

**EFFECT OF NUMBER RIGHT SCORING METHOD AND LOGICAL CHOICE WEIGHT SCORING METHOD ON SOCIAL STUDIES MULTIPLE CHOICE TEST SCORES**

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**Abstract**

The study compared logical choice weight scoring method and number right scoring methods on multiple choice test on Social Studies scores. The purpose is to find the most effective way to be used out of the two methods of scoring multiple choice in Social Studies. One short experimental design and a survey type of research design were used as research design for the study. All junior secondary school Social Studies students in Ekiti Central area of Ekiti State Nigeria for the population for the study the sample consisted of our hundred students who were selected from the population using stratified sampling techniques hypotheses were generated and tested at 0.05 level of significance Using correlational and descriptive analysis. The study revealed that there was a significant difference between logical choice weight and number right scoring methods. The study revealed that logical choice weight scoring method was the best method that favored the scoring of the students' scripts in multiple choice test. The logical choice weight method could be used in tertiary institutions for Post-UAMB test. Consultancy firms and public service could also adopt the use of logical choice weight scoring method.

Keywords: Multiple-choice, logical choice weight, number Wright

**Introduction**

The goals of Social Studies curricula are to help students in all educational programs to acquire knowledge and ideas that will contribute to their overall development. According to Nwagwu (1981), Social Studies education is primarily justified by the positive impact it can have on a person's capacity to behave morally, ethically, humanely, and responsibly in a variety of social, political, and economic contexts. Furthermore, Anders (2010), also opined that social studies education should foster in each member of society the capacity to adjust to a constantly shifting environment and to become obedient, devoted, hardworking, diligent, and meticulous citizens.

Teachers must assess students in order to determine whether or not their virtues have occurred. According to Mwebaza (2010), assessment is the process of gathering data about curricular operations in order to make decisions about student learning, Greaney (2001) defined assessment as the methodical process of figuring out how much instruction or learning has impact on a student's behavior. This process is typically carried out by a teacher using tests to determine whether or not pupils have learned the material.

According to Bandele (1992), a test is a tool used to quantify a particular kind of behavioral change under controlled, methodical, and standardized conditions. The conduct could be related to aptitude, knowledge, success, intelligence, or personality. Omirin (1999). Opined that Tests are systematic data collection methods intended to facilitate intra- and inter- individual comparisons within a class or educational system, consequently, a test is a tool that is mostly utilized in educational institutions to determine the degree of achievement that students have attained within a certain course of study Test consists of easy and objectives test. Multiple-choice type of objective test has generally been

occasionally practically necessary item format in the knowledge, aptitude, and ability testing domains, or more broadly in the testing domains where the highest possible achievement is of interest and reaction speed is not crucial. According to Ajeigbe & Afolabi (2013), a standard multiple-choice objective test comprises a broad sample of the course outline or subject syllabus within a clearly defined range of cognitive levels. Oladunni (1996) opined that multiple choice type of objective type of test is useful for measuring both the lower order and the higher order mental processes. In multiple-choice tests, students are required to pick the best possible answer(s) out of the choices from a list. Multiple-choice test include an introductory part which is known as stem and several alternatives among which one is the answer.

The advantages of multiple choice test is that it can be scored easily and did not allow arbitrary allocation of marks like essay test. When answering multiple-choice questions, students have to choose the right response from a predetermined set of options, or foils. According to Ajeigbe and Afolabi (2013), the right option is referred to as the key, and the incorrect options are labeled distracters. This description identified them as conceptions, partially accurate responses, and frequent factual or logical errors that might divert students' attention from the right answers when they are ill-prepared.

Many people have a tendency to have a negative attitude of tests because they think that students can correctly guess an item without fully understanding the proper response, especially when it comes to Multiple-choice test types. For instance, it's easy for test to cheat or do blind guessing in objective test, most especially multiple-choice test and get unmerited scores were dull or test wise testee can scores higher than knowledgeable testee thereby affect here liability of the test scores. As a way to solve this problem a number of scoring method has been introduced among those scoring methods are number right scoring method, logical choice weight scoring method. The number right scoring method is the type of scoring method in which a marker assigns one mark to any correct option picked by the students as a number of scores would be placed over the total number of the items. This is only method used by the examiner in most institutions of learning. Kolawole (2006), mentioned that Number right scoring method is also known as standard conventional method the method occurs where the candidate will obtain either score or (1) one or even (0) zero in a particular item.

One mark is awarded for correct or best option which is the (key) and point (0) is awarded for incorrect option. Then score for any candidate in a test score by number of correct options or number of item she gets right over the total number of items. In this type of scoring, it is very easy for the students to guess the items right. Logical choice weights, according to Ajibola (2003), are techniques for scoring multiple choice exams in which differential weights are allocated to item selections based on an expert judgment's a prior assessment of each options degree of correctness. It entails giving out prizes, partial credit for incomplete data, with a weight of one for the primary option.

Ajibola (2012) opined that logical choice weight scoring system is a scoring scheme where a score is assigned to every

option, followed by 0.75 for the second-best option, 0.50 for the third-best option, 0.25 for the fourth-best option, and zero (0) for the fifth-best option.

