three approaches of print, broadcasting and occasional face-to-face tuition, which are its staple methods, into an effective teaching system. It usually comes into being in order to provide for rapid expansion of educational opportunity at minimum cost. As far as possible, it has to achieve this by using existing media, facilities and personnel. Its students are usually scattered and part-time. Often its teachers - its writers, its tutors, its broadcasters - are part-time too. It reaches its students through the part-time use of other institutions.

1. Count 100 words from the beginning of the passage. Count words joined by a hyphen as two words. Put a vertical line after the 100th word to mark it.

2. Find the average length of complete sentences in the text. The quickest way to do this is as follows:

a. Find the last full stop before the 100th word. How many complete sentences occur up to this full stop?

b. Count the number of words between the full stop and the 100th word. Subtract this number from 100, and you will know the total words in complete sentences.

c. Divide this total by the total number of complete sentences, and you will have average sentence length.

3. Find the total number of words of three or more syllables. Do this by underlining each word and then counting the total, up to the 100th word. We will call these 'difficult words'.

Write the total here: _____

4. Now calculate the formula:

$$\frac{2 (\text{ASL} + \text{DW})}{5} + 5$$

Where ASL = average sentence length
and DW = total number of difficult words.

Write the answer here: _____

This is the readability score.

(10 minutes)

Answer

The strengths and weaknesses of distance teaching, which we have discussed above, to a large extent determine the nature of an institution set up to teach at a distance. It must find ways of combining the three approaches of print, broadcasting and occasional face-to-face tuition, which are its staple methods, into an effective teaching system. It usually comes into being in order to provide for rapid expansion of educational opportunity at minimum cost. As far as possible, it has to achieve this by using existing media, facilities and personnel. Its students are usually scattered and part-time. Often | its teachers - its writers, its tutors, its broadcasters - are part-time too. It reaches its students through the part-time use of other institutions.

1. The 100th word is 'Often'.

2. a. complete sentences : 5

b. total words in complete sentences : 99

c. average sentence length : $99/5 = 19.8$

3. Words of 3 or more syllables : 20

$$4. \quad \frac{2(19.8 + 20)}{5} + 5$$

$$= \frac{2(39.8)}{5} + 5$$

$$= \frac{79.6}{5} + 5$$

$$= 15.9 + 5$$

$$= 20.9 \text{ This is the readability score.}$$

Comment

If your answer is slightly different from mine, do not worry. We shall see shortly the reasons for this. If it was very wrong, check your work against my answer carefully. I have set down each stage in my calculation to help you. Once you understand how to do this test, it will take you only 5 minutes each time.

7. What does the score mean?

You will generally arrive at a score between 10 and 30. You can interpret the scores as follows, using the levels defined in section 2.

12 and under	:	1	very easy
13-16	:	2	easy
17-20	:	3	quite difficult
over 20	:	4	difficult

You will see now that our text is a difficult one.

The score on one passage alone is, however, of doubtful value. To get a reasonably reliable score, you should check at least three passages from different parts of a text, and find the average score. The figure you arrive at gives you rough guidance on the level. As there are certain difficulties in counting, there are often two or three slightly different possible scores for a passage. But, more importantly, the score only means that a text is likely to be at the right level for a group of students, not that it definitely is. It is only a mechanical measure and does not consider whether students will be able to follow the meaning. Provided that you are aware of these limitations, you will find the formula useful.

8. When to use the Modified Fog Index

You can use the formula frequently during the development of a course, and you can also show the writer how to use it. It will quickly indicate whether a text is unsuitably difficult, and will provide a check that a writer is sustaining a desired level. You can also use the test to establish the level of any passages you use for Cloze testing.

The test may not be of much use to you in languages other than English, although I have heard of cases where it has been used with apparently satisfactory results.

9. How to apply the Modified Fog Index

You already know the basic procedure, but there are a few minor points to consider.

a. counting words : count abbreviations as a single word; count numbers written in figures such as 2000, as a single word; count a repeated word each time it occurs.

b. sentence length : a sentence divided into parts by a colon (:) or semi-colon (;) remains a single sentence and, however long, should be counted as one sentence.

c. difficult words : if in doubt about the number of syllables, say the word to yourself. Pronunciation varies, so scores inevitably vary slightly. Most people say 'different' as two syllables, not three. I counted 'media' in our passage as three syllables. You might have it as two. This makes very little difference to the score.

d. There are several versions of the Fog Index. If you know and prefer another version, use it. Do not, however, mix together different versions.

10. How useful are readability tests?

Since it is unsatisfactory to guess the reading level of texts, we need a

reliable means of diagnosis. The Cloze test is the most reliable, because it checks whether students can understand a text. It is, however, of limited use in a busy course production department as it is rather laborious to apply. Formulae are less reliable as they provide no check on understanding, but they are quick and easy to apply and therefore worth using judiciously.

There is one problem that neither kind of test addresses. Distance-teaching texts contain much that is not continuous prose, and readability tests can only be used with prose. We need further checks on the language of lists, instructions, exercises, and on the clarity of presentation.

Finally, tests indicate whether a text is at about the right level or at the wrong level. If the level is wrong, the test does not tell you what is wrong with the language, nor what to do about it. That is the subject of our next unit.

Summary

This unit has shown you how to use a Cloze test and the Modified Fog Index to assess whether texts are at the right reading level for your students.

ASSIGNMENT G

This is a short assignment, to provide more practice in using the Modified Fog Index. Simply select three passages from your own course units and calculate the readability score. This should not take you more than three-quarters of an hour. Do the scores you get indicate that the texts are easy enough for your students? Jot down a few comments on the scores; you will use these in your next assignment.