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A SURVEY OF TEACHER-GENERATED READING COMPREHENSION QUESTIONS: THE CASE OF A DISTRICT-WIDE TRAINING COURSE IN BEIJING

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Introduction

In secondary schools in China, students generally rely on course books to access reading materials. However, anecdotal evidence suggests that some questions in text books do not appear to be very effective, so teachers find themselves either improving on the original questions or developing alternative ones. Teachers also find themselves searching for reading passages in order to supplement course books, using these as the basis for creating further comprehension tasks.

In order to promote the professional development of English teachers in secondary schools, the Beijing Education Committee carried out a one-year teacher training programme in 2013, which covered, amongst a range of topics, the setting of appropriate reading comprehension questions. The teachers' development was evaluated at the end of the programme by means of a survey (see Appendix 2) which asked participants to design reading comprehension tasks based on a given. The first author of this paper was involved in the training, and the later issuing and analysis of the survey. The second author was the project supervisor. This study aims to analyse a representative sample of these reading comprehension tasks to identify what kind of questions were asked.

Overall, this study sought to answer the following research questions:

1. What questions do English teachers in secondary schools in Beijing set when designing reading comprehension tasks?
2. Do the questions asked help students to understand the reading texts?
3. What principles of question design can be developed on the basis of this knowledge (the answers to 1 and 2)?

Of these questions, only the first one is addressed in this paper. Further research is needed to ascertain whether the questions actually help students to understand texts (Question 2), and to draw up guidelines for designing questions (Question 3).

It is hoped that this study will show the value of observing what teachers actually do when devising comprehension questions. Armed with this knowledge, it will be possible to help teachers to further develop the validity of their test items in the future, promoting more positive washback of testing on teaching and learning, and enabling teachers to interrogate their practice more critically (Jones & Saville 2016).

Literature review

This literature review is primarily a means of arriving at a workable model for classifying the reading comprehension tasks that teachers produce. It seeks to juxtapose different "levels" of reading with the types of questions that elicit these levels, so as to suggest an appropriate taxonomical framework for categorising teachers' questions.

Firstly, in regard to the nature of reading itself, we find in much of the literature that the reading process contains two broad procedures: a lower level processes of decoding and higher level processes of constructing mental representations from the text. This is of course a highly generalised and unrefined way of looking at reading, since it is known by both researchers and classroom practitioners that the reading process is much more complex and fluid than this. As Green (2011: 191) notes, the wide range of reading models found in the second language literature suggest that "when reading for different purposes readers may need to engage different cognitive processes, or to balance these processes in different ways". Nonetheless, this binary classification process is helpful in establishing a starting point for our analysis.

In line with this division of reading comprehension into higher order and lower order skills, Kintsch and van Dijk (1978), and Kintsch and Yarbrough (1982), identify two levels of comprehension: the "microprocesses" level, referring to "local phrase-by-phrase understanding", and the "macroprocesses" level, referring to "global understanding". An earlier study by Gray (1960) also retains a distinction between "reading the lines" (the literal meaning of text), reading "between the lines" (inferred

meanings), and “beyond the lines” (readers’ evaluations of text). A further model is that of Kintsch (1988), who divides reading comprehension into three levels: “surface-based level”, “text-based level” and “situation-based level”.

The second strand of our survey concerns reading comprehension questions themselves. From the outset of this research, a crucial assumption has been that comprehension questions strongly influence the processing of texts, and that questions determine how far readers will participate actively when processing texts. What we mean here is that if we want to assess students’ critical thinking, we must actually set questions that elicit criticality: a simple issue of construct validity. According to research, appropriate questions can enable learners to think about their own reading strategies (see King 1989). They also encourage them to think critically, logically and creatively about texts, and to respond to the information and ideas contained therein (Graves, Juel & Graves 2001: 271).

In a relatively early study, Nutall (1982: 128) classified reading questions usefully into four broad categories: yes/no questions, alternative questions, wh-questions and how/why questions. She proposed five types of question based on whether the information needed to answer the question is explicitly stated in the passage, and on the complexity of reader’s mental processes of identifying and synthesising information (p.132-133). Type 1 questions are essentially those that involve literal comprehension, whereby the information is directly available in the text; Types 2, 3 and 4 questions are those that force the reader to think about what the writer has written and how he has written it. Type 5 questions, meanwhile, are those that involve the reader in interacting with the writer, and which ask the reader to formulate actions based on textual evidence (Nutall 1982: 132-133). Item writers/teachers will clearly want to go beyond Type 1, and hopefully reach Type 5 questions at least some of the time.

In other studies, question types have been grouped according to where the information may be found (local/global text level) and how explicit the match is between the prompt and textual information. This has allowed item categories to be set up such as “identifying the main idea”, “locating details” or “making inferences” (van Steensel et al. 2013).

Goldman and Duran (1988) identify five main types of questions, varying in terms of their relation to the text and the types of processing

activities required to answer them. Generally, Type 1, 2 and 3 questions involve the reader in identifying specific elements within a text, but vary in the kind of text processing activities needed to answer. Type 4 questions require students to answer on the basis of bringing different parts of the text together, while Type 5 questions require a level of reasoning that goes beyond the text itself – again the hardest type of question to write well.

A further useful classification is that of Pearson and Johnson (1978), who identify three types of comprehension question. “Textually explicit” questions are those that ask the reader to engage in verbatim recall of parts of the text. “Textually implicit” questions ask the reader to make inferences about the text and integrate ideas within the text. “Scriptally implicit” questions, meanwhile, require the reader to evaluate and interpret by establishing connections between text and background knowledge.

