

Research on the Consistency between English Curriculum Standards and Reading Questions under the Background of the New College Entrance Examination

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Abstract: Under the background of the new curriculum standard and the new college entrance examination reform, the consistency between the two has become one of the core issues of English educators. "SEC" consistency analysis mode is used to construct a consistency analysis framework. The consistency of the new curriculum standard and the new college entrance examination paper I from 2020 to 2022 is analyzed from the dimensions of overall consistency, cognitive level and content theme. The results show that, the consistency between the two is high on the whole; The three sets of test papers have the same focus on the cognitive level, but the scope is not comprehensive and the proportion is unbalanced; The focus of the three sets of test papers in the content theme is the same, but the proportion is unbalanced. Therefore, it is suggested that the English reading proposition of the college entrance examination should be based on the curriculum standard and balance the proportions of both cognitive level and content theme; English teachers in senior high school should study the curriculum standard, and the reading questions of the college entrance examination, to clarify the cognitive level and content theme requirements, then adjust the direction of reading teaching.

Keywords: New College Entrance Examination Paper I, New English Curriculum Standards, Consistency Analysis, SEC Consistency Analysis Mode

1. Introduction

The bases for academic evaluation in China are mainly curriculum standards and syllabuses ^[1]. In 2021, the General Office of the State Council pointed out in the *Guiding Opinions on Promoting the Reform of the Way of Education in Ordinary High Schools in the New Era* that "the proposition of the senior high school proficiency test and college entrance examination should be based on the curriculum standards of ordinary high school and the requirements of talent selection in colleges, and the provinces implementing the new curriculum will no longer formulate test syllabus ^[2]." This means that the proposition of those provinces implementing the new college entrance examination should be based on the New English Curriculum Standard for Senior High School (2017 Edition) (hereinafter referred to as the "new curriculum standard"). The new curriculum standard adds academic quality standards and stipulates that the proposition should refer to the requirements of Level 2 ^[3].

With the reform of the new college entrance examination, the national examination paper propositioned by the Examination Center of the Department of Education has been launched since 2020. The consistency between the new curriculum standard and the new college entrance examination has a profound impact on the implementation of both. In the English paper I of the new college entrance examination, the reading part accounts for the largest proportion. This thesis intends to explore the consistency level between the new curriculum standard and English reading questions in the new college entrance examination paper I from 2020 to 2022, compare and analyze the differences between them from multiple perspectives, including the overall consistency, cognitive level, content theme dimension. The purpose is to understand the direction of the proposition of the English reading questions in the paper I under the background of the new college entrance examination reform. Then it will provide some suggestions not only for the scientific proposition of English reading questions, but also for the reading teaching for the future.

2. Research Design

2.1 Research Objects

The research objects of this thesis are the academic quality standards, Level 2 in the new curriculum standard and the reading part of the new college entrance examination paper I (hereinafter referred to as the “paper I”) from 2020 to 2022. The total number of reading questions are 20. Specifically, it consists of 15 reading comprehension questions and 5 five-answers-out-of-seven, with a total score of 50 points.

2.2 Research Tool

This thesis uses the “SEC” (Surveys of Enacted Curriculum) consistency analysis mode as the research tool, which refers to the sum of ideas, procedures and methods to judge and analyze the degree of consistency among various elements of the curriculum system [4]. Norman Webb constructed the consistency analysis standard from the four dimensions of knowledge, including type, depth, breadth and sample balance. Later, Andrew Porter and John Smithson absorbed the advantages of Webb’s model and developed the SEC consistency analysis mode [5].

The SEC mode is made up of a two-dimensional matrix from the two dimensions of “cognitive level” and “content theme”; Then, under the two-dimensional matrix, the specific items of the curriculum standard and test questions are coded respectively, generating the ratio data; Thereafter, the ratio data are substituted into the Porter consistency formula (seen as following) to obtain the consistency coefficient, which stands for the level of consistency [6].

$$P = 1 - \frac{\sum_{i=1}^n |X_i - Y_i|}{2}$$

The formula is explained as follows. “n” represents the total number of cells in the two-dimensional matrix; “i” represents a specific cell; “Xi” and “Yi” represent the ratio data of the corresponding cells of the two matrices; “P” refers to the consistency coefficient, which is between 0 and 1. The larger of P-value, the higher level of the consistency between the two; When P=0, it means they are completely inconsistent; when 0<P ≤ 0.3, it means they are weakly consistent; When 0.3<P<0.8, it means that the two are consistent to a certain extent; When 0.8 ≤ P<1, it means that they are strongly consistent; When P=1, it means they are completely consistent.

