

Adequacy of Tertiary Education Curricula for Sustainable Development of the Graduating Students in Nigeria

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Abstract

Curriculum paradigm is among some other parameters which have participative roles to play in the global vision of sustainable development. In Nigeria case, despite the several reform measures towards sustainable development (SD), tertiary education curricula have been doubted in their viability to attend to sustainable development vision. On this premise, this descriptive survey investigated the adequacy of tertiary education curricula for sustainable development of the graduating students in Nigeria. Two research questions and one research hypothesis and guided the study. A sample of 525 tertiary institutions lecturers participated in the study. The instrument used had a reliability value of 0.79. The findings revealed that the tertiary institutions curricula in Nigeria are somewhat adequate (32.6%). Statistically significant difference was also recorded between university lecturers and colleges of education mean ratings of the adequacy of the curricula ($t\text{-cal} (3.39) > t\text{-crit} (1.92)$), while their responses on gender basis did not yield any significant difference ($t\text{-cal} (0.47) < t\text{-crit} (1.92)$). The tilting responses observed in the findings of this study is a pointer to the inadequacies in the curricula which pose challenges to preparing graduating students for the global world advocating for sustainable development. The author recommends among others interconnectedness by collaboration/partnership among agents of sustainable development.

Keywords: Curriculum, sustainable development, tertiary education

Since the dawn of time, people have been seeking to ensure their own survival through various means. Education is therefore recognized as an important tool in developing human capacity that is sustainable. Infact, the idea of a development that is sustainable is not a new aspiration. It could be traced centuries

ago in ancient civilizations, feudal organizations, indigenous groups and also in agricultural societies (Marcos, 2008). However, it has acquired strength in the 20th century, and in the last decades, many humans in various countries of the world have realized that change in our time is inevitable. As a result, the events of the past half decade or so have been important facts about education, development and the ability of education to bring about changes of a particular kind (Sarumi, 2008).

Consequently, in every society today, education is seen as the main key to the development of the individual and the society. Development is defined as a process in which something passes by degrees to a different stage especially a more advanced or mature stage (Alufohai, 2011). It is the advancement from a low level to a higher level of political, social, economic, scientific, technological and educational maturity in an organized society. The notion therefore arises from the United Nations (2004) that any issue or definition of development must include ‘sustainability’ because ‘sustainable development’ is central to any understanding of true development. According to the United Nations, sustainable development (SD) is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for generations to come.

It should be acknowledged that there is no single route to sustainable development. There are many different players in sustainable development including governments, business, media, youths and educational institutions just to mention a few. Each of the players has a different vision of sustainable development, and how it can contribute to human progress. Of interest and concern in this research is tertiary education through its curricula practices for sustainable development of students at the verge of graduation in their respective institutions. The wholesome development of the school paragraph going youth involves the totality of his/her behavioral characteristics. These stage by stage behavioural changes according to (Falaye, 2003) have effects on the teaching and learning relationship in the school system. She further poisted that:

the development ‘achievement’ of the child (in his/her physical, cognitive and psychosocial development) has implication for the kind of educational “product” he/ she will become. (p. 544)

This observation and assertion which has implication for the kind of educational product an individual will become further has the curricula at tertiary level as major determinants.

Various countries no doubt, evolve appropriate curriculum and pedagogical strategies based on national principles and policies, Nigeria is not an exception. At the tertiary level of education in Nigeria, several reformmeasures have characterize Nigerian higher education. With respect to the curriculum of tertiary institutions, the National Universities Commission has evolved two innovative strategies to enhance quality assurance and address the observed shortcomings that have been the subject of public criticism (Osuji, 2004). The first is the introduction of 2011 of league tables for universities based on the outcome of visitation/ accreditation reports in which overall ranking of universities was done for greater validity. The second is the comprehensive curriculum review of all programmes in universities with a view to ensuring relevance and quality in line with the reality of the world of work.

