

# *A Content Validity Study on Listening Comprehension in CET-4*

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**Abstract:** Based on the theory of Bachman and Palmer's task characteristics framework, this paper analyzes the content validity of the listening comprehension tests in CET-4 (December 2018-- September 2020), according to College English Teaching Guide (2017 Version) and the CET-4 Testing Syllabus (2016 Revised Edition). The results show that the listening comprehension tests basically conform to the stipulations and possess a relatively satisfactory content validity. But there is still advice for further improvement.

## 1. Introduction

Since its implementation in 1987, College English Test Band 4 (hereinafter referred to as CET-4) has gone through a history of more than 30 years, during which it has undergone many reforms. *The Teaching Requirements for College English Courses* promulgated by the Ministry of Education in January 2004 put forward the teaching goal of "cultivating students' comprehensive English ability, especially listening and speaking ability". The cultivation of listening ability is placed in a prominent position. In order to achieve the teaching goals set by the *Teaching Requirements for College English Courses*, the CET-4 listening comprehension test has undergone substantial reforms since 2005: 1) The score ratio has been increased from the original 20% to 35%; 2) The test time has been extended from the original 20 minutes to 35 minutes; 3) Long conversation listening comprehension test is added; 4) Compound dictation is changed from the original alternative question type to the required question type. However, with the promulgation of the "College English Teaching Guide" (2017 Edition), the CET-4 listening comprehension test, once again, has been reformed since 2017: 1) The test time has been reduced from the original 35 minutes to 25 minutes; 2) Short conversations have been replaced by news reports; 4) Compound dictations have been deleted. In view of the importance of listening comprehension in College English teaching and the reform of the CET-4 listening comprehension test, it is necessary to study the CET-4 listening comprehension test.

Validity is the core issue of a test, and the study on the test paper itself is one of the effective ways to verify the validity of the test. Moreover, research on the test itself is also one of the main problems that need to be solved in the current washback effect research (Gu Xiangdong 2007).[1] Nowadays, there are many researches on CET-4 listening comprehension test from various

perspectives, such as from the perspective of pragmatic analysis (Qin Su 2015[2], Wang Yifei 2018[3]), the discussion of teaching or learning strategies (Ji Qian 2016[4], Lei Yingying 2017[5]), the application of Schema theory (Feng Liyi 2015[6]). Among them, most are researches of the task characteristics of the test questions, such as Yang Huizhong & Weir (1998) [7], Pan Zhixin (2007) [8], Gu Xiangdong, Li Yaguo (2010) [9], etc. Looking at the existing literatures on the CET-4 listening comprehension test questions, it can be found that there is not research on the CET-4 listening comprehension test after 2017 when the latest reform of CET-4 was implemented.

This study takes the listening comprehension test of the five innovated CET-4, from 2018 to 2020, as the research object, including 15 news reports, 10 long dialogues, 15 passages and corresponding 125 questions. It aims to explore the content validity of the CET-4 listening comprehension test through a comprehensive analysis of the task characteristics of its text input and expected answer, to exam whether the listening comprehension test of CET-4 is consistent with the current Teaching Guide and the Test Syllabus, and at the same time to try to put forward some suggestions for the proposition of the listening comprehension test.

## 2. Theory Framework

Bachman and Palmer (1999) point out that reliability and validity are two important indicators of language testing.[10] Because the reliability of language testing is relatively stable, it can be easily obtained through statistical analysis; while the validity is much more complicated.

Content validity refers to the validity embodied by conceptual and non-statistical data. It is a judgment on whether the sample in the measurement target field is appropriate based on the systematic analysis of the test content. Heaton (2000) believes that the content validity of a language test refers to "whether the test has tested what required in the test syllabus, or the extent to which the test can represent the content it wants to measure or test".[11] The more the test content is relevant to the teaching requirements and the test syllabus, the higher its validity is. Therefore, the usual basis for verifying the content validity of the test is the Teaching Guide and the Testing Syllabus.

Bachman & Palmer's framework of task characteristic includes five aspects: characteristics of the setting, characteristics of the test rubrics, characteristics of the input, characteristics of the expected response, and characteristics of relationship between input and response. This paper will analyze the CET-4 listening comprehension test from two aspects: the input and the expected response.

The input refers to the materials that test takers need to process and answer, including the presentation format and language of input of the materials. The presentation format of the material includes the language used, the length of the texts and the degree of speededness; the language of input includes the topic, genre and textual characteristics of the material. Expected response refers to the test taker's reaction and output to the test task.