2.3 Research Procedures

2.3.1 Construction of SEC Consistency Analysis Mode

Table 1: SEC Consistency Analysis Mode

Content Theme		Cognitive Level					
		Perceiving and Identifying(A)	Locating and Extracting(B)	Understanding and Integrating(C)	Analyzing and Reasoning(D)	Appreciating and Evaluating(E)	Transferring and Applying(F)
Language(1)	Vocabulary(1)						
	Grammar(2)						
Content(2)	Information(3)						
	Fact(4)						
	Opinion(5)						
	Main idea(6)						
	Intention(7)						
	Emotion(8)						
	Attitude(9)						
Structure(3)	Macrostructure(10)						
	Microstructure(11)						

Guo Baoxian and Zhang Jianzhong has constructed a framework system of foreign language reading ability of primary and secondary school students with two dimensions (cognitive level and content theme), three factors (language, content and structure) and six levels (perceiving and identifying, locating and extracting, understanding and integrating, analyzing and reasoning, appreciating and evaluating, transferring and applying) [7]. The framework has organically integrated various connotations of reading ability and it can not only reflect the types of foreign language reading ability of primary and secondary school students in China, but also reflect their different cognitive levels of reading ability [8]. Therefore,

based on this framework, combined with the requirements of the National College Entrance Examination English Syllabus of 2020 and the new curriculum standard on reading, this thesis constructs the SEC consistency analysis mode, which includes six cognitive levels horizontally and three content dimensions vertically which includes 11 sub-themes, as shown in Table 1.

2.3.2 Coding Results of the New Curriculum Standard

The requirements of the academic quality standards, Level 2 in the new curriculum standard are the main basis for the proposition of the college entrance examination. Among those requirements, there are merely five items about “reading”, but each item includes several sub-items, which are expressed in the form of action verb plus content^[3]. To facilitate coding, the five items are first subdivided into 20 sub-items. Then three postgraduate students and one in-service senior high school English teacher independently analyzed and coded the 20 sub-items according to the above SEC consistency analysis framework, and reached a consensus through discussion when there were differences. Take the first sub-item “Be able to judge and identify the intention of text” as an example. As for its cognitive level, it belongs to “Perceiving and Identifying, so it is coded as A; As for its content theme, it refers to “intention”, so it is coded as No. 7. As a result, its code result is “A7”. Finally, the ratio data of each cell are calculated based on the coding results of these 20 sub-items.

2.3.3 Coding Results of the Paper I

After coding the new curriculum standard, three postgraduate students and one in-service senior high school English teacher still analyzed and coded the reading part of paper I of the new college entrance examination from 2020 to 2022. The process is as follows: at first, analyze the cognitive level and content theme of each reading question and divide it into the two-dimensional matrix corresponding to the SEC consistency analysis framework independently; Secondly, as for the inconsistent coding results, four researchers discussed again to get the final coding results; Then, fill the frequency of the same coding results into the corresponding cell and calculate the total score; Finally, calculate the ratio data of the total score of each cell.

Since the reading part of these three papers has 20 questions for each, we will not analyze them one by one here. Take the No. 21 question in the paper I of 2020 as an example to show the specific coding and calculating process. The example and analysis are as follow.

E.g. How many people can each grand prize winner take on the free trip?

- A. Two B. Three C. Four D. Six

This question can be positioned at the “Grand Prize” part, “for each of three winners, a parent and one other person of the winner’s choice” and extract the answer to this question quickly. From the perspective of cognitive level, this topic belongs to the level of “positioning and extracting (B)”; As for the content theme, this topic aims to check whether students can obtain detailed information, so it belongs to the category of “information (3)”. Therefore, the code result of this question is B3.

There are four questions coded B3 in the paper I of 2020 and the score of each question is 2.5 points. Therefore, the total score of B3 cell is $4 * 2.5=10$ points, accounting for $10/50=0.2$ of the total score of 50 points. So the ratio data of B3 is 0.2. As the limited space, the ratio data of the final coding results of three sets of papers of the new college entrance examination from 2020 to 2022 are emitted.

3. Data Analysis

Substitute the ratio data of the paper I and the ratio data of the new curriculum standard into the Porter consistency coefficient formula. Then the consistency coefficient P value can be calculated. The corresponding figures can be made to show its consistency clearly.