Furthermore, a programme of entrepreneurial studies was recommended and introduced to prepare graduates of the system to be self-employed and created employment rather than look to government for employment. Another key player in the reform drive to bridge the Information Technology (IT) drive in tertiary institutions curricula is the national IT policy evolved by the National Information Technology Development Agency (NITDA) created in 2001 in line with the World Summit on Information Society (WSIS) Plan of Action. As a result, tertiary institutions in Nigeria through their curricular practices are expected to employ it as the engine for sustainable development and global competitiveness.

Tertiary education curricula are expected to contribute maximally to the national development which is sustainable through high level relevant manpower training. The individual becomes self-reliant and useful members of the society. Education and curriculum implementation at this level includes Universities, Colleges of Education, Polytechnics and monotechnics. The major innovations at the tertiary level recorded by Alade (2012) include:

1. Maintenance of uniform academic calendar for all tertiary institutions;
2. Proper funding and maintenance of infra-structure;
3. Introduction of virtual library;
4. Introduction of Information and Communication Technology Education.
5. Approval for establishment of Private Universities,
6. The modification of Distance Learning to National Open University of Nigeria (NOUN) to make education accessible to the grater population of Nigerians.

Moreover, tertiary institutions curriculum can be utilized to direct the attention of personnel and learners to issues of sustainable development through some other curriculum innovations and curriculum, offerings. The innovations occur by way of diversifying tertiary institutions curricula to include courses that are themselves predisposing to development issues. They include international relations, civic education and promotion of government economic programmes and environmental issues of protection, preservation and management. A close look at tertiary education curricula in Nigeria shows that some innovative curricula like Environmental , Population Education; Family Life/ HIV – AIDS Education, Civic Education/ Citizenship Education; Women (in development) Education and Capital Market Studies have been developed and infused/integrated for general implementation. Already, the implementation of the above are evident insome Nigerian tertiary institutions apart from universities.

At the college of education level, the third edition of the minimum standards (NCCE, 2002) ated in Osuji (2004) also contains fundamental current trend in education occasioned by globalization. This edition therefore contains two new specific subjects: General Mathematics and Computer Education, under General Studies, which are now compulsory for all colleges of education students who also have to offer Pre-Education Studies (PES). This curriculum reform coupled with the versatility and diversifications in the curriculum of each course or area(s) of specialization in Nigerian tertiary institutions are expected to improve the worthwhileness of the curricula altogether in relation to their relevance, scope, sequence,

balance and timeliness with a view to their being more consistent with the vocational, personal, social and intellectual needs of the graduating students and the society, and by implication, determine human and societal sustainable development.

In spite of the above reforms and diversifications in the existing tertiary institutions curricula in Nigeria, numerous commentators have challenged the worthwhilness of such curricula in term of adequacy for equipping tertiary institutions students with valuable knowledge and skills for sustainable development. In this study therefore, the major issue is the adequacy of the present curricula in Nigerian Universities and Colleges of Education to provide a strong education forsustainable development of the recipients in the society that is constantly changing and complex.

Statement of the Problem

One of the major challenges facing sustainable development in different nations of the world has been associated with what the curriculum offers the learners With the recognition that education, throughout ages in one form of the other fosters development, promotion and sustenance of a society's cherished cultural and other practices from one generation to another, and from era to era, its curriculum provides basis for sustainable development that meets the needs of the child and the society he/she is growing up into. Contradictions however results in the criticisms levied against tertiary institutions curricula that have evolved overtime on their appropriates in shaping learners ways of life. Also, the relationship between the tertiary institutions curricula content and the needs of the individual, the society and the eventual development of the products of the curricula have attracted much attention.

Similarly, the wholesome behavioural changes in the cognitive, affective and psychosocial development of tertiary institutions students which are indicative of the nature of the curriculum necessary for sustainable development are obviously claimed to be lopsided. All these observations put together, provide the premise for the investigation into the adequacy of tertiary education curricula forsustainabledevelopment of the graduating students in Nigeria, which in the assumption of the researcher, is a strong determinant of individual and societal sustainable development in Nigeria and other nations of the world.

Research Question

The research question that guided the study is:

How do lecturers in the universities and their counterparts lecturing in the colleges of education perceive the adequacy of the present tertiaryeducation curricula being implemented in enhancing the holistic development of the students in their respective disciplines?

