DETERMINATION OF ITEM DIFFICULTY IN SOCIOLOGY OF EDUCATION TEST ITEMS AMONG UNDERGRADUATES IN TERTIARY INSTITUTION IN LAGOS STATE, NIGERIA

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Abstract
Item difficulty is a psychometric term used to show the response of hightest takers to low test takers in relation to items. It shows how difficult any item is for both high and low test takers under classical test theory. The study adopted survey research design as population comprised of undergraduates in Lagos State University of Education, Lagos. Stratified random sampling technique was employed to select 50 students each from six (6) Colleges in the University to form a sample of 300 undergraduates. 60-items Self-Developed Sociology of Education Achievement Multiple Choice Test (SDSOEAMCT) was used for data collection. This instrument is a 4-options type. The instrument was validated by two experts in Sociology of Education and ascertained to meet construct validity. With test re-test reliability form, co-efficient r-value of 0.892 was obtained hence internal consistency met. With BILOG-MG statistical software, difficulty coefficients for each item was determined. Finding shows that undergraduates have difficulty on items constructed on conceptual clarifications, school/philosophers of sociology and social stratification. It concluded that sociologists should devote more time to teach identified topics students find more difficult. Among others it recommended that Sociology of Education teachers should validate the test before its administration to students.

Keywords: Sociology of Education, Undergraduates, Item analysis, Item Difficulty, Biasness

Introduction
Sociology of education is an attempt to examine the effect of such institutions like the family, peer group, culture, religious belief and economy on the institution of education and how the institution of education also affects the other social institutions. Sociology of education can then be regarded as an analysis of social processes involved in educational institutions. By social processes we mean the way the school is organised, various structures or persons in positions of responsibilities, leadership, relationships and how these processes help promote or retard social outcomes or goals of schools. Sociology of education is an attempt to examine and understand the relationships between the school and society focusing attention on issues surrounding influence on culture on education, changing needs of the society, class structure of the society, education and the society, education and politics among others. It would be thoughtful to maintain that the study of human behaviours is better enhanced through education (Adeyemo & Oyeyemi 2003; Pezone & Singer 2013). Thus, through the process of socialization schools are directly engaged in social control. This includes instilling loyalty, obedience to authorities. Schools promote social control by teaching the children to idealize nation's leaders; people in place of power are presented in such a way

that it is not easy to question their authority. Schools also try to channel youth into socially approved activities and jobs when children show interest in disapproved areas or are identified as having behaviour problems, the school may keep close monitor over them for a long time.

Blaming education for the ills of society is like blaming a mirror because you do not like your reflection. According to Elekwa and Okanezi, (2013), the first step in improving education is to recognize that the matter plaguing education are rooted in the way society is structured, that is garbage in garbage out mentality. For example, we live in a competitive economy where everyone seeks advantage and higher profits, where people on the bottom rung of the economic ladder are stigmatized as failures and blamed for their conditions. The educational system of any society is related to the total social system of that society. Whether it prepares the new generations for status quo or for change depends upon the needs and goals of the society concerned. In a modernizing society the educational system has two main functions, transmission of the cultural heritage to new generation, and enabling the new generations to develop a degree of adjustability to change in the society (Amaele, 2010).

One of the oldest social institutions is education, the formal direction of learning experiences. It does not require the services of a prophet or a soothsayer or a philosopher to explain that educational institution serves certain basic social purposes; the most familiar of education is socialization or the transmission of cultural knowledge, value and beliefs. Another purpose is social control, whereby schools regulate the way in which people behave. This field of study proffers solution on how to tackle the challenges confronting the society today which include cultism, deviance behavior, disrespect to elders and constituted authorities, sharp practices, among others. In a similar vein, it helps people to choose and learn social roles, the educational institution attempts to ensure an adequate supply of trained people to fill needed occupation in an effort to match peoples talents and abilities with the needs to specialized occupational roles, school channel children into different areas of study and place them at distinct academic levels. However, the socialization function of education goes beyond merely reaching values and norms. Again, schools are also expected to convince their students that it is necessary to behave according to these principles. Indeed, students are graded not only on how well they cooperate, how orderly they are and even how clean they keep themselves.

In any given educational system where students' scores remain one cardinal unit for selection, prediction, motivation, guidance and counselling purpose, research and development then components such as test, measurement, assessment and evaluation would always have an important role to play in such a system. These scores from students remain an important matter used in identification of educational success. Results from educational assessment have a major function that will be useful in further educational processes (Retnawati, et al., 2017). In examination condition, assessment is seen as a process of gathering data, analysing, transforming and interpreting the sourced data in a bid to taking an informed decision by different stakeholders. These stakeholders could be responsible for the determination of items in the curriculum, recruitment of teaching professionals, identifiers of lapses in students' performance in school examinations, examiners among others.

