Getting information from advanced reading tests

Two kinds of tests

Here is a short reading text followed by two kinds of tests.

A major construction problem is the diversion of the river to enable the foundations for the dam to be excavated and the concrete placed. Since it would be uneconomical to construct diversion works and coffer-dams to divert the full flood discharge of the river, the diversion has been divided into several distinct operations. The critical period will be during the low water season, because, as the river falls, the cofferdam on the left bank will be demolished where it crosses the diversion channel, allowing water to flow through the temporary openings in the dam wall. This having been done, a rockfill cofferdam will be constructed across the main river channel downstream of the main site. This will cause the water at the dam site to remain quiescent by preventing any flow in this part of the main river channel and directing water through the diversion tunnel.

1 The diversion has been divided into several distinct operations because
   a. the full flood of the river must be diverted.
   b. the foundations have to be excavated.
   c. a complete diversion is too expensive.
   d. it occurs during a critical period.

2 The rockfill cofferdam
   a. will direct the flow through the diversion tunnel.
   b. is on the main site.
   c. will decrease the flow at the dam site.
   d. is on the left bank.

3 *This* in line 5 refers to

4 *This* in line 6 refers to

5 *This* in line 7 refers to

The multiple-choice test tells us how much information the reader got from the passage. We can use the results of this test to classify our learners into groups (Pass/Fail) or rank them on a scale (A, B, C, . . .).

The reference word test, on the other hand, can provide us with several kinds of information. It can give us information about language learning in general. For example, in a class of 40 learners, 5 did not answer item 3 correctly. Twenty-two did not answer item 4 correctly. If we compare the two items, we find that *it* in item 3 refers to a noun group *(the cofferdam on the left bank)* whereas *this* in item 4 refers to a larger unit *(the cofferdam on the left bank will be demolished)*.

(from Adamson & Lowe, 1971, pp. 106-107)

The test shows that reference words referring to a noun group are easier than those referring to a clause.

The reference word test can also give us information about individual learners. If a learner does not answer item 4 and similar items correctly, we know that that learner needs help or extra practice with the reference words *this*, *that*, and *it* where they refer to a clause.

We can contrast the two kinds of tests by thinking of learning as a journey. The first kind of test, exemplified by the multiple-choice items, tells us how far the learners have come along the road. The second kind of test, exemplified by the reference word items, tells us what the road is like, what difficulties can be found on the journey, and how learners have coped with these difficulties.

There is another important difference between these two kinds of tests. Good multiple-choice items, comprehension questions, and true/false statements are not easy to make. Items like the reference word items however are easy to make because the items can follow a fixed formula like

*This* in line 6 refers to

or

What does *this* in line 6 refer to?

The only difficulties involved in making such items are knowing what language features to test and finding examples of these features in the text. In the rest of this article we will look at useful features to test to gain information about reading, and we will look at possible types of items."
Paul Nation

Types of test items: language features

Comprehension questions direct attention to the message of a text which is peculiar to that text. This makes it difficult for the teacher or the learners to get information about points that need further attention in order to make it easier to read other texts. The items described in this section, however, test language features that are important for the understanding of almost every text. Performance on these items can be used as a basis for planning further teaching.

1 Noun groups

Much of the complexity at the sentence level is caused by noun groups containing relative clauses or reduced relative clauses. Here are two sentences from an unsimplified text. The noun groups are in brackets. Notice how the relative clauses and reduced relative clauses complicate what is basically a simple sentence pattern.

(The advent of jet and rocket propulsion, and of nuclear reactors, has shown that (the materials which previously served for constructional purposes) are no longer wholly satisfactory for (the manufacture of equipment on which the efficient functioning of these new sources of power depends). (An industrial demand) has arisen for (entire new metals which were merely laboratory curiosities a few years ago, or which, in the case of the transuranic elements produced by nuclear fission, never before existed within the history of Man.)

(Adamson & Lowe, 1971, p. 25)

There are various levels of difficulty of relative clauses, and test items will reveal these. Briefly, the most difficult relative clauses are those that interrupt the normal subject-verb (object) pattern. So a relative clause which is attached to the subject of a sentence causes more difficulty for a reader than one attached to the object. In addition, relative clauses with the object of the relative clause replaced by the *wh* word are more difficult than those with the subject of the relative clause replaced by the *wh* word. That is, *The man who I saw* . . . . . is more difficult than *The man who saw me* . . . .

Understanding of complex noun groups can be tested in the following ways.

a. The teacher gives the learners a noun from the text. The learners copy the whole noun group containing the noun. Alternatively the learners can just copy the first two and last two words of the noun group in the text.

b. The teacher gives the learners a verb from the text and they copy the subject and object of the verb from the text. Here are items based on the examples of noun groups given above.

are no longer satisfactory, depends on

2 Co-ordination

The following sentence can be divided into three parts.

1 The main cables of all modern suspension bridges are fixed to the tower tops, and subject
2 the towers to a very heavy vertical load almost the total weight of the bridge.