Research Hypotheses

The following hypotheses were tested at 0.05 level of significance.

H₀₁ : There is no statistically significant difference between the universities lecturers' and colleges of

education lecturers' ratings of the adequacy of tertiary institutions curricula in enhancing the holistic development of the students in their respective disciplines.

H₀₂: There is no statistically significant difference between male and female lecturers' ratings of the adequacy of tertiary institutions curricula in enhancing the holistic development of the students in their respective disciplines.

Methodology

This study adopted the descriptive survey research design. The population comprised all the government owned universities lecturers and their counterparts in the government owned colleges of education in Ogun State. They are Federal University of Agriculture, Abeokuta Olabisi Onabanjo University, Ago-Iwoye, Tai Solarin University of Education, Ijebu-Ode Federal College of Education, Osiele, Abeokuta and Tai Solarin College of Education, Omu -Ijebu, all located within Ogun State Nigeria. Male and female lecturers in the tertiary institutions were within the population scope of this study.

The sample of the study comprised five hundred and twenty five (525) respondents made up of 355 lecturers in the universities (200 male and 155 female) and 175 lecturers in the colleges of education (75 male and 95 female) randomly selected from the five tertiary institutions in Ogun State with the exception of the existing polytechnics in Ogun State, Nigeria.

The instrument used was tagged Tertiary Education Curriculum Rating Scale (TECRS) adapted from the investigation carried out by Falaye (2003) during a State Primary Education Board workshop (SPEB) in Ogun State to determine the adequacy of the present school curriculum vis-à-vis the development of the child.

The adapted instrument was structured into two sections: A and B Section A is on the bio-data of the respondents while section B contains twenty items in line with the research question and research hypotheses, and the responses required include Very Adequate (VA), Adequate (A), Somewhat Adequate (SA) and Not Adequate (NA). The TECRS was validated for relevance through two experts criticisms, suggestions and modification. Upon the administration of twenty-five (25) copies of the TECRS to some lecturers outside the scope of the study, a Cronbach Alpha value of 0.79 was obtained and considered high/ reliable enough for this study. The 525 copies of TECRS were administered by the researcher and some postgraduate students within a period of about three weeks. Descriptive statistics of frequency count, percentages, mean, standard deviation bar chart used and inferential statistics of t-test at an alpha level of 0.05 were used to answer the research question and the research hypotheses as appropriate respectively.

Results and Discussion

Research question 1: How do lecturers in the universities and their counterparts lecturing in the colleges of education perceive the adequacy of the present tertiary education curricula being implemented in the holistic development of the students in their respective disciplines?

Table 1: Analysis of Lecturers’ Responses to the Adequacy of the Tertiary Institutions Curricula in the Holistic Development of the Students.

S/N	Adequacy of tertiary institutions curriculum	Very Adequate	Adequate	Somewhat Adequate	Not Adequate
1	Adequacy of value orientation and education in the curriculum	150(28.6)	135(25.7)	186(35.3)	54(10.3)
2	Adequacy of a good knowledge of civic responsibilities in the curriculum	87(16.6)	279(53.1)	99(18.9)	60(11.4)
3	Adequacy of the curriculum diversification for development	135(25.7)	150(28.6)	186(35.3)	54(10.3)
4	Adequacy of curriculum enrichment occasioned by globalization	108(20.6)	123(23.4)	258(49.1)	36(6.9)
5	Adequacy of skills taught in the curriculum	45(8.6)	120(22.9)	310(59.0)	50(9.5)
6	The curricular provisions for learners economic development	60(11.4)	165(31.4)	265(50.5)	35(6.7)
7	Adequacy of learning experiences for moment empowerment	10(1.9)	184(35.1)	94(17.9)	237(45.1)
8	Adequacy of the continuity in the curriculum between the institution and home	80(15.2)	95(18.1)	80(15.2)	270(51.4)
9	Adequacy of the relationship between the curriculum and life experiences in learners environment	36(6.9)	108(20.6)	123(23.4)	258(49.1)
10	Adequacy of the curriculum contributions to the socio-political advancement of learners	184(35.1)	265(50.5)	60(11.4)	16(3.0)
11	Adequacy of the social skills taught in the curriculum	60(11.4)	280(53.3)	84(16.0)	101(19.3)
12	Adequacy of the occupational skills in the curriculum for sustainable development	99(18.9)	279(53.1)	87(16.6)	60(11.4)
13	Adequacy of the curriculum towards inquiry and creative achievement	80(15.2)	110(21.0)	288(54.9)	47(8.9)
14	Adequacy of the curriculum in meeting the physical, cognitive and psychomotor needs for the learners	60(11.4)	40(7.6)	360(68.6)	65(12.4)
15	The adequacy of opportunities for peer interaction as provided for in the curriculum	54(10.3)	135(25.7)	150(28.6)	186(35.3)