When talking about the content validity of a test, it means talking about the fidelity of the test paper to the Teaching Guide and the Testing Syllabus. Hence, both the Teaching Guide and the Testing Syllabus should be referred to as the bases of modifying Bachman and Palmer's original framework of task characteristics. Then, according to the contents of the three sections in CET-4 listening comprehension (see Table 1), the modified framework of CET-4 listening comprehension test is presented as follow (see Table 2):

Table 1: Contents of CET-4 listening comprehension (2018-2020)

Testing structure	Number	Question type	Questions
News reports	3	MC	7
Long conversations	2	MC	8
Passages	3	MC	10

MC=Multiple choice

Table 2: The modified framework for listening comprehension

Aspects	Related section
1. Characteristics of the Input	
Length	A B C
Speed	A B C
Readability	C
Genre	C
Topic	A B C
2. Characteristics of the Expected Response	
Response Type	A B C
Listening Skills Coverage	A B C

### 3. Findings and Discussions

Based on the modified framework for listening comprehension test and the listening ability requirements in Teaching Guide and Testing Syllabus, the content validation of CET-4 listening comprehension will be discussed. In order to evaluate accurately, characteristics of the input and the expected response will be analyzed in details.

#### 3.1. Characteristics of the Input

##### 3.1.1 Length

Table 3: Length of listening comprehension (Word)

	2018.12	2019.06	2019.12	2020.07	2020.09
A. News reports	508	461	501	554	545
B. C 1	283	241	246	287	277
C 2	273	244	289	255	264
C. P 1	232	241	241	240	240
P 2	232	229	249	272	230
P 3	235	230	246	242	248

Test takers will be definitely affected if the listening materials are too long, due to the limitation of people's focus time. The Testing Syllabus defines that test takers will have three news reports, with 450-500 words and 7 questions in total; two long conversations, with 240-280 words each conversation and 8 questions in total; and three passages, with 220-240 words each passage and a total of 10 questions. The length of the news reports, long conversations and passages in listening comprehension tests are counted carefully and the result are presented in Table 3.

C=conversation P=passage

Viewed from Table 3, only the length of news reports in June 2019 is within the stipulated line 450-500 words. The lengths of news reports in the other four tests exceed the stipulated line, with the minimum of 1 word in December 2019 and the maximum of 54 words (about 11%) in July 2020. As for the length of long conversations, it is not difficult to find that all the long conversations from December 2018 to September 2020 are between 241 and 289 words in length, neither too short nor too long. And concerning the lengths of the passages in these five tests, only the length of Passage 2 in July 2020 exceeds the stipulated 220-240 words each passage by 13%. The lengths of other passages are between 229 and 249 words, which highly meet the stipulations in the Testing Syllabus.

Therefore, referring to the stipulations in the Testing Syllabus of CET-4, it can be concluded that the length of the news reports is a little over the stipulations in the Testing Syllabus. While the length of long conversations is appropriate in CET-4 listening comprehension tests from December 2018 to September 2020, and words of individual long conversation meet the requirements of the Testing Syllabus well. And the length of the passages is relatively appropriate in these tests and relatively conforms to the stipulations in the Testing Syllabus.

### 3.1.2 Speed

The Teaching Guide has divided the English language abilities into three different levels: basic level, improved level and higher level. But there is not specific requirement for the speed of the listening materials. While, the Testing Syllabus has stated that the speed of the CET-4 listening materials should be within 120-140 words per minute. The speed analyzed in this paper is the average speed of all the input materials, including news reports, long conversations and passages, but excluding their questions. The calculation formula for speed is: the speed of each listening comprehension test (wpm) equals to the total number of words in the input materials (excluding questions) divides the total time to read these materials. The speeds of the input materials- news reports, long conversations and passages in listening comprehension tests- are presented below.

