Multiple-choice Test Item in Basic Schools of Qaladiza Town

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Abstract

Recently in Iraqi Kurdistan, multiple-choice test items (MCTIs) have become the consideration of assessment process, and they constitute a considerable portion of formative and summative assessments in basic and high schools in Iraqi Kurdistan. There is a consensus that poorly written MCIs degrades the dependability of test scores, and may not give a clear picture of the effectiveness of the teaching process. Therefore, this study is aimed at evaluating 60 MCTIs chosen randomly from some basic schools of Qaladiza town. The data collected by using a checklist prepared by the researcher based on the principles in constructing MCTIs. The results obtained from the analyzed data show that there are many problems in the collected MCTIs. The last section of the study is about some recommendations given to the teachers and test designers.

Chapter One: Literature Review

1 – 1 Introduction

Over the last decade, multiple-choice test items (MCTIs) have been increasingly used due to larger student numbers, reduced resources and increasing use of new technologies (Nicol, 2007, p. 53). Additionally, they have become the basis of a significant portion of assessment in many education courses. Recently, MCTIs have constituted the main part of both formative and summative achievement tests in basic and high schools of Iraqi Kurdistan. Therefore, much consideration should be given to the nature, preparation, and use of MCTIs in the region.

Undoubtedly, classroom tests are one of the most important aspects of the teaching – learning process, and designing effective and reliable classroom tests is a challenging responsibility facing teachers. Those who have little preparation or knowledge in the craft of designing MCTIs will not only face difficulties, but also lower the reliability of evaluation and the assessment process. The MCTIs are a powerful teaching – learning tool if they are designed well. Although they seem to be simple in appearance to construct, they are actually very difficult to design correctly (Brown & Abeywickrama, 2010, p. 67). One goal of this research, therefore, is to help teachers writing MCTIs better.

1 – 2 The Notion of Multiple-choice Test Items

MCTIs are all receptive or selective response testing items in which the test-taker chooses from a set of responses, called options, rather than creating a response (Brown & Abeywickrama, 2010, p. 68). Furthermore, an MCTI is described as a context, stem (Hughes 2003, p. 75), lead (Harris 1969, p. 7), whether an interrogative or affirmative sentence, that is followed by some options. More clearly, all MCTIs have three main elements. The first element is an item, a stem, or a context in which the problem is presented. The second one is the correct option or answer; and finally, there are distractors which are incorrect options given along with the correct option (Heaton, 1988, p. 28; Hughes, 2003, p. 75; Mousavi, 2009, p. 427). A typical example of an MCTI is shown below:

How many chromosomes are found in a typical human cell? stem/context



In the example above, only one option is correct. This version of this item format is known as one-answer multiple-choice item. A part from this version, MCTIs can also come in two other formats. One of them is called "multiple-response multiple-choice item" in which the test-takers are required to choose more than one option as the answer. A typical example of this version is shown below.

- Choose vegetables from the following options.
 - A) Avocados
 B) Carrots Correct answer
 C) Green Apples
 D) Radishes Correct answer
 E) Limes

Another version of MCTI format is known as "best answer multiple-choice item" in that all given options are particularly correct answers, but the examinee is directed to select the best answer (Mousavi, 2009, p. 428).

Given options in MCTIs can be presented in different ways. First, options can be given within the stem. For instance:

Excuse me do you know (A. where is the post office B. where the post office is C. is where the post office D. where the post is office) please?

Previous research has commented on this format of MCTI. For example, Harris (1969, p. 26) claims that this format is economical. This means that it occupies less space on the paper

and can save papers while administrating the test. However, that this format seems to be complicated and confuses the examinees' minds. Instead, the following format is more preferred.

Excuse me, do you know please?

Although this seems to be less confusing and complicated, it is less economical and occupies more space on the examination paper.

1 – 3 Principles in Constructing MCTIs

Constructing MCIs is very demanding and time-consuming. To design high quality MCIs, therefore, teachers should keep the following principles in mind.

1. Each MCTI should measure only one objective

While teachers design MCTIs, they ought to be careful about the fact that in each item only one intended skill or area should be tested or focused (i.e VALIDITY). This is less confusing for the test-takers and helps to reinforce a particular teaching point (Mousavi, 2009, p. 429). For instance,

- Where did you go after the party last night?
 - a) Yes, I did
 - b) Because I was tired
 - c) To Emmy's place for another party
 - d) Around eleven o'clock

If we examine this item we see that option (A) is designed to assure that whether the students are capable of differentiating between an answer to *wh*- question and a *yes/no* question. Other options are presented to test the students' ability to comprehend and distinguish the meanings of *where* as opposed to *why* and *when*. Thus, the objective – that is focusing on *wh*- questions – is clearly and directly addressed.