3.1 Analysis of the Total Consistency

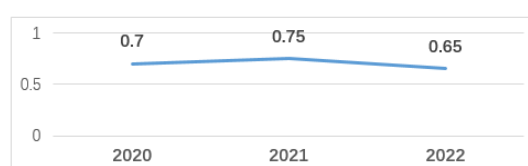


Figure 1: Consistent Coefficient of the New Curriculum Standard and the Paper I from 2020 to 2022

It can be seen from Figure 1 that the consistency coefficient P values of the new curriculum standard and the paper I of the new college entrance examination for 2020-2022 are 0.7, 0.75 and 0.65 respectively. All of them are between 0.3 and 0.8, indicating that the two have reached a certain degree of consistency. It can also be seen that they are a little different, indicating that the proposition of the reading part of the three sets of paper I are slightly different, but the fluctuation is not obvious.

3.2 Analysis of the “Cognitive Level”



Figure 2: Cognitive Level of the New Curriculum Standard and the Paper I from 2020 to 2022

As Figure 2 shows, in terms of the key points, the “understanding and integrating” level accounts for the largest proportion among the six cognitive levels in the new curriculum standard; In the three sets of test papers from 2020 to 2022, “understanding and integrating” level also accounts for the largest proportion.

From the perspective of the scope, the new curriculum standard involves five levels, “perceiving and identifying”, “positioning and extracting”, “understanding and integrating”, “analyzing and reasoning”, “transferring and applying”. However, the 2020-2022 new college entrance examination paper I only involves the first four levels of the new curriculum standard, lacking the examination of the “transferring and applying” level. It shows that the proposition of the reading questions of the 2020-2022 new college entrance examination paper I does not fully meet the requirements of the new curriculum standard.

As for the ranking of different cognitive levels, the new curriculum standard is based on the proportion of “understanding and integrating>perceiving and identifying>positioning and extracting>analyzing and reasoning=transferring and applying>appreciating and evaluating”; However, the paper I of 2020 and 2021 take this order, “understanding and integrating>perceiving and identifying>positioning and extracting=analyzing and reasoning>appreciating and evaluating=transferring and applying”; In 2022, it is slightly different according to the proportion of “understanding and integrating>perceiving and identifying=analyzing and reasoning>positioning and extracting>appreciating and evaluating=transferring and applying”.

From the perspective of single cognitive level, firstly, “perceiving and identifying” accounts for 0.35 in the new curriculum standard, while the three sets of papers failed to meet the requirements; Secondly, “positioning and extracting” accounts for 0.1 in the new curriculum, while the three sets of papers exceeded the requirements; Thirdly, the proportion of “understanding and integrating” in the new curriculum standard is 0.45, while the paper I of 2021 and 2022 meet the requirements of the curriculum standard, slightly lower than the requirements in 2020; Fourthly, the proportion of “analyzing and reasoning” in the new curriculum standard is 0.05, while the proportion of the three sets of test papers from 2020 to 2022 is 0.2, 0.15 and 0.2 respectively, all exceeding the requirements; Fifthly, “appreciating and evaluating” is not stipulated in the new curriculum standard, nor is it examined in the three paper I; Sixthly, “transferring and applying” accounts for 0.05 in the new curriculum standard, but the three sets of papers do not examine this level.

3.3 Analysis of the “Content Theme”

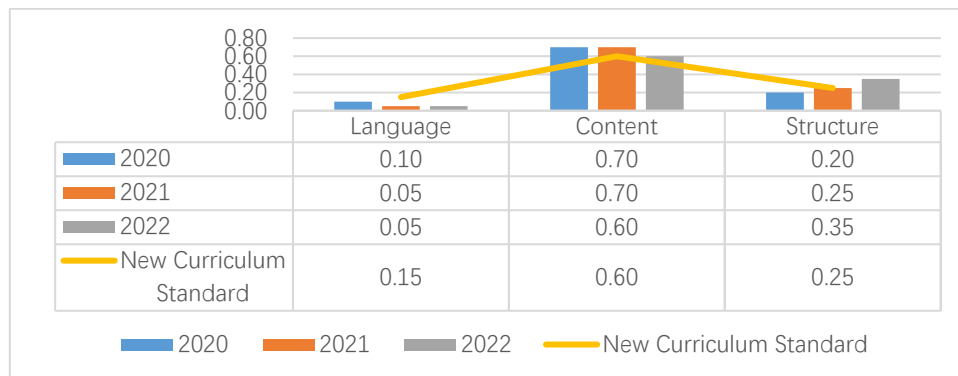


Figure 3: Content Theme of the New Curriculum Standard and the Paper I from 2020 to 2022

According to Figure 3, in terms of the key points, the new curriculum standard and the three sets of paper I all pay the most attention to the “content”. From the perspective of the scope, the new curriculum standard and three paper I all involve three levels of language, content and structure. As for the overall proportion, the proportions of the three levels in the new curriculum standard and the three sets of paper I are the same, i.e. “content>structure>language” from the largest to the smallest.

