

## **TEACHERS' INSTRUMENTS FOR EVALUATING STUDENTS ACHIEVEMENTS IN ENTREPRENEURSHIP EDUCATION IN OWERRI EDUCATION ZONE 1 OF IMO STATE**

**Ezechukwu, Ifeoma Roseline *PhD*<sup>1</sup> & Okorie, Caroline Ifeyinwa<sup>2</sup>  
& Okwa Chiamaka Oluchi *PhD*<sup>3</sup>**

Department of Physical Science Education  
Imo State University, Owerri

### **Introduction**

There is a great need for technological, social and economic orientation of the senior secondary school students in Nigeria. In order to improve the pace of the nations' technological, social and economic development, these students should be made to acquire relevant knowledge, skills and desirable work habits. They need to understand and manipulate processes and materials. Entrepreneur Education is the foundation for the economic, social and technological development of any nation. It is an education process that creates in an individual the ability and skills to become self-reliant and to overcome the dynamic challenges posed by the harsh economy of nations (Meziobi, 2013). This kind of education helps to ensure that young people are well equipped to face the challenges of the world work. It is in this light that Bolarinwa (2001) noted that entrepreneurial education is the type of education that provides training, experience and skills that prepare graduates with entrepreneurial knowledge, skills, and competence needed to be self-reliant.

Entrepreneurship Education is an academic programme and exercise that seeks to provide the students and trainees with the knowledge, skills, and motivation to encourage entrepreneurial success in various settings, be it profitable and non-profitable settings. It inculcates the idea of leadership, accountability, management and dynamic entrepreneurial success into students and makes them to be willing to take new venture and accept full responsibility for outcomes. Anumaka (2010) defined entrepreneurship education as an academic exercise that seeks to provide students with the knowledge, skills, competence and empowerment to be self-reliant, creative, harness opportunities and develop entrepreneurial success in various settings. The UNESCO and ILO (2006) defined entrepreneurship education as “learning directed towards developing in young people those skills, competencies, understanding and attributes which equips them to be

innovative, and to identify, create, initiate, and successfully manage personal, community, business, and work opportunities including working for themselves". It is not a type of job that gives fish, but a type that teaches how to fish. It is an umbrella term that covers a number of activities and subjects that go beyond basic entrepreneurial programmes.

According to Jerom (2014) the aim of Entrepreneurship Education is not just to teach an individual how to run a business, but to encourage creative thinking, promote strong sense of self-reliance, accountability and productivity. Other objectives include:

- To inculcate in an individual survival skills,
- To build in an individual knowledge and skill either about or for the purpose of Entrepreneurship,
- To equip the recipients-usually at the secondary school level- with such skills that enable them to fit into the world of economic and productive enterprise upon graduation,
- To inculcate in an individual the ability to recognise opportunities in life,
- To help people create and operate new ventures and be self-reliant,
- To reduce the soaring incidence of unemployment,
- To alleviate poverty,
- To foster socio-economic integration and development,
- To drastically reduce idleness among youths and thereby curb the attendant consequences of idleness such as youth restiveness, insurgency and other forms of social vices.

The overall goal of the curriculum is to prepare the students to face the challenges of the new millennium. The major aim is that students having successfully passed through the senior secondary education, should have acquired the skills in a specific trade to enable them create jobs and generate wealth. The new entrepreneurship education curriculum was designed to meet the targets of the National Economic Empowerment and Development Strategy (NEEDS) which are expressed as: value re-orientation, poverty eradication, job creation, wealth generation and using education to empower the citizenry. The philosophy of this curriculum is to present Entrepreneurship Education as subjects that have relevance in everyday life and could prepare graduates for an entrepreneurial career in future.