2. Both the stem and the options have to be as clear and simple as possible

While writing MCTIs, teachers should avoid excessive wordiness or complex sentence structures in both the stem and options because complex structure and long context make the stimulus difficult to understand the requirement of the question (Zimmaro, 2004, p. 16). Therefore, when the students answer incorrectly we are not sure whether this is due to their insufficient knowledge or the problem with the context. In the example below, the stem is wordy and complex.

- My eyesight has really been deteriorating lately. I wonder if I need glasses. I think I had better go to the to have my eyes checked.
 - a) pediatrician
 - b) biologist
 - c) dermatologist
 - d) optometrist

The first two sentences in the stem is unnecessary. If we want to identify the type of medical profession that deals with eyesight issues, these two sentences are superfluous (Brown & Abeywickrama 2010). Moreover, it is common to express the correct response more carefully and at greater length than the distractors. However, research (e.g. Chase 1964) has indicated that longer options tend to result in higher response rates, and teachers are mostly unaware of this item-writing principle (Rodriguez, 1997). To solve the problem, we can rephrase the stem as the following.

- I think I had better go to the to have my eyes checked.
 - a) pediatrician
 - b) biologist
 - c) dermatologist
 - d) optometrist

In addition, (Burton, *et al* 1991, p. 11) claim that using negativity in the stem may lead the testees to misunderstand the stem and affect their real performance. However, if it is necessary to use the negative from, the negation should be underlined, capitalized, or written in bold.

3. Each item must have only one correct answer

The answer of the question must absolutely be correct and the only correct one in the given options (unless the item is a *multiple-response* item type). Otherwise, the item will not be reliable and should not be used. Consider the item below:

- The question was to answer.
 - a) difficult
 - b) easy
 - c) heavy
 - d) weighty

In the options, both (A) and (B) are suitable and meaningful in the stem. Since we have two correct answers, this item is not reliable and needs to be changed. We can rephrase the item either by extending the stem by adding some words or by eliminating one of the correct options. After revising, the previous item can be as the following:

- The question was to answer. That is why I got a high grade.
 - e) difficult
 - f) easy \square Correct answer
 - g) heavy
 - h) weighty
- 4. Each option should be grammatically correct when placed in the stem

Test designers should be aware of the fact that when the correct option placed into the stem, the sentence should be grammatically correct. For example:

- Someone who designs cars is a
 - a) engineer
 - b) architect
 - c) driver
 - d) pilot

the problem with this item is that both *engineer* and *architect* are grammatically not suitable to the stem because both begin with the vowel sounds and at the beginning of the blank in

the stem there is a letter, since *a engineer and *a architect are not grammatically correct. This may paves the way to confuse the students' minds and may affect their real performance. This can be solved by adding the article to the beginning of the options such as:

Someone who designs cars is

- e) an engineer
- f) an architect
- g) a driver
- h) a pilot
- 5. The number of the options should not be less than four

While designing MCTIs, the number of the given options is very important and needs to be considered. The more options are presented, the less guessing factor is involved. Items with two options will provide 50% of the guessing factor; this means the test-takers will have 50% chance to choose the correct answer without knowing it. Items with three options create about 33.5% of the guessing factor, with four options there is 25% of the guessing factor. Thus, with increasing the number of the options the guessing factor will decrease.

6. Options should be free from clues

Poorly written items often contain clues that help students who do not know the correct answer eliminate incorrect alternatives and increase their chance of guessing correctly. In some cases teachers unintentionally provide clues in the items. Firstly, sometimes inconsistent grammar in the stem provide a clue to the students to choose the correct or eliminate the incorrect answers easily, and they think that inconsistent grammar is a sign of incorrect answer. Consider the example below:

- A word that is used to describe a verb is an
 - a) noun
 - b) adjective
 - c) adverb
 - d) pronoun

In this item, quick-witted students immediately see that both (A) and (D) are not correct answers because they begin with a consonant sound. To solve this problem, the article should be written with the options (Burton, *et al.* 1991, p. 20). Furthermore, it is concluded through research (e.g. Haladyna & Downing 1989, p. 63) that having noticeably longer or shorter option than the others is usually presumed to be the correct or incorrect answer without good reason. Moreover, (Chase 1964) stated that longer options tend to result in higher response rate and students may guess those options which are standing out of the others. Therefore, the options should be similar in length. Another case that provides clue to the testees is when all options are not plausible. Sometimes teachers for the sake of having many options present poor alternatives. However, they should be aware that unrealistic or humorous distractors increase the guessing factor.