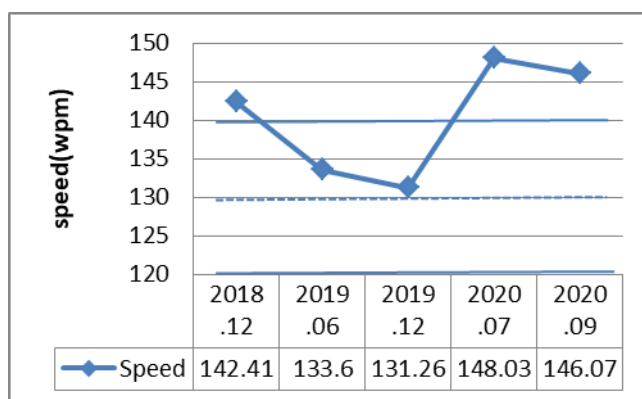


Figure 1: Speed of the input materials

From Fig 1, it can be easily seen that the CET-4 listening comprehension tests from December 2018 to July 2020 maintain at a relatively stable fast speed. The fastest is the listening comprehension test in July 2020, with a speed of 148.03 words per minute. The listening comprehension tests in September 2020 and December 2018 rank second and third, with speeds of 146.07 wpm and 142.41wpm. Speeds of all these three listening comprehension tests exceed the stipulated range in the Testing Syllabus, between 120 and 140 words per minute. The speed of the listening comprehension test in June 2019 is 133.6 wpm, and that in December 2019 is 131.26 wpm. The speeds of these two listening comprehension tests are appropriate and in line with the stipulations. Therefore, it is concluded that the speed of the listening comprehension is faster than the stipulation range between 120 and 140 wpm in the Testing Syllabus. Among these five listening

comprehension tests, speeds of three tests exceed the upper limit line 140 wpm, speeds of the other two tests are both over the midline of the stipulation range, placing at its upper part.

### 3.1.3. Readability

Readability refers to the degree of difficulty of the texts to be read and understood. The Testing Syllabus stipulates that students are to be able to basically understand spoken or written materials with medium difficulty, so the readability of the passages in listening comprehension is what we are concerned. This paper uses Microsoft Office Word to detect the fifteen passages in CET-4 listening comprehension, and then extracts the required data from the basic information on readability. The data in Table 4 shows that the mean readability of each. CET-4 listening comprehension test from December 2018 to September 2020 remains relatively stable. It is between 57.6 and 70.8. The readability of all the fifteen passages ranges from 31.5 to 82.1.

Table 4: Readability

	2018.1 2	2019.0 6	2019.1 2	2020.0 7	2020.0 9
Passage 1	31.5	64.9	43.4	61.9	74.3
Passage 2	69.1	72.9	68.5	82.1	74.7
Passage 3	72.3	74.6	61.7	39.3	59.1
Mean:	57.6	70.8	57.9	61.1	69.4

The New Readability Yardstick offers a practicable criterion. According to the readability yardstick, the smaller the readability is, the more difficult the passage is, and vice versa.

According to the Flesh readability yardstick, it can be seen that the scores of these passages (between 31.5 and 82.1) belong to difficult, fairly difficult, standard, fairly easy and easy. To be specific, 33% of these passages are standard; 33% are fairly easy; 20% are difficult; 8% are fairly difficult and 8% are easy. Since CET-4 is a norm-referenced standardized test and the Testing Syllabus states "...spoken materials with medium difficulty", it is acceptable that the readability of the listening comprehension is within the levels of fairly difficult and fairly easy, which can accurately and objectively reflect the actual listening ability of the test takers. Hence, it is concluded that the readability of these listening comprehension tests is more difficult than it should be. It is advisable to reduce, even avoid passages in the level of difficult.

### 3.1.4 Genre

Table 5: Genre distribution of passages (%)

	Narration	Exposition	Argumentation
2018.12		33.3	66.7
2019.06	33.3	33.3	33.3
2019.12		33.3	66.7
2020.07	33.3		66.7
2020.09	33.3	33.3	33.3
Mean:	20%	26.7%	53.3%

Genre refers to a type of stylistic structure occurring in particular setting, which is unique in cognitive pattern, has its own norm of organization and structure, and has particular and distinctive communicative functions (Richards, et al., 2003). Testing syllabus stipulates that the passage genre should be varied, including narration, argumentation and exposition. So this paper will discuss the stylistic characteristics of the passages in CET-4 listening comprehension from narration,

argumentation and exposition. A survey of the genres of the passages in passage listening comprehension is presented in Table 5.

From the data above, the results of the genre distribution of the passages in CET-4 listening comprehension from December 2018 to September 2020 are analyzed. In general, the genre of them meets the requirements for genre of the Testing Syllabus. The testing passages cover the three genres described in the Testing Syllabus. The genre of argumentation tops the other two genres, accounting for 53.3%; the genres of exposition and narration account for 26.7% and 20%. The reason, on the one hand, is that argumentative essays are a style of objective reasoning, with clear viewpoints, rigorous structure, and clear organization, which helps to achieve the purpose of the listening comprehension: "to test students' ability to obtain oral information". On the other hand, Alderson (2000) suggested that expository passages are more difficult to process than narrative passages, perhaps due to the greater variety of content, and also possibly because of greater variety of relationships among text units. In other words, exposition is more difficult to be understood than others. In this meaning, the narration and argumentation are relatively easy to understand. As a test to assess test takers' listening ability to meet the needs of life and work related information exchange, it is relatively appropriate and reasonable.