Students performance both in National or school based examinations is interpreted with respect to difficulty, discrimination and guessing ability of students especially when the items are designed using multiple choice format. This format allows students to respond to their choice of correct items by identifying the right key that best explain their ability. Their ability level is express through the nature of key identified as the right option. School based examinations are not standardised items rather teacher

made test. These are test items developed and validated by certain crop of teachers to determine the validity and reliability of such a test. Items in School based examinations may necessarily not undergo the various psychometric processes due to the rigour and stringent procedure to adhered to in order to determine the quality of items constructed. They are test items constructed by a teacher with the aid of the curriculum and classroom objectives in specifics (Rosidin, et al, 2019).

In Nigeria, school based examinations includes semester and session examinations carried out in Colleges of Education, Universities, Polytechnics, Secondary (terms) and Primary (terms) schools respectively (Onuka, 2018). In these examinations, due to the large number of test takers, items are designed using multiple option formats with the aim of measuring many students at the same time. Under this format, a greater proportion of the course or subject content is covered and students are expected to respond to them as soon as possible perhaps due to the time allocated for such a test (Aditya, Heri & Eri, 2021). In Colleges of Education, Sociology of education is a compulsory course for teacher trainee exposure. This course affords every teacher trainee an opportunity to understand the psychological component of his/her learners, developmental phase of learners, factors that may hamper effective learning by students, exposure to various human development theories.

In school examination, performance of students is another area of concern for examiners. Just like every other course, students performance in psychology of learning in education in tertiary institutions may be attributed to many factors associated to students, teachers, nature of test development, difficulty of test items, guessing parameters, ill preparation by learners, content mastery, complex terms, marking scheme, scoring error, phobia of failure, time allocated to items, readiness and willingness to learn, level of concentration, age dimension, environmental factors like noise, heat among others (Okon, et al, 2019). Okon, et al. (2019) also noted that sociology of learning is one that is designed to explain the inherent components of young adults especially as it relates to their learning abilities. These young adults are confronted with challenges which can best be explained by seasoned psychologists. As a result exposing students to the study of psychology will further provide an avenue for them to discover other dimension of human learning.

In the course of determining difficulty level of items in the school based examination, the researchers used test theory of Classical Test Theory (CTT) rather than Item Response Theory (IRT). While both theories, CTT and IRT seeks to establish that performance of students is determined through estimation of item difficulty, discrimination and guessing ability. Unlike IRT that seeks to identify quality of test items, CTT is concerned with observed scores consisting of the actual scores and measurement errors. The researchers in this work are more concerned with the use of CTT as it tries to identify difficult items generally not using any form of specifics. Teacher made questions unlike standardised questions are faulted most times because they not factor the inputs of other specialists in that subject area thereby bringing about questioning on the quality of items developed. Sometimes they are also restraints owing to the fact that these test developers lack adequate knowledge on test development (Adegoke & Yemisi, 2019). In other to promote teacher made test of school based examinations, it becomes imperative to analyse each item to find out its quality, so that in the measurement of test items in School Examination test instrument becomes capable in giving the needed information in assessment.

This research applied Classical Theory Test approach only to describe the characteristics of items in school based examination of sociology of education using test items analysis to estimate difficulty level only while also stating prevalent factors that contributes to making those items difficult for students.

Statement of the Problem

School based examinations are mostly designed by teachers in those schools and when students from these

schools are confronted with external items even in their cognate areas they most times perform below expectations thereby degrading the credibility of school based examinations. In a study carried out by Bankole & Akeem (2019), they claimed that items in school based examination are too weak and easy for test takers as teachers also influence their performance thereby not giving credibility to such examination. Failure to curtail such if it ever exists would lead to rote learning, increase in guessing parameter, non-generalizability and acceptance of test results which will naturally lead to non-credibility of test score. In a bid to restore confidence in school based examinations that is characterised by teacher made items, the researchers were out to determine the Item Difficulty of Sociology of Education among Undergraduates in Tertiary institutions Lagos State.

Purpose of the Study
The broad purpose of this study is to determine item difficulty index in sociology of education achievement test while the specific objective include.
1. To determine item difficulty of Sociology of Education Achievement Multiple Choice Objective Test.

Research Question
1. What is the item difficulty of Sociology of Education Achievement Multiple Choice Objective Test?

Methodology
Descriptive survey research design type was used in this study. This design type allows the researchers to study a large sample of participants and draw up conclusion from carefully selected samples. The population for this study was all undergraduates in Lagos State University of Education, Ijanikin, Lagos State while 200 level undergraduates in the institution formed target population for this work. Stratified random sampling technique was employed to select 50 students each from six (6) Colleges in the institution. Hence a sample of 300 students was selected. 60-items Self- Developed Sociology of Education Achievement Multiple Choice Objective Test (SDSOEAMCOT) was used as instrument for data collection. This instrument is a 4-option scale type. The instrument was validated by two experts in Sociology of Education and ascertained to meet internal consistency. With the aid of BILOG-MG statistical software, difficulty coefficients for each item was determined.