Consequently upon the recognition of the critical importance of entrepreneurial skills to sustainable national growth and development, the Nigerian Educational Research and Development Council (NERDC)

developed about 34 curricula for Senior Secondary Schools. The subjects that make up the entrepreneurial aspect of the Nigerian secondary education are also called the trade subjects and they are 34 at present. These include: auto body repair and spray painting, auto electrical work, auto mechanics, auto parts merchandising, air conditioning refrigerator, welding and fabrication, engineering craft practice, electrical installation and maintenance work, radio, TV and electrical work, building technology, painting and technology plumbing and pipe fitting, machine woodworking, carpentry and joinery, furniture making, upholstery, catering craft practice, garment making, textile trade, dyeing and bleaching, printing craft practice, cosmetology, leather, leather good manufacturing and repair, stereography, data processing, store keeping, GSM maintenance, photography, tourism, mining, animal husbandry, fisheries, marketing, salesmanship. The curriculum content has been carefully structured using the conceptual approach. The implementation of the new curriculum could be achieved through the use of evaluation instruments such as practical test, interviews, project, assignments, and observations.

This paper therefore focused on the Teachers' Knowledge and Skills in Evaluating Students' Achievement in entrepreneurship education in Imo State of Nigeria. If the teachers are not knowledgeable on the techniques and methods of effective evaluation, then the objectives of entrepreneurship education cannot be achieved in secondary school system. A teacher, according to Tarum (2009) is someone who impacts knowledge and skills to students and prepares them with the vision of being leaders of tomorrow through motivated educational system. Soni (2012) posited that a teacher is a person who has undergone approved professional training in education at appropriate levels, capable of impacting knowledge, education and skill to learners. In the same vein, Babalola (2008) opined that a teacher is a person who by virtue of training and experience facilitates learning in learners by preparing and sustaining the necessary climate or environment for learning to take place. The entrepreneurship teachers have the responsibility of educating students in the different ways of being self-reliant. The teacher impacts knowledge and skills to students and evaluate them for competency and mastery using different types of assessment to ascertain the students achievement of the planned objectives.

One major way of monitoring the quality and standards of the teaching and learning of Entrepreneur Education in schools is through the evaluation of the learning outcome of the students. The essence of using tests and other evaluation instruments during the instructional process is to guide, direct, and monitor students' learning progress towards the attainment of the course objectives (Alonge, 2004; Kolawole, 2010). This monitoring of learning

achievements in Entrepreneur Education involves the processes of testing, measurement, assessment and evaluation. A test is set of questions, tasks or problems intended to measure an individual's knowledge, skill, aptitude, intelligence etc. Testing is therefore a systematic procedure of presenting a set of questions, tasks, or problems to testees and expecting them to respond to the items either orally or written, and sometimes by performance within a specified time schedule. Measurement is the assignment of numbers or marks to observed event or response to testing. Assessment is the process of using the results from measurement to take decisions about the object of assessment. Evaluation is a systematic process of determining the extent to which the learners have achieved the stated instructional objectives.

The focus of evaluation is on the appraisal of the worth or value of a policy or action and the making of appropriate decision based on the findings of such appraisal. Evaluation is judged in terms of its philosophy, objectives and intents vis-à-vis its meeting the needs of the planners, society and students. Indeed, evaluation is an important aspect of good teaching and learning process because no matter how efficient the teacher, how intelligent the students, how adequate the audio-visual equipment, if no provision is made for some evaluation of progress, the teaching may be invalidated. Unfortunately some teachers see evaluation as an isolated activity from the teaching and learning processes. Hence, some teachers haphazardly carry out the evaluation processes of the students without utilising the goals and benefit of evaluation in the classroom. Some of the teachers see evaluation mainly for the purpose of grading the students. From data collected on the result of the implementation of a programme, evaluation seeks to point out the discrepancy or otherwise that may exist between the planned and achieved of the programme (Obiefuna, 2008 & Olaitan 2003).

Duru (2011) classified evaluation into three namely formative, summative and diagnostic evaluations. She is of the opinion that an all-encompassing evaluation is the one which embraces the three component parts of evaluation. Formative evaluation is defined by Duru as "a process of trying out instructional materials during development with members of a target audience and based on feedback from them, revise the original material". This process of revision as a result of feedback continues until the quality of the instructional materials is at desired level of effectiveness and efficiency. Formative evaluation in relation to students' achievement in a programme is meant to monitor the students learning progress and also to provide an on-going feedback on the strength and weakness of the students to the teacher (Ughamadu, 2005). It is analogous to continuous assessment. Formative evaluation is expected to lead to actions towards overcoming learning

deficiencies; aid in motivating learners and increase retention and transfer of learning (Gronlund & Linn, 1990). Formative testing is designed to identify learners' difficulties with a view to providing remediation measures to enhance performance of majority of students (Ajogbeje, 2013). Therefore, if assessment is not effectively carried out in the entrepreneurship education class, then the objectives of the lessons cannot be achieved.