Parts 2 and 3 are parallel to each other and they are both connected to part 1. A problem in reading such a sentence is selecting the relationship between part 1 and part 3. This can be tested in the following ways.

a. The teacher instructs the learners to remove and, and rewrite the sentence as two sentences.

b. If part 3 begins with a verb, the teacher gives the learners the verb and they copy the subject and object of the verb from the text.

subject

3 Reference words

This, that and it are the most difficult reference words because they can refer to items other than nouns or noun groups. There are however other factors which affect the difficulty of reference words. These include whether the reference word follows or precedes the item referred to, whether the item referred to is in a different sentence from the reference word or not, and whether there are other grammatically (although not semantically) possible items between the reference word and the item referred to. Barnitz (1980) found that the most difficult reference items were those that referred to a noun in the same sentence and followed the item referred to. Barnitz tried to make a ranking of the difficulty of different types of reference items. When such a ranking has been made, teachers can use tests of reference items to see how far a particular learner has gone on the way to mastering the text. Then suitable help and practice can be provided. Teachers can also use the tests described in this article to make their own rankings of difficulty. Examples of reference word items have already been given.
4 Verbs

Verbs typically enter into a relationship with a subject, and an object, adjunct, or complement. In a sentence like *The committee reached a decision*, the subject and object of the verb *reach* are quite apparent. These relationships are less apparent in a sentence like *After much deliberation by the committee a decision was finally reached*. Sometimes the relationships are even less apparent when the verb has become a noun. For example, in the following sentence, some learners will have difficulty in deciding what uses what and what competes with what.

Sowing the orchard to grass will result in a temporary check to the vigour of the trees, due principally to the use of the available nitrogen by the grass and competition by the sword for the moisture.

(NZDA, 1974, p. 50)

We have seen how the What does what? item can be used to test learners’ understanding of noun groups and co-ordination. It is the most efficient way of testing whether learners see the subject verb (object/complement) relationship in different parts of a sentence. Here is a sample item.

**The rules to follow when answering a What does what? item are:**

(i) Always make the verb active – not passive.

(ii) Copy only the headwords of the subject and object noun groups. That is, give short answers.

(iii) Do not use reference words when answering but answer using the item referred to.

**Types of test items: problem solving strategies**

In order to succeed in independent reading, learners need to be able to cope with unknown words and complicated sentences. It is not enough to know that a learner cannot cope with these difficulties. If help is to be given, the teacher must know where the learner is going wrong.

1 Words in context

Here is an item to test how well learners have mastered the strategy of guessing unknown words from context (Long & Nation, 1980).

If the home orchard area is small, the problem of the large size to which most fruit trees grow can be met by planting dwarf or semi-dwarf trees . . . . They can be grown conveniently along the edge of the vegetable garden without encroaching on it.

(NZDA, 1974, p. 51)

**encroaching**

a. What part of speech is it?

b. What does not encroach on what?

c. Which word could you put between the two sentences – but, because or then?

d. What does encroach mean in the text?

If the learners’ guess at d is a different part of speech from a then they need to make a basic change in their strategy. Their guess must be the same part of speech as the unknown word. b tests whether the learners notice the immediate grammatical relationships. c tests the learners’ appreciation of the wider context. A breakdown at any one of these points shows where further practice is needed.

2 Simplifying sentences

The steps in this strategy consist of items mentioned in the section on language features, namely

a. reference

b. co-ordination, and

c. noun groups.

Here is a sample item.

Simplify the following sentence by replacing all reference words by the items referred to, by removing and, but, or and rewriting as different sentences, and by removing the parts of the noun groups that follow the main noun in the group (relative and reduced relative clauses).

The legs of the Severn towers, on the other hand, have no cells, and the visible outer plating, reinforced by internal longitudinal stiffeners, is carrying the whole of the tower load, and surrounds an otherwise open space, save for the diaphragms, ladders and lifts.

(Adamson & Lowe, 1971, p. 97)

Here is the answer.

The legs of the Severn towers, on the other hand, have no cells. The visible outer plating is carrying the whole of the tower load. The visible outer plating surrounds an otherwise open space, save for the diaphragms, ladders and lifts.

This strategy is used whenever the learners meet a sentence that they cannot understand in spite of knowing the vocabulary (Nation, 1979; Long & Nation, 1980).

Validity

The validity of the test items described in this
article depends on whether the items test real problems in advanced reading and whether the strategies work.

There is considerable evidence that the items test real problems. Most of the evidence however comes from studies of children learning their mother tongue. Researchers have found that children learn items like reference words, or noun groups, in a particular order. This order seems to reflect the difficulty of the items. So, children learn relative clauses attached to the object before relative clauses attached to the subject. In addition, comprehension tests reveal that children have more difficulty in interpreting sentences containing a relative clause attached to the subject. The small amount of experimentation done with learners of English as a foreign language supports the findings of first language learning research. But there is need for more research with foreign learners. Teachers can carry out much of this research in their own classroom by combining the use of the test items described in this article with translation checks and individual interviews with learners. Evidence about whether the strategies work can only come from their use. They have been useful in my teaching but teachers should not accept them uncritically. The question of validity should be the concern of all teachers.

Conclusion

The test items described in this article direct attention towards structural features of a reading text and to analytical strategies. There are several reasons for this. Firstly, performance on the items provides the teacher and learners with feedback which can result in appropriate help and practice with features that occur in almost every reading text. Secondly, the items allow teachers to investigate learning. That is, teachers can act as experimenters and develop and validate rankings of learning difficulty of structural features. Through their testing they can gain new insights into language and how it is learned. Thirdly, the items direct attention to language as a system. An important educational goal of language learning is the development of an interest in language for its own sake. An awareness of the system behind language is a step towards this goal.

It needs to be stressed that the items described in this article are not offered as substitutes for comprehension questions. They are useful additional tools which may lead to a greater understanding of learning and a corresponding improvement in teaching.

References