### 3.1.5 Topic area

Topic or topic area means the particular subject that an article discusses or writes about. The Teaching Guide stipulates that students are required to be able to understand simple English conversations on daily topics, slow-spoken lectures with familiar topics, and major-related English courses. The Testing Syllabus states that uplifting contents and wide range of topics are the basic principles of selecting test materials. It is listed that topics should cover areas such as humanities, social science, nature science and other fields, but the background knowledge involved should be known by the test takers or be provided in the passage. Based on the statement of the Testing Syllabus, topics of the listening comprehension test from December 2018 to September 2020 are explored carefully and it is found that the listening comprehension tests from December 2018 to September 2020 cover a wide range of topics, including humanities, social science, natural science and daily life topics. In terms of topics of humanities, there are one in December 2018; one in June and two in December 2019; three in July 2020; as well as two in September 2020. Topics of social science include: Potato chips in Japan, Effective ways to concentration and Functions of local public libraries in December 2018; three in June 2019; three in December 2019; two in July 2020; and one in September 2020 and so forth. Regarding to natural science topics, they are Mobile phone network and Savannah cat in December 2018; Preventing harms from ants and Improving health in the old age in June 2019; Seattle doesn't get too much rain and Reasons of muscle aching after exercises in December 2019; Romania's wetlands come back to life and Romania's wetlands come back to life in July 2020; and Pollution and global climate, Paying with payment apps and Disruptive effects of smartphones in September 2020. Among these topic areas, articles on social science topics are the most common ones, accounting for 35%; followed by articles on natural science and humanities, accounting for 25% each; articles on daily life topics rank the least, accounting for only 15% (See from Table 6). In short, diverse and authentic listening comprehension materials, broad and unbiased topic areas meet the requirements of the Testing Syllabus, and test takers can understand them easily.

Table 6: Ratio of topic areas

Test time	Humanities	Social science	Natural science	Daily life
2018.12	25	50	12.5	12.5
2019.06	12.5	50	25	12.5
2019.12	25	37.5	25	12.5
2020.07	37.5	25	25	12.5
2020.09	25	12.5	37.5	25
Average:	25	35	25	15

## 3.2 Characteristics of the Expected Response

### 3.2.1 Response type

The selected response adopted in these listening comprehension is presented in the format of multiple choice question (MCQ). Generally, it contains a question and several alternative options, which guarantee the objectivity of the answers. Second, it is marked by computer, which ensures the accuracy and reliability of the scores. Third, listening comprehension tests with MCQ are easy to be pretested and analyzed by statistical tools in terms of item analysis, item banking of multiple-choice items. In this sense, adopting selected response in the format of MCQ in CET-4 listening comprehension do really has merits. And it ensures the objectivity and accuracy of the scores and the reliability of the scoring.

### 3.2.2 Listening skills coverage

One of the aspects of the content validity study of CET-4 listening comprehension is to evaluate whether the tests test the required listening skills stated in the Teaching Guide and the Testing Syllabus.

The process of listening comprehension is essentially a process in which test takers use various skills to understand the listening materials. The Testing Syllabus states that listening comprehension is to test students' ability to obtain spoken information, including understanding the main idea, important facts and details, implicit meaning, judging the communicative function of the utterance, and the speaker's point of view, attitude, etc. The following skills are stipulated clearly for the CET-4 listening comprehension.

#### A. Understand explicit information

01 Understand the main idea

02 Understand important information or specific details

03 Understand the views, attitudes, etc. clearly expressed by the speaker

#### B. Understand the implicit information

04 Make inference of implied meaning

05 Judge the communicative function of utterance

06 Infer the speaker's point of view, attitude, etc.

#### C. Use language features to understand listening materials

07 Identify phonetic features (such as identifying phonetics from continuous speech, understanding stress and intonation, etc.)

08 Understand the relationship between sentences (such as cause and effect, comparison, condition, etc.)

#### D. Use listening strategies

##### 09 Use appropriate listening strategies to help comprehension

According to the above listening skills, the reading skills coverage of CET-4 listening comprehension from December 2018 to September 2020 is calculated and presented below.