Diagnostic Evaluation is done during the formation of educational objectives. The tests in the school are expected to be diagnostic in nature. It is used to determine learning difficulties during instruction. When a student continues to experience learning difficulties despite all efforts to improve him, there arises a need to engage in a detailed diagnosis of his learning problem.

Summative (Final) Evaluation is the kind of evaluation that is carried out when the programme has fully stabilized or has almost come to an end to ascertain the effectiveness of the programme. Summative evaluation seeks to know all about the curriculum package starting from the goals and objectives stated, the implementation processes and the evaluation procedures used in assessing learners performance. With regard to students' achievement in curriculum programme implementation, Ughamadu (2005) stated that summative evaluation "comes at the end of the course of instruction with the aim of determining the extent to which instructional objectives have been achieved. His concern is in the extent of students' achievement of instructional outcomes. These require the knowledge and skills of teachers in test construction and administration and record keeping in evaluating students' academic achievement.

The definition of academic achievement varied among educators, policymakers and other educational stakeholders. Academic achievement is described by Mueller (1992) as the educational goal that is achieved by a student, teacher or institution over a certain period. This is measured by examinations or continuous assessments and the goal may differ from an individual or institution to another. There is no general agreement on how it is best tested or which aspects is most important, whether procedural knowledge such as skills or declarative knowledge such as facts. What this means is that academic achievement is measured in relation to what is attained at the end of a programme, since it is the accomplishment of medium or long term objective of education.

Academic achievement, in the context of this study is the outcome or the extent to which the stated objectives in entrepreneurship education could be attained by students at the end of their senior secondary school education. For teachers of entrepreneurship education and implement school based evaluation in entrepreneurship education effectively in order to enhance

students' achievement especially in internal and external examination would require teachers' knowledge and skills to cope with specific content, objectives, utilization of instructional materials and evaluation methods embedded in the new curriculum.

Teachers are expected to construct valid and reliable tests which could be used in all schools following established procedures and practices of test construction. In addition to test construction (which is mainly on cognitive aspect of learning), teachers should also be able to measure the learners affective attributes such as attitudes, motives, interest, values and other personal characteristics. The teachers should also be able to provide clues or measures about the physical alertness and patterns of learners' psychomotor attributes. The continuous assessment is said to be comprehensive as it is expected to measure the cognitive, affective and psychomotor domains of learners. This involves a great variety of instruments such as: tests, interviews, questionnaire, assignments, and observations.

This implies that the teacher is expected to give more tests which mean more marking and work for the teacher. They need to observe the learners more keenly to access their affective outcomes. The question addressed as the problem of this study is; would the construction and use of test items, feedback and remediation be more effective on students' achievements in entrepreneurship education in Owerri education zone 1 of Imo State.

Generally, this study appraised teachers' knowledge and skills in evaluating students' achievement in entrepreneurship education in Owerri Education Zone 1 Imo State of Nigeria.

Specifically, the study sought to;

1. To find out the proportion of secondary school teachers that uses the various evaluation instruments in the evaluating students' achievement in entrepreneurship education.
2. To ascertain the sources from where teachers generate their entrepreneurship education test items.
3. To ascertain the levels of questions on the Bloom's taxonomy of cognitive domain set by teachers in entrepreneurship education tests.
4. To find out the proportion of teachers that carry out content validity, reliability test and item analyses in entrepreneurship education tests.
5. To find out how teachers use the outcomes of the formative tests in entrepreneurship education.

In carrying out this study, three research questions were formulated. These are;

1. What proportion of secondary school teachers use the various evaluation instruments in evaluating students' achievement in entrepreneurship education?
2. From what sources do teachers generate their entrepreneurship education test items?
3. What levels of questions on the Bloom's taxonomy of cognitive domain are set by teachers in entrepreneurship education tests?
4. What proportions of teachers carry out content validity, reliability test and item analyses in entrepreneurship education tests?
5. How do teachers use the outcomes of the formative tests in entrepreneurship education?

