
DEVELOPMENT EDUCATION AND SCIENCE EDUCATION UNDERGRADUATES' PERCEPTIONS
OF SUSTAINABLE
DEVELOPMENT IN NIGERIA

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Abstract

Amidst contemporary issues are social and economic crises across the globe which calls for the attention of institutions of higher learning to provide undergraduates with competence to contribute and promote the quality of life through development activities for the benefits of both present and future generations. The study examined the influence of development education on undergraduates' perception of sustainable development. Descriptive research design of the survey type was adopted by the study. The population comprised all the undergraduates of the Department of Science Education, Faculty of Education, Ekiti State University, Ado Ekiti, Nigeria. The sample was 120 undergraduates from the Department who were purposively selected for the study. The instrument used for the study was a questionnaire which was validated by experts in the Faculty of Education, Ekiti State University, Ado Ekiti. The reliability coefficient was determined using test re-test method and a coefficient of 0.88 was obtained. Frequency, percentages and mean were used to answer the research questions while the inferential statistics of Pearson's Product Moment Correlation was used to test the hypothesis at 0.05 level of significance. The study revealed that Development Education is not taught in the institution under study. It was also showed that Development Education influences Science Education undergraduates' perceptions of Sustainable Development. Based on the findings of the study, it was recommended that development education should be included in the curriculum and be made compulsory for all students due to its potential to inculcate in students, development literacy and to enhance quality decision making process for healthy society and sustainable development.

Keywords: Perception, environmental education, development education, undergraduates, sustainable development

Introduction

Development globally is expected to be directed towards sustainability. No doubt, uncultured development may not be good enough to meet the so desired sustainable

development. It has generally been acknowledged that education plays a major role in the development of nations/societies. Specifically, higher education is expected to play multiple roles in the nation development. Awu

(2021) explain that traditionally, higher education has been assigned multiple roles to; produce human capital for national development, widen access, provide citizen education, drive national socio inclusion policies, develop the agricultural sector, mining, health, women emancipation and gender equality, national defense, the lower educational cycles and many other sectors through embodied knowledge, research, training and capacity building. Thus, development education is pertinent in familiarizing the people with the best practices in development processes most importantly at the higher institutions of learning. Educating undergraduates will go a long way in informing their perception of sustainable development and enhancing local peace, gender equity and justice with respect for culture and human diversity.

The United Nations (UN) submitted that Development Education has a major dimension to enable people to participate in the development of their community. The 17 Sustainable Development Goals are integrated which recognize that action in one area will affect outcomes in others and that development must balance social, economic and environmental sustainability.

According to UN (2015), education “by 2030 ensures that all learners acquire the knowledge and skills needed to promote Sustainable Development through education for Sustainable Development”. Expectantly, by 2030, the threatening global issues relating to gender issues, cultural and human diversity, local and

global peace and security, equity and justice could have been reasonably addressed. Development Education therefore, could facilitate the achievement of this global goals.

Noddings (1997) opines that a “morally defensible aim of education should be to encourage the growth of competent, caring, loving and lovable people; “social responsibility, social change and social justice are key goals of education”. Development Education (DE) enables the actualization of the human and societal dimensions mentioned by the above scholars, hence, the knowledge of DE could initiate the perceptions of undergraduates to promote human and social lives.

Elizabeth (2011) emphasized that poverty reduction depends on the knowledge and skills that people acquired, not the number of years that they sit in a class room and that Development Education prepares learners’ minds to adopt societal friendly behavior and sustainable life styles that will drive their employability, productivity, health and well-being and also ensure that their communities and nations strive. The development that will enhance peace, equity and justice would be channeled towards education to enable the people acquire all relevant knowledge that are required. Development Education links teaching and learning to everyday life. Wintere, (2018) emphasized that it helps students to learn to interact with others, learn to apply knowledge in real-life situations, it sensitizes students on how to utilize the knowledge they acquired in

future professions and promote self-directed learning.

Communities of people across the globe should be able to meet their needs and improve their living conditions through necessary awareness on self-discovery, capacity building and problem solving without any hindrance to future generations to meet their own needs. This is what scholars referred to as "sustainable community development or sustainable national development" Aruma (2009) and Aruma & Uzoagu (2018). Development Education promotes self-discovery, capacity building, problem solving, hard work, community collaboration and participation among people.

According to Ugwuzor (2016), people need to know the reasons they should participate in community development projects and the benefits thereafter since their consciousness, enthusiasm and zeal need to be awakened and sustained in order for the development project to be effective in the society. Development Education unravels the reasons for and the benefits in community development projects, therefore it awakens the consciousness, enthusiasm and zeal of individuals in society.