Of the above models, we choose to draw on Pearson and Johnson’s (1978) taxonomy here, primarily because of its ability to capture the dynamic relationship between the information presented in a text and information that has to come from a reader’s store of prior knowledge. We adapt this model here, however, to consider the *likely* or *anticipated* relationship between questions and responses. It is quite possible that a “textually explicit” question could elicit a critical response, while a “scriptally implicit” question could generate a superficial answer: further research will therefore be needed to determine how the interrelationship between prompt and response actually plays out in a real testing situation.

Methodology

This research is quantitative in that it computes the prevalence of certain types of reading comprehension question within a large sample of questions written by teachers. However, it is also situated within a broader, socio-cognitive model of test development which sees this type of evaluation as being of great importance when building a validity argument for tests and items on the basis of evidence (Weir 2005). The data collected is, in essence, a series of small pieces in a wider jigsaw of test validation procedures, tessellating with other aspects of knowledge that we will gain from other sources, especially teachers’ later practice and feedback. An innovative aspect of the research design, for all its partiality, is the way in which data has been scaled down in a way that is representative of the demographics of the participants as a whole.

Table 1. Disproportionate Stratified Sample of Participant Teachers.

| Geographic Region | Population | | Disproportionate Stratified Sample Using Equal Allocation | |
|-------------------|------------|---------|---|---------|
| | Frequency | Percent | Frequency | Percent |
| District 1 | 305 | 6.57 | 3 | 5.88 |
| District 2 | 381 | 8.21 | 3 | 5.88 |
| District 3 | 529 | 11.4 | 3 | 5.88 |
| District 4 | 654 | 14.09 | 3 | 5.88 |
| District 5 | 308 | 6.64 | 3 | 5.88 |
| District 6 | 124 | 2.67 | 3 | 5.88 |
| District 7 | 99 | 2.13 | 3 | 5.88 |
| District 8 | 242 | 5.22 | 3 | 5.88 |
| District 9 | 369 | 7.95 | 3 | 5.88 |
| District 10 | 288 | 6.21 | 3 | 5.88 |
| District 11 | 143 | 3.08 | 3 | 5.88 |
| District 12 | 42 | 0.91 | 3 | 5.88 |
| District 13 | 152 | 3.28 | 3 | 5.88 |
| District 14 | 211 | 4.55 | 3 | 5.88 |
| District 15 | 178 | 3.84 | 3 | 5.88 |
| District 16 | 318 | 6.85 | 3 | 5.88 |
| District 17 | 297 | 6.4 | 3 | 5.88 |
| Total | 4640 | 100 | 51 | 100 |

During the training programme, participants were invited to design reading comprehension activities for the “while-reading” phase of a specified reading text (see Appendix 2). The teacher’s questions were collected and formed the basis for the data analysis. Appropriate ethical considerations were followed in terms of consent, and official, signed approval was granted for the researchers to use the data in question. We were authorised to publish the findings of the research.

The text in question was a 293-word story with an unexpected ending (see Appendix 2), the synopsis of which is as follows:

A lady named Jenny borrowed her neighbour’s car and thought that she had broken the neighbour’s vase in a gift box in the car when the car stopped suddenly. She decided to buy an identical one and substituted the original one without telling her neighbour. However, when she called her neighbour with the intention of explaining what had happened, her neighbour told her that the broken vase was, in fact, supposed to be returned to the store because it was already broken before she borrowed the car.

The narrative genre was selected for this task because in secondary school textbooks, narratives take up a large proportion of textbook time, and are the most common *genre* that teachers come across in classroom teaching.

The participants were instructed to design three “while-reading” activities for secondary school level students, at three different levels: Year 7, Year 8 and Year 9 (see Appendix 1 for further information about the levels). For each activity, teachers were also asked to state what they wanted their students to achieve, and to specify the time allotment.

All papers were collected from the participants, and an initial corpus of questions was assembled. Altogether, 4640 teachers working in 323 state schools participated in the survey. Participants’ ages ranged from 23 to 53, with the ratio between male teachers and female teachers being 9% (male) and 91% female). 90.6% of the participants had bachelor’s degrees, 8.5% masters degrees, and the others had no degree. The teachers’ professional background also varied, with the shortest teaching experience being only 1 year, and the longest 33 years.

The study adopted a stratified sampling approach, to ensure representativeness. As Daniel (2012: 126) explains, this type of approach separates the target population into mutually exclusive, homogeneous segments (strata), with a random sample being selected from each segment (stratum). The sample size for each stratum was then determined by putting together equal groups (see Table 1).

Following this process, the targeted number of teachers from each stratum was randomly chosen through a lottery method. Once the sample of teachers was generated, their testing papers were then taken from the corpus for later analysis.

The questions were analysed in a relatively intuitive way, slightly akin to “grounded theory”: in other words, the researchers did not have any preconceived ideas as to what types of question would be set or how these might ultimately be coded, and an open minded, non- judgmental approach was retained at all times. Samples of questions are given in Appendix 3.

Table 2. Different Types of Reading Comprehension Activity.

| Response format | Frequency | Percent |
|--|-----------|---------|
| Answering a direct question | 70 | 45.8% |
| Looking at a sentence with "it" and summarizing the usage of it | 24 | 15.7% |
| Ordering | 10 | 6.5% |
| Matching | 10 | 6.5% |
| True or False | 9 | 5.9% |
| Filling in the blanks | 9 | 5.9% |
| Multiple choice | 9 | 5.9% |
| Reading aloud | 2 | 1.3% |
| Determining <i>how</i> the writer told us the story | 1 | 0.7% |
| Determining how to make suggestions from the story | 1 | 0.7% |
| Identifying compound sentences | 1 | 0.7% |
| Identifying people's names, the relationships between them, and the reasons for the change of vase | 1 | 0.7% |
| Identifying key words that mark the development of the story | 1 | 0.7% |
| Adding an ending to the story | 1 | 0.7% |
| Retelling the story | 1 | 0.7% |
| No task set | 2 | 1.3% |
| Total | 153 | 100% |

Results

The reading comprehension tasks set by the tutors were carefully read, and eventually categorized by grouping them according to fifteen activity types. Any overlaps between codes were resolved through appropriate discussion. All fifteen types of activity were initially listed, as below, according to how often each type occurred in the activities.