Incorrect punctuating can also provide clue to the examinees. Teachers, while writing MCTIs, should not place any punctuation mark at the end of the incomplete-statement stem unless the sentence requires it. Each option should start with a lower-case letter if the blank is within the stem (Mousavi, 2009, p. 430).

7. Blanks should not come at the beginning of the stem

Measurement specialists have advised not to use the completion format, especially at the beginning of the stem because a student has to retain the stem in short-term memory while completing the stem with each option. Test anxiety is even higher if the student is not a native English speaker (Cheung & Bucat, 2012, p. 2). Rather, the stem can be written as an incomplete statement that needs to be completed and the omission should occur at the end of the stem rather than at the beginning. The examples given below give more details.

- have the molecular formula C_nH_{2n}.
 - a) Alkanes
 - b) Alkenes
 - c) Alkanols
 - d) Alkanoic acids

This item can be revised to be better as follows:

- Which type of organic substance has the molecular formula C_nH_{2n}?
 - a) Alkanes
 - b) Alkenes
 - c) Alkanols
 - d) Alkanoic acids (Cheung & Bucat, 2012, p. 2)
- 8. The correct answer in each item should be presented in a random order.

If the correct answers of the options come in the same position, the guessing factor will be high. In other words, if there is a noticeable pattern to the positions of the answers from item to item, quick-witted students may take notice and make their selections accordingly (Burton, et al. 1991, p. 29). Research (such as Haladyna & Downing 1989) has shown that the answer of the items should be randomized by arranging the alternatives in logical order. For instance, if the options are numbers, they should be arranged in ascending order, and if the options are words, they should be arranged alphabetically. Consider the following example:

When did the World War I begin?



9. Using alternatives such as "none of them" or "all of them" should be avoided.

Using these alternatives in MCTIs is tempting to many teachers because they appear to fit easily into many items. However, many measurement specialists do not recommend the use of these options (Cheung & Bucat, 2012; Burton, et al 1991). They are frequently used when the teacher faces difficulties in coming up with a sufficient number of distractors. Such teachers emphasize quantity of distractors over quality. Unfortunately, the use of either of these alternatives tends to reduce the effectiveness of the item. However, (Clegg & Cashin, 1986) believe that in one- correct-answer multiple-choice items the alternative "none of them", if used with caution, may serve a useful purpose, especially for items requiring mathematical calculations.

1 – 4 Merits and Weaknesses of MCTIs

1 – 4 – 1 Merits of MCTIs

MCTIs have a lot of advantages that make the items the most versatile of most other item types. Firstly, MCIs are more flexible than other item types for assessing a variety of content and instructional objectives. They are adaptable to different levels of learning outcomes, from recall of knowledge to a more complex levels such as analyzing, comprehension, interpretation, and discrimination (Burton, et al 1991). Additionally, MCTIs are preferred by measurement experts because the items' sampling of content is usually superior when compared to other item types (Mousavi 2009). Secondly, the administration of MCTIs is easy. This means that they can be given to a large number of test-takers in one single testing session. This helps the test writers to include a large number of different tasks or individual items in the testing session (Harris 1969). Thirdly, MCTIs do not allow students to use avoidance strategy - that is avoiding the correct answer or difficult problems by extending their responses as it is seen in composition writing. In contrast to open-ended questions, which are usually subject to interpretation, MCTIs are straightforward and closedended (Mousavi 2009; Harris 1969), and in MCTIs, students cannot mask the correct answer by writing long and elaborative responses which obfuscate the issue. Therefore, they are often used to overcome the weaknesses of composition tests. Another important advantage of MCTIs is their intra-rate reliability – that is the objectivity of scoring. The scoring of MCTIs is not affected by the rater's personal judgment. According to (Burton, et at. 1991), MCTIs, [if well designed], are less susceptible to guessing, and therefore capable of producing more reliable scores. (Harris, 1969, p. 7) further claims that MCTIs tend to have superior reliability because they do not have degrees of correctness, as seen in essays. Finally, the scoring of MCTIs is easy, accurate (Clegg & Cashin, 1986), and time saving. It is amenable that MCTIs are quickly scored, and it can be done not only by hands, but also by different equipment such as machines and computers.