Perceptions are personal constructs which form the bases of individuals' beliefs, which may be the foundation of ones' action. Shepiro, (1991) and Green, (2014) assert that people operate by developing personal constructs which enable them interact with and interpret the world about them. Personal and social environment among others could influence

perceptions. Informed undergraduates' perceptions are supposed to spur them to take action for Sustainable Development (SD), but there is an observed undergraduates' reluctance to transfer knowledge into action for SD. It could be assumed that the inability of students to transfer knowledge into actions that favour SD is a factor of inability to reason as a result of lack of adequate knowledge. Therefore, students should be able to reason the cause and effect, advantages and disadvantages, and alternative outcomes for the decision-making process. Hence, Development Education which have the potential to inculcate the aforementioned should be taught to undergraduates in order to promote SD.

Sustainable Development (SD) is a United Nation (UN) idea which emphasizes that human societies must live and meet their needs without compromising the ability of future generations to meet their own needs (Brundland report, 1987). Sustainable Development, according to its content, emphasizes Economic Development, Social Development and Environmental Protection. Undergraduates require SD knowledge for globally acceptable life styles so that SD can be actualized.

The status of undergraduates' perceptions of Sustainable Development seems to have a correlation with family background. Certain parents seem to lack the capacity for their parental roles which could allow children behavioural attitudes that are not in favour of Sustainable Development. For example, Adeyinka (2009) submit that

when parents lack responsibility for their parenthood, children (undergraduates inclusive) will acquire maladaptive behaviours. However, McIntosh, (2008), revealed that sound parental moral values will reflect positive academic interest and performance in children despite the financial status of parents. Therefore, one could assume that the kind of moral values within the family determine the nature of perceptions, attitudes and behaviours children and undergraduates will adopt. Such perceptions, attitudes and behaviours could be in favour of respect for culture, equity, justice, peace and security.

The perceptions of undergraduates on Sustainable Development could have connections with peer group influence. Trust in friends makes students to be relatively more willing to accept messages from close friends (Hallinan & Williams, 1990). The manifestation of risk behaviours such as cultism, drug abuse, prostitution, extravagant spending and lack of respect for knowledge which are not in favour of Sustainable Development could be traced to peer group influence.

According to Pandilla, Walker and Bean (2009), peers may strongly determine preference in the way of dressing, speaking, using illicit substances, sexual behaviour, adopting and accepting violence, adopting criminal and antisocial behaviours. One could assume that the issues of cultism, drug abuse, campus prostitution which are not in favour of Sustainable Development could be due to peer group influence. Conversely, one

could also see that good peer relation could encourage students towards positive learning and behaviour which favour Sustainable Development.

Relatedly, gender related issues, policies and practices could be seen as among the factors that influence undergraduates' perceptions of SD. Gender discrimination against the female persons in society has overtime created gender inequalities which is a threat to SD. There is the need for academic reforms to correct this societal anomaly such that male undergraduates will not adopt this age long societal aberration to enable female undergraduates be encouraged to see themselves as indispensable part of the agents of change needed to promote SD.

Family background, could also influence students' perception through the way of upbringing the children in the family. The type of moral standard instill into children in the family goes a long way in shaping the minds of the students towards a friendly society and thus achieving a sustainable society development. David (2008) posit that it is easier to focus on technology or anything else instead of looking inward to the complexities of human psychology which is the most difficult and important challenge of building a decent world. Educating the mind therefore through formal education and parents could give direction to the mind towards a SD.

Statement of the Problem

The form of education that enhances perceptions in favour of Sustainable

Development is required in institutions of higher learning. The dispositions of undergraduates seem not to be in support of SD which may be due to lack of the knowledge of Development Education that are supposed to be part of the requisite knowledge content for achieving Sustainable Development Goals (SDGs). It appears that Development Education are not taught in some institutions of higher learning in Nigeria specifically in Ekiti State. The perceptions of undergraduates seem to have been obscured from the Sustainable Development Goals by family background, peer group and gender influences.

Research Questions

The following research questions were raised for the study:

1. Is Development Education taught in the university under study?
2. Does Development Education influence science education undergraduates' perceptions of Sustainable Development?
3. Does peer group influence science education undergraduates' perceptions of Sustainable Development?
4. Does family background influence science education undergraduates' perceptions of Sustainable Development?
5. Does gender influence science education undergraduates' perceptions of Sustainable Development?

