

**DEVELOPMENT OF A SCALE FOR ASSESSING
EFFECTIVENESS OF ENTREPRENEURSHIP EDUCATION
ADMINISTRATORS IN SOUTH-EAST
UNIVERSITIES, NIGERIA**

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Introduction

Graduate unemployment in Nigeria is cumulative. It increases as institutions turn out graduates annually. The rate at which young graduates from universities seek employment outweighs the capacity of the economy to provide such employment (Akpan & Etor, 2013). In order to make university education in Nigeria functional and relevant, the Federal Government of Nigeria, through the National Universities Commission (NUC), made entrepreneurship education a compulsory course for all undergraduate students in Nigerian universities.

The concept entrepreneurship, be it in economy, business, school or otherwise has been widely studied and explained from different perspectives by different scholars, but there is lack of consensus among scholars on what constitutes entrepreneurship. The term “entrepreneurship” comes from the French language, “entrepandre” which means to “carry on” (with duty) or to “try” (Ezeani, 2012). This implies that entrepreneurship means carrying on with duty or trying an opportunity. Entrepreneurship is a dynamic process of vision, change and creation. It involves doing things that are not generally done in the ordinary course of business or routine; it is essentially a phenomenon that comes under the wide aspect of leadership (Folahan & Omoriyi, 2006).

The aims of entrepreneurship education in Nigeria are to help students develop a business plan for enterprise, equip them with effective management strategies in their chosen enterprise and help them develop, expand and be innovative and creative in their product line(s) through expansion to new markets. The overall aim of the policy is to inculcate in the students’ entrepreneurial spirit that will help to curb the increasing rate of graduate

unemployment (FRN, 2014). This will help graduates to recognize business opportunities, mobilize resources and exploit the opportunity for self-employment which will be beneficial for community and national development (Akpan & Etor, 2013; Roe-Odegard; 2004). The objective also includes development of personal qualities, attitudes, formal knowledge and skills of the beneficiaries.

Entrepreneurship education is about developing attitudes, behaviours and capacities at the individual level. It is also about the application of those skills and attitudes that can take many forms during an individual's career, creating a range of long-term benefits to society and the economy. It seeks to provide students with the knowledge, skills and motivation to encourage entrepreneurial success in a variety of settings (Nwosu & Ohia, 2009). Olawolu and Kaegon (2012) confirms that entrepreneurship education prepares youths to be responsible and become entrepreneurs or entrepreneurial thinkers by exposing them to real life learning experiences where they will be required to think, take risks, manage circumstances and at the same time learn from the outcome.

To achieve the objectives of university entrepreneurship education, there should be a concerted effort by its administrators to ensure that managerial roles are effectively carried out. The university administrators including directors of entrepreneurship centres and the lecturers play a critical role in achieving the objectives of this programme.

It is imperative to state that effective administration is indispensable for the successful functioning of any programme in any institution. Without effective and meaningful administration, it may be impossible to deliver results. Entrepreneurship administrative responsibilities are those entrepreneurship management strategies which include planning, organizing, staffing, directing, reporting and coordinating of human and material resources of the institution. Agreeing with the above statement, Ezeani (2012) states that entrepreneurship administrative responsibilities are those management strategies which the university administrators employ to lead the school to greater heights through the acquisition of required skills which enable students become self-employed and self-reliant after graduation.

In the administration of university entrepreneurship education, it is the duty of the directors to ensure that they plan, organize, direct and coordinate the activities of human and material resources for the training of students. This will help in the acquisition of entrepreneurial skills by providing training centers and articulating the programmes to help explore different opportunities for students. To effectively promote entrepreneurship in tertiary institutions in Nigeria, school administrators play a vital role by effectively assessing

lecturers/teachers' competence (Onu, 2013). The administrators train and retrain the lecturers through quality development programmes like orientation programmes, workshops and conferences so that the lecturers will meet up the challenges in the teaching of entrepreneurship education. The entrepreneurship Directors ensure that funds are sourced, provided and managed judiciously, because no educational programme can survive without adequate funding.

