

Research Article.

## Assessment of Effective Domain among NCE Geography Students of Two Affiliated Colleges of Education of Enugu State University of Science and Technology (ESUT) Enugu, Nigeria

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**ABSTRACT:** *Five affective (attitudinal) qualities: curiosity objectivity, open-mindedness, confidence and perseverance have been shown to be pre-eminent in the teaching and learning process. However, of all these attributes (qualities): curiosity and objectivity have high indications as the two most important or highly rated scientific attitudes. The study also demonstrated that three scientific behaviours with the highest rating exhibited by the 'best' students is the students' responsibility. The 'best' students were in addition shown to possess other beneficial traits such as refined manner (good behavior), humility, attentiveness and interest learning. While six (6) scientific attitudes were apparently substantially favoured among the general undergraduate populations, three (3) attitudes such as reality orientation, objectivity and open-mindedness were least favoured. Thus, the clearer definition of these affective qualities among our student population would likely assist our teachers/educators (at all levels of our school system), curriculum and counseling experts in doing a better job to advance the educational task.*

**Keywords:** *Attitude, Educational task, Learning process, Students, Scientific*

### I. INTRODUCTION

One of the cardinal objectives of education is to modify the behavior of the individual for his benefit and that of the society he lives in. The use of performance criteria and substantiated result from precise objectives provides according to [1], the evidence as to the outcomes of class-work or teacher-learner interactions. Therefore, instead of mere speculations resulting from vague general objectives which, of course, go with lots of interpretations, educational objectives are essentially stated to cover any of the three domains. Consequently, [2] classified behavioral objectives into cognitive objective which relates to knowledge and intellectual capacity, psychomotor objective which concerns the practical skills and competencies, while the affective domain relates to attitudes, feelings (likes or dislikes), values, appreciation and habits etc

The concept 'assessment' refers to making an empirical judgment or measurement (calculations) about the worth or values of specific affective or attributes or qualities as possessed by the student population under study.

Unlike the cognitive and psychomotor domains, where standard test may be used to determine these attributes, the use of observations questionnaire (opinionnaire), interviews, rating scales, etc have known to be most useful methods of evaluating affective (attitudinal) qualities, [1],[3].

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Some affective attributes relevant to assessment of scientific attitudes or behavior among others include; curiosity, objectivity, reality orientation, confidence, precision, risk taking, perseverance, consensus and collaboration, etc. the affective domain are to create positive attitudes towards learning eg in science.

The work of the teacher in the society is that of a facilitator accordingly, in the philosophy of Nigerian education, embodied in the National Policy at education emphasized among others, the inculcation in the learner, the right type values and attitudes for the survival of both individual and the Nigerian society [3]. Furthermore, psychology with its vast resources has afforded the opportunity to identify the needs, likes and dislikes and limitations of learners, just the same way sociology and education are believed by social scientist not to be only interrelated but also interdependent. Therefore, thorough education develop and enhance positive scientific attitudes, pupils and students for the benefits of the society.

[4], stressed that now an obsolete view to think of a teacher as a good instructor whose main task is to pump information into learners and to cover more subject matter, but rather, the classical view of a good teacher is one who should have a holistic view and not a fractionated view of an individual or learner. That is, the educator must consider the “total person” of the educate, because individuals are a collection of so many talents, in fact, 120 talents such as academics, creativity, planning, social forecasting, organizing, decision-making etc. to evaluate a student solely on the basic of academic talent would amount to insulting him as a person. Therefore, [4] believed that a multi-talent approach would be required in teaching and that teachers should attempt to develop all possible talents of their students rather than just the academic ones; as the multi-talent teachers would help students in building their ‘self concepts’

While scholars and researchers have always concentrated on studies pertaining to the assessment of both the cognitive and psychomotor domains, affective qualities of educational objectives are more or less neglected. But for the fact that the affective attributes or qualities are indispensable to the general learning process in formal and informal settings, their study would indeed assist in full learning attitudes (feelings, likes and dislikes etc) that could either enhance or otherwise the general learning objectives, including perhaps directly domains like cognitive and psychomotor.

