



PERCEPTION OF SUSTAINABLE DEVELOPMENT GOALS AMONG SCIENCE LECTURERS IN COLLEGES OF EDUCATION IN SOUTH-SOUTH NIGERIA

Agbi, Anthony Idialu (Ph.D)

Department of Integrated Science,
School of Sciences,

Federal College of Education, Obudu, Cross River State.

Email: tonyagbi60@gmail.com

Phone: +2348050971139

Abstract

The study was designed to ascertain the level of perception of sustainable Development Goals (SDGs) among science lecturers in the Colleges of Education in South-South Geo-Political Zone of Nigeria. The study was a descriptive survey type of research involving 252 science lecturers in Colleges of Education drawn by stratified random sampling technique. Four research questions and three null hypotheses guided the study. The instrument for data collection was a 32-item Sustainable Development Goals Perception Scale (SDGsPS) developed by the researcher. This was validated and reliability coefficient using Cronbach Alpha was found to be 0.76. Data collected were analysed using mean, standard deviation and t-test statistics at 0.05 level of significance. The results showed that science lecturers indicated moderate level of awareness of the SDGs Programme. Furthermore, the major source of information of the science lecturers in respect of the SDGs Programme is the Social Media. Similarly, gender, years of teaching experience and school location were found to be significant factors in the levels of perception indicated by the science lecturers. Based on these findings, the educational implications were identified and highlighted. It was, however recommended amongst others that for Nigeria to achieve the objectives of the SDGS Programme using education as a major tool, not only should there be adequate provision of funds and other educational resources, the science lecturers (teachers) must be adequately integrated in the entire process of such a programme.

Key words: Awareness, School Location, Sustainable Development Goals (SDGs), Teaching Experience, Gender, Teachers' Perception.

Introduction

In the year 2012, from 20th to 22nd June, the United Nations' Conference on Sustainable Development was held in Rio de Janeiro, Brazil. This conference resulted in a focused political outcome document, commonly referred to as the Sustainable Development Goals (SDGs) programme. These goals were built on the Millennium Development Goals (MDGs) and converged with the post 2015 development agenda (UNO, 2012). A closer look at the outcome document indicates that the SDGs are a series of 17 time-bound development goals with 169 targets. The goals are intended to be action-oriented, aspirational and universally applicable to the global community.

In specific terms, the SDGs are geared towards addressing the issues of poverty, human development, gender parity, employment, human settlement, environmental sustainability and governance (UNDP, 2015). Furthermore, the policy document of the SDGs was designed to be applicable in line with the different national realities, capacities, level of development and national aspirations. By implication, it could be said that effective implementation of the programme demands enhanced capacity of the populace and inclusiveness of the various sectors of the society.

It is obvious from the above that the education sector has a major role to play especially in building the capacities of the populace towards effective implementation of the programme. According to the United Nations' Organization (UNO, 2021), education empowers the citizenry to transform the society by re-orienting them to develop the requisite knowledge, skills and attitudes for sustainable development. Through effective teaching and learning, the learners are gradually equipped to face the demands of a more sustainable world.

In furtherance of the above, the education sector response to the SDGs should entail revision of the National Policy on Education, curriculum revision, adequate provision of instructional resources, enhanced fundings, enhanced capacity building, etc. It is expected that the emerging educational goals, philosophy, strategies, improved curricula and pedagogical interventions on the education sector will contribute their quota immensely to the attainment of the SDGs. In effect, the teachers (lecturers), especially the science teachers have a major role to play in the realization of these goals. The major challenge of implementing any education programme lies squarely on the teachers. This is because the quality of teachers in any educational system will greatly affect the quality of teaching and learning that prevails in the system (FME, 2013). In other words, teachers at all levels are regarded as the centre hub of any educational process. This therefore implies that the science teachers who are charged with the responsibility of executing educational programmes in the nation should not only be aware of both national and global demands but should equally be adequately equipped to tailor their teachings towards these demands.