Research Hypothesis

The hypothesis formulated for the study:
 Ho₁: There is no significant relationship between Development Education and science education undergraduates' perceptions of Sustainable Development.

Methodology

The study adopted descriptive research design of the survey type. The population for the study comprised 2,892 undergraduates in the Faculty of Education during 2017/2018 – 2020/2021 academic sessions in Ekiti state University, Ado Ekiti. The sample for the study consisted of 120 intact class of undergraduates from the Department of Science Education in the existing six course- options (Biology, Chemistry, Physics, Basic Science, Mathematics and Computer) who were purposively selected for the study. The instrument used for data collection was a questionnaire. The face validity of the instrument was established by experts in Science Education and Test, Measurement and Evaluation while the reliability of the instrument was determined using test re-test method.

The instrument was administered on 30 undergraduates outside the sample on two occasions. The scores of the responses were correlated using Pearson's Product Moment Correlation analysis and a reliability coefficient of 0.88 was obtained which was considered high enough for the instrument to be reliable. The copies of the questionnaire were administered to 120 undergraduates from Science Education, covering all the six course options. The data collected from the respondents were analyzed using descriptive and inferential

statistics. The descriptive statistics of frequency, percentages, means and standard deviation were used to answer the research questions while the inferential statistics of Pearson's Product Moment Correlation statistics was used to test the hypothesis formulated at 0.05 level of significance.

Results and Discussion

Question 1: Is Development Education taught in the university under study?

Table 1: Means of the teaching of Development Education in the institution under study.

S/N	ITEMS	A	D	REMARK
1	I receive Development Education-centered lessons in my class activities.	82 (68.4)	38 (31.6)	AGREED
2	Students take courses in Development Education in 100 level (at entry).	62 (51.6)	58 (48.4)	AGREED
3	Development Education course is part of my compulsory courses.	54 (45.0)	66 (55.0)	DISAGREED
4	Development Education is taught as a separate course of study in this institution.	45 (37.5)	75 (62.5)	DISAGREED

Table 1 presents the teaching of Development Education in the institution under study. The result shows that 82 (68.4%) of the total sample agreed that they receive Development Education-centered lessons in class activities while 38 (31.6%) disagreed. On whether students take courses in Development Education at entry in 100 level, 62 (51.6%) respondents agreed whereas 58 (48.4%) disagreed. 54 (45.0%) respondents agreed that Development Education course is part of compulsory courses while 66 (55.0) disagreed. 45 (37.5%) agreed that Development Education is taught as a

separate course of study in the higher institution of learning whereas 75 (62.5%) disagreed. Using a criterion mean score of 2.50 for the rating scale, nearly all the items had mean scores below the cut-off point. This implies that Development Education is not taught in the institution under study.

Question 2: Does Development Education influence science education undergraduates' Perceptions of Sustainable Development?

Table 2: Means of Influence of Development Education on Undergraduates' Perceptions of Sustainable Development

S/N	ITEMS	SA	A	D	SD	MEAN
1	Societal problems such as inequalities, insecurity, injustices, unemployment and poverty are prevalent across the globe.	87 (72.5)	29 (24.2)	4 (3.3)		3.69
2	Development Education gives students the needed literacy to tackle societal problems to achieve Sustainable Development.	71 (59.2)	38 (31.7)	9 (7.5)	2 (1.7)	3.48

Table 2 presents the influence of Development Education on undergraduates' perceptions of Sustainable Development. The result depicts that 87 (72.5%) of the total sample strongly agreed that Societal problems such as inequalities, insecurity, injustices, unemployment and poverty are prevalent across the globe, 29 (24.2%) agreed and 4 (3.3%) disagreed. On whether Development Education gives students the needed literacy to tackle societal problems to achieve Sustainable Development, 71 (59.2%) respondents strongly agreed, 38

(31.7%) agreed, 9 (7.5%) disagreed while 2 (1.7%) strongly disagreed. Using a criterion mean score of 2.50 for the rating scale, all the items had mean scores above the cut-off point. This implies that Development Education influence undergraduates' perceptions of Sustainable Development.

Question 3: Does peer group influence science education undergraduates' perceptions of Sustainable Development?