From the foregoing, it is evident that entrepreneurship education in Nigerian State-owned and Federal Universities, if properly managed by the University administrators, could turn around the economic fortune of Nigerians by providing jobs, and reducing both unemployment rate and the poverty level. Having considered the need for effective administration of entrepreneurship education, it is pertinent to develop a valid and reliable instrument that could assess the administrators of entrepreneurship education in Nigeria.

Two major properties are considered essential for developing a scale in this study, they are; validity and reliability. For an instrument to achieve the objectives to which it was developed, validity of such instrument is crucial. Validity of an instrument refers to the capability of an instrument to measure whatever it is designed to measure (Nwana, 2007). In an empirical study, Meredith cited in Awofala (2011) recommended a factor loading (FL) of 0.36 and above as minimum for accepting any item as valid for construct validity. Also Balogun and Mustapha (2014) concluded that test items that have high factor loading and satisfy other psychometric properties are important for selection in any instrument development and validation study. On the other hand, reliability of an instrument refers to the capacity and consistency of a measuring instrument to give the same information each time it is used (Egwim & Amaechi, 2015). This implies that if an instrument persistently and consistently measure what it set out to measure anytime it is used, that instrument can be relied upon. With regards to this, Awofala (2011) found out that his instrument titled: teaching effectiveness scale had good reliability with Cronbach alpha coefficient of 0.70. The findings also agree with the findings of Zhang and Lam (2013) where their racquetball skills test battery for young beginners had a high reliability of Cronbach coefficient of 0.68.

Personal experiences by the researchers and search of literature have proved that there is lack of instrument for assessing the duties of University entrepreneurship education administrators in Nigeria. This situation could have caused researchers carrying out research in such areas to either suspend their research or use a non-valid and unreliable alternative instrument. If this situation is allowed to persist, the result of subsequent researches and their generalization may not be credible. Also the level of administrative

effectiveness of entrepreneurship education directors in universities may not be wholly ascertained. The problem of this study posed as a question is: what is the construct validity and internal consistency of the developed items of Effectiveness of Entrepreneurship Education Administrators Scale (EEEAS) in South East State-owned Universities in Nigeria?

The central purpose of this study is to develop an instrument for assessing the effectiveness of entrepreneurship education administrators in South-East Universities of Nigeria. Specifically, the study sought to:

3. ascertain the construct validity of EEEAS, and
4. determine the internal consistency reliability index of EEEAS.

The following research questions were posed to guide the study:

- 3) What is the construct validity of EEEAS?
- 4) What is the internal consistency reliability index of EEEAS?

Method

The design of this study is instrumentation research design. The population of the study consists of 3586 tutorial staff from 5 State-owned universities. 1000 tutorial staff was sampled using cluster random sampling technique. The instrument that was used for data collection for this study is a rating scale titled “Effectiveness of Entrepreneurship Education Administrators Scale (EEEAS)” with 47 items with four components parts/clusters. These items were generated from literature on entrepreneurship education. The instrument was validated by three experts in the area of measurement and evaluation. The rating scale is formed along a 4-point rating scale options: Strongly Agree (4 points), Agree (3 points), Disagree (2 points) and Strongly Disagree (1 point). The instrument was initially face validated by three experts in the area of Educational Measurement and Evaluation. Factor analysis by Confirmatory Factor Analysis (CFA) with varimax rotation and Cronbach alpha statistics using SPSS version 21 were used to answer research question one and two respectively. For the factor analysis, items with 0.35 and above in one factor loading are seen as pure, below 0.35 are seen as impure while any item that recorded up to 0.35 in more than one factor loading is considered as complex items.

