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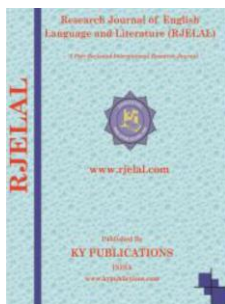
AN EMPIRICAL STUDY OF ENGLISH READING TEST

GUO FANG[1], LI JIALING[2]
[1]Professor of English, School of Foreign Languages, North China Electric Power University, Beijing , China
[2]Postgraduate of English, School of Foreign Languages, North China Electric Power University, Beijing, China
E-mail: 1207620506@qq.com
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ABSTRACT

This paper analyzes the discourse and propositions of the reading comprehension part of the English final exam paper for the first-year students in North China Electric Power University. According to the validity and reliability theory, and referring to the Teaching Requirements for College English Courses, the author conducts an empirical study on the reading part of the test paper, and tests whether the test paper meets the teaching requirements and whether it meets the reliability and validity of the test. Through analysis, the author found that the length of the article was appropriate; the selected topics were rich and diverse and close to reality; the vocabulary scope met the requirements; the students' practical application ability was examined. This test generally met the outline requirements, but the problem of setting a single question type was waiting for improvement.

Keywords: reading test, reliability, validity

1.   Introduction

Language Testing is indispensable in foreign language teaching. Language Testing can test the teaching results and students' mastery of knowledge. At the same time, language testing will also have an impact on teaching. Improperly designed tests will affect the test results and bring negative effects to teaching. Well-designed tests will bring positive effects to the teaching and improve students' language level (Nolen et al, 1992). Therefore, a well-designed test is of great significance for language teaching.

Reading as one of the four skills of listening, speaking, reading and writing, is an indispensable part of language testing and has a large proportion in testing. The level of reading ability reflects the ability of students to obtain information and the practical application of language. However, in the actual language test, the design of some test questions is not reasonable enough. For example, the length of the reading article is too long; the material selection is single; the vocabulary is difficult; and the question type is unreasonable. There are also some test papers whose design is deviated from the syllabus and the test objectives, resulting in low reliability and validity. In terms of ability to examine, the design of the question type does not focus on the students' practical application ability; the investigation of students' ability is not comprehensive.

Therefore, the author decided to conduct an empirical study to test whether the design of the reading part of the English test paper of the school meets the requirements of the outline and whether

it has high reliability and validity. In accordance with the relevant requirements of the College English Department of the Ministry of Education, namely the general level of college English reading and the theory of reliability and validity, this paper analyzes the reading comprehension questions of the English final exam papers for the first-year students.

2. Literature Review

2.1 Validity and Reliability

There are two factors that measure the quality of a set of questions, namely reliability and validity.

Reliability refers to the reliability of the test results, and the level of reliability reflects the extent to which the test reflects the actual language level of the subject. Lyel (1990) attributes the reliability to the answer to a question, that is, the extent to which the candidate's grade is determined by factors other than the language ability to be measured by the exam. Garnt (2001) believes that reliability is an indicator of the accuracy, consistency, reliability, and fairness of a particular test score.

Validity refers to whether the test is valid, that is, whether the test tests what it should test. "The validity is the core issue of an exam. If an exam is highly reliable, but it does not take the test, the validity of such an exam is not high." (Yang, 2009) Oller (1979) believes that Tests that are not valid cannot be called tests. Test validity includes: structural validity, content validity, simultaneous validity, predictive validity, and surface validity, where content validity is considered to be the most important validity. Content validity is intrinsic validity, that is, the validity of the test itself. It refers to the representativeness of the measurement tool content (including materials, subjects, topics) or the adequacy of selected content samples (Sampling adequacy) (Ker linger, 1973).

Both validity and reliability are indispensable in the test, but the two are mutually constrained. The pursuit of credibility does not meet the requirements of validity. In the case of high efficiency, reliability is not guaranteed. Validity requirements make language testing focus on the holistic, artistic, and diverse test topics, and the content and form of the test are as close as possible to the actual use of the language. The reliability requirement makes the language test emphasize the scientific nature of the language, pays attention to the homogeneity of the test topic, and makes the content and form of the language test out of the actual use of language.

Therefore, a high-quality test paper should pay attention to the balance between validity and reliability.