Teachers' perceptions are a major predictor of the use of new technologies in institutional settings as well as mode and level of implementation of any educational programme. Perception towards a programme will potentially influence its practice and success. Perception involves the identification and interpretation of information to understand an issue in the environment (Schacter, 2011). For the teachers'/lecturers' enhanced perception of the school curriculum, school environment, adequate funding, availability of resources and continuous training have a great role to play. A well informed and capable person is more likely to lend himself towards government policies and programmes than an uninformed one. Therefore, the government at all levels have a major role to play in ensuring

that teachers (lecturers) are carried along in the planning and implementation of her programmes such as the SDGs and others. The level of awareness and the quality of knowledge possessed by the teachers/lecturers on such programmes will have a marked effect on the way they are perceived. Invariably, this also will determine the level to which they are ready to tilt the teaching/learning process towards the realization of the goals of such programmes. Students are therefore able to relate what they learn in the classroom to their real life actions, and will increasingly be in a better position to take the lead in changing behaviours and adopting sustainable lifestyles in all their endeavours.

Against this background, the researcher has observed from available literature that the role of public institutions (and its personnel), especially tertiary educational institutions in the implementation of SDGs is not a well researched area. Similarly, there is hardly any information on Colleges of Education lecturers' perception of SDGs especially in the South-South Geo-political Zone of Nigeria. Furthermore, available studies on teachers' perception of SDGs (Ike & Nwosu, 2020) failed to investigate the influence of years of teaching experience on teachers' perception of SDGs. The need to fill these gaps and other similar ones necessitated this study.

Statement of the Problem

Over the years, the Federal Government of Nigeria has come up with various programmes and initiatives aimed at making life better for the citizenry. In most cases, the federal government usually aligns itself with global initiatives that emanate from the United Nations. For instance, the United Nations Programme on Environmental Protection and the MDGs. In spite of the benefits associated with these laudable programmes, it is obvious that the nation is far from the realization of such benefits.

The questions that readily come to mind here are: What could be responsible for this failure? Could it be that the populace across the various strata had no clear perception of what these programmes were all about? To what extent were the various sectors of the society, especially the education sector involved in the planning and implementation of these programmes? Now that the SDGs programme has been unveiled, will it still go the same way like other previous programmes? How aware and involved are the science teachers (lecturers) in the implementation of the SDGs? These are some of the questions that necessitated the quest to carry out this study.

Purpose of the Study

The purpose of this study was to assess the level of perception of Sustainable Development Goals (SDGs) among Colleges of Education science lecturers in the South-South Geo-political zone of Nigeria. Specifically, the study was aimed at finding out the:

- 1) extent to which science lecturers are aware of the Sustainable Development Goals (SDGs) programme;
- 2) major source of information of science lecturers on the SDGs programme;
- 3) level of knowledge possessed by science lecturers in the various aspects of SDGs programme;
- 4) factors militating against the efforts of the science lecturers in performing their roles in line with the SDGs programme.

Research Questions

The following research questions guided the study:

- 1) To what extent are science lecturers aware of the SDGs programme?

- 2) What is the major source of information of science lecturers with regard to the SDGs programme?
- 3) What is the level of knowledge of the various aspects of SDGs possessed by science lecturers?
- 4) What are the factors militating against the efforts of science lecturers in performing their roles in line with the SDGs programme?

Research Hypotheses

The following null hypotheses that were tested at 0.05 level of significance guided the study:

- 1) There will be no significant difference in the mean level of perception of the SDGs programme among science lecturers by gender.
- 2) There will be no significant difference in the mean level of perception of the SDGs programme among science lecturers by years of teaching experience.
- 3) There will be no significant difference in the mean level of perception of the SDGs programme among science lecturers by school location.

Research Design

A survey research design was used for the study. This design was adopted since the study merely sought information from the respondents as the situation exists in the study area.

The population consisted of all the lecturers in the School of Sciences in all the Colleges of Education in the study area. This population consisted of science lecturers from both the urban and rural Colleges of Education in the six states of the South-South Geopolitical Zone of Nigeria. In each of the six states in the zone, one College of Education was selected using stratified random sampling technique. This gave a total of six Colleges of Education. Purposive sampling technique was used to obtain a sample of 42 science lecturers per college giving a total of 252 science lecturers as respondents (i.e., $6 \times 42 = 252$).

