

DEVELOPMENT AND VALIDATION OF SOCIAL STUDIES ACHIEVEMENT TEST FOR UPPER BASIC SCHOOL STUDENTS IN KATSINA STATE, NIGERIA

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Abstract

The study involved the Development and Validation of Social Studies Achievement Test for Upper Basic Schools Students in, Katsina State, Nigeria. Seven objectives, five research questions and two hypotheses guided the study. The researcher adopted instrumentation research design for the study. The population of the study were seven thousand three hundred and fifty-eight (7358) Upper Basic Student Two (UBSII) social studies students. The sample of 361 students randomly drawn was used to subject 30 objective test items for item analysis. Thirty, (30) items with difficulty indices ranged from 0.25 to 0.79 and discrimination indices of 0.20 to 0.58 were retained. Face and content validation of SSAT was ensured by constructing items in line with the test blueprint and experts. The test reliability established through Kuder Richardson formula 20 gave a coefficient of SDA, mean, standard deviation and chi-square. The study revealed that the multiple choice test items of SSAT fall within the accepted range of 0.7 – 1.5 and there is no significant difference between students' scores on the percentage of easy and difficult in Social studies multiple choice test items and revealed that decoys in social studies multiple choice test items are significantly plausible. It implies that the social studies multiple choice test items has effective properties in terms of validity, discrimination power, difficulty levels and reliability index estimated to be 0.79. The developed SSAT had high psychometric properties. The researcher concluded that the developed (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria has high psychometric properties for assessing Upper Basic School(UBSII) students. The researcher recommends that the developed (SSAT) to be used for Upper Basic School two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria.

Keywords: Development, Validation, Social studies, Achievement test, Upper Basic School

Introduction

Education is the bedrock of economic development of any nation. It is a conscious and deliberate effort to create an atmosphere of learning and the learning process so that learners are actively developing their potentials for them to have the spiritual strength of religious, self-control, personality, intelligence, and the skills needed for themselves and society (Anikpo, Mohammed, Salau, Ezegebe, & Okunamiri, 2016). Education is an instrument for realization of national growth and a means of equipping the citizens for effective contribution to the nation's development (FGN, 2013). Education is the most vital instruments for social and political mobilization and the acquisition of important technical skills, for these reasons lion share is requiring for nation's resources to be invested in education so as witnessed and continues to witness a great of knowledge, so much new knowledge is discovered in every discipline of life social studies is included (Ololube, 2011). Hence, nation can develop above the level

of its education; no educational system can develop above its teachers (Okam, 2013). It is believed that people can manage their personal life and professional duties when they are well educated, and social studies as a subject has been proven to be an indispensable tool for the development of the self and the nation as a whole. Social Studies is the study of man in his environment. It assesses man in his physical and social environment as well as the effects of science and technology and religion on him. 'Man' here means all human beings. (Anikpo, *et. al.*, 2016). Social studies also is a field of study that studies man, his relationship with his physical and social environments. It involves how man uses his knowledge of science and technology to solve his problems. Social studies comprise subjects such as: history, geography, economics, government, psychology, sociology, anthropology, and political science. It is known as components of social studies. It is integrated because, it includes all those portions of social science that are important to the immediate purpose of learning and can be adapted to suit the level of understanding of the students. Therefore, student's assessment in social studies is very important to understand their level of competency. Thus, instrument for proper assessment is required.

Assessment plays a crucial role in the school system especially in teaching and learning process. Without assessment teachers cannot discover the areas of strengths and weaknesses of their students and the extent of which teaching objectives have been achieved (Olutola, Olatoye & Olatoye, 2016). Assessment in education is descriptive rather than judgmental in nature. Its primary role is to increase students learning and development. It is often seen as a tool to measure the progress of individual students. It also allows individuals, communities and countries to track the quality of schools and educational systems (Braun, Kanjee, Bettinger & Kremer, as cited in Olutola & Olatoye, 2019). When assessment becomes regular, then it is called Continuous Assessment. Assessment is the systematic collection, review and use of information about educational programme, undertaking for the purpose of improving students learning and development (Akanwa & Ihechu, 2019). It involves the collection of information about an individual student's knowledge, skills, attitudes, judgment, interpretation and using the data for taking relevant decisions about the individual, instructional process, curriculum or Programme (Ugodulunwa, 2008).

