

# Analysis on Fairness of CET-4 Passage Reading Based on the Validity

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**Abstract:** Test fairness is a compulsory factor besides the validity and reliability in English language testing. The major objective of this paper, with combination of quantitative and qualitative analysis, is a preliminary effort to research the fairness of passage of CET-4 based on the validity. And the tokens of 2014 to 2018 in three sets of passage reading in each examination are abstracted to analyze the fairness. Accordingly, some implications are drawn for writing and instructors entailed in writing.

## 1. Introduction

CET-4 is shortened for College English Test Band 4, a nationwide examination organized by the Ministry of Education. In order to enhance the teaching quality of college English programs, the committees of CET-4 are authorized by the Ministry of Education to design, organize, manage and implement CET-4, to some extent, with great authority in China, aiming at testing non-majored college learners' English comprehensive capacities covering writing, listening, reading and translating abilities. Passage reading occupies 20% of the score in CET-4 in which two passages are included in and learners are required to complete five questions (multiple choices) after each passage within certain time. While how to mark the definite possible answers and enhance accuracy remains a difficult point to most learners. Therefore, two main questions, whether it is fair with three different sets of paper in each examination and whether the fortune gets involved, are worth researching.

## 2. Literature references

### 2.1. The Construction of CET-4 Passage Reading Test

Passage reading is the third part of reading comprehension in CET-4, constructed by two passages with paralleled words in which there are five questions after each passage. The score of passage reading is 142, accounting for 20% in total with its aiming at testing the testees' academic performance from the perspectives of semantics, syntax and the ability to acquire information by answering questions based on the passage. Testees, after reading in depth, select the best answer form the four choices.

### 2.2. The Requirements of Passage Reading in CET-4 Based on the Syllabus

According to the syllabus, the subject of passage reading is diverse, including the biography, the society, cultures, common senses, knowledge or information of science and advance technology, etc. Furthermore, the words of passage reading must be with moderate difficulty, demanding the Chinese glossing if there is any vocabulary beyond the CET-4 syllabus.

### 2.3. Test Validity

In the Dictionary of Language Testing, it is defined as "The quality which most affects the value of a test, is prior to, though dependent on, reliability. A measure is valid if it does what it intended to do, which is typically to act as an indicator of an abstract concept which it claims the measure." (Davies, A. et al. 2002: 221) [1]

## 2.4. Test Fairness

Fairness concerns are an integral part of the development and scoring of all tests. The many activities that ensure fairness include routine analyses of test questions to establish that questions do not unfairly contribute to group differences.

## 3. Methodology of the Paper

In order to provide the evidence of the fairness, the Antconc and excel software are applied in this thesis to demonstrate the tokens of CET-4 passage reading with multiple test questions with quite different passages in each paper. Firstly, the tokens of passage reading of CET-4 from 2014 to 2018 are calculated. Then, the statistics are input into the excel software to analyze the distribution in three sets of paper in each examination for identifying the test validity. Besides, whether the language points are tested from the similar forms will be interpreted.

## 4. Analysis and Discussion

### 4.1. The Analysis of CET-4 Passage Reading in Recent Five Years

Reading is an effective way to input knowledge and the Syllabus for College English Test — Band Four checks whether the testees are capable of obtaining information appropriately within time limitation. While, the text vocabulary plays a key role in the language testing and it is a basic unit in a passage. Tokens refer to the number of running words in a passage. (Douglas Biber, 2011: 52) [2] Tokens of CET-4 passage reading from 2014 to 2018 are calculated to figure out the test validity of multiple paper. Moreover, the number of words with Chinese meanings or glossing are counted.

Fig. 1 Tokens of CET-4 passage reading (from 2014 to 2018)

	Tokens of passage 1	Chinese glossing	Tokens of passage 2	Chinese glossing
2014.6/1	365	3	359	2
2014.6/2	370	3	366	3
2014.6/3	365	2	366	3
2014.12/1	354	1	360	3
2014.12/2	345	0	354	1
2014.12/3	353	1	360	3
2015.6/1	341	3	359	3
2015.6/2	419	2	400	3
2015.6/3	341	2	332	2
2015.12/1	355	3	339	2
2015.12/2	363	2	365	2
2015.12/3	316	1	332	2
2016.6/1	349	0	338	1
2016.6/2	359	2	359	3
2016.6/3	352	3	355	2
2016.12/1	345	3	337	2
2016.12/2	337	1	321	1
2016.12/3	383	0	346	1
2017.6/1	358	2	338	0
2017.6/2	332	0	365	3
2017.6/3	356	1	354	2
2017.12/1	368	2	356	0
2017.12/2	337	1	323	1
2017.12/3	341	1	354	1
2018.6/1	359	3	344	2
2018.6/2	351	1	345	2
2018.6/3	358	2	350	1
2018.12/1	341	3	345	0
2018.12/2	353	1	362	2
2018.12/3	358	3	358	1