Table 2 shows that half the above activities were direct questions. 15.7% of the activities focused on the meaning and the usage of the pronoun "it" (the passage contained nine of these in all, with five clearly different meanings and references). Two further activities, "Determining how to make suggestions from the story" and "Identifying compound sentences" were also related to language study. This indicated that some teachers paid attention to helping students to notice, learn and grasp the target language points in the process of reading and understanding the passage.

We took account of possible geographical variations depending on whether teachers came from urban or rural areas. This enabled providers to ascertain whether there may be any variation in experience across wider regional divisions. It also enabled variations in geographical area to be controlled for in the research process to ensure that they were not distorting or skewing the findings.

We hesitate to draw any simplistic or naïve conclusions from such geographical analysis. However, some noteworthy points arose: firstly, teachers from urban areas appeared to finish writing all the tasks, and designed fifty-four activities in total, whereas although teachers from the suburban area made up ninety-four activities, two were left blank. Teachers in both types of area

adopted direct questions as the most common activates, with the percentages of 40.7% in urban area and 49.5% in suburban area. The proportions of the three activities, "True or False", "Filling in the blanks", "Find out the sentence with 'it' and summarize the usage of it", were broadly similar. However, teachers in the two areas had different preferences in selecting the types of reading activities to design. The percentages of "Ordering" and "Matching" designed by teachers in urban areas were almost double those of teachers in suburban areas, while the percentage of "Multiple choice" designed by teachers in urban areas were half of those designed by teachers in suburban areas. Thirdly, all activities relating to language study were designed by teachers in suburban areas, while teachers in urban areas designed some open ending activities, such as "Adding an ending to the story" (see Table 3).

In total, fourteen kinds of non-direct-question reading activities were designed by teachers ($n=76$). Of these, 73 were "textually explicit", "textually implicit" or "scriptally implicit" questions, while the other four were "outliers", in that they were not closely related to the reading comprehension process at all. 40.1% of the activities were textually explicit, leading students to refer to the clearly represented factual information in the passage. These were mostly designed as "Ordering", "Matching", "Filling in the blanks" and "Multiple Choice". 47.4% of the activities were textually implicit, helping students to make inferences based on what was explicitly stated in the passage. Of the 76 activities, only one was scriptally implicit (1.3%). Table 4 shows these variations.

Table 3. Reading Comprehension Activities Designed by Teachers from Different Areas.

| | Response format | Urban area | | Suburban area | | Total | |
|----|---|------------|---------|---------------|---------|-----------|---------|
| | | Frequency | Percent | Frequency | Percent | Frequency | Percent |
| 1 | Answering a direct question | 22 | 40.7% | 46 | 49.5% | 70 | 45.8% |
| 2 | Looking at a sentence with "it" and summarizing the usage of it | 10 | 18.5% | 14 | 15.1% | 24 | 15.7% |
| 3 | Ordering | 5 | 9.3% | 5 | 5.4% | 10 | 6.5% |
| 4 | Matching | 6 | 11.1% | 4 | 4.3% | 10 | 6.5% |
| 5 | True or False | 2 | 3.7% | 3 | 3.1% | 9 | 5.9% |
| 6 | Filling in the blanks | 4 | 7.4% | 5 | 5.4% | 9 | 5.9% |
| 7 | Multiple choice | 3 | 5.6% | 10 | 10.8% | 9 | 5.9% |
| 8 | Reading aloud | 0 | 0 | 2 | 1.1% | 2 | 1.3% |
| 9 | Determining <i>how</i> the writer told us the story | 0 | 0 | 1 | 1.1% | 1 | 0.7% |
| 10 | Determining how to make suggestions from the story | 0 | 0 | 1 | 1.1% | 1 | 0.7% |
| 11 | Identifying compound sentences | 0 | 0 | 1 | 1.1% | 1 | 0.7% |
| 12 | Identifying people's names, the relationships between the people and the reasons for the change of vase | 1 | 0.7% | 0 | 0 | 1 | 0.7% |
| 13 | Identifying key words that mark the development of the story | 0 | 0 | 1 | 0 | 1 | 0.7% |
| 14 | Adding an ending to the story | 1 | 1.85% | 0 | 0 | 1 | 0.7% |
| 15 | Retelling the story | 0 | 0 | 1 | 1.1% | 1 | 0.7% |
| 16 | No task set | 0 | 0 | 2 | 1.1% | 2 | 1.3% |
| 17 | Total | 54 | 100% | 96 | 100% | 153 | 100% |

Table 4. Comprehension Levels of Reading Activities.