Results

Table 1: Result of factor analysis for the construct validity of EEEAS

S/N	Item Statement	Rotated Component Matrix				Decision
		1	2	3	4	
	Students’ entrepreneurial skill acquisition training					

1	Coach students on writing a comprehensive business plan capable of attracting start-up grant/fund	0.22	0.42	0.17	0.21	Pure
2	Ensure that training manuals are properly used for coaching in compliance with professional regulations	0.26	0.67	0.17	0.22	Complex
3	Ensure that entrepreneurship education courses are appraised	0.28	0.18	0.22	0.31	Impure
4	Guarantee collaboration with other professional bodies and students	0.31	0.33	0.31	0.59	Pure
5	Provide accessible centre to all students where skills and training could be acquired	0.26	0.66	0.30	0.30	Pure
6	Provide variety of practical training programmes to acquire trade/professional skills inform of internship.	0.21	0.31	0.24	0.19	Impure
7	Ensure that instructions are fully guided by the training manuals.	0.32	0.24	0.18	0.69	Pure
8	Make certain that objectives programmes are clearly defined to help students to establish short and long plans	0.62	0.13	0.27	0.19	Pure
9	Ensure that programmes are well articulated in order to help students explore different possibilities	0.75	0.18	0.22	0.25	Pure
10	Ensure that each student undergo practical training before graduation	0.23	0.32	0.71	0.21	Pure
11	Ensure that the practical trainings reflect the aspects of psychomotor domain	0.25	0.33	0.27	0.81	Pure
12	Supervise instruction for the acquisition of the skills.	0.31	0.21	0.30	0.81	Pure
Personnel management enhancement						
13	Identify the areas that lack lecturers	0.76	0.26	0.23	0.23	Pure
14	Advance for employment lecturers in areas of need.	0.31	0.65	0.32	0.21	Pure
15	Assign qualified lecturers for the teaching of various entrepreneurship education courses	0.28	0.22	0.27	0.82	Pure

16	Provide orientation programmes for lecturers to create awareness on the need for entrepreneurship education	0.64	0.24	0.23	0.25	Pure
17	Organise in-service training for lecturers to enable them acquire more skills on Entrepreneurship education to cope with the societal development and competition.	0.26	0.21	0.29	0.43	Pure
18	Organize periodic workshops for lecturers to expose the values and potentials of Entrepreneurship Education	0.56	0.19	0.27	0.31	Pure
19	Intensify enlightenment of entrepreneurship Education to lecturers for acceptability	0.39	0.42	0.56	0.22	Complex
20	Arrange for periodic appraisal of lecturers performance	0.18	0.22	0.62	0.27	Pure
21	Provide enabling incentive to encourage or stimulate and sustain the interest of lecturers in the programme	0.30	0.22	0.60	0.26	Pure
22	Organise seminars for lecturers to build innovative and entrepreneurship culture in the university	0.59	0.20	0.23	0.24	Pure
23	Ensure entrepreneurship education capacity building for lecturers in the university	0.26	0.85	0.29	0.33	Pure
Provision of entrepreneurship education equipment/facilities						
24	Ensure that entrepreneurship centres are equipped to NUC standard.	0.56	0.19	0.22	0.34	Pure
25	Ensure that adequate staff office accommodations are provided	0.44	0.21	0.22	0.31	Pure
26	Provide e-library facilities for entrepreneurship education	0.33	0.22	0.63	0.24	Pure
27	Link e-library directly to NUC resource and Knowledge centre for the use of the available resources	0.29	0.22	0.79	0.25	Pure
29	Provide multi-purpose hall where visitors stay and make enquiries	0.78	0.23	0.23	0.31	Pure
30	Provide halls for special activities	0.24	0.23	0.27	0.63	Pure