As is seen in the table based on AntConc software, the tokens of passage one and passage two in June and December of 2014 ranged from 345 to 370. For instance, the tokens in passage one were ranging from 365 to 370 and 345 to 354 and the tokens in passage two circled around 359 to 366 and 354 to 360 respectively. Nevertheless, as is presented in the table, the number differences of passage reading from 2014 to 2018 nearly could be within ten words in each examination except for June and December in 2015 and December in 2016 and 2017. A case in this point is that tokens for passage one and passage two were 419 and 400, outnumbering the scope of 332 to 359 in June of 2015. Likewise, the tokens 316, 383 and 368 of passage one in December of 2015, 2016 and 2017 had differences from the same year's tests. Overall, the tokens of passage reading from the year of 2014 to the year of 2018 almost ranged from 340 to 360, making the least distinction (within 10) among each paper of the same examination. More importantly, the figures of Chinese glossing are from 0 to 3, proving that the words beyond the syllabus are limited and almost there is no distinction among all paper between 2014 and 2018.

#### 4.2. Analysis of Propositions in CET-4 Passage Reading in Recent Five Years

ETS Standards for Quality and Fairness proposes that test should be no test bias, which means all test takers must be treated fairly and share the equal opportunity to study the contents covered by the academic examination. While, the proposition for testing passage reading in CET-4 involves the process concerning the topical subject, detailed questions, purpose and intention as well as reasoning questions, etc. Thereby, there must be some clues contributing to the successful completion of reading. The key testing points, taking the three paper from June of 2016 as an example, mainly cover: (1) proper names in paragraph one such as pre-industrial Europe in 2016-6-1 and Artificial Intelligence in 2016-6-2. (2) object clauses led by *that* in 2016-6-1 *there are growing concerns that robots could become a threat; the study found that certain mental functions-including measures of abstract reasoning...* in 2016-6-3. (3) persons such as outgoing and sympathetic people in 2016-6-1, old people in 2016-6-2 and young adulthood in 2016-6-3. With the similar questions assigned, the proposition of test fairness is embodied. Likewise, three paper in December of 2018 has testing points in common, like the transitional words *but* and *however*; the punctuations “” and : *as well as* comparative forms *healthier; smarter and bigger*, etc. Overall, designers try to avoid testing bias in testing points of CET-4 passage reading.

#### 5. Summary

The paper, with the quantitative and qualitative analysis combined, studies the validity of CET-4 passage reading from the token point of view and illustrates the test fairness of multiple paper in the same examination. Generally, there is not a distinct difference in the tokens of passage reading and the Chinese glossing in recent five years, presenting the designs for the validity. Furthermore, it is also explained that the testing targets is not strikingly distinct, such as the transitional words *but*, proper names and the clauses, expounding the test fairness of the content for test takers. Meanwhile, the language points are tested from the similar forms and there is no distinct bias for the test takers, implying that it is not relevant to fortune in CET-4. There are limitations in the paper, after all, test fairness is formed based on various factors, and the research on rigorous training for all persons involved in the development or scoring of test questions and implement of the test in this paper makes room for researchers in the future.

#### References

- [1] Douglas Biber, Stig Johansson Geoffrey Leech, Susan Conrad Edward Finnegan, *Longman Grammar of Spoken and Written English, Foreign Language, Teaching and Research Press*. 2011:52-53
- [2] Hongxiong Wang & Xianjun Zhan, *Multi-dimensional Analysis on Fairness of English Testing in College Entrance Examination[J]*, CURRICULUM, TEACHING MATERIAL AND

METHOD, 2011(5): 49-53

[3] Jinsong Fan, *A Study on Test Fairness of Language Testing: Definition, Theoretical Frameworks and Responsibility of Stakeholders* [J], *Foreign Language Testing and Teaching*, 2014(4): 11-19

[4] [http://www.ets.org/gre/revised\\_general/about/fairness/](http://www.ets.org/gre/revised_general/about/fairness/)