1-4-2 Weaknesses of MCTIs

It is clear that MCTIs are one of the most widely used item type in objective tests. However, their usefulness is limited. MCTIs, just like other item types, are not a panacea; they have many limitations. To use MCTIs effectively, teachers should be aware of these drawbacks. First of all, designing successful MCTIs is time-consuming. This is mostly because of that

distractors of the items are difficult to find or sometimes not available. According to Mousavi (2009, p. 432), the nature of MCTIs do not depend on what is tested, but the ability of item writers to construct well-functioning distractors. Secondly, guessing the correct answer may have a considerable impact on the test scores. It is clear for the test-takers that one of the given choices is correct. This means that they will typically have 33%, 25%, or 20% guessing factor depending whether there are three, four, or five options. Therefore, when a student gets a particular score, we are not sure whether the score is showing his real performance or guessing had an effect on it. Thirdly, MCIs are used to test only recognition knowledge (Hughes 2003). In MCIs, since students select a response from the given options rather than supplying or constructing a response, these items are not suitable to measure some other learning outcomes such as elaborating, summarizing, providing examples, and organizing personal thoughts. Fourthly, Backwash [see Mousavi (2009, p. 47) for further information on Backwash) may have a harmful effect. This means that when the test-takers take MCTIs frequently, this way of testing tend to improve their guessing rather than language ability (Hughes, 2003; Mousavi, 2009). Therefore, instead of learning the language, students learn to answer MCTIs successfully, and they focus on memorization of single words or definitions. Another drawback is that cheating is facilitated. The nature of MCTIs is a stem followed by some options. The options, which include the correct answer, are either numbered or alphabetized, and the test-takers are required to write the number or letter of the chosen option. This is very easy for the test-takers to communicate among themselves non-verbally. One way to solve this problem is to have two versions of the same test through different order of the items in the options are presented. Finally, MCTIs are often criticized by language teachers because they claim that real-life language use is rarely offered in the items (Mousavi, 2009, p. 433). Furthermore, answering MCTIs is unreal task because typical responses to different stimuli in everyday situations require production rather than choosing from some options.

All in all, these limitations do not mean that there should be no MCTIs in tests given regularly in educational institutions. They are very well suited to many testing and education conditions.

Chapter Two: Methodology

This chapter is aimed at evaluating the sample test questions chosen randomly in some basic schools of Qaladiza town. The data were collected through a checklist and analyzed to answer the following research question:

 To what extend do the selected MCTIs in the test questions meet the principles in constructing MCTIs?

This chapter includes information about the evaluation instrument, data collection and data analysis procedures.

2 – 1 The instrument

The instrument used for the evaluating the data is a checklist (see Appendix A). It is designed by the researcher based on the basic principles in constructing MCTIs. The checklist consists of ten items, which require yes/no answers. The main purpose of the checklist is to find out whether the MCTIs in the sample questions meet the basic principles in constructing MCTIs.

2 – 2 Data collection procedure

The data were collected through three steps. First, ten sample tests designed for students studying English were selected randomly from ten basic schools in Qaladiza town. Second, among the test questions, (60) multiple-choice test items were selected for the process of evaluation. Third, each MCTI is checked against the evaluation criteria in the evaluation instrument.

2 – 3 Data analysis procedure

Quantitative data were obtained from the instrument, and analyzed by using Statistical Package for the Social Sciences (SPSS) program. Each MCTI was checked against the basic principles (i.e. variables in SPSS) in designing MCTIs, and analyzed by using Descriptive Analysis in the program.

Chapter Three: Data Analysis

The aim of the present study is to judge the quality of MCTIs given to English students in some basic schools of Qaladiza town for the purpose of the extent to which the test items meet the principles of constructing MCTIs. In this process each MCTI was checked against the ten evaluation criteria. After checking the collected MCTIs, the following data were obtained (see Appendix B for the SPSS output for each MCTI).

Evaluation Criteria (principles of constructing MCTIs)	Frequ	lency	Percentage	
	YES	NO	YES	NO
1. The test item measures only one objective.	44	16	73.3	26.7
2. The stem is clearly worded and free of ambiguity.	47	13	78.3	21.7
3. The options are clear and understandable.	51	9	85	15
4. Each test item has only one correct answer.	45	15	75	25
5. The test item is grammatically correct.	41	19	68.3	31.7
6. The number of the options is four or more.	32	28	53.3	46.7
7. The options are all plausible.	30	30	50	50
8. Giving blank at the beginning of the stem is avoided.	54	6	90	10
9. The correct answers in the stems are arranged in the random order.	40	20	66.7	33.3
10. Using alternatives " <i>none of them</i> " or "all of them" is avoided in the given options.	60	0	100	0