Data Presentation and Interpretation
1. **Research Question:** What is the item difficulty of Sociology of Education Achievement Multiple Choice Objective Test?

Table 1: Results of difficulty level (p)

No of Items	(P)	Category Item
1	*0.117	Too difficult
2	0.735	Moderate
3	0.693	Moderate
4	0.608	Moderate
5	0.699	Moderate
6	0.779	Moderate
7	*0.104	Too difficult
8	0.797	Moderate
9	0.377	Moderate
10	0.476	Moderate
11	0.365	Moderate
12	0.769	Moderate

13	*0.231	Too difficult
14	0.661	Moderate
15	0.655	Moderate
16	0.537	Moderate
17	0.559	Moderate
18	*0.203	Too difficult
19	0.794	Moderate
20	0.564	Moderate
21	0.966	Moderate
22	0.565	Moderate
23	*0.136	Too difficult
24	0.774	Moderate
25	0.587	Moderate
26	0.790	Moderate
27	*0.204	Too difficult
28	0.563	Moderate
29	0.671	Moderate
30	0.798	Moderate
31	0.767	Moderate
32	0.658	Moderate
33	0.549	Moderate
34	*0.116	Too difficult
35	0.552	Moderate
36	0.519	Moderate
37	0.665	Moderate
38	0.472	Moderate
39	0.761	Moderate
40	0.672	Moderate
41	0.761	Moderate
42	*0.014	Too difficult
43	0.878	Too easy
44	0.575	Moderate
45	0.564	Moderate
46	0.478	Moderate
47	*0.214	Too difficult
48	0.559	Moderate
49	0.689	Moderate
50	0.657	Moderate
51	0.571	Moderate
52	0.769	Moderate
53	0.780	Moderate
54	*0.115	Too difficult
55	0.779	Moderate
56	0.776	Moderate
57	0.788	Moderate
58	0.707	Moderate
59	0.776	Moderate
60	0.806	Too easy

Source: Research work, 2024

From the table above it shows that 60 multiple choice objective test format was used for this data. The responses of the students was dichotomised into 0, 1 (0 represent wrong option and 1 represent correct option). From the 400 respondents who participated in Educational Psychology of Learning a school based examination, identified that items 1, 7, 13, 18, 23, 27, 34, 42, 47 and 54 were seen as bad items and needed to be modified or removed totally from the pool of sociology of education scale. However, items 43 and 60 exceeded the difficulty index coefficient of 0.3 to 0.7 as they recorded 0.801 and 0.832 which makes the items too easy and weak for test takers as it is drifting towards 1; while items 1, 7, 13, 18, 23, 27, 34, 42, 47 and 54 all fell below the difficulty estimates as a result seen as very difficult for test takers.

Discussion of Findings

It is revealed from the analysis table above that given the Self designed Sociology of Education Achievement Test Scale of 60-items only items 43 and 60 were seen as weak or too easy items for students however, ten items were seen to be very difficult for test takers. It was discovered that the topics from which these items were developed from conceptual clarifications, school/philosophers of sociology and social stratification. It is very imperative that students find these topics difficult perhaps due to the nature of the topics, language used in construction of items and possibly too structure used in item construction. The findings of this work is in consonance with that of Onyeche & Lilian, (2020) who maintained that sociology of education is a unique course due to its unique interplay in the society. He reiterated that students in tertiary institutions often see the course as interesting one as it relates well with the behavioural patterns and attitude of persons. Onyeche & Lilian, (2020) stressed that for effective teaching and understanding to take place certain contextual terms must be well explained and justified, as teachers must be articulated in identifying the sources and implication of deviant behaviours among students. However, the outcome of this study further corroborates the work of Udofia (2008) who alluded that in reducing the contributory conditions to item difficulty, teachers must desist from use of ambiguous word, incomplete sentences that are vague, apportion appropriate time to test administration, ensure validity and reliability of instrument among others.

Conclusion

The study can affirm that the self-designed Sociology of Education Achievement Test remains a true measure for the assessment of undergraduate because its items are relatively good and not difficult. It can also be concluded that for good performance of students to be achieved, teachers should pay rapt attention to conceptual clarifications and its school of thought/philosophers.

Recommendations

Sociology of education remains one compulsory course for undergraduates across tertiary institutions in Lagos State. At the end of this work, the researchers among others recommended the following:

- Sociology of education teachers should validate the test they construct before its use generally on students.

- Students of sociology should be encouraged to prepare well for examination as test remains the most accepted measure of assessment.

- Course concepts, terminologies, school of thought should be given prompt attention during scale development.

- Measurement and Evaluation experts are encouraged undertake item analysis so that bad or unwanted items can be weeded out before administration to students.

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