Table 3: Means of influence of peer group on undergraduates' perceptions of Sustainable Development

S/N	ITEMS	A	D	REMARKS
1	Friends can have a potent influence on the way students perceive and response to situations in society.	115 (95.8)	5 (4.2)	Agree
2	Students can be influenced into cultism, drug abuse, prostitution and fornication, examination malpractice and other related bad behaviours which may not be in favour of Sustainable Development.	116 (96.7)	4 (3.3)	Agree
3	Friends can motivate students to be serious with their academic in order to achieve the education goal of Sustainable Development.	120 (100)	-	Agree

Table 3 presents the effects of peer group on undergraduates' perception of sustainable development. The result reveals that 115 (95.8%) of the respondents agreed that friends can have a potent influence on the way students perceive and response to situations in society while 5 (4.2%) disagreed. On whether students can be influenced into c cultism, drug abuse, prostitution and fornication, examination malpractice and other related vices which may not be in favour of Sustainable Development, 116 (96.7%) agreed while 4 (3.3%) of the respondents disagreed. Amazingly, all the 120 (100%) respondents agreed that friends can motivate students to be serious with their

academic in order to achieve the education goal of Sustainable Development. Using a criterion mean score of 2.50 for the rating scale, all the items had mean scores above the cut-off point. This implies that peer groups have effects on undergraduates' perceptions of Sustainable Development.

Question 4: How do family background influence science education undergraduates' perceptions of Sustainable Development?

Table 4: Means of influence of family backgrounds on undergraduates' perceptions of Sustainable Development.

S/N	ITEMS	A	D	REMARKS
1	Parents' personality and attitudes can stimulate students against or in favour of Sustainable Development.	115 (95.8)	5 (4.2)	Agree
2	Financial status of parents affects the way students will embrace learning with seriousness.	108 (90)	12 (10)	Agree
3	Inability of parents to give their children education leads to increased ignorance in the light of environment, society and economy and this will not promote Sustainable Development.	115 (95.8)	5 (4.2)	Agree
4	Lack of parental attention to students could lead to criminal behaviours in students which is not in favour of Sustainable Development.	116 (96.7)	4 (3.3)	Agree
5	When parents have sound moral values, irrespective of their financial status, their children could do well in school.	110 (91.7)	10 (8.3)	Agree

Table 4 presents the influence of family background on undergraduates' perceptions of Sustainable Development. The result reveals that 115 (95.8%) of the study participants strongly agreed that parents' personality and attitudes can stimulate students against or in favour of Sustainable Development while 05 (4.2%) disagreed. On whether financial status of parents affect the way students will embrace learning with seriousness, 108 (90%) respondents agreed while 12(10 %) disagreed. 115 (95.8%) respondents agreed that inability of parents to give their children education leads to increased ignorance in the light of environment, society and economy and this will not promote Sustainable Development while 5

(4.2%) disagreed. Also, 116 (96.7%) respondents agreed that lack of parental attention to students could lead to criminal behaviour in students which is not in favour of Sustainable Development, while 4 (3.3 %) disagreed. 110 (91.7%) respondents agreed that when parents have sound moral values, irrespective of their financial status, their children could do well in school while 10 (8.3%) disagreed. Using a criterion mean score of 2.50 for the rating scale, all the items had mean scores above the cut-off point. This implies that family backgrounds influences science education undergraduates' perceptions of Sustainable Development.

Question 5: Does gender influence science education undergraduates' perceptions of Sustainable Development?

Table 5: Means of influence of gender on undergraduates' perceptions of Sustainable Development

S/N	ITEMS	A	D	REMARKS
1	I am aware of the inequality between the female persons and the male persons in society in terms of education, employment, decision making and leadership.	101 (84.2)	19 (15.8)	Agree
2	The male persons are given more opportunity as against the female persons to function in such areas as education, decision making, employment opportunity and leadership in society.	99 (82.5)	21 (17.5)	Agree
3	Gender inequality does not favour gender equity as a Sustainable Development Goal	96 (80.0)	24 (20.0)	Agree

Table 5 presents the influence of gender on undergraduates' perceptions of sustainable development. The result reveals that 10101 (84.2%) of the respondents agreed that they are aware of the inequality between the female persons and the male persons in society in terms of education, employment, decision making and leadership while 19(15.8) agreed. On whether male persons are given more opportunity as against the female persons to function in such areas as education, decision making, employment opportunity and leadership in society, 99 (82.5%) respondents agreed while 21 (17.5%) disagreed. 96 (80%) respondents agreed that gender inequality does not favour

gender equity as a Sustainable Development Goal while 24 (20%) disagreed. Using a criterion mean score of 2.50 for the rating scale, all the items had mean scores above the cut-off point. This implies that gender influences undergraduates' perceptions of Sustainable Development.

Hypothesis Testing

Ho₁: There is no significant relationship between Development Education and undergraduates' perceptions of Sustainable Development.