| Types | Textually explicit | | Textually implicit | | Scriptally implicit | | Total | |
|---|--------------------|---------|--------------------|---------|---------------------|---------|-----------|---------|
| | Frequency | Percent | Frequency | Percent | Frequency | Percent | Frequency | Percent |
| Ordering | 9 | 100% | 0 | 0% | 0 | 0% | 9 | 100% |
| Multiple choice | 5 | 71.4% | 2 | 28.6% | 0 | 0% | 7 | 100% |
| Matching | 2 | 20% | 8 | 80% | 0 | 0% | 10 | 100% |
| True or False | 9 | 100% | 0 | 0% | 0 | 0% | 9 | 100% |
| Filling | 7 | 87.5% | 1 | % | 0 | 0% | 8 | 100% |
| The usage of it | 0 | 0% | 25 | 100% | 0 | 0% | 25 | 100% |
| People's names, relationships and the changes of the vase | 1 | 100% | 0 | 0% | 0 | 0% | 1 | 100% |
| Key words to show the development of the study | 1 | 100% | 0 | 0% | 0 | 0% | 1 | 100% |
| Adding an ending | 0 | 0% | 0 | 0% | 1 | 100% | 1 | 100% |
| How the writer told us the story | 1 | 100% | 0 | 0% | 0 | 0% | 1 | 100% |
| How to make suggestions | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% |
| Compound sentences | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% |
| Reading aloud | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% |
| Retelling | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% |
| Total | 35 | 40.1% | 36 | 47.4% | 1 | 1.3% | 76 | 100% |

A further finding of this study was that textually explicit activities were distributed evenly in the first two tasks, but there were far fewer of them in Task Three. All textually implicit questions, meanwhile, were allocated almost equally across the three tasks.

Some teachers asked the students to summarize the main idea of either each paragraph or the whole passage the first time they read; others set activities in Task Two or Three as lower-order reading comprehension levels. Arguably, the only scriptally implicit activity formed part of Task Three. This task asked students to add an ending to the story, according to what they read from the passage. We believe that the teacher who set this activity wished to

stimulate the students' own evaluation of the story, and their prior knowledge. This appeared to be beneficial to their deeper understanding of the passage. Table 5 shows these findings in more detail.

As we can see, there was a large contrast among the proportions of different forms across activities. Firstly, wh-questions, especially questions starting with "what", took up the largest proportion of 71.6%, which was nearly three quarters. In contrast, the least used form was that of alternative (either/or) questions, with only two such questions being written by two teachers. Coincidentally, the two questions concerning detailed information were actually the same ("Was the new vase cheap or expressive?"). Table 6

Table 5. Comprehension Levels of Reading Activities in Three Tasks.

| Tasks | Response format | Textually explicit | | Textually implicit | | Scriptally implicit | | Total | |
|----------------|--|--------------------|---------|--------------------|---------|---------------------|---------|-----------|---------|
| | | Frequency | Percent | Frequency | Percent | Frequency | Percent | Frequency | Percent |
| 1 (Item 61) | Ordering | 5 | 100% | 0 | 0% | 0 | 0% | 5 | 100% |
| | Multiple choice | 2 | 50% | 2 | 50% | 0 | 0% | 4 | 100% |
| | Matching | 1 | % | 8 | 0% | 0 | 0% | 9 | 100% |
| | True or False | 4 | 100% | 0 | 0% | 0 | 0% | 4 | 100% |
| | Filling in | 1 | 100% | 0 | 0% | 0 | 0% | 1 | 100% |
| | The usage of it | 0 | 0% | 2 | 100% | 0 | 0% | 2 | 100% |
| | Total | 13 | 52% | 12 | 48% | 0 | 0% | 25 | 100% |
| 2 (Item 64) | Ordering | 2 | 100% | 0 | 0% | 0 | 0% | 2 | 100% |
| | Multiple choice | 3 | 100% | 0 | 0% | 0 | 0% | 3 | 100% |
| | Matching | 1 | 100% | 0 | 0% | 0 | 0% | 1 | 100% |
| | True or False | 4 | 100% | 0 | 0% | 0 | 0% | 4 | 100% |
| | Filling | 1 | 100% | 0 | 0% | 0 | 0% | 1 | 100% |
| | The usage of it | 0 | 0% | 11 | 100% | 0 | 0% | 11 | 100% |
| | How the writer told us the story | 1 | 100% | 0 | 0% | 0 | 0% | 1 | 100% |
| | People's names, relationships and the change of the vase | 1 | 100% | 0 | 0% | 0 | 0% | 1 | 100% |
| 3 (Item 67) | Total | 13 | 54.2% | 11 | 45.8% | 0 | 0% | 24 | 100% |
| | Ordering | 2 | 100% | 0 | 0% | 0 | 0% | 2 | 100% |
| | True or False | 1 | 100% | 0 | 0% | 0 | 0% | 1 | 100% |
| | Filling | 5 | 83.3% | 1 | 16.7% | 0 | 0% | 6 | 100% |
| | The usage of it | 0 | 0% | 12 | 100% | 0 | 0% | 12 | 100% |
| | Reading aloud | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% |
| | Key words to show the development of the study | 1 | 100% | 0 | 0% | 0 | 0% | 1 | 100% |
| | Adding an ending | 0 | 0% | 0 | 0% | 1 | 100% | 1 | 100% |
| | How to make suggestions | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% |
| | Compound sentences | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% |
| | Retelling | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% |
| | Total | 9 | 33.3% | 13 | 48.1% | 1 | 3.7% | 27 | 100% |
| Total | | 35 | 40.1% | 36 | 47.4% | 1 | 1.3% | 76 | 100% |

Table 6. Different Forms of Reading Comprehension Questions.

| | Forms | Frequency | Percent |
|---|--|-----------|---------|
| 1 | yes/no questions | 31 | 15.2% |
| 2 | Alternative questions | 2 | 0.01% |
| 3 | wh-questions (who, what, which, when, where) | 148 | 71.6% |
| 4 | how/why questions | 26 | 12.7% |
| | Total | 207 | 100% |

Table 7. Different Types of Reading Comprehension Questions.

| | Types | Frequency | Percent |
|---|---------------------|-----------|---------|
| 1 | Textually explicit | 146 | 70.5% |
| 2 | Textually implicit | 37 | 17.9% |
| 3 | Scriptally implicit | 24 | 11.6% |
| | Total | 207 | 100% |

outlines the data further regarding this point.