Table 7: Listening skill coverage in CET-4 listening comprehension

Skills	01	02	03	04	05	06	07	08	09
2018.12	1	13	3	3	3	2			
2019.06	5	10	2	2	6				
2019.12	4	14	3	1	2			1	
2020.07	1	17	1	2	3	1			
2020.09	1	11	2	6	3	2			
Total	12	65	11	14	17	5	0	1	0
Total(%)	10%	52%	9%	11%	14%	4%	0%	1%	0%

From Table 7, we can find that in seven of the nine listening skills are involved, among which 02 Skill understanding important information or specific details is the most checked one. It account for 52%. 05 Skill judging the communitive function of the utterance ranks the second accounting for 14%. This is reasonable because we all know that the test takers are just hearers but not interlocutors. Mostly test takers don't know what the listening materials are talking about. They listen for the information required and judge the communitive function of what they hear. 04 Skill making inference of implied meaning ranks the third. That's because, sometimes, the speakers do not express their meanings explicitly, test takers need to make inference and deductions to get the information they want. 01 Skills understanding the main idea and 03 Skill understanding the views, attitudes clearly expressed by the speaker are the fourth and fifth respectively. Among the listening skills, skills 01, 02 and 03 are the lower-order skills, but take a high proportion (71%) of question items. It suggests that the understanding of explicit information plays an important role in successful listening comprehension. Also, such design agrees with the stipulations in the Teaching Guide: the basic requirements of listening stipulate that (college students) should be able to understand the main idea and grasp the main points. According to this, it comes to realize that skill 01, 02 and 03 are regarded as the basic requirements for listening comprehension. It comes to the conclusion that important information or specific detail is the most checked, then judging communitive and making inference. These question items cover most of the listening skills in the Testing Syllabus and are basically in line with the requirements of the Teaching Guide.

## 4. Conclusion and Suggestions

Concerning with the characteristics of the input, length, speed, readability, genre and topic area are described. The length is a little over the requirement of the Testing Syllabus, especially the news reports. The speed of the listening is mainly faster than that is stipulated in the Testing Syllabus. The readability is unsatisfactory inconsistent, since most of the listening passages are difficult and there are passages of 30 and over 80. The genre and topic area are appropriate and extensive. Referring to the characteristics of expected response, CET-4 listening comprehension from December 2018 to September 2020 has good coverage of the listening skills and the proportion of them well corresponds with the stipulations in the Testing Syllabus. In brief, the characteristics of the expected response meet the stipulations of the Testing Syllabus and the Teaching Guide fine.

### 4.1 Implication for Test Design

It is analyzed that the CET-4 listening comprehension from December 2018 to September 2020



does not have very high content validity. Suggestions are put forward to improve the quality of the future listening comprehension tests. First, the length of news reports could be decreased to not more than 500 words. Second the speed of the listening comprehension should be decreased and placed in the range between 120-140 words per minute. Third, the readability of the passages needs to be stable consistent. It is better to have passages at the readability level of fairly difficult, standard and fairly easy. Fourth, since the listening comprehension test has only multiple choice questions, it is reasonable to suggest that proper proportion of productive questions be adopted in the future listening comprehension test. Fifth, skill 08 Understanding the relationship between sentences and 09 Using appropriate listening strategies to help comprehension are suggested to be involved in the listening comprehension tests. Skill 07 testing the test takers' reading abilities on contextual level, not on sentential level can better evaluate their abilities; and adopting Skill 07 can better meet the requirement of the Testing Syllabus.

## 4.2 Implication for English Teaching and Learning

Regarding the enlightenment on English teaching and learning, this paper put summarizes the following. First, English learners should broaden and enrich their background knowledge. The more background knowledge about the listening materials the English learners have, the easier it will be to understand the listening. Teachers should also choose listening materials that are closely related to the society, culture, economy, religion, sports, and entertainment of the western countries. Through ways of broadening background knowledge and improving their cultural sensitivity, English learners can improve their knowledge construction, and increase their accumulation of cultural knowledge of western countries. Connecting relevant new and old information, learners can predict the content of the material they are listening. Second, teachers should adopt multimodal teaching mode to comprehensively improve students' English ability. Compared with the traditional mode of using audio resources alone, the multimodal autonomous English listening teaching mode can effectively promote students' autonomous learning ability. Teachers should strive to select listening materials from multiple perspectives such as language, vision, hearing, posture, and so on, so as to enable English learners to interact with various senses and improve their performance in English listening. Third, teachers and learners should both attach importance to cognitive strategy training. Teachers should develop students' habit of obtaining necessary information purposefully during the listening process. Through analysis of the listening skill coverage, it is found that there are many question items testing students' ability to listening to important information or specific details, such as time, place, people, events, and reasons, so good listening habits should be cultivated during the listening process. For example, note-taking keywords or main points can help remember and understand the information offered in the listening materials.

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