16	Adequacy of the curriculum on entrepreneurial knowledge and skills for human development	40(7.6)	60(11.4)	184(35.1)	241(45.9)
17	Adequacy of the curriculum quality for sustainable development	108(20.6)	165(31.4)	184(35.1)	68(12.9)
18	Adequacy in high level relevant manpower training through the curriculum.	165(31.5)	150(28.6)	108(20.6)	102(19.4)
19	Adequacy of the curriculum for eventual job-creation opportunities by graduating students	90(17.2)	237(45.1)	93(17.7)	105(20.0)
20	Adequacy of the curriculum content for international relevance and cross-cultural sustainable development	60(11.4)	84(16.0)	280(53.3)	101(19.3)
	Total (%)	16.3%	30.1%	32.6%	21.0%

In the analysis of the tertiary institutions lecturers responses, it is discovered that 16.3% of them considered tertiary institutions curriculum being implemented in their working institutions very adequate, 30.1% of them perceive the curricula to be adequate while 32.6% of them consider the curricula to be somewhat adequate. Only 21.0% of them responded that tertiary institutions curricula in Nigeria are not adequate at all. With this result, there is tilt in perception of the lecturers concerning the adequacy of tertiary institutions curricula in Nigeria.

With the ratings above, it could be interpreted that more attention is still needed on the adequacy of the curricula in the following area:

- Curriculum enrichment occasioned by globalization (Item 4);
- Adequacy of skills taught in the curriculum (Item 5);
- The curriculum provision for learners' economic development (Item 6);
- Adequacy of learning experiences for human empowerment (Item 7);
- Adequacy for continuity in the curriculum between the institution and the home (Item 8);
- Adequacy of relationship between the curriculum and life experiences in learners' environment (Item 9);
- Adequacy of the curriculum towards inquiry and creature achievement (Item 13)
- Adequacy of the curriculum in meeting the physical, cognitive, and psychomotor needs of the learners' (Item 15):
- Adequacy of the curriculum on entrepreneurial knowledge and skills for human development (Item 16):

Adequacy of the curriculum content for international relevance and cross-cultural sustainable development(Item 20);

The indicative of the above findings is because the extent of the respondents’ perception on the items between very adequate and adequate falls bellows average.Tertiary education curricula in Nigeria still need continuous evaluation so as to perform optimally to expectation for sustainable development. This state of affairs according to Ottaway and Lester-Smith (2003) has created an imbalance in the economic, political and cultural development of the nation.

Test of Hypotheses

HO₁:There is no statistical significant difference between the Universities lecturers’ and Colleges of Education lecturers’ ratings of the adequacy of tertiary institutionscurricula in enhancing the holistic development of the students in their respective disciplines.

Table 2. T-test Analysis of the Lecturers in the Universities and their counterpart in the colleges of Education ratings of the Adequacy of Tertiary Institutions Curricula.