The distribution of question types among all one hundred and ninety nine questions may be seen in Table 7, following Pearson and Johnson's (1978) questions taxonomy.

As Table 7 shows, nearly three quarters of questions were "textually explicit", the answers to which were clearly stated in the passage. Examples of this type of question were: 'What happened to Aunt Fern's vase?' or "Did she wonder what might be inside the box?". Textually implicit questions accounted for 17.9% of all questions asked. An example of this type of question is "Will

Jenny tell her neighbour that she had bought a new vase?"

At the same time, the lowest represented type of question (11.6%) was that of "scriptally implicit" questions: these demanded that students make more interpretive and evaluative connections between the text and their own prior knowledge. The most typical questions designed by teachers of this kind were "What do you think of Jenny?", "If you were Jenny, what would you do?", and "What other solutions do you have for the problem?".

Table 8. Forms of Reading Comprehension Questions in Three Tasks.

| Tasks | Forms | Frequency | Percent |
|----------------|--|-----------|---------|
| 1 (Item 61) | yes/no questions | 11 | 20.0% |
| | alternative questions | 0 | 0% |
| | wh-questions (who, what, which, when, where) | 41 | 74.5% |
| | how/why questions | 3 | 5.5% |
| | Total | 55 | 100% |
| 2 (Item 64) | yes/no questions | 13 | 14.0% |
| | alternative questions | 2 | 2.1% |
| | wh-questions (who, what, which, when, where) | 68 | 70.8% |
| | how/why questions | 13 | 14.0% |
| | Total | 96 | 100% |
| 3 (Item 67) | yes/no questions | 2 | 4.3% |
| | alternative questions | 0 | 0% |
| | wh-questions (who, what, which, when, where) | 35 | 74.5% |
| | how/why questions | 10 | 21.3% |
| | Total | 47 | 100% |

Table 9. Types of Reading Comprehension Questions at Three Tasks.

| Levels | Types | Frequency | Percent |
|----------------|---------------------|-----------|---------|
| 1 (Item 61) | Textually explicit | 44 | 84.6% |
| | Textually implicit | 8 | 15.4% |
| | Scriptally implicit | 0 | 0% |
| | Total | 52 | 100% |
| 2 (Item 64) | Textually explicit | 74 | 73.3% |
| | Textually implicit | 21 | 20.8% |
| | Scriptally implicit | 6 | 5.9% |
| | Total | 101 | 100% |
| 3 (Item 67) | Textually explicit | 28 | 51.9% |
| | Textually implicit | 8 | 14.8% |
| | Scriptally implicit | 18 | 33.3% |
| | Total | 54 | 100% |

We now seek to show how teachers designed various direct reading comprehension questions for the three tasks at three different levels. This information is shown in Tables 8 and 9.

From the above tables, we may see that teachers who preferred to adopt direct reading comprehension questions designed 55 questions in all. Nearly three quarters of the questions were wh-questions, and 20% questions were written as yes/no questions, which mostly concerned facts and detailed information. Very few (5.5%) how/why questions were designed at this level, while there were no alternative questions presented. As for question types, textually explicit questions were most commonly designed, with a proportion of 84.6%. The rest of the questions were textually implicit. No scriptally implicit questions were written at this level.

At the next level up, 96 direct reading comprehension questions were designed. In terms of question forms, the distribution was similar to that in Task 1: wh-questions were still the most prevalent category, with a proportion of 70.8%. Yes/no questions and how/why questions made up the percentage, with 14% respectively. Unlike Task 1, at this level, two alternative questions were written, which were the only two questions in this form of all those designed. Regarding question

types, teachers designed all three types of questions, of which textually explicit still took up the largest proportion of 73.3%. The percentages of the other two were respectively 20.8% and 5.9%.

The constitution of reading comprehension questions changed markedly at the third level. Here, teachers wrote 51 direct questions in total. As for question forms, the constitution of reading comprehension questions resembled the previous two tasks. Wh-questions remained the most prevalent, with a proportion of 74.5%. How/why questions featured more than yes/ no questions at this level, and the percentages of these were 21.3% and 4.3%. Concerning question type, although textually explicit questions were still in first position, the proportion dropped to 51.9%, while scriptally implicit questions exceeded textually implicit questions, with a percentage of 33.3%. Textually implicit questions rose to 14.8% at this level.

Discussion

In this discussion, we draw out some of the key 'themes' from the data analysis, as a distillation of the key findings of the research. The four bullet points below summarise the main findings thus far:

- The majority of the questions designed are wh-questions, starting with 'who', 'what', 'which', 'when' and 'where'. These questions focused mainly on factual details within the story. Moreover, the information that the questions related to was generally stated explicitly in the story, and could easily be picked out (Nutall 1982; Goldman & Duran 1988; Pearson & Johnson 1978). These are perhaps the easiest type of question to set, confirming that teachers will often have recourse to relatively simple questioning techniques.
- Teachers do design other types of activity besides the above, but some of these appear less relevant to the reading comprehension process, because they are either activities by which students might acquire the English knowledge, such as "finding out how to make suggestions" and "finding out the compound sentences", or activities for students to improve their mastery of pronunciation and their memory of the 'plot' of the narrative: for example, "reading aloud" and "retelling the story". Khalifa and Weir (2009: 44) refer to these as "local level" questions.
- Teachers are able to use certain reading comprehension activities to guide students to experience the reading process as a whole. Students' performance on these activities would be likely to reflect more fully how they read and understand the passage.
- Overall, tasks generally favour the exercising of lower-level mental activities. Among these, there was one clear exception, which occurred when the matching and multiple choice activities that teachers designed were concerned with the main idea of either the passage or each paragraph, which required students to process the comprehensible information covering all parts of the text.