In general, assessment through the use of achievement test serves the purpose of identifying the learners' extent of mastery of knowledge and skills, as well as contributes to effective teaching of a subject. Akanwa *et. al.*, (2019), believe that assessment is central to the overall quality of teaching and learning. An achievement test is a task given at the end of teaching learning processes in order to ascertain the extent to which the stated objective(s) have been fulfilled (Ferguson in Malik, 2022). He further explained that achievement test is used to find out how much a student is able to achieve in a subject after being exposed to instruction. It is a systematic and purposeful quantification of learning outcomes. It involves the determination of the degree of attainment of individuals on tasks, courses or programs to which the individuals were exposed. Test is one of instrument used by the teachers to evaluate students' academic progress and accomplishment. The role of psychometric properties of a test in development and validation of an achievement test cannot be over emphasized. Some of the psychometric properties of a test are: validity, reliability, difficulty index, discrimination index and plausibility of decoys.

Validity of an instrument or a test is the degree of accuracy with which the test measures what it is intended to measure. It is the appropriateness, meaningfulness and usefulness of the specific inferences made from test scores. It is vital for a test to be valid in order for the results to be accurately applied and interpreted (Olatoye, Olutola, & Ihechu, 2022).

Reliability of an instrument refers to the degree of consistency or stability of the measures obtained from instrument/test. Reliability is its measure of consistency, stability, dependability, predictability, precision and accuracy (Olutola Olatoye, & Ihechu, 2023). Reliability, the scholars further stated that reliability may also be looked at as inversely related to the size of measurement error. In a reliable test, the smaller the error, the more consistent the observed scores are. It is possible however, for a test to yield highly consistent results from day to day without measuring what it is meant to measure. In other words, a test can be reliable whereas, it is not valid.

Difficulty index of an item is the extent to which an item has been answered correctly by the testees. That is the percentage of the testees that select the right option. Going by this definition of item difficulty, (Olutola et. al, 2019) stated that the closer to one (1) the value of the difficulty index is, the simpler the item and the closer the value to zero, the more difficult the item. In other words, the higher the difficulty index of an item, the easier the item, the lower the difficulty index, the more difficult the item. Difficulty index tells us how easy the item was for the students in that particular group ((Olutola, 2015).

Item Discrimination: is the extent to which an item differentiates between the brilliant students and poor students or distinguish the higher achievers (those who are more competent) from the lower achievers (those who are less competent). It is also the ability of the item to discriminate between brilliant and weak examinees, (Olutola et. al 2019).

Item Distractors: These are incorrect options in multiple choice test items (Olatoye, 2022). The effectiveness of options in multiple choice tests is judged by how plausible the distractors are. In other to determine the plausibility of the distracter/ decoy 5% of the examinees must select the decoy. Analyzing the distracters (i.e. incorrect alternatives) is useful in determining the relative usefulness of the decoys in each item. Items should be modified if students consistently fail to select certain multiple-choice alternatives. This show that the alternatives are totally implausible and therefore of little use as decoys in multiple choice items (Mustapha, 2013).

Objectives of the Study

The main objective of the study was to develop and validate Social Studies Achievement Test (SSAT) for upper basic schools two (UBS II) students in Dutsin-Ma Zonal Education Quality Assurance Katsina State.

The study specifically sought to:

1. find out validity of Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria.
2. examine the reliability of the Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria.
3. determine difficulty indices of Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria.
4. find out the discrimination power indices of Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria.
5. examine the plausibility of decoys in the multiple-choice Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria.