Respondent Category	N	X	SD	Cal.t	Crit.t	df	Prob
University Lecturers	355	63.54	3.95				
College of Education lecturers	175	60.84	4.55	3.39	1.92	523	0.05

Cal.t (3.39) > Crit. t (1.92)

The tilt in the responses of lecturers in the sampled universities and the colleges of education show a statistically significant difference. University lecturers had a mean rating of 63.54 as against the mean of 60.84 of the colleges of education lecturers on the adequacy of tertiary institutions curricula being implemented. The difference is significant (t-cal (3.39) > t-critical (1.92), hypothesis I is thus rejected. These tilt of opinions corroborate the observations of Chikondi (2010) that the educators (agents) who provide education in the various education/training programmes undergo mechanistic paradigm of education which is closed, formal, differentiated by subject specialists and thus not focus on interconnectedness of issues. Besides, they also lack appropriate knowledge on issues of sustainability and the skills to integrate. The weaknesses of the curricula before them could also not help the situation.

HO₂: There is no statistically significant difference between male and female lecturers’ ratings of the adequacy of tertiary institutions curricula in enhancing the holistic development of the students in their respective discipline.

As presented in Table 3, male and female tertiary institutions lecturers did not differ in their mean rating of the adequacy of the curriculum in enhancing the holistic development of the students in their respective institutions, thus research hypothesis 2 is not rejected. The mean ratings of both sexes are close (male= 52.41; female= 52.82). From the findings of this study, the challenges for sustainable educational development of students in tertiary institutions and the eventual sustainability expected after graduation are obvious. These challenges are subsumed in the recommendations below.

Table III: Difference in Perceptions of Male and Female Lecturers of the Adequacy of Tertiary Institutions Curricula.

Tertiary Institutions Lecturers	N	X	SD	Cal.t	Crit.t	df	Prob
Male	275	52.41	4.05				
Female	250	52.82	4.55	0.47	1.92	523	0.05

Cal.t (0.47) > Cal.t (1.92)

Recommendations

Since education for sustainable development is all about empowering people to act for change in the global socio-economic, political, cultural and environmental milieu, tertiary institutions curricula play significant roles. As a result, the author of this paper suggests as follows;

- All the innovations and initiatives put in place in tertiary institutions and their curricula need to be constantly pursued through adequate monitoring, strategy of consultations, workshops and conferences comprising the implementation agents and management of Nigerian universities, colleges of education, government representatives and international bodies.
- Collaboration should be enhanced with educational institutions (nationally and internationally), communities, non-governmental organizations (NGOs) and other sectors like industries and organizations for common global objectives so as to bring about sustainable development. In order to buttress this, UNESCO (2002) cited in Chikondi, (2010) opined that partnerships enable all stakeholders to make concrete contributions aimed at furthering sustainable development. By bringing together individuals and groups with different perspectives and from different levels, it is possible to challenge mental models and ideas of “this is the way we do it”.
- Sustainable development seeks negotiation and consent as stated by Sterling (2004). In order to create new knowledge skills and practices for development, there is the need to look beyond the organized knowledge in separate subject specializations so as to provide avenue for more interconnectedness of issues. This does not undermine specialism but provision should be made for diversity, coherence, interdisciplinarity and also flexibility and further curriculum empowerment.

Conclusion

Curriculum in its various forms and at various forms and at various levels of implementation serves as a vehicle for trans-border cultural and innovative transmission as well as accelerates national and international development that can be sustainable. Educators therefore continue to face compelling

responsibility to foster sustainable development in their respective roles of bringing the innovative ideologies installed in tertiary institutions into practical reality through their teaching approaches.

As curriculum reforms continue in the educational policies in Nigeria, educators also require a newset of skills such as envisioning, critical thinking, reflection, dialogue and negotiation, collaboration and building partnerships to effectively impart skills of education for sustainable development in the learners under their domain.

The focus of this research paper and the findings thereof is a pointer to all stakeholders who recognize education through its curriculum as a critical tool for promoting sustainable development. The author would also use this avenue to put in print that concerned curriculum implementers who are lecturers in various educational institutions of higher learning cannot blend with trend of sustainable development in their stationery positions where they rely on obsolete knowledge, skills and habits to teaching and research. They need to be interconnected through their truthful presence in workshops, seminars and conferences rather than building their curriculum vitae on the same spot without active contributions to global knowledge which promote development that is sustainable.

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