### **Method**

The study is a survey research design. Ogomaka (1999) defined descriptive survey research design as an attempt to discover relationships that exist between non-manipulated variables, that is, to describe the present- what is? Also Gall, Gall and Borg (2007) stated that survey research design is a method of data collection using question or interviews to collect data from a sample that has been selected to represent a population to which the findings of the data analysis can be generalized. The design is appropriate for the study since the researcher used questions (items) as instrument for collecting data from the respondents. The population of the study was all entrepreneurship education (trade subjects) teachers in senior secondary schools in Owerri Zone 1 in Imo State of Nigeria. One hundred and Fifty senior secondary school trade subject teachers were sampled through purposive sampling technique. They were made up of 104 females and 46 males. The main instrument used for the data collection was Teachers Instruments for Evaluating Students Achievement Scale (TIESAS) questionnaire designed to elicit responses from the subjects in the areas of evaluation instruments, source of test items, levels of cognitive domain covered by the questions, validation and item analyses. Other area covered is the use of formative tests in evaluating students in senior secondary school entrepreneurship education. The questionnaire consists of 23 questions on a modified four point likert type of scale using never, rarely, sometimes and always. The instruments were face and content validated by three experts, two in entrepreneurship education (trade subjects) and one in the field of Measurement and Evaluation and it was trial-tested on teachers that were not from the sampled schools. Cronbach Alpha reliability method was used to compute their internal consistency reliability. It yielded coefficients of 0.78. Copies of the questionnaire were administered to the respondents by the

researchers with the help of three trained research assistants. Data were analysed using descriptive statistics.

**Results**

**Table 1:** Evaluation Instruments used by teachers in the entrepreneurship education Class Instruments

	<b>Regularity of the use of instruments</b>			
	<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Always</b>
Written Tests	-	-	60(40%)	90(60%)
Assignments	-	5(3%)	51(34%)	94(63%)
Group Work	6(4%)	45(30%)	69(46%)	30(20%)
Project Work	45(30%)	67(45%)	27(18%)	11(7%)
Observation	90(60%)	15(10%)	25(17%)	20(13%)
Oral Examination	73(49%)	68(45%)	9(6%)	-
Peer Group Evaluation	90(60%)	48(32%)	12(8%)	-

The table 1 above shows that the percentages of teachers that sometimes and always use the written tests is 100% ; 97% of the teachers use Assignments; 66% of the teachers use Group work; 25% use project work; 30% of the teachers use Observation; 6% of the teachers use oral Examination; and 8% of the teachers use Peer Group Evaluation.

**Table 2:** Source of Test Items for evaluating Students in entrepreneurship education

<b>Source of Items</b>	<b>Regularity of usage</b>			
	<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Always</b>
Test book Publisher's Questions	3(2%)	27(18%)	54(36%)	66(44%)
Past Questions	49(33%)	65(43%)	22(15%)	14(9%)
Question and Answer Books	54(36%)	51(34%)	39(26%)	6(4%)
Constructed by teacher	6(4%)	30(20%)	33(22%)	81(54%)

The table 2 above shows that: 80% of the teachers sometimes and always obtain their evaluation questions from textbook publisher's questions;



24% of the teachers obtain their evaluation questions from past questions; 30% of the teachers their e obtain valuation questions from question and answer books; and 76% of the teachers construct their questions.

**Table 3:** Levels of Cognitive Domains covered by Test Instruments

Level of Questions	Regularity of		Use of levels of	Questions
	Never	Rarely		
Knowledge	-	-	85(57%)	65(43%)
Comprehension	-	19(13%)	86(57%)	45(30%)
Application	12(8%)	22(15%)	78(52%)	38(25%)
Real life Questions	18(12%)	79(53%)	27(18%)	26(17%)

The table 3 above shows that 100% of the teachers set knowledge level questions; 87% of the teachers sometimes and always set comprehension level questions; 77% of the teachers sometimes and always set application level questions; and 35% of the teachers sometimes and always set real life questions.