From the findings, we may note that the participants exhibited an ability to design different reading tasks based on a given text. They devised various types of reading activities and questions, with some degree of success, to assess and improve students' reading competence. The tasks designed related to both lower-level reading comprehension and higher-level comprehension in terms of the demands of the task, although with a clear preponderance to the former. As we have seen, the direct questions that teachers designed covered all forms of questions and involved

reading comprehension at three different stages of difficulty: textually explicit, textually implicit and scriptally implicit.

Nonetheless, it seems that further development in the use of response formats is needed. Firstly, many of the activities that teachers designed were mainly intended to assess the isolation of purely factual information from the passage, for instance, where students were asked to read the passage aloud or retell the passage. Interestingly, too, some of the activities or questions were not presented at the correct time. For example, some teachers asked the students to match the main idea to each of the paragraphs or summarize the main idea of the whole passage in the first task. Yet finding the main idea belongs to high-order reading comprehension, so it might well be difficult for students to finish activities such as this purely through a first reading of the passage. Thirdly, some activities and questions do not seem to serve to help students to "scaffold" their understanding of texts, even if scaffolding is a key tenet of learning oriented assessment (Jones & Saville 2016). For instance, some teachers continued to write textually explicit reading comprehension questions across all the three tasks; as a result, students' understanding of the passage would remain at the level of recalling explicitly stated factual information, with no explicit progression of skills from one level to the next. In all, then, our research reveals that the teachers do still require training and practice in writing effective reading activities and questions.

Conclusion

In conclusion, this study, albeit preliminary, shows the challenges faced by teachers in designing effective comprehension questions, and points to what may be achieved through training. Good reading comprehension tasks remain a significant tool when teaching reading, so it is worth investing in developing these skills. When reading comprehension activities and questions are appropriately designed, teachers are better able to lead students towards effective reading, and to foster the development of their reading skills and abilities. Thus, it is recommended that test designers, teachers researchers, teacher trainers and teachers should further study theories related to reading test question design, and participate in active comprehension and design of items, so as to improve their ability to design effective reading comprehension activities.

At the same time, it is hoped that the findings of this study will enable teacher training and education programmes in Beijing to become more

relevant. We deem “assessment literacy” to be an unduly formalised way of describing this process: but if more teachers are able to enhance their ability to write appropriate reading comprehension activities and questions, students will increasingly be led towards a more meaningful, fruitful reading process, and students’ reading competence is likely to increase in line with this. This has the potential to improve the washback of testing on teaching and learning, and to engage students in a more systematic, scaffolded approach to reading comprehension which stretches them, and enables them to grow in their ability to interpret written texts.

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Appendices

Appendix 1: Compulsory Education English Curriculum Standards (2011 Edition)

表1：分级目标描述（初中部分）

| 级别 | 目标描述 |
|----|---|
| 3级 | <p>对英语学习表现出积极性和初步的自信心。</p> <p>能听懂有关熟悉话题的语段和简短的故事。能与教师或同学就熟悉的话题（如学校、家庭生活）交换信息。能读懂小故事及其他文体的简单书面材料。能用短语或句子描述系列图片，编写简单的故事。能根据提示简要描述一件事情，参与简单的角色表演等活动。</p> <p>能尝试使用适当的学习方法，克服学习中遇到的困难。</p> <p>能意识到语言交际中存在文化差异。</p> |
| 4级 | <p>有明确的学习需要和目标，对英语学习表现出较强的自信心。</p> <p>能在所设日常交际情境中听懂对话和小故事。能用简单的语言描述自己或他人的经历，能表达简单的观点。能读懂常见文体的小短文和相应水平的英文报刊文章。能合作起草和修改简短的叙述、说明、指令、规则等。能尝试使用不同的教育资源，从口头和书面材料中提取信息、扩展知识、解决简单的问题并描述结果。</p> <p>能在学习中相互帮助，克服困难。能合理计划和安排学习任务，积极探索适合自己的学习方法。</p> <p>在学习和日常交际中能注意到中外文化的异同。</p> |
| 5级 | <p>有较明确的英语学习动机、积极主动的学习态度和自信心。</p> <p>能听懂有关熟悉话题的陈述并参与讨论。能就日常生活的相关话题与他人交换信息并陈述自己的意见。能读懂相应水平的读物和报刊、杂志，克服生词障碍，理解大意。能根据阅读目的运用适当的阅读策略。能根据提示独立起草和修改小作文。</p> <p>能与他人合作，解决问题并报告结果，共同完成学习任务。能对自己的学习进行评价，总结学习方法。能利用多种教育资源进行学习。</p> <p>进一步增强对文化差异的理解与认识。</p> |