On the basis of the above sampling techniques, it is hoped that the sample reflected all the characteristics of all the science lecturers in all the Colleges of Education in the Zone. Specifically, the sample consisted of science lecturers both in the urban and rural areas of the study area. The sample also consisted of both male and female science lecturers and experienced and inexperienced science lecturers. In addition, the lecturers were selected from the Departments of Biology, Chemistry, Computer Science, Integrated Science, Mathematics, Physical and Health Education, and Physics in the selected Colleges of Education in the Zone.

Instrument for Data Collection

The instrument that was employed for the study was a questionnaire – Sustainable Development Goals Perception Scale (SDGsPS). This was developed by the researcher based on extensive review of related literature. The preliminary list of the instrument was validated by six experts – four experienced science educators (lecturers) and two experts in Test and Measurement from both Colleges of Education and Universities. Subsequently, the instrument was pilot-tested with 42 science lecturers in a neighbouring College of Education, Katsina-Ala, Benue State. Their responses were computed and factor-analysed by means of SPSS Computer Software. This helped to determine the construct validity of the instrument. Based on this analysis, a final instrument consisting of factorially pure items in sustainable development clusters emerged with 32 items in four clusters.

In order to determine the reliability of the instrument, it was further administered to another 42 science lecturers randomly selected from another College of Education in Benue State (those that were not initially used during the validation of the instrument). From their responses, the reliability of the instrument was estimated in terms of internal consistency using Cronbach's Co-efficient Alpha. The reliability coefficient of the instrument was found to be 0.76. This was considered high and reliable.

Method of Data Analysis

The data collected for the study were analysed using mean and standard deviation scores as well as t-test statistics. The mean and standard deviation gave information on the level of perception of the science lecturers on the SDGs programme in line with the research questions, while the t-test statistics was used for the stated hypotheses at 0.05 level of significance.

To ascertain the mean level of each item, the values assigned to the various response categories were used. The values assigned were as follows:

Strongly Agree (SA)	-	4
Agree	-	3
Disagree (DA)	-	2
Strongly Disagree (SD)	-	1

Based on the above 4-point Likert-type scale, the mean perception level was interpreted as follows:

Above 3.50 – High/Adequate perception

2.50-3.50 – Moderate/Average perception

Below 2.50 – Low/inadequate perception

The hypotheses were tested using t-test at 5% level of significance. A null hypothesis was upheld if the calculated value is less than the critical t-value (table value). On the other hand, the alternate was accepted where the calculated t-test is greater than the critical t-value (table value).

Results

The results of the study are shown below in line with the research questions and hypotheses of the study.

Research Question One

To what extent are science lecturers aware of the SDGs Programme?

Table 1: Mean Scores of the Extent of Science Lecturers' Awareness of the SDGs Programme

S/No	Extent of Awareness of SDGs Programme	Male \bar{X}	Female \bar{X}	Experienced \bar{X}	Inexperienced \bar{X}	Urban \bar{X}	Rural \bar{X}	Overall \bar{X}
1	SDGs are off-shoots of MDGs	3.70	3.23	3.65	2.68	2.88	2.16	3.05
2	SDGs are intended to be action-oriented.	3.65	2.52	3.86	3.02	3.07	2.48	3.10
3	SDGs take into account the different national realities and capabilities.	2.26	2.81	3.23	2.98	2.65	2.12	2.68
4	Each country with its own approach to change for the global common good.	2.58	2.35	3.51	2.56	2.89	2.28	2.70
5	SDGs is also known as Transforming the World- the 2030 Agenda	2.06	2.51	2.07	2.15	2.26	2.38	2.24
6	SDGs are 17 aspirational goals.	3.88	3.28	3.52	3.26	3.29	2.81	3.34
7	SDGs are focused on 169 target areas.	4.25	3.66	3.91	3.21	3.61	3.11	3.63
8	SDGs is geared towards ending poverty, fight inequality ...	3.72	4.12	2.89	1.85	3.15	3.26	3.17
9	SDGs also focused on tackling climate change.	2.51	2.02	2.05	2.06	3.26	2.07	2.33
10	SDGs have elements of inclusiveness and equity.	3.45	2.86	3.26	2.59	2.55	2.18	2.82
11	SDGs stress the importance of science and technology in national development.	4.26	3.27	3.82	3.57	3.06	3.33	3.55
	Overall	3.30	2.97	3.25	2.72	2.97	2.56	2.96

