# Analysis of Multiple-choice Propositions in Secondary School English Tests 

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#### Abstract

Multiple choice questions are a common question type used in current secondary school English tests. Multiple choice questions can test students' completion of multiple learning tasks such as vocabulary, grammar, and listening. Multiple choice questions have the advantages of effectively testing students' learning ability, wide coverage, convenient and efficient use, etc., and occupy an important position in daily secondary school English tests. To this end, this study will analyze the proposition system of multiple-choice questions in the current secondary school English test, make use of the strengths and avoid the weaknesses, and provide design principles and recommendation for the proposition system.


## Keywords

## Multiple-choice questions; Proposition; Secondary English test.

## 1. Introduction

Multiple choice questions are one of the most widely used questions in current secondary school English tests. Liu Runqing has mentioned in the language test that multiple-choice questions can be applied to all aspects of the language proficiency test. [1] Because multiplechoice questions can improve the objectivity and accuracy of marking papers, they are popular with many teachers. However, we must also know that although multiple-choice questions have their irreplaceable advantages, they also have inherent disadvantages not be ignored. To this end, after carefully studying the propositional principles and methods of multiple-choice questions, the teachers should propose effective design methods and improvement principles, eliminate the shortcomings, and improve the reliability and validity of multiple-choice questions.

## 2. Overview

### 2.1. Definition of multiple-choice questions

Multiple choice questions are questions from which the subject is asked to choose the correct answer. Multiple choice questions usually have only one answer, so they are also called one choice questions. Multiple choice questions are widely used in vocabulary, grammar, listening, reading and other question types. Multiple choice questions can be used to measure students' understanding and memory retention of knowledge, usually used for input-based knowledge. With the development of English education in China's secondary schools, the role of English testing in guiding teaching has become increasingly prominent, and multiple-choice questions occupy an irreplaceable and guiding position in English testing, so understanding the design principles of multiple-choice questions is the basic quality that qualified teachers should have.

### 2.2. Advantages of multiple-choice questions

### 2.2.1. High reliability

Test reliability refers to the degree of reliability and consistency of the test results of a question. A multiple-choice question has a high reliability because it only examines one knowledge point, eliminates the interference of other external factors to the greatest extent, covers a wide range of test points, and has many samples.

### 2.2.2. Easy implementation

The method of multiple-choice questions is usually to directly select the correct option, or directly fill in the answer card, so its answer method is simple, the marking work is convenient, and the overall implementation is more efficient and economical than subjective questions.

### 2.2.3. Clear test point

Each multiple-choice question only tests one language point, so that subjects can easily understand and discover the purpose of the test and improve the efficiency of answering questions.

### 2.2.4. Wide coverage

In most English tests, a test paper usually contains dozens or even hundreds of objective multiple-choice questions, and its examination content can include vocabulary, grammar, reading and other question types, so its coverage is wide and the amount of examination is large.

### 2.3. Disadvantages of multiple-choice questions

### 2.3.1. Inability to test productive language skills

Often multiple-choice questions are used to test comprehension and memory of receptive language skills in the listening and reading types. However, these type questions cannot measure productive language skills such as speaking and writing, therefore, there is still a gap between the actual test type and desirable test achievement.

### 2.3.2. Guessable answers

Since the answer skill of multiple-choice questions is to fill in the options directly and sometimes randomly, candidates can use some guessing skills or free and random selection to answer questions without understanding and analyzing the language knowledge test points. But the teacher has no way of knowing whether the candidate's answer was chosen through careful thought or random guessing. Wu Li'an found that multiple-choice questions often induce unfounded speculation, and it often occurs that subjects chose the correct answer with the wrong reason. [2]

### 2.3.3. Difficult proposition process

The proposition process for multiple-choice questions is a difficult and tough problem. Hughes said that multiple-choice questions are the one of hardest and most time-consuming test type, and high-quality multiple-choice questions are difficult to design. [5] Pan Zhixin also said that producing a set of high-quality test papers generally takes professionals a year to ensure that all quality indicators are met. [3]

### 2.3.4. Harmful backlash effects

The misinformation in the options will, to some extent, be a question for the victim to question what they already know. Moreover, a large number of multiple-choice training questions will cause subjects to focus part of their attention on finding and training the answering skills of this question type, neglecting the cultivation of language skill and thinking quality, resulting in high scores but low ability.

## 3. Design

### 3.1. Design principles for multiple-choice questions

There are many ways to design multiple-choice questions, and the teacher's choice of the appropriate proposition method has a guiding effect on the design of the question. Lu Ziwen mentioned that multiple-choice questions have the advantages of objective and convenient scoring, convenient statistical analysis, and have a wide range of applications, etc. [4]
In this chapter, I will describe some of the design principles commonly used in multiple-choice propositions.