6. find out the differences between students' scores on the percentage of easy and difficult multiple choice Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria.
7. determine the reliability of decoys in the multiple choice Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria.

Research Questions

The study was guided by the following research questions:

1. What is the validity of Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria?
2. What is the reliability of the Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria?
3. What are the difficulty indices of Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State Nigeria?
4. What is the discrimination power of Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria?
5. What is the plausibility of decoys/distracters of the multiple-choice Social Studies Achievement Test items (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria?

Hypotheses

The following null hypotheses were formulated and tested at 0.055 level of significance in the study.

H0₁: There is no significant difference between students' scores on the percentage of easy and difficult multiple choice Social Studies Achievement Test (SSAT) items for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria.

H0₂: Decoys in the multiple choice Social Studies Achievement Test items for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria are not significantly plausible.

Methodology

This study adopted instrumentation research design, because, the research is geared towards developing and validating a multiple-choice social studies achievement test for upper basic school two students the data that were analyzed with reference to psychometric properties. The target population of the study consists of seven thousand, three hundred and fifty-eight (7358) upper basic school students out of which four thousand one hundred and thirty-nine (4139) students are in Dutsin-Ma Local Government Area and three thousand two hundred and nineteen (3219) are in Kurfi Local Government Area. The sample size consisted of three hundred and sixty-one (361) upper basic school two (UBSII) students selected from nine, (9) upper basic schools in Dutsin-Ma Zonal Education Quality Assurance (5) in Dustin-Ma and (4) in Kurfi. Multi-stage sampling technique was used. The sampled schools are randomly selected using simple random sampling technique.

The developed instrument called Social Studies Achievement Test (SSAT) was used for data collection. The face, content and construct validities of the instrument were ascertained by three experts, two from educational psychology and counselling and one expert from measurement and evaluation unit, faculty of Education, Federal University Dutsin-Ma.

To establish the reliability of the instrument, SSAT was subjected to trial testing. The instrument was administered on a sample of fifty (50) students randomly drawn from Upper Basic School II Students in Community Day Secondary School Safana. Safana Zonal Education Quality Assurance. Safana is completely outside the study area. The scores obtained from the trial testing was subjected to Kuder-Richardson (KR-20) formula to determine the internal consistency of the SSAT. The reliability coefficient calculated was 0.7863. This shows that the instrument is valid and reliable for use. The instrument was administered to the UBS II students in the sampled schools by the researcher and nine (9) trained research assistants who are experienced upper school social studies teachers. The data collected for the study were analyzed with respect to the research questions and hypotheses formulated.

Results

Research Question One: What is the validity of Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria?

Table 1: Validity of Social Studies Achievement Test (SSAT) Based on IRT Model

Items	Infit	Outfit	Items	Infit	Outfit
1	1.03	1.07	16	1.19	1.33
2	1.02	1.05	17	1.24	1.34
3	0.73	0.85	18	1.29	1.49
4	1.29	1.39	19	1.34	1.45
5	0.62	0.92	20	1.01	1.02
6	0.72	0.89	21	0.84	0.93
7	1.04	1.07	22	1.02	1.07
8	0.85	1.03	23	0.84	0.86
9	0.83	0.98	24	0.96	0.95
10	1.01	1.06	25	0.93	0.95
11	0.69	0.72	26	1.08	1.12
12	0.81	0.86	27	0.98	0.97
13	0.90	0.95	28	0.78	0.85
14	0.62	0.91	29	0.86	0.93
15	1.02	1.05	30	0.92	0.94
Mean	0.95	1.04			
SD	0.48	0.52			

Table1 showed the result of the fit statistic of the SSAT multiple choice test items for the years under study. The result showed that the multiple choice test items had the infit statistic ranging from 0.62 to 1.34; and outfit statistic range from 0.85 to 1.49 respectively. In the items of SSAT, all the items fall within the accepted range of 0.7 – 1.5. The fit statistic of the Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students indicated that all the items are perfectly valid. The mean of the infit and outfit are 0.95 and 1.04 respectively.