Table 1 is a reflection of the level of awareness of SDGs programme by science lecturers. All the various categories of science lecturers have scores above the cut-off mean of 2.50. The male science lecturers have the highest mean score of 3.30 while their rural counterparts have the least mean score of 2.56. From the result, the information flow

favoured male, experienced and urban science lecturers than their female, inexperienced and rural counterparts respectively.

Finally, the overall mean of 2.96 is within the mean range of 2.50 – 3.50. Hence, it can be concluded that the respondents have a moderate level of awareness of the SDGs programme.

Research Question Two

What is the major source of information of science lecturers with regard to the SDGs programme?

Table 2: Mean Scores of Source of Information of Science Lecturers on the SDGs Programme

S/No	Sources of Information	Gender		Teaching Experience		School Location		Overall \bar{X}
		Male \bar{X}	Female \bar{X}	Experienced \bar{X}	Inexperienced \bar{X}	Urban \bar{X}	Rural \bar{X}	
1	Radio/Television	3.89	3.48	4.02	3.25	4.18	3.56	3.73
2	Workshops/Conferences	2.92	2.26	3.20	3.75	3.21	2.96	3.05
3	Newspapers/Magazines	2.68	1.85	3.86	2.89	3.22	1.86	2.73
4	Advocacy/Sensitization	1.89	1.56	2.33	2.07	2.58	2.33	2.13
5	Discussion with Peers	2.28	1.98	3.87	3.66	3.06	2.82	2.94
6	Social Media	4.62	3.96	3.86	4.68	4.55	2.88	4.09
	Overall	3.04	2.52	3.52	3.38	3.47	2.74	3.11

From the above (Table 2), most of the science lecturers got their information about SDGs Programme from social media (4.09), followed by Radio/Television (3.73). Furthermore, advocacy/sensitization (2.13) came last, followed by Newspapers/Magazines (2.73). Similarly, the results showed that more male science lecturers (3.04) had access to information on the SDGs Programme than their female counterparts (2.52).

In terms of years of teaching experience, more experienced science lecturers accessed information on the SDGs Programme through Radio/Television (4.02). With regard to school location, more urban science lecturers accessed information on SDGs through Social Media (4.55) than their Rural Counterparts (2.88).

In conclusion, therefore, it can be said that the major source of information of the science lecturers in respect of the SDGs Programme is the social media. Others include Radio/Television, workshop/Conference, discussions with peers and Newspaper/Magazines.

Research Question Three

What is the level of knowledge of the various aspects of SDGs programme possessed by science lecturers?

Table 3: Mean Scores of Level of Knowledge of the Various Aspects of SDGs Programme Possessed by Science Lecturers

S/No	Goal Areas	Gender		Teaching Experience		School Location		Overall \bar{X}
		Male \bar{X}	Female \bar{X}	Experienced \bar{X}	Inexperienced \bar{X}	Urban \bar{X}	Rural \bar{X}	
1	Reducing general poverty prevalence (Goals 1, 2 & 10)	3.25	2.36	3.16	1.92	3.38	2.81	2.81
2	Human Development (Goals 3, 4 & 6)	2.91	3.10	2.82	2.06	3.91	2.11	2.81
3	Gender Parity (Goal 5)	3.21	3.62	3.72	2.91	3.87	3.66	3.50
4	Employment, Economic growth and competitiveness (Goals 7, 8 & 10)	2.61	1.86	2.56	1.98	2.08	1.89	2.16
5	Human Settlement Housing and Population Infrastructure (Goal 11)	2.61	1.86	2.63	2.25	4.07	2.33	2.63
6	Environmental Sustainability (Goals 12, 13, 14 & 15)	2.88	3.10	2.26	3.01	2.82	2.38	2.74
7	Governance, Peace and Security (Goal 16)	2.81	2.33	3.62	2.71	2.81	1.87	2.69
8	Means of Implementing Goals 1 to 16 (Goal 17).	2.61	2.02	1.69	2.02	2.33	1.68	2.06
		2.86	2.53	2.81	2.36	3.16	2.34	2.68