	relating to entrepreneurship education					
31	Provide seminar rooms in the entrepreneurship education centre	0.60	0.21	0.32	0.22	Pure
32	Provide separate building that accommodates 50 students and personnel at a time	0.72	0.19	0.32	0.22	Pure
33	Provide machineries necessary for entrepreneurial practical in the university	0.24	0.28	0.27	0.44	Pure
34	Ensure that modern information technology facilities for information gathering and dissemination are provided	0.24	0.33	0.23	0.84	Pure
35	Ensure that computer unit with internet connectivity are provided	0.71	0.26	0.31	0.30	Pure
	Financial management					
36	Ensure that funds are judiciously managed	0.26	0.33	0.22	0.74	Pure
37	Ensure that required funds are received from the university budgetary allocation.	0.19	0.81	0.19	0.21	Pure
38	Ensure that the centre is adequately funded in the university	0.64	0.17	0.25	0.22	Pure
39	Guarantee that the centre is funded through external grants from the industry and Angel funds.	0.21	0.25	0.63	0.22	Pure
40	Source for special intervention funds	0.85	0.27	0.23	0.31	Pure
41	Ensure that the centre maintains separate bank accounts from the university accounts	0.69	0.19	0.21	0.34	Pure
42	Audit the accounts of the centre in accordance with existing rules	0.66	0.34	0.33	0.32	Pure
43	Manage fund objectively	0.64	0.17	0.24	0.24	Pure
44	Involve venture capitalists in the funding of the centre	0.32	0.28	0.33	0.23	Impure
45	Ensure that investors in the programmes specifically set-up for such purposes are involved in the funding	0.70	0.17	0.33	0.21	Pure
46	Make certain that funds are received through internally generated revenue (IGR) for the	0.27	0.19	0.23	0.62	Pure

47	centre Ensure that checks and balances are implored to avoid financial fraud.	0.29	0.24	0.44	0.21	Pure
Total number of pure items				44		
Total number of impure items				2		
Total number of complex items				1		

Table 1 shows the result of factor analysis for the construct validity of EEEAS. It was indicated in the table that 44 items were found to be pure, 2 items impure and 1 item as complex in the instrument. The conclusion is that out of the 47 items, 44 were constructively valid to assess the effectiveness of entrepreneurship education administrators in South-East Universities of Nigeria.

Table 2: Result of Cronbach alpha analysis for the internal consistency reliability indices of EEEAS

n	No. of Items	Cronbach alpha index	Decision
1000	44	0.96	Very High Reliability

Table 2 shows the result of Cronbach alpha analysis for the internal consistency reliability indices of EEEAS. It was indicated in the table that the 1000 respondents rated the remaining 44 items of the scale which was subjected to Cronbach alpha statistics gave an index of 0.96 which was regarded as very high reliability. The conclusion is that EEEAS has a very high internal consistency reliability.

Discussion

It was found in this study that out of the 47 items developed by the researchers, 44 were constructively valid to assess the effectiveness of entrepreneurship education administrators in South-East Universities of Nigeria. This implies that the instrument is valid. That is to say that the instrument can objectively measure the construct/traits it is designed to measure. In consonance with this finding, Meredith cited in Awofala (2011) recommended a FL of 0.36 and above as minimum for accepting any item as valid for construct validity. Also Balogun and Mustapha (2014) concluded that test items that have high factor loading and satisfy other psychometric properties are important for selection in any instrument development and validation study. The similarities in the findings could be attributed to the fact the studies could have used similar statistics in the course of analyzing the data.

It was also revealed in this study that EEEAS has a very high internal consistency reliability. This implies that the instrument can consistently measure the set objectives for it. In agreement with the above finding, Awofala (2011) found out that his instrument titled: teaching effectiveness scale had good reliability with Cronbach alpha coefficient of 0.70. The findings also agree with the findings of Zhang and Lam (2013) where their racquetball skills test battery for young beginners had a high reliability of Cronbach coefficient of 0.68. The high reliabilities of the instruments could be explained by the fact that studies made use same statistics and also there could be similarities in the nature of the areas of studies.

Recommendations

The following recommendations were made for the study;

4. Researchers and evaluators should adopt EEEAS in assessing university administrators in the area of entrepreneurship education administration.
5. The University administration can adopt the instrument in assessing her entrepreneurship education directors' effectiveness.
6. The instrument should be adopted as a means for maintaining effectiveness in the administration of entrepreneurship education in Nigerian universities.

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