The spread of the infit and outfit and their mean indicate highly valid items (since their mean are sufficiently close to one). This is also an expression of uni-dimensionality- a situation where all the

items assess one latent ability, that is cognitive ability achievement in Social studies. Therefore, all the items of SSAT are valid and showed uni-dimensionality.

Research Question Two: What is the reliability of the Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria?

Table 2: Reliability of the Social Studies Achievement Test (SSAT) Based on IRT Model

Method of Estimating Reliability	Number of Items	Social Studies Achievement Test Reliability Index
Kuder-Richardson formular 20	30	0.7863

The reliability index of the Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students was estimated to be 0.7863 using Kuder-Richardson formular 20 (KR20). This shows that the Social Studies Achievement Test developed is highly reliable.

Research Question Three: What are the difficulty indices of Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State Nigeria?

Table 3: Item threshold values (difficulty estimates) of the items of the multiple choice test in Social Studies based on IRT model.

Items	Threshold	Items	Threshold
1	0.34	16	-0.16
2	-0.38	17	0.75
3	-0.88	18	-0.24
4	-1.09	19	1.19
5	-0.73	20	-0.92
6	-1.01	21	-0.33
7	-0.57	22	0.53
8	1.72	23	-1.45
9	1.21	24	0.65
10	-1.33	25	-0.32
11	0.73	26	0.95
12	1.12	27	-1.03
13	-1.46	28	0.65
14	0.25	29	-1.17
15	-0.62	30	0.77
Mean	0.88		
SD	0.47		

Table 3 revealed the item difficulty estimates or difficulty measures of Social Studies Achievement Test Items. The results revealed that seventeen (17) items (57%), that is items 2, 3, 4, 5, 6, 7, 10, 13, 15, 16, 18, 20, 21, 23, 25, 27, and 29 within the b-value range of -3 to +3 had negative difficulty estimates while thirteen (13) items (43%), that is items, 1, 8, 9, 11, 12, 14, 17, 19, 22, 24, 26, 28 and 30 within the b-value range of -3 to +3 had positive difficulty estimates. The negative estimates imply that 17 items are easy while 13 items are difficult. Based on this information, none of the items were rejected in terms of difficulty levels.

Research Questions Four: What is the discrimination power of Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria?

Table 4: Item parameters (discrimination power) of the items of the multiple choice test in Social Studies based on IRT model.

Items	Slope	Items	Slope
1	0.54	16	2.34
2	0.52	17	0.88
3	0.64	18	1.09
4	0.12	19	0.64
5	1.16	20	1.85
6	1.25	21	0.96
7	0.61	22	0.21
8	1.33	23	0.34
9	1.11	24	0.19
10	0.95	25	0.64
11	0.24	26	0.55
12	1.14	27	3.31
13	0.59	28	1.01
14	0.45	29	1.14
15	0.33	30	0.93
Mean	0.72		
SD	0.42		

Table 4 revealed that six (6) items (20%), that is items 4, 11, 15, 22, 23 and 24, within the value range of .01 - .34 indicated very low discriminating values, while nine (9) items (30%), that is items 1, 2, 3, 7, 13, 14, 19, 25 and 26 within the value range of .35 - .64 indicated low discriminating values. Also, twelve (12) items (40%), that is item 5, 6, 8, 9, 10, 12, 17, 18, 21, 28, 29 and 30 within the value range of .65 - 1.34 indicated moderate discriminating values and three (3) items that is, item 16, 20 and 27 items (10%) had values of 2.34, 1.85 and 3.31 respectively, meaning that the three items had a very high discriminating attributes.

Research Questions Five: What is the plausibility of decoys/distracters of the multiple-choice Social Studies Achievement Test items (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria?

Table 5: Item plausibility of decoys/distracters of the multiple-choice Social Studies Achievement Test items based on IRT model.