From table 3 above, the highest level of knowledge of the various aspects of the SDGs programme was possessed by the male science lecturers (2.86), followed by the experienced science lecturers (2.81). The least knowledge of the programme was shown by the rural science lecturers (2.34), followed by the inexperienced science lecturers with a group mean of 2.36. In terms of the overall level of knowledge on the goal areas, the science lecturers expressed more knowledge of the programme in the area of gender parity (3.50), followed by the human development area (2.81). The least level of knowledge of the programme was expressed in the area of the required means of implementing the programme (2.06), followed by the area of employment, economic growth and competitiveness (2.16).

In the overall considerations, the science lecturers have the highest mean score (3.50) in the goal area of gender parity than other areas of the programme.

Research Question Four

What are the factors militating against the efforts of the science lecturers in performing their roles in line with the SDGs programme?

Table 4: Factors that Militate Against the Efforts of the Science Lecturers in line with their SDGs Entailed Roles

S/No	Item	N	Mean	S.D.	Rank
1	Inadequate provision of educational infrastructure and teaching resources	252	3.88	0.79	1 st
2	Lack of political will towards education by government	252	3.02	1.21	6 th
3	Poor academic planning and implementation	252	2.91	0.98	7 th
4	Poor funding	252	3.68	0.86	4 th
5	Non-involvement of teachers/lecturers in decision-making/policies	252	3.86	1.01	2 nd
6	Lack of incentives for teachers/lecturers.	252	3.58	0.80	5 th
7	Poor security situation in the country/in the locality	252	3.80	0.96	3 rd

The results on table 4 above, shows that inadequate provision of educational infrastructure and teaching resources ranked first as a factor militating against the science lecturers' efforts towards carrying out their assigned duties in line with the demands of the SDGs programme. This was followed by non-involvement of teachers (lecturers) in decision-making/policies and the poor security situation in the country. Others include poor funding, lack of incentives for the lecturers, lack of political will towards education by the government and poor academic planning and implementation.

Hypothesis One

There will be no significant difference in the mean level of perception of SDGs programme among science lecturers by gender.

Table 5: The t-test of the Mean Level of Perception of SDGs Programme Among Science Lecturers by Gender

	Mean	S.D.	n	Df	Standard Error	t-cal	t-critical	Decision
Male	3.30	0.86	170	250	0.16	2.06	1.96	Reject
Female	2.97	1.31	82					

Where SD = Standard Deviation; t-cal = t-calculated and t-crit is table value of t.

Table 5 above presents the t-test analysis of the difference between the mean level of perception of the SDGs programme by gender (male and female). From the table, it can be observed that the t-calculated (2.06) at 250 degree of freedom and 0.05 level of significance is greater than the t-critical (table value) of 1.96. There is therefore enough evidence to reject the hypothesis of no significant difference (H_0). Hence, there is a significant difference between the mean perception of SDGs programme among science lecturers by gender. This is however in favour of the male science lecturers.

Hypothesis Two

There will be no significant difference in the mean level of perception of SDGs programme among science lecturers by years of experience.

Table 6: The t-test of the Mean Level of Perception of SDGs Programme Among Science Lecturers by Years of Teaching Experience

	Mean	S.D.	n	Df	Standard Error	t-cal	t-critical	Decision
Experienced Lecturers	3.25	0.65	117	250	0.12	4.41	1.96	Reject Ho
Inexperienced Lecturers	2.72	1.26	135					

Where SD = Standard Deviation; t-cal = t-calculated and t-crit is table value of t.

Table 6 presents the t-test analysis of the difference between the mean level of perception of the SDGs programme among science lecturers by years of experience. From the table, it can be observed that the t-calculated (4.41) at 250 degree of freedom and 0.05 level of significance is greater than the critical value of t (table value) which is 1.96. There is therefore enough evidence to reject the hypothesis of no significant difference (Ho). Hence, there is a significant difference between the mean perception level of the SDGs programme by years of teaching experience among science lecturers. This is however in favour of the experienced lecturers.