Table 1: Frequency	and Percentage of the analy	yzed MCTIs
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It can be inferred, first, from (Table 1) that among 60 MCTIs, 44 test items, which correspond to 73.3%, measured only one objective, but 16 of them, corresponding to 26.7% did not. Second, 47 (i.e. 78.3%) of the test items were worded clearly and free of ambiguity; however, 13 (i.e. 21.7%) of them were ambiguous and not worded clearly. Third, the options of 51 MCTIs, which shows 85%, were clear and understandable; but the options of nine test items were not clear. Fourth, among the evaluated MCTIs, 45 (i.e. 75%) test items had only one correct answer; but for the other 15 test items more than one option was correct. Fifth, 41 MCTIs were grammatically correct; however, 19 test items (i.e. 31.7) were grammatically problematic. Sixth, only 32 MCTIs, which means 53.3%, were provided with four options. However, the other 28 test items (i.e. 46.7%) had less than four options. Seventh, the options of 30 MCTIs were plausible, but the options of the other 30 test items, which constituted 50%, were not plausible, in which the correct option could easily be selected. Concerning giving blanks at the beginning of the test items, in 54 MCTIs (i.e. 90%), the blanks were not provided at the beginning of the stems. In addition, the answers of 40 test items were arranged randomly; however, in the other 20 items, the correct options were given in an expected order. Finally, in all test items the alternatives "*none of them*" and "*all of them*" were avoided in the given options.

Chapter Four: Conclusions and Recommendations

It is concluded from the analyzed data that MCTIs designed in some basic schools of Qaladiza town do not fully meet the basic principles in constructing MCTIs. According to the results of the data analyses, 16 among 60 test items measured more than one objective. This means that more than one language component (i.e. grammar, vocabulary, and pronunciation) was focused in the test items. According to Mousavi (2009, p. 429), testing more than one feature in one test item is confusing for students. Moreover, testing more than one language component may not show the real performance of the examinees in testing the intended area. Therefore, teachers and test designers ought to be careful about the fact that only one feature in each test item has to be tested, because it will be less confusing for the test takers and the scores will be more reliable. Concerning the second finding, 21.7% of the test items were ambiguous and not worded clearly. This causes problem for the test takers because complex or ambiguous structures in the test items make the stimulus difficult to understand the requirement of the question (Zimmaro, 2004). Many students cannot answer the question not due to their insufficient knowledge, but not understanding the stem. Therefore, it is recommended for teachers that while designing the MCTIs, they should read the test items many times for checking comprehension and clarity problems. Furthermore, 31.7% of the test items were grammatically problematic. Grammatical mistakes are not preferred in the test papers because they may cause misunderstanding or decrease the reliability of the test items. This is seen perhaps because many teachers or test designers do not proofread their test items before giving to the test takers. Hence, it is strongly recommended that teachers ought to read and revise their test items at least one day before giving to the test takers for the purpose of solving any grammatical or comprehension problems in the test items. Another important finding is that 46.7% of the test items had less than four options. This is a problem in MCTIs because the fewer options are provided, the higher guessing factor is involved. This means that providing three or two options gives 33% or 50% respectively of chance to guess the correct option without knowing the answer. Additionally, having high guessing factor does not provide clear understanding of the test takers' performance in the test. For this reason, it is highly recommended that teachers and test designers should keep in mind that MCTIs have to be given with at least four options. Further considerable finding is that 50% of the options of the stems were not plausible. In other words, they were not challenging and the test takers could easily pick the correct option. This is worth stressing because poor MCTI options decreases the reliability of the test. Clegg and Cahin (1986) state that teachers should avoid writing poor alternatives just for the sake of having more options, because they will simply become throwaway options. Therefore, teachers should think about writing options that have high discrimination quality.

It can be understood from the results of the data analysis that most English language teachers in basic schools of Qaladiza town seem to be unaware of the principles in designing multiple-choice test items because many problems were found in their test items. It has been concluded that poorly written MCTIs lower the dependability of the test scores, and cannot provide us with essential information about the evaluation and assessment processes. Thus, teachers and test designers in our region ought to have a deep understanding of the basic principles in constructing MCTIs in order to have better reliability of the test scores and validity if the assessment process.