Items	Asymptote	Items	Asymptote
1	0.12	16	0.13
2	0.02	17	0.04
3	0.09	18	0.02
4	0.03	19	0.21
5	0.10	20	0.02
6	0.12	21	0.43
7	0.03	22	0.11
8	0.14	23	0.22
9	0.03	24	0.09
10	0.15	25	0.05

11	0.04	26	0.12
12	0.14	27	0.03
13	0.03	28	0.12
14	0.14	29	0.02
15	0.10	30	0.38
Mean	0.11		
SD	0.17		

Table 5 revealed that items were ranged from 0.02 to 0.43. Based on the data in table 5, twenty six (26) items (87%) that is items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,12, 13, 14, 15, 16, 17, 18, 20, 22, 24, 25, 26, 27, 28 and 29 fall within the c-value range of 0.01 to 0.20 which shows that the items were desirable and the probability of getting an answer correctly by mere guessing is low while four (4) items (13%) fall within the c-value range of 0.21 to 0.43 that is items 19, 21, 23, and 30 which shows that the items were not very good and the probability of getting an answer correctly by mere guessing is high.

Hypotheses Testing

Two (2) null hypotheses were formulated in the study as presented below:

H0₁: There is no significant difference between students' scores on the percentage of easy and difficult of multiple choice Social Studies Achievement Test Items for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria.

Table 6: Chi-square Summary of students' scores on the percentage of easy and difficult Social studies multiple choice test Items

Difficulty	Percentage	Item favoured due to Difficulty	Df	Chi-square	Sig.(2tailed)
Easy	57	17	1	0.53	0.466
Difficult	43	13			
Total	100	30			

χ^2 tabulated at 0.05 level of significant with 1 df = 3.84

Result in Table 6 shows that the chi-square calculated value of 0.53 is less than the tabulated chi-square value of 3.84 when tested at 0.05 level of significance with 1 degree of freedom. Therefore, the null hypothesis which states that 'there is no significant difference between students' scores on the percentage of easy and difficult Social studies multiple choice test Items is thereby upheld. It implies that there is no significant difference between students' scores on the percentage of easy and difficult Social studies multiple choice test Items.

H0₂: Decoys in the multiple choice Social Studies Achievement Test items for upper basic school two (UBSII) student's achievement in Dutsin-Ma Zonal Education Quality Assurance in Kastina State are not significantly plausible

Table 7: Chi-square Summary of Decoys in Social Studies Multiple Choice Test Items

Decoys	Percentage	Item favoured due to Decoys	Df	Chi-square	Sig.(2-tailed)
Low guessing	87	26	1	16.13	0.000
High guessing	13	4			
Total	100	30			

χ^2 tabulated at 0.05 level of significant with 1 df = 3.84. Result in Table 7 revealed that the chi-square calculated value of 16.13 is greater than the tabulated chi-square value of 3.84 when tested at 0.05 level of significance with 1 degree of freedom. Therefore, the null hypothesis which states that decoys in social studies multiple choice test items are not significantly plausible is thereby rejected. It implies that decoys in social studies multiple choice test items are significantly plausible. It also implies that the social studies multiple choice test Items has effective distractors.

Discussion of Findings

The discussion of findings was done according to the research questions asked and hypotheses formulated in the study:

The study revealed that the multiple choice test items had the infit statistic ranging from 0.62 to 1.34; and outfit statistic range from 0.85 to 1.49 respectively. In the items of SSAT, all the items fall within the accepted range of 0.7 – 1.5 and are perfectly valid. The mean of the infit and outfit are 0.95 and 1.04 respectively. Since their mean are sufficiently close to one and expression of uni-dimensionality- a situation where all the items assesses one latent ability, that is cognitive ability achievement in Social Studies. Therefore, all the items of SSAT are valid and showed uni-dimensionality. The finding is in agreement with the finding of Chime, (2012) who revealed that the SSAT was very valid, as shown in the proper distribution of the contents in the table of specifications; and reliable as indicated by a reliability estimate of 0.96.