表2：语言技能分级目标

| 级别 | 阅读技能目标描述 |
|----|--|
| 3级 | <ol style="list-style-type: none"> 1. 能正确地朗读课文； 2. 能理解并执行有关学习活动的简短书面指令； 3. 能读懂简单故事和短文并抓住大意； 4. 能初步使用简单的工具书； 5. 课外阅读量应累计达到4万词以上。 |
| 4级 | <ol style="list-style-type: none"> 1. 能连贯、流畅地朗读课文； 2. 能理解简易读物中的事件发生顺序和人物行为； 3. 能从简单的文章中找出有关信息，理解大意； 4. 能根据上下文猜测生词的意思； 5. 能理解并解释图表提供的信息； 6. 能读懂简单的个人信件、说明文等应用文体材料； 7. 能使用英汉词典等工具书帮助阅读理解； 8. 课外阅读量应累计达到10万词以上。 |
| 5级 | <ol style="list-style-type: none"> 1. 能根据上下文和构词法推断、理解生词的含义； 2. 能理解段落中各句子之间的逻辑关系； 3. 能找出文章中的主题，理解故事的情节，预测故事情节的发展和可能的结局； 4. 能读懂相应水平的、常见体裁的读物； 5. 能根据不同的阅读目的运用简单的阅读策略获取信息； 6. 能利用词典等工具书进行阅读； 7. 课外阅读量应累计达到15万词以上。 |

Table 1. Objectives for Levels 3–5 (secondary school part)

| Levels | Objective Description |
|----------------|---|
| Level 3 | <p>Showing initiatives and initial confidence in English learning.</p> <p>Able to understand passages on familiar topics and simple stories in listening. Able to exchange information with teachers or classmates on familiar topics (such as school, family life). Able to read short stories and simple written materials of other text types. Able to describe picture series in phrases or sentences and create simple stories about them. Able to briefly describe a story with clues and participate in simple role plays.</p> <p>Able to try adopting appropriate learning methods to overcome difficulties in learning.</p> <p>Able to realize cultural differences in language communication.</p> |
| Level 4 | <p>Clear about one's own needs and goals in learning, showing quite strong confidence in English learning.</p> <p>Able to understand dialogues and short stories in certain daily communication situations. Able to describe one's own or others' experiences and express simple opinions. Able to read short passages of common text types and articles in English newspapers at corresponding levels. Able to jointly draft and revise brief narratives, notes, directions, rules, etc. Able to try using different educational resources, extract information from oral and written materials, expand knowledge, solve simple problems and describe results.</p> <p>Able to help each other and overcome difficulties in learning. Able to rationally plan and arrange learning tasks and actively explore suitable learning methods.</p> <p>Able to realize similarities and differences between Chinese and foreign cultures in learning and daily contacts.</p> |
| Level 5 | <p>Having clear motives, positive attitudes and confidence in English learning.</p> <p>Able to understand statements on familiar topics and participate in discussions. Able to exchange information with others and state one's own opinions on related topics in daily life. Able to read materials, newspapers and magazines at corresponding levels, overcoming the obstacle of new words and grasping the main idea. Able to apply proper reading strategies in accordance with the reading goals. Able to draft and revise short compositions with clues.</p> <p>Able to cooperate with others to solve problems and report results, accomplishing learning tasks. Able to assess one's own learning and summarize methods. Able to use varied educational resources in learning.</p> <p>Further strengthening understanding and knowledge of cultural differences.</p> |

Table 2. Objectives for Language Skills at Each Level (reading skills part)

| Levels | Reading Skills Objective Description |
|----------------|--|
| Level 3 | <ol style="list-style-type: none"> 1. Able to read texts aloud and correctly. 2. Able to understand and fulfil brief written directions related to learning activities. 3. Able to understand simple stories and passages, grasping their general ideas. 4. Able to use simple reference books. 5. The amount of outside reading should total no less than 40,000 words. |
| Level 4 | <ol style="list-style-type: none"> 1. Able to read texts aloud, coherently and fluently. 2. Able to understand sequences of events and behaviours of characters in simple readings. 3. Able to find out related information from simple texts and understand the main idea. 4. Able to guess the meanings of new words from their contexts. 5. Able to understand and explain the information provided by graphs. 6. Able to understand practical writing matters such as simple personal letters and expositions. 7. Able to use reference books like English-Chinese dictionaries to assist reading comprehension. 8. The amount of outside reading should total no less than 100,000 words. |
| Level 5 | <ol style="list-style-type: none"> 1. Able to infer and understand the meanings of new words through context and word-building rules. 2. Able to understand the logic relations between sentences in a passage. 3. Able to find out the themes of passages, understand the plots of stories, foresee the development of the plots and possible endings of stories. 4. Able to understand readings of common text types at corresponding levels. 5. Able to adopt simple reading strategies to obtain information according to different reading goals. 6. Able to make use of reference books like dictionaries for reading. 7. The amount of outside reading should total no less than 150,000 words. |

Appendix 2: Survey Paper

北京市2013年初中教师教学基本功培训和展示活动英语学科培训调研试卷

第四部分 教学设计 (共30分)

七、阅读教学材料, 完成教学设计任务 (共30分)

Aunt Fern's vase

Have you ever had that "sinking feeling" when you realized you'd done something terrible?

A woman from Seattle, named Jenny Leigh, borrowed her neighbor's car one afternoon. On the back seat of their car was a beautiful gift box, and she wondered what might be inside it. It was a cold and snowy day and, as Jenny was driving along, she hit a small patch of ice. The car spun around and headed straight for a tree. Luckily, Jenny was able to avoid hitting it. However, when she turned to look at the back seat, she saw that the gift box had fallen on the floor. Jenny opened up the box to see a beautiful ceramic vase, broken into several pieces.

Jenny was horrified when she saw what she had done. How could she tell her neighbor that she had ruined the vase? Then she noticed that the name of the store was written on the side of the box. So, she drove to the store and bought an identical vase. She locked the new vase away safely in the trunk of the car. It had cost a lot of money, but she knew it was the right thing to do.