Table 6: Correlation analysis of Development Education and undergraduates' perceptions of Sustainable Development

Variable	N	Mean	SD	r	P
Development education	120	9.69	3.24		
Perception of sustainable development	120	21.58	6.51	0.437*	0.000

*p < 0.05

Table 6 shows that the computed r value (0.4375) is significant at $p < 0.05$ level of significance. The null hypothesis is rejected. This implies that there is significant relationship between DE and undergraduates' perceptions of SD. The correlation between DE and undergraduates' perceptions of SD is moderate and statistically significant in a positive direction.

Discussion of Findings

The study showed that Development Education was not taught in the university under study. This may not allow undergraduates to understand the context of development and developmental issues around the world so as to act to transform it as the role of Development Education demands, in Toney Daily and Colm Regan concept of Development Education (2015).

Also, the study revealed that Development Education influenced undergraduates' perceptions of Sustainable Development as all the items against question four 4 had mean values above the cut-off point, indicating that Development Education gives students the needed literacy to tackle societal problems such as

inequalities, insecurity, injustices, unemployment and poverty to achieve SD Development. The study revealed that the perception of undergraduates in the said university on Sustainable Development is positive even though Development Education was not taught in the university, this suggests that undergraduates in the institution must have gotten their SD knowledge from other sources and not through direct curricular transmission by the contents of Sustainable Development through Development Education. This is in agreement with the findings of David Orr, (2008), that what people know about the contents of SD is derived from other sources such as television and not in direct experience through learning. Barraza and Walford, (2002), also pointed out that undergraduates' perceptions of the contents of SD are influenced by media such as television, computer games and other social activities. A situation where undergraduates in the institution will derive SD knowledge from other sources outside school curriculum may not be adequate if the institution must join the International and global Campaign and advocacy for SD.

The study also showed that gender issues had effects on undergraduates' perceptions of SD. All the items against

question seven 7 had mean values above the cut-off point, indicating that masculine superiority against the female persons which would not favour SD has been established in the minds of undergraduates. Initiating and consolidating academic review and reforms is expedient to correct this societal anomaly as found out in institution of higher learning such that male undergraduates will debunk this observed age long aberration while female undergraduates see themselves as indispensable agents of change needed to promote Sustainable Development.

This is in concord with submission of Melero & Solis-Espallargues, (2012) that there should be a form of Education that acknowledge all subjects as agents of change, including women to promote gender equality.

The study also showed that family background influenced science education undergraduates perceptions of SD as all the items against question six 6 had mean values above the cut-off point, showing that parents personalities and attitudes can stimulate students against or in favour of SD. There is tendency that undergraduates whose parents have sound moral standard will be well behaved and have peaceful co-existence with others, passion for hard work, respect for gender equity and abide with the rules and regulations in the school so as to promote Sustainable Development nationally and internationally.

The study revealed that peer group had influence on undergraduates' perceptions of SD. All the items against question five 5 had mean scores above the cut-off point, which implied that friends could have a potent influence on the way students perceive and respond to situations in society and that students could be influenced into cultism, drug abuse, prostitution and fornication, examination malpractices and other related bad behaviours which may not be in favour of SD. This finding agrees with Pandilla, Walker and Bean (2009), who revealed that peers may strongly determine preference in the way of dressing, speaking, using illicit substances, sexual behaviour, adopting and accepting violence, adopting criminal and antisocial behaviours. The finding is also in agreement with that of Ajayi, Haastrup and Osalusi, (2010) posited that the major causes of cultism in tertiary institution were influence of peer group, parental background, societal decadence, erosion of education standards, militarization of the Nigerian polity, lack of recreational facilities, quest for power and protection among others.

The institution has been doing well in the fight against the influence of peers on science education undergraduates' lifestyles through campaign and advocacy against cultism, drug abuse and examination malpractices among other unsustainable behaviours relating to peer group influences. If this effort is sustained and consolidated, undergraduates of the

institution could be role models among their counterparts.

Conclusion and Recommendations

From the results of the study, it can be concluded that Development Education was not taught in the institution under study. Perceptions of science education undergraduates was in favour of Sustainable Development. Development Education, peer groups, family backgrounds and gender were important factors that influenced science education undergraduates' perceptions of Sustainable Development.

Recommendations

Based on the conclusion of findings, it was recommended that:

1. Development Education should be integrated in the higher institutions' programmes.
2. Parents should endeavour to inculcate moral values and have respect for gender equity and peaceful co-existence so as to promote sustainable development in the society.

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