The study showed that the developed Social Studies Achievement Test (SSAT) has high reliability index estimated to be 0.79. The finding is in line with the finding of Lydia and Nkechi (2018) who conducted a study on Students' academic achievement in Quantitative Economics for senior secondary schools and found that the empirical reliability of the test was 0.86. The test was found to be of good quality, valid and highly reliable

The study revealed that 57% of SSAT items are within the b-value range of -3 to +3 had negative difficulty estimates while 43%, of SSAT items within the b-value range of -3 to +3 had positive difficulty estimates. Based on this information, none of the items were rejected in terms of difficulty levels. The corresponding hypothesis affirmed that there is no significant difference between students' scores on the percentage of easy and difficult Social studies multiple choice test Items. The findings are in agreement with the findings of Chime, (2012) who revealed that the SSAT had a good difficulty and discriminatory indices, ranging from 0.08 to 0.88 and -0.03 to 0.49 respectively. The findings are in agreement with the findings of Malik, (2022) who revealed that the developed Economics Achievement Test instrument for Senior Secondary schools has high psychometric properties in terms of difficulty and discrimination index and reliability index.

The study revealed that 20% of SSAT items are, within the value range of .01 - .34 indicated very low discriminating values, while 30% items are within the value range of .35 - .64 indicated low discriminating values. Also 40% items of SSAT item are within the value range of .65 - 1.34 indicated moderate discriminating values 10% of SSAT items had values of 2.34, 1.85 and 3.31 respectively. The finding is in agreement with the finding of Chime (2012) who found out that: the developed Economics achievement test instrument for Senior Secondary schools has high psychometric properties in terms of validity and discrimination index; the instrument has high reliability index. Also the finding is similar to the study result of Chidiebere, (2020) who revealed that 50 items with difficulty indices ranged from 0.25 to 0.79 and discrimination indices of 0.20 to 0.58 were retained.

Face and content validation of EAT was ensured by constructing items in line with the test blue print, the use of experts in test construction. The study revealed that items were ranged from 0.02 to 0.43. Based on the data in table 7, 87% of SSAT items fall within the c-value range of 0.01 to 0.20 which shows that the items were desirable and the probability of getting an answer correctly by mere guessing is low while 13% of SSAT items fall within the c-value range of 0.21 to 0.43, which shows that the items were not very good and the probability of getting an answer correctly by mere guessing is high. The corresponding hypothesis affirmed that, that decoys in social studies multiple choice test items are significantly plausible.

It also implies that the social studies multiple choice test Items has effective distractors. The finding is in agreement with the findings of Orange and Dorani (2010) who revealed that the lowest c-values, the better indicating a lower probability of getting the answer correct by mere guessing of low ability examinees. Also, the finding concurs that of Harris (2005) who concluded that the items with 0.30 or greater c-values are considered not very well, rather c-values of 0.20 or lower are desirable.

Conclusion

The researchers concluded that the developed and validated Social Studies Achievement Test (SSAT) for upper basic school two (UBSII) students in Dutsin-Ma Zonal Education Quality Assurance, Katsina State, Nigeria has high psychometric properties. The fit statistic of the Social Studies Achievement Test indicated that all the items are perfectly valid, has high reliability index estimated to be 0.79. None of the items were rejected in terms of difficulty levels and that there is no significant difference between students' scores on the percentage of easy and difficult Social studies multiple choice test Items, it has high psychometric properties in terms of discrimination. Finally, the researcher concluded that the items were desirable and the probability of getting an answer correctly by mere guessing is low. It also implies that the social studies multiple choice test Items has effective distractors.

Recommendations

Based on the findings of the study the following recommendations were made:

1. The developed Social Studies Achievement Test should be used by students as study guide,
2. Social Studies teachers as a template to develop other achievement instrument in Social Studies,
3. The psychometricians and measurement expert should organize workshops to educate teachers on the implications of quality tests. They should as well train teachers to know about the modern measurement frame work called IRT as well as the necessary interpretations involved.
4. The examination bodies and teachers should be encouraged to adopt (IRT) in developing test items used in measuring student's ability in Social Studies.
5. The ministry of Education and universities should try and assist students who are interesting to study a research on item response theory to get software and necessary computer packages. That it is imperative to determine how the items in an instrument fit the IRT parameter model, such as one parameter, two parameters and three parameter logistic models.
6. The educational guidance counselors should use the scores obtained to render appropriate services in line with career choose.