After buying the vase, Jenny decided that she should call her neighbor and tell her what had happened. However, before she had a chance to explain, her neighbor said, "Oh, by the way, I forgot to tell you. I bought a vase for my Aunt Fern's birthday yesterday, and when I got home I noticed that it was broken. I left it in the car as I was planning to return it to the store today. What time will you be returning the car? I'd like to get there before it closes."

| | | | |
|--|--|-------------------------------------|----------------------------------|
| 课题 | | | |
| Aunt Fern's vase | | | |
| 教学目标 | | | |
| 学生能够： 1. 通过阅读活动, 读懂关于一只破碎的故事。 2. 掌握文中的指代词it的用法。 3. 结合本课所学内容, 发表自己的观点。 任务一: 修改教学目标 对上述教学目标进行适当的修改, 使其可操作、可达成。 ● 教学目标1): 58. _____ ● 教学目标2): 59. _____ ● 教学目标3): 60. _____ | | | |
| 教学过程 (45分钟) | | | |
| 教学环节 | 师生活动 | 设计意图 | 时间 |
| Lead in | ● Questions and answers ● Have you ever done something terrible? ● What did you do? ● How did you feel at that time? | 引出话题 | 3' |
| Pre-reading | ● Predicting according to the title and the first sentence ● What happened to Aunt Fern's vase? | 体验阅读的预测策略 | 2' |
| While-reading | 任务二: 设计阅读活动 设计三个不同层次的阅读活动 (含活动的内容和方式), 并写明活动的意图及所需时间。 ● Reading Activity 1: (活动1): 61. _____ ● Reading Activity 2: (活动2): 64. _____ ● Reading Activity 3: (活动3): 67. _____ | 62. _____ 65. _____ 68. _____ | 63. ____ 66. ____ 69. ____ |
| Post-reading | ● Outlining the story orally ● Language focus 任务三: 设计产出活动 设计一个在上述教学活动基础上学生能够运用所学语言做事的活动, 包括: 活动的内容、活动的方式、活动的时间、活动的指示语和学习效果的评价。 (活动内容): 70. _____ (活动方式): 71. _____ (活动指示语): 72. _____ (学习效果评价): 73. _____ | 归纳、传递信息 语言学习与实践 运用语言做事情 | 5' 5' 74. ____ |

Appendix 3: Sample activities designed by teachers

| Geographic Region | Samples | | |
|-------------------|--|--|---|
| | Teacher 1 | Teacher 2 | Teacher 3 |
| District 1 | 04010024 | 04010539 | 04011096 |
| 61 | Read and answer the following questions: 1: What happened to Aunt Fern's vase? 1 2: What did Jenny do with Aunt Fern's vase? 1 3: Who broke it? 2 | Read the text fast and match the paragraphs with the main idea. | Read the passage quickly and answer the following questions: 1. What the passage mainly about? 2 2. Who broke the vase according to Jenny's neighbor? 2 |
| 64 | Read and check the true sentences: 1. Jenny borrowed her neighbor's car one afternoon. 2. Aunt Fern's vase was in a gift box on the front seat of the car. 3. Jenny hit the car on the tree. 4. Jenny didn't know where to buy an identical vase. 5. Jenny told her neighbor what had happened. | Reading sentences with pronoun "it". Speak out what "it" refers to in each sentence. | Read the passage again and answer questions: 1. What happened when Jenny was driving? 1 2. How did Jenny feel when she saw the vase into pieces? 1 3. What did Jenny do then? 1 4. What do you think Jenny would feel after she knew the truth? 2 |
| 67 | Underline the sentences with "it" and write down what all "it" refer to and summarize the usage of "it". | Read the text paragraph by paragraph and complete the table with proper words or phrases. (no table) | Read and tell what the underlined "it" refers to in each sentence. (6 sentences) |
| District 2 | 04020016 | 04020654 | 04021309 |
| 61 | Complete the paragraph according to the passage. | Read the passage and order the following information according to the development of the story: | Answer the questions: 1. What's in the car when Jenny Leigh borrowed her neighbor's car? 1 2. What happened to it? 1 3. What did Jenny do with it? 1 4. What did Jenny Leigh's neighbor say about it? 1 |
| 64 | Read the passage and find out what "it" refers to in the following sentences. | Find out the sentences with "it" in the passage, explain their meaning and finish the following sentences. | Are they true or false? 1. Jenny had a serious accident. 2. Jenny was sorry to what she had done. 3. She paid for it. 4. She didn't tell her neighbor the truth. |
| 67 | Group discussion Based on what happened to Jenny, state your viewpoint Why do you for Jenny? 3 What other solutions do you have? 3 | Answer the questions: 1. Was it a fine day that day? 1 2. What happened to the car? 1 3. What did Jenny do after she found the broken vase? 1 | Underline the sentences with "it" and write down what all "it" refer to. |
| District 3 | 04030022 | 04031597 | 04032982 |
| 61 | Underline the words which "it" directed. | Read the passage and match the paragraph with the main idea. | Read and match the main idea of each paragraph. |
| 64 | Find a time line; match the people's behavior with the time. | Read the passage and underline the word "it", explain what it refers to. | Read and answer the 3 questions: 1. Did Jenny hit the tree? 1 2. What did Jenny do after she saw the vase was broken? 1 3. Did Jenny make the vase broken? 1 |
| 67 | Finish exercise in pairs, including true or false questions, and some closed questions and gap filling questions. (no specific questions) | Answer the questions: 1. Who borrowed her neighbor's car? 1 2. What happened when she was driving alone? 1 3. Why did she buy an identical vase? 1 4. Was the new vase cheap or expressive? 1 5. What did she feel after she heard her neighbor's words? 2 | Read and order the sentences. (9 sentences with it) |