Liu Runqing and Han Baocheng (2000) pointed out that content validity can be measured from the following three aspects: the correlation between the test content and the test objectives, the representativeness of the test content and the applicability of the test content. The research methods and angles of predecessors for content validity are basically the same, as Xu Jing (2013) pointed out: Selecting the test questions for several consecutive years, one by one from the aspects of material selection, reading speed, reading difficulty, and problem angle. Contrast and evaluate the validity of its content.

At present, domestic research mainly focuses on high school English reading, and there are few college English reading studies; also there are few studies on the consistency of test questions and curriculum standards. Liu Na (2014) took the CET-6 reading comprehension part of 2011 and 2012 as the research object, and found that the design of the college entrance examination questions in the past two years had a high content validity, but "to strictly control the length of reading chapters and the difficulty of materials "; Zhang Hui (2010) specialized in the content validity of fast reading, and found that language communication ability was receiving more and more attention.

3. Three Requirements for College English Reading

In the Teaching Requirements for College English Courses, the three levels of English reading requirements for college students are: general requirements, higher requirements, highest requirements. For non-English major undergraduate

GUO FANG, LI JIALING

students, it is required to meet the "general requirements", and for students who have the ability to learn to encourage them to achieve "higher requirements". This article is for the first-year non-English majors at the undergraduate level, so only the "general requirements" are discussed. "General requirements" include: a) Students can basically read English articles on general subjects and read at a rate of 70 words per minute. b) When reading fast, less difficult materials, students can read up to 100 words per minute. c) Students can skim and read the reading materials. d) Students can use the dictionary to read English textbooks of this major and English newspaper articles with familiar subjects, master the general idea, and understand the main facts and related details. e) Students can read the materials of the applied styles that are common in work and life. f) Students can use effective reading methods in reading.

The teaching nature of the Teaching Requirements for College English Courses refers to "English language teaching with English language knowledge and application skills, learning strategies and cross-cultural communication as the main content", and the teaching objectives emphasize " to cultivate students' comprehensive English application ability." It can be seen that English reading ability should focus on practical applications.

4. Reading part of the Reliability and Validity Analysis

The reading process is the reader's decoding process of the discourse. There are many factors influencing the reading comprehension. The factors that remove the reader itself are related to the material itself, such as the length of the reading material, the vocabulary grammar, the subject matter and the genre, and the test questions. Therefore, the quality of the test should be considered in many aspects.

The set of papers selected is the final exam paper for students of the 2018 Minority English Academic Counseling Class of North China Electric Power University. There are 4 articles in the reading and reading section of the test paper.

4.1 Material length and Readability

The reading comprehension part of the 4 articles has 2118 words after statistics, and the reading time is 30 minutes according to the prescribed reading questions, so the reading speed is about 70 words per minute, which is in line with the "general requirements" in the Teaching Requirements for College English Courses, which is "the standard of 70 words per minute". Therefore, this set of papers meets the requirements for the teaching of college English courses in terms of the length of reading articles. The length of the article is short and the reading speed is moderate, which is suitable for the English level of first-year university students.

Readability: An important concept for measuring the difficulty of reading text is readability. Through the objective measurement of some language factors in the text to calculate the legibility of the article such as: word length, sentence length, syllable number, pronoun number, suffix number structure, logical words and so on. The Flesh calculation formula uses the word length and sentence length as the basis for the complexity of the language material. Because the required variables are easy to obtain and the calculation is convenient, it is the most widely used formula. The calculation formula is:

Reading Ease Score = 206.835 − 84.6WL − 1.015SL

In the formula, WL represents the average number of syllables per word, and SL represents the average number of words in each sentence. The calculated value is a number between 0 and 100. Flesh provides a difficulty reference table as follows:

Table 1. Reference table of Readability

Readability index	Measurement description	Representative magazine	Potential reader group	
			Grade	% of American adults
0 – 30	Harder	Scientific	College	4.5
30 – 50	Hard	Academic	High School	24

GUO FANG, LI JIALING

50 – 60	Difficult	Quality	Some High School	40
60 – 70	Normal	Digest	7th or 8th grade	75
70 – 80	Easy	Slick-fiction	6th grade	80
80 – 90	Easier	Puff-fiction	5thgrade	86
90 – 100	Especially easy	Comics	4th grade	90

Flesh's easy-to-read formula is applied to Microsoft Office Word software, and the author calculates the readability of each article based on the software (See the Table 2 below).

Table 2.