References

- Akanwa, U. N & Ihechu, K. J. P. (2019). *Effect of Peer- Assessment Strategy on Senior Secondary School Students' Achievement in Agricultural Science in Imo State*.
- Anikpo, M. O., Mohammed, A. S., Salau, A. T. Ezegbe, M. O. & Okunamiri, R. U. (2016) *Basic social studies book 1-3*. Learn Africa
- Ali, A. (2008). *Fundamentals of Research in Education*. Akwa: Meks Publishers Nigeria Ltd.
- Braun, H. Kanjee, A. Bettinger, E. & Kremer, M. (2016). *Improving Education through Assessment, Innovation and Evaluation*. <https://www.amacad.org/publications/braun.pdf> on 19th October, 2021. /12
- Chime, U.M. (2012). *Development and Validation of Economics Achievement Test*. Unpublished M.Ed. Dissertation. Department of Science Education, University of Nigeria,
- Chidiebere, C. A. (2020). Students' Academic Achievement in secondary school Economics: Effects of feedback and Remediation. *Asian Institute of Research Education Quarterly Reviews*. 3(4), 479-488.
- Federal Government of Nigeria (2013). *National Policy on Education*. Lagos: Nigeria Educational Research and Development Council Press.
- Ferguson, P. (2011). Student perceptions of quality feedback in teacher education: Assessment & evaluation in higher education. *Journal of Education and Practice*, 36 (1),
- Lydia, I. & Nkechi, P. M. (2018). Test of Achievement in Quantitative Economics for Senior Secondary Schools: Construction and Validation using Item Response Theory (IRT). *Asian Journal of Education and Training*, 4 (1) 18-28.
- Malik, A. (2022). Development and validation of an Economics Achievement Test for secondary school. Unpublished dissertation.
- Olutola, A.T. (2015). Item Difficulty and Discrimination Indices of Multiple Choice Biology Tests. *Liceo Journal of Higher Education Research*, 11(1), 16-30.
- Olutola, A.T., Olatoye, O.O. and Olatoye, R. A. (2016). Assessment of Social Media Utilization and Study Habit of Students of Tertiary Institutions in Katsina State. *Journal of Education and Practice*, 7(3), 178-188.
- Olutola, A.T. & Olatoye, R.A. (2019). *Introduction to Educational Measurement and Evaluation*. Department of Educational Foundations, Faculty of Education, Federal University, Dutsin-Ma, Katsina State, Nigeria
- Olutola, A.T., Ihechu, K.J.P & Olatoye, R.A. (2023). Insecurity and assessment practice in University. *Indonesian journal of multidisciplinary Research* 3(1)2023. <https://ejournal.upi.edu/index.php/IJOMR/article/view/48061>
- Ololube, N.P. (2011). *Education and Society: An Interactive Approach*. Owerri: Spring Field Publishers.
- Orange, A.M. & Dorani, K. (2010). Developing a social studies achievement test for high school students based on item-response theory (IRT). *Journal of psychological models and methods*:1(1), 1-13.
- Olasenhinde, K. J. (2022). *Lecture guide on Educational Research Method*. Faculty of Education, Federal University Dutsin-Ma, Katsina State, Nigeria.
- Okam, C. C. (2013) Needed Paradigm shift for repositioning social studies education to meet vision 20-20 challenges, *Nigerian journal of social studies and civic education (NJSSCE)* 2(1),39-
- Ugodulunwa, C. A. (2008). *Fundamentals of Educational Measurement and Evaluation*. Jos: Fab Anieh Nig. Ltd.