Therefore, the dearth of knowledge about the attitudinal qualities of the undergraduate science (geography) students is the motivation for this investigation. The main objectives are to define:

- The affective qualities pre-eminent in the learning and teaching process.
- The relative affective qualities with the highest and lowest rating among the undergraduate students’ population and
- The affective attributes of the ‘best’ undergraduate students.

## **II. RESEARCH DESIGN AND METHODOLOGY**

### **2.1 Population of study**

One hundred and two (102) undergraduate (geography) students of college of Education Technical, Enugu and those of College of Education Nsukka formed the population of this study. Both institutions are affiliated to ESUT-Enugu and the programmes are controlled and moderated by the faculty of education, ESUT, Enugu. Furthermore, employment regulations for the academic staff engaged in both NCE and degree programme are similar to that of ESUT, Enugu.

Apart from a wide geographical barrier, the two institutions under study appear more or less identical, in terms of academic curriculum, and perhaps social life. An outlay of the undergraduate populations under study is as shown below.

## 2.2 Sample and Sampling Procedure

The validated interview schedule was administered to all the levels undergraduate (geography) students of College of Education Technical, Enugu and College of Education Nsukka. A total of sixty eight (68) students were used for the study.

**TABLE 2. 1: POPULATION OUTLAY OF UNDERGRADUATE STUDENTS UNDER STUDY**

Level study	Students enrolment/No of questionnaire administered per institution	
	College of Education Technical Enugu No of questionnaire administered	College of Education Nsukka No of questionnaire administered
100	17.16 (94.1%)	9:9(100%)
200	25.19 (76.0%)	3:3(100%)
300	8.5 (62.5%)	6:6(100%)
Total population sampled	50 40 (80.0%)	18:18 (100%)

The TABLE above indicates that students at 400 levels in the institutions left the college after their teaching practice, and only those available were enlisted for study

**TABLE 2.2: OBSERVABLE QUALITIES FOUND IN THE ‘BEST’ UNDERGRADUATE STUDENTS IDENTIFIED AND RATED BY THE UNDERGRADUATE**

Population Science Attitude	Score (%)	Rating
Curiosity	44.8	1
Confidence	37.9	2
Responsibility	32.8	3
Perseverance	27.6	4
Open-mindedness	15.5	5
Objectivity	15.5	5
Risk-taking	13.8	7
Reality Orientation	8.6	8
Consensus and collaboration	8.6	8
Precision	5.2	10
Satisfaction	3.4	11

Other observable beneficial qualities listed by the respondents’ population as possessed by the ‘best’ students in their class include:

- Refined manner (good behavior)
- Humility and
- Attentiveness/interest in learning

## 2.4 The research instrument

This study made use of questionnaire as a means of data collection (see TABLE 2.1 above).

The items of the instrument used in the study were validated by a team of experts in the Research Language and Science Education Unit, ESUT, Enugu. The instrument which comprised interview schedule in which respondents were to tick ( ✓ ) for the appropriate responses provided or provide short answers centered on research objectives. The instrument investigated among other parameters, affective (attitudinal) qualities pre-eminent in the learning and teaching of science (geography). The observable attributes or attitudes with title- the ‘best’ undergraduate students, including individual respondent’s attitude learning etc.

## III. RESULTS

The outcome of the analysis of the data on the affective (attitudinal) qualities showed that the four (4) attitudes or attributes considered by the undergraduate of the ESUT affiliated colleges to be pre-eminent in the learning and the teaching of science (geography) were curiosity (68.2%), objectivity (58.6%), openness (51.7%), confidence (34.5%) and perseverance (34.5%). Similarly, it could be seen from, table 2.1 that the two most important scientific attitudes were found to be curiosity (67.2%) and objectivity (58.0%).

The result of this investigation also showed that curiosity, confidence responsibility were three observable attributes or attitudes with the highest exhibited by the ‘best students’ as identified and rated by the general undergraduate population.