Passage	Passage A	Passage B	Passage C	Passage D	Average value
Readability value	58.9	47.4	52.8	70.1	57.3

In these four articles, it can be seen that the difficulty of article A and article C is "Difficult", article B is "Hard", and the readability value of article D is "Easy". The average of the readability of the four articles was calculated to be 57.3. Referring to the numerical table provided by Flesh, it can be seen that the readability of the four materials is between 50 and 60, and the overall difficulty is "Difficult".

According to the above analysis, it can be seen that the length of the article meets the requirements of the course teaching, and it meets the validity requirements. However, it is difficult to read the discourse. From the nature of the test, this is a screening effect of the academic test and the level test. The degree of mastery of knowledge has an impact on the reliability and validity of the test.

4.2 Genre and theme

Table 3

Part	Passage	Theme	Genre
Section A	Passage A	History	Narrative
Section B	Passage B	Culture	Narrative
Section C	Passage C	Technology	Explanatory text
	Passage D	Medical	Argument

Through the genre and theme analysis of the four articles in the reading section, it can be seen that the subject matter of the article involves history, culture, science and technology, and medicine, all of which contain certain humanities knowledge and a wide range of subjects. The genre of the article consists of three categories: narrative, explanatory text, and argument. The materials are real and diverse, close to the actual life, in line with the Teaching Requirements for College English Courses and have high validity and reliability.

4.3   Article Vocabulary

In the vocabulary analysis of the article, the College English Vocabulary Reference Table attached to the Teaching Requirements for College English Courses is used as a standard to measure the vocabulary of the article. Therefore, the author uses data filtering to view the relationship between words in the reading material and words in the vocabulary.

Through data screening of vocabulary and reading articles, the total number of words in the vocabulary is 7681 words, the total number of words in the article is 1331, and the total number of words in the word list is 405, by accumulating the frequency of each word. It is concluded that the article contains a total of 1331 words in the word list, and it can be seen that the number of words

GUO FANG, LI JIALING

from the vocabulary accounts for 62.84% of the total number of words in the article.

The College English Vocabulary Reference Table is based on the vocabulary specified in the "Three Requirements for Teaching in College English Courses". The words in the table are divided into three levels, of which 4,794 words are included in general requirement. The higher requirement contains 1,601 words, which are marked with an asterisk; the highest requirement contains 1,281 words, which are marked as triangles. After data screening, there are 4 asterisk mark words and 3 triangle mark words, each word only appears once, and the proportion is very small.

By analyzing the above data, it can be seen that the vocabulary range of the article is in line with the "College English Vocabulary Reference Table", and there are fewer difficult words, so the choice of the article meets the requirements of the curriculum standards, and has a certain degree of discrimination.

4.4 Question Type Analysis

The type of questions set in passage A is to fill in the blanks of the selected words, mainly to examine the students' understanding of the meaning of the words, which is a basic knowledge examination. In passage B, it is a paragraph matching question. The article has a long length and has 17 paragraphs. Therefore, this article mainly examines the students' ability to skim and summarize the main purpose of the paragraph. Passage C and D are shorter in length, and the setting questions are multiple-choice questions. They examine the ability to search for the details of the article, as well as to summarize the main purpose of the article.

In terms of ability to examine, not only the students' ability to understand the discourse, but also the practical application ability of the subject's detailed search ability and generalization ability are examined, which is in line with the Teaching Requirements for College English Courses.

From this point of view, the content validity of the test is in line with the requirements. The question type of the reading part is based on objective questions, which improves the reliability of the test and ensures the fairness and objectivity of the test results. However, the lack of subjective questions improves the reliability and also reduces the validity to a certain extent. This is an objective reality, and it is necessary to consider how to achieve a certain balance between the two.

5. Conclusion and limitations

This paper analyzed the reading part of the test from many aspects, such as length and legibility of the article, genre theme, vocabulary, and question types.

Through analysis, the author found that:

a) The length of the article was appropriate;
b) The selected topics were rich and diverse and close to reality;
c) The vocabulary scope met the requirements;
d) The students' practical application ability was examined.

These aspects were appropriate.

The disadvantage was that all the questions were objective questions, which led to unreasonable setting of the questions, which was not conducive to test validity.

Since the aspects selected in this paper are only some of the aspects of reading test, other factors such as syntax and background knowledge will also affect the difficulty of reading. Therefore, this study has certain limitations. The writer hopes that the follow-up research can be based on more corpuses and analyzes the reading questions from different angles. Therefore, the teacher has a more comprehensive and scientific understanding of the proposition of the exam, which makes the final proposition of the English course more scientific and rational.

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GUO FANG, LI JIALING

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