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يوخته

. ئەم توێژینەوەیە لە چوار بەشی سەرەکی پێک ھاتووە. لە بەشی یەکەم زانیاری بنچینەیی و پێویست سەبارەت بە سروشت و بنەماکانی نوسینی پرسیاری فرە ھەڵبژاردە، لایەنە باش و خراپەکانی خراونەتە ڕوو. لە بەشی دووەمدا، ئامرازی کۆکردنەوەی زانیاری پێویست، چۆنیەتی کۆکردنەوەی زانیاری، وە چۆنیەتی شیکردنەوەی زانیارە كۆكراوەكان ڕوون كراوەتەوە. بەشی سێیەم تایبەتە بە شیکردنەوەی زانیاریە كۆكراوەكان و دۆزینەوەكان. وە لە بەشی چوارەمدا ئەنجامەكان و چەند ڕاسپاردەيەک بۆ مامۆستایان خراونەتە ڕوو.

ملخص البحث

أصبحت مؤخرا في اقليم كوردستان، فقرات أسئلة الاختيار من متعدد فى الاختبارات، مصدر حيرة فى عملية التقييم، و يكون جزءا بارزا" في امتحانات المدارس الاساسية (الابتدائية و المتوسطة). أتفق الباحثون على أنَّ أسئلة الاختيار من متعدد اذا كانت ضعيفة تقلَّل من نسبة اعتمادها، حصة نتائجها، و لا تكون هذه النتائج مكان ثقة مطلقة. الهدف الرئيسى من هذا البحث هو تقييم مجموعة اسئلة (اختيار من متعدد) في المدارس الاساسية في قضاء قلعةدزة، و كشفت النتائج إنّ السئلة فيها نواقص كثيرة و لا بدّ من معالجتها.

يتكون هذا البحث من أربعة أقسام رئيسية. في القسم الاوّل تمّ عرض المعلومات الاساسية، والضرورية لأسس وضع اسئلة الاختيار من متعدد، و بيان الجوانب الاجابية و السلبية فيها. في القسم الثاني فكان في بيان وسائل جمع المعلومات الضرورية و الية جمعها، و كيفيّة تحليل هذه المعلومات المجموعةز و خصّص القسم الثالث لتحليل المعلومات المجموعة، و الكشف عنها. أمّا القسم الرابع و الاخير فقد تمّ فيه عرض نتائج البحث و عدد من التوصيات الضرورية للاستاذة.

Appendix A: The evaluation checklist

	Evaluation Criteria	YES	NO
1	The test item measures only one objective.		
2	The stem is clearly worded and free of ambiguity.		
3	The options are clear and understandable.		
4	Each test item has only one correct answer.		
5	The test item is grammatically correct.		
6	The number of the options is four or more.		
7	The options are all plausible.		
8	Giving blank at the beginning of the stem is avoided.		
9	The correct answers in the stems are arranged in a random order.		
10	Using alternatives such as " <i>none of them</i> " or "all of them" are avoided among the given options.		

Appendix B: Tables and charts of SPSS output

The item measures only one objective.

-	-	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	44	73.3	73.3	73.3
	No	16	26.7	26.7	100.0
	Total	60	100.0	100.0	

The stem is clearly worded and free from ambiguity.

		Frequency	Percent	Valid Percent	Cumulative Percent
Y	'es	47	78.3	78.3	78.3
N	lo	13	21.7	21.7	100.0
Т	otal	60	100.0	100.0	
Valid					

The options are clear and understandable.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	51	85.0	85.0	85.0
	No	9	15.0	15.0	100.0
	Total	60	100.0	100.0	

Each item has only one correct answer.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	45	75.0	75.0	75.0
	No	15	25.0	25.0	100.0
	Total	60	100.0	100.0	

The item is grammatically correct.

-	-	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	41	68.3	68.3	68.3
	No	19	31.7	31.7	100.0
	Total	60	100.0	100.0	











	-	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	32	53.3	53.3	53.3
	No	28	46.7	46.7	100.0
	Total	60	100.0	100.0	

The number of the options is four or more.

The options are all plausible.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	30	50.0	50.0	50.0
	No	30	50.0	50.0	100.0
	Total	60	100.0	100.0	

The blank is not given at the beginning of the stem.

Percent

Valid Percent

90.0

10.0

100.0

Frequency

54

6

60

Cumulative

Percent

90.0

100.0





100.0

90.0

10.0

The correct answers in the stems are arranged in the random order.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	40	66.7	66.7	66.7
	No	20	33.3	33.3	100.0
	Total	60	100.0	100.0	

"none of them" or "all of them" are avoided among the given options.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	60	100.0	100.0	100.0





Valid

Yes

No

Total