Furthermore the outcome of the study on individual respondent’s attitudes or otherwise, towards learning based on their degree of agreement ie scale rating showed that six attributes of the affective domain namely curiosity, precision, consensus and collaboration, risk-taking, responsibility and perseverance were most favoured among the respondents, while 3 scientific attributes reality orientation, open-mindedness and objectivity were least favoured among the undergraduate.

## IV. DISCUSSION

The knowledge from this investigation that these scientific qualities curiosity, objectivity, open-mindedness, confidence/perseverance were indicated as pre-eminent in the teaching and learning process would likely not only be of much help to undergraduate students, but perhaps to learners (pupils and students) in general, especially science students. A full appreciation of these qualities or attitudes would indeed be instructive particularly to the science teacher or educator at all levels of our educational system, as this could assist the teacher in emphasizing on or developing these essential qualities in learners.

[3] stressed the importance of inculcating the right type of values and attitudes in the learners by teachers. The job of a teacher is essentially that of a facilitator, helping to create the right type of environment in which he/she assists the learner to exploit his/her full potentials. For instance, an educator who fully appreciates the objectives of education/science instruction and that the two most important or highly rated scientific attitudes are curiosity and

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objectivity, as shown in this study (TABLE 2.1), would tailor his instructional methods to enhance or develop these beneficial traits in the learners, thus creating the enabling environment for which creativity would flourish.

[1], observed that the fundamental objectives of affective domain are to create positive attitudes towards the learning of science in learners, for the benefit of not only the learner but that of the society in general. This study has also demonstrated that the three scientific behaviours with the highest rating exhibited by the ‘best’ students in the undergraduate population were curiosity, confidence and responsibility, thus further stressed on the importance of curiosity in particular, not only in the teaching and learning of science but in educational tasks in general. Therefore, there is probably no knowledge of these three (3) beneficial scientific qualities as possessed by the best undergraduate students (TABLE 2.2), would be useful to both teachers/educator and curriculum designers, in order to inculcate, enhance or encourage these specific beneficial attributes in learners, generally. Education authorities [5] and [6] observed the importance of all the planned learning experiences that learners acquire under the guidance of the school, for the benefit of not only the learner but also the society in general.

Furthermore, refined manner (good behavior), humility, attentiveness and interest in learning have been shown as additional beneficial attributes of the students, thus pointing out that if these additional positive attitudes that have been given clearer definition are properly harnessed, it would probably go a long way in suiting and healing not only our school systems, but equally hospitable to the Nigerian community at large. Social scientists have stressed not only the interrelationship between education and society but also their interdependence. Therefore, the defined positive qualities of our ‘best’ students could serve as a frame of reference to all classroom teachers (who interact with so many learners), teachers in-training, counseling and curriculum personnel, who will perhaps through the exploitation of the principles of motivation etc advance our education and societal development.

## V. CONCLUSION

Based on this study, that six (6) scientific attitudes; curiosity, precision, consensus and collaboration, responsibility, perseverance and risk-taking were all substantially favoured among the undergraduate population of the two ESUT affiliated colleges indicates that there is the need to sustain and encourage these positive scientific traits. To sustaining or enhancing the positive talents in learners (pupils/students) depends according to [4] on the teachers’ ability to ‘read-well’, perceive the needs including the inadequacies and potentials of his pupils or students. No consistent pattern was discernible in the observed slight differences, in the possession of the six positive scientific attitudes between the undergraduates of the two colleges.

The three least favoured scientific attitude: reality orientation, objectivity and open-mindedness among the students’ population indicate that for the educational objectives to be realized, the teachers/educators in both institutions under study and perhaps elsewhere have an extra work to do in re-appraising their instructional methods, while these findings could serve as a kind of social forces to affect curriculum decisions.

It has been observed [4], that there is scarcely anything the science education in our schools today; if have skillful science-teaching cannot cure. On the whole, most of the required improvement lies with the job of a teacher who has a good science orientation, knowledge of the objectives for teaching science, is interested in teaching and knows how children learn, of course in addition, if he/she desires indeed to be a good teacher.

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