### 3.1.1. Unique correct answer

This principle seems to be easy to implement, but it is difficult to design, for which requires the subject designer to have rich language knowledge and propositional skills. For example:
The book cost her $\qquad$ .
A. less than $\$ 18$ B. less than 28 C. between $\$ 18$ and $\$ 28$ D. between $\$ 20$ and $\$ 25$

In this question, if $B$ is the correct answer, then $A$ is also correct. If $D$ is the correct answer, then C is also correct.

### 3.1.2. Clear measurement objectives

One question tests one goal, for example, the test tense question cannot have test voice at the same time, otherwise the candidate's knowledge judgment will be disrupted. For example:

- I feel very happy that I $\qquad$ to be the host.
- Congratulations! (2007 Regional Middle School Examination Questions)
A. choose B. am chosen C. was chosen D. have chosen


### 3.1.3. Appropriate context

Appropriate context should be provided in the question stem to ensure that there is no ambiguity in the question stem. However, the context cues should not be too much to prevent candidates from guessing the answers, and not too limitation to hinder the candidates' answers. For example:
There was plenty of time. She $\qquad$ . (1987 College Entrance Examination question)
A. mustn't have hurried B. needn't have hurried
C. must not hurry D. couldn't have hurried

The content of this question can be both use speculation and interpretation of past facts, so if both B and D are correct, candidates will be confused about the answers.

### 3.1.4. Balanced option length

The length of the options should be balanced, otherwise it may give the test taker some hints. For example, if all three options are shorter and the remaining one is longer, candidates will tend to exclude the longer option outright.

### 3.1.5. Consistent option generics

The options given in the exam should first ensure that the generics are consistent, such as consistent parts of speech, consistent grammar points, etc. For example:
The road conditions there turned out to be very good, __ was more than we could expect (2008 National Exam Questions Volume II)
A. it B. what C. which D. that

In this question, it is clear that option $A$ is different from the other three options, so candidates will exclude option A directly.

### 3.1.6. Not contain options mean the opposite

The choice contains options with opposite meanings, which is easy for the subjects to exclude one of them from neglect, which reduces the interference effect of the option, thereby reducing the utility of the question.

### 3.1.7. Clear and concise question stem

The questions stem should be concise, neither too long nor too short, and should not be ambiguous in order to provide sufficient information. Answers cannot appear and cannot be completely irrelevant to the question being done.

### 3.1.8. Random answer distribution

The distribution of options cannot be regular, otherwise students can answer questions by guessing, and randomness can reduce the possibility of students' guessing.

### 3.2. Recommended improvements of multiple-choice design

Despite its inherent drawbacks, multiple-choice questions are still an efficient and convenient way to test. Therefore, when designing multiple-choice questions, one can refer to the following methods.

### 3.2.1. Questions stem propositional principle

The following principles can be followed in the reasonable design of the test questions:
(1) Do not set a blank space at the beginning of the stem sentence.
(2) The design should be concise and clear.
(3) The language should be close to the reality of society and student life, embody the humanistic spirit, and have a sense of reality.
(4) The context is appropriately set. Too little context is not enough to establish artistic conception, and too much context will provide grammatical or semantic implications.

### 3.2.2. Ways to improve the intrusiveness of options

When designing multiple-choice questions, the teacher should not arbitrarily design irrelevant options, the distractors should be highly disturbing, and the students should not be able to easily see the answer without effort, and should mobilize students' thinking and knowledge. Common ways to increase the distractions are:
(1) Design distractions with mistakes that students often make in their learning.
(2) Design with a narrative that students do not rigorously learn in their learning.
(3) Note that the length and wording of the distractors should be similar to the correct answer.
(4) Maintain similarity between options.
(5) By comparing and analyzing mother tongues and foreign languages, the options for mother tongues to have a negative migration effect on foreign languages were identified.

### 3.3. Trial Making

In order to ensure the quality of the test paper, the teacher needs to do a trial after the design of the test paper is designed. The age, thinking level, and knowledge level of the person who chooses to do the test should be similar to the student being examined, and the subjective judgment of the teacher cannot be relied on alone to define the applicability and difficulty of the test questions. After the students conduct the test, the teacher shall count the results of the candidate, analyze the error rate and reasons of each question, and adjust the test question or re-proposition in time. This ensures that each test item is positively correlated with the overall score, improving the validity and reliability of the entire paper.

## 4. Conclusion

Multiple choice is the most commonly used question type in various types of exams, occupies an irreplaceable position, and is beloved by secondary education teachers. Although multiplechoice questions have particularly inherently disadvantageous and cannot fully detect students' language ability, however, if the teacher can carry forward the advantages of multiple choice, ensure the reliability and validity of the test, and abandon its drawbacks through careful questions and trial work, and promote the strengths and avoid the weaknesses. Then, multiplechoice questions will effectively measure student learning outcomes, help teachers teach, and promote student learning.

## References

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