In his addition to the logical choice weight scoring technique, Ebel (1965) considered each alternative and its degree of similarity to the key. He clarified that if there are four alternatives in an item and D is the key, D will be allocated (marked). Any response that is closer to D will be given a score of 0.75; the next closest response to D will receive a score of 0.5; and the final choice will receive a score of zero. Thus, students' scores are favored by the logical choice weight scoring technique.

### **Statement of the Problem**

Selecting the most reliable scoring method for a multiple-choice test is a challenging task when it comes to measuring of learning outcomes effectively. While the multiple-choice test involves human decision-making in selecting the correct answer from several options, there is a lack of established findings on the best scoring method to use. A good test is anticipated to consistently and effectively measure what it purpose to measure. Seriousness of a test must be acknowledged, as it has been widely recognized that the accuracy of the marking system significantly impacts on the reliability and validity of the test. Reforms in assessment are necessary to implement measures that can enhance teaching and Offer more valuable and dependable feedback on the results. Hence, the researcher opted to identify the effect of number right scoring method and logical choice weight scoring method on social studies multiple choice test scores in junior secondary school. In view of the above, the following research questions were raised to guide the study:

- 1 Does scores derived from number right scoring method higher than scores derived from logical choice weight scoring method in Social Studies multiple choice test in junior secondary school.
- 2 What is the overall performance of students in the two scoring methods?

### **Research hypothesis**

The following null hypothesis was generated and tested in this study-

HO1: There is no significant difference between the scores of students whose scripts were marked with logical choice weight scoring method and those marked with number right scoring method.

### **Methodology**

The research design used in this study was the survey type. This design enabled the researcher to compare logical choice weight and number right two hundred (200) to attempt items based on number right scoring method. The test items were drawn from standardized achievement test constructed by Ekiti state Ministry of Education on Social Studies the tests were made up of sixty (60) items with four alternative options the scripts were collected and scored based on logical choice weight and number right scoring method. The researchers used the key prepared for each format to score the items such as in logical choice weight, certain weight was assigned to any corrected option. The

which is the key, it would be assigned 0.75, if B's response is next closer to D it would be assigned 0.5 while the last option would be assigned zero (0).

**Results**

Table 1, indicated the overall scores of students in logical choice weight and number right scoring methods. In unified Social Studies examination

Variables	No of Cases	Minimum	Maximum	Mean 60 Marks	Std. Deviation	Range	Z-score	%
Logical Choice Weight Method	200	14	58	33.31	7.242	44	0.67	75%
Number right scoring method	200	6	40	26.31	6.269	34	-0.33	37%

The general questions raised were subjected to descriptive analysis. There are six hundred (600) cases, two hundred (200) students for logical choice weight and two hundred (200) students for scoring. The logical choice weight method had minimum of 14 and maximum of 58 while the number right scoring method is minimum of 6 and maximum of 40.

In logical choice weight scoring method, it had the highest means of 33.31 (75%) while number right scoring have mean of 26.31 (37%) which implies that the students performed best in logical choice weight than number right scoring method. Also weight had the standard deviation of 7.242 with range of 44, which more spread. While number right scoring method is having standard deviation of 6.269 and range of 34 The score for logical choice weight is 0.67 and number right method is having -0.33. In view of this logical choice weight had the overall performance of students in Social Studies

Table: 2 Shows the percentage of the best performance.

	No of cases	Mean	Standard Deviation	%	N
Logical Choice Weight Method	200	33.31	7.242	75%	25% above average
Number right scoring method	200	26.31	6.269	37%	13% below average

The table above shows that logical choice weight had the highest mean of 33.31 with the percentage of 75 which is 25% above average, the mean for number right scoring method was 26.31 with 37 percent and 13% below average. This shows that logical choice weight scoring method had the highest percentage and has the best performance.

Table 3: Correlation analysis showing significant relationship between number right scoring and logical choice weight scoring methods

Variable	Number	r	rtable
Number Right Scoring Method	200	0.240	0.195
Logical Choice Weight Method	200		

P-<0.05 (significant result)

### **Discussion**

Students whose scripts were graded using the logical choice weight performed better overall and in comparison to those whose scripts were rated using the number right scoring method. Based on the fore mentioned hypothesis, the data analysis results were explained. The performance of students whose scripts were graded using number right scoring techniques was significantly correlated with this study's findings- It follows that those students' performance was influenced by their level. Another study conducted by Ajibola (2003) discovered that logical choice weight scoring can enhance an exam's capacity to represent students' level of understanding on the. According to Ajayi (2012), the logical choice weight scoring technique gives pupils a lot of academic way to be vulnerable. This encourages positive effort, taking risks, and self-belief all of which may be necessary for success in life. Even though it was tedious and time consuming, it had a big impact on multiple choice social studies test scores.

### **Recommendations**

- i Post-Joint Admission and Matriculations Board (JAMB) test in Nigeria and admissions processes in other nations may employ the logical choice weigh scoring approach in higher education institutions.
- ii The ministry and training institute should also utilize the logical choice weight technique of scoring for public service examinations.
- iii The rational choice weight technique of topic teacher evaluation should be used by schools.

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