**Table 4:** Validation Processes of Test Items by Teachers

Validation Processes	Regularity of		Validation	
	Never	Rarely	Sometimes	Always
Content Validity	19(13%)	17(11%)	46(31%)	68(45%)
Reliability Test	84(56%)	61(41%)	3(2%)	2(1%)
Item Difficulty	88(59%)	47(31%)	10(7%)	5(3%)
Item Discrimination	115(77%)	9(6%)	6(4%)	20(13%)
Distracter Index	91(61%)	44(29%)	10(7%)	5(3%)

The table 4 above shows that: 76% of the teachers sometimes and always carry out the content validity of the test instruments; 3% of the teachers sometimes and always carry out the reliability tests of the test instruments; 10% of the teachers sometimes and always carry out the analyses of item difficulties; 17% of the teachers sometimes carry out the analyses of item discrimination power; and 10% of the teachers sometimes and always carry out the analyses of distracter index of the options.

**Table 5:** Use of the Outcomes of Formative Evaluation Tests in entrepreneurship education Class

Use of Formative Test	Regularity		Of Use	
	Never	Rarely	Sometimes	Always
Give Formative Tests	-	-	56(37%)	94(63%)
Give Formative Test and Feedback to students	10(7%)	9(6%)	47(31%)	84(56%)
Give Formative Test, Feedback and Remediation Lesson to Students	5(3%)	72(48%)	37(25%)	36(24%)

The above table 5 shows that 100% of the teachers sometimes and always give formative tests; 87% of the teachers sometimes and always give formative tests and give feedback to the students; and only 49% of the teachers sometimes and always give remediation lessons to the students in addition to the feedback to the students.

**Discussion**

The results of the study indicate that 100% of the teachers use written tests and majority of them use written assignments and group works to evaluate the students in entrepreneurship education. This supports the research findings by Dandis (2013). It is not common for teachers in Nigeria to use observation, oral examination and peer group assessment to assess and grade students in entrepreneurship education. Thus evaluation based on written test is not valid and comprehensive as it does not measure all that it is expected to measure to achieve the goals of entrepreneurship education.

This study revealed that over 80% of the teachers source their evaluation questions from publishers’ text books. This is simply because the teachers and students use the recommended textbooks. Most times the teachers prepare their lesson notes from the textbooks; give assignments from them and are most likely to draw their items from the textbooks. It is just easier and convenient for the teachers. This supports the report by Sharon, Charlene & Denisse (1997). Very few of the teachers source their test items from past questions and question and answer books. This is rather surprising as it is believed that many teachers usually copy questions from past questions and past questions and answer books.

The result of this study shows that majority of the teachers sometimes set test items covering knowledge, comprehension and applications. But only few of them indicated that they set questions on real life problems.

The results of this study indicate that many teachers carry out the content validity of the test items at least to cover many of the topics covered with the students. But only very few of them sometimes carry out the reliability test, item difficulty index, item discrimination power and distracter index. For any test instrument that these item analyses are not carried out, then the test cannot be valid, reliable and useable. Many teachers do not carry out item analyses of their test instruments due to lack of knowledge of the techniques and time factor. Many of them just copy questions without these item analyses.

This study revealed that majority of the teachers give formative tests and feedback of the test results to the students. Some teachers do not give remediation lessons due to high workload and the rush to cover the scheme of work for the term. This is not good for the effective teaching and learning of entrepreneurship education in senior secondary schools. Research results of Ajogbeje( 2013) showed that formative evaluation (viz formative test, feedback, and remediation) enhanced the performance of students. The study also showed that formative test with feedback and remediation is more effective than formative test only.

### **Recommendations**

Based on the results of this study, it is recommended that:

- Teachers should be encouraged to use variety of evaluation instruments apart from written examinations in evaluating the students in entrepreneurship education.
- Teachers should be retrained on the techniques of test construction and administration in schools
- Teachers should be guided and encouraged to set questions that relate to real life problems
- Entrepreneurship education teachers should be required to give remediation lessons after the formative tests in order to improve the learning capacity of the students.
- Teachers of entrepreneurship education in secondary schools should be given study leave and sponsored by the Secondary Education Management Board (SEMB) to enable them attend short training in school based evaluation.

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