When it comes to the proportion of single factor, first, the proportion of “language” specified in the new curriculum standard is 0.15, but the actual proportion of the three sets of paper I from 2020 to 2022 is 0.1, 0.05 and 0.05 respectively, which are all lower than the requirements of the curriculum standard; Secondly, the proportion of “content” in the new curriculum standard is 0.6, while only the paper I in 2022 meets the requirements and the proportions of the 2020 and 2021 exceed the curriculum standard; Thirdly, the new curriculum standard stipulates that the proportion of “structure” is 0.25. Only the test paper in 2021 meets the requirements. It is lower than the proportion of the curriculum standard in 2020 and it is higher than the proportion in 2022.

The details of the content theme are as follows. First of all, as for the “language” level, both the new curriculum standard and the three paper I from 2020 to 2022 involve “vocabulary”, but not “grammar”. Then, as for the “content” level, the new curriculum standard stipulates to examine information, facts, opinions, main ideas, intentions and attitudes, among which “information” accounts for the largest proportion; The paper I in 2020 examines information, facts, main ideas and intentions; The paper I in 2021 examines information, facts, main ideas, intentions and attitudes; The paper I in 2022 examines information, facts, opinions, main ideas and intentions. All the three sets of papers also take “information” as the main dimension to test. Finally, as for the “structure” level, the new curriculum standard stipulates that “macrostructure” and “microstructure” should be examined, especially the “microstructure”. The three test papers all examine these two dimensions and take “microstructure” as the focus.

4. Suggestions Based on the Data Analysis

The consistency of the new curriculum standard and the three paper I not only provides favorable suggestions for the reading proposition of the new college entrance examination paper I and even other types of test papers, but also for English reading teaching in senior high school.

4.1 Suggestions for the Reading Proposition

First of all, since the new curriculum standard stipulates that the academic quality standards, Level 2 are mainly used to test the learning outcomes of optional compulsory courses, Level 2 is the main basis for the proposition of the college entrance examination^[3]. Before propositioning the reading questions for the college entrance examination, the experts should carefully study and firmly grasp the relevant requirements based on the new curriculum standard, the requirements of “reading” in Level 2 specifically.

Then, in the process of propositioning the reading questions for the college entrance examination, the six cognitive levels and three dimensions of content theme should be considered comprehensively, balance the proportion to strive to reach a high degree of consistency with the new curriculum standard. Specifically speaking, as for the cognitive level, it is necessary to add reading questions to examine students’ abilities of “perceiving and identifying, “appreciating and evaluating” and “transferring and

applying”. In terms of content theme, the questions testing “content” dimension should be appropriately reduced, while the questions testing “language” and “structure” dimensions should be increased; The “content” dimension can also examine students’ understanding of the author’s opinions, emotions and attitudes; At the “structure” dimension, it is also necessary to examine students’ grasp of the “macrostructure” of the text, that is, the genre.

Finally, after propositioning the reading questions of the college entrance examination, detailed answers and analysis should be provided to clarify the cognitive level and content theme of each question so that English teachers in senior high school can grasp the key points quickly and accurately, so as to carry out targeted reading teaching.

4.2 Suggestions for English Reading Teaching in Senior High School

First and foremost, study the requirements of reading in the new curriculum standard. English teachers in senior high school should carefully study the requirements of “reading” in the content module “language skills” of the new curriculum standard and the specific requirements of “reading” in the Level 2 of the academic quality standards so that they can be clear about the direction of reading teaching.

Then, study the reading questions of the college entrance examination to clarify the requirements on the cognitive level and content theme of the examination and adjust the direction of reading teaching in future. Specifically, firstly, at the cognitive level, English teachers in senior high school need to guide students to “appreciating and evaluating” the text they read, and “transferring and applying” the acquired knowledge, etc. into new contexts. Secondly, in the content theme, when reading new words in a new text, students can be guided to guess the meaning of new words according to the context first to train the ability of “language”; During the English reading teaching, students should be guided to pay attention to various elements like information, facts, opinions, main ideas, intentions, emotions and attitudes; Students should also be guided to sort out the “structure” of the text, including grasping the genre of the text and the cohesive relationships between sentences.

To sum up, English teachers in senior high school should not only be guided by the new curriculum standard and questions of the college entrance examination, but also adjust the teaching focus based on the actual reading level of students, striving to meet the requirements specified in the new curriculum standard, so as to achieve the optimization of efficiency of English reading teaching.

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