Hypothesis Three

There will be no significant difference in the mean level of perception of SDGs programme among science lecturers by school location.

Table 7: The t-test of the Mean Level of Perception of SDGs Programme Among Science Lecturers by School Location

	Mean	S.D.	n	Df	Standard Error	t-cal	t-critical	Decision
Urban	2.97	0.78	84	250	0.13	3.41	1.96	Reject Ho
Rural	2.56	1.18	168					

Where SD = Standard Deviation; t-cal = t-calculated and t-crit is table value of t.

Table 7 above presents the t-test analysis of the difference between the mean level of perception of the SDGs programme among science lecturers by school location. From the table, it can be observed that the t-calculated (3.41) at 250 degree of freedom and 0.05 level of significance is greater than the critical value of t (table value) which is 1.96. There is therefore enough evidence to reject the hypothesis of no significant difference (Ho). Hence, there is a significant difference between the mean perception level of the SDGs programme among science lecturers by school location. This is however in favour of the urban science lecturers.

Summary of Findings

The analysis of data has brought to light some findings. These findings are as given below:

1. Science lecturers have moderate level of awareness of the SDGs programme.
2. The major source of information of the science lecturers in respect of the SDGs programme is the Social Media.

3. Science lecturers are more knowledgeable in the area of gender parity than in the other goal areas of the SDGs programme.
4. The factors militating against the efforts of the science lecturers in performing their roles in line with the demands of the SDGs programme include inadequate provision of educational infrastructure/teaching resources, non-involvement of teachers (lecturers) in decision-making (policies) and the poor security situation in the country. Others include poor funding, lack of incentives for the lecturers, lack of political will towards education by the government and poor academic planning and implementation.
5. Gender is a significant factor in the perception of the SDGs programme by science lecturers. Male science lecturers have a higher perception of the SDGs programme than their female counterparts.
6. Years of teaching experience is a significant factor in the perception of the SDGs programme by science lecturers. Experienced science lecturers have higher perception of the programme than their inexperienced counterparts.
7. Location is a significant factor in the perception of the SDGs programme by science lecturers. Urban science lecturers have a higher perception of the programme than their rural counterparts.

Discussion of Findings

One of the findings of this study as reflected in table 1, is that science lecturers have a mere moderate level of awareness of the SDGs programme. This, to say the least, is very embarrassing since teachers are supposed to be embodiment of knowledge as the heart-beat of the society. This implies that there has not been adequate advocacy by government and its agencies as regards the SDGs programme. This low level of advocacy by government and its agencies on the SDGs programme will also rub-off on the learners and the general populace who are supposed to be useful agents in the implementation process of the SDGs programme.

The above scenario is in agreement with the finding of Nworgu (cited in Agbi, 2018) that non-involvement of teachers in decision-making was a major constraint to teachers' perception of Education Sector Reform (ESR) towards the attainment of the MDGs. Therefore, this underscores the need for adequate involvement and sensitization of teachers in the scheme of things especially in the planning and implementation of a developmental programme such as the SDGs in the society. This could be carried out through adequate sponsorship of science lecturers to conferences and workshops both within and outside the country.

Another finding of the study as in table 2 is that the major source of information of the science lecturers with regard to the SDGs programme is the Social Media. This is a pointer to the fact that most policies of government are externally imposed on the teachers to implement without creating room for their inputs at the planning stages. This exclusion of teachers and other stakeholders in the planning of developmental programmes such as the MDGs and SDGs by government has significant implications on the perception and implementation of such programmes by the populace. According to Iedunote (2020), awareness is very vital in understanding human behavior because every person perceives the world and approaches life issues differently. Hence, it can be said that human behavior is based on one's perception (awareness) of what reality is, not on the actual reality itself. Consequently, the level of awareness towards a given programme will potentially influence its level of success.

Similarly, a closer look at the analysis in table 2 indicates that male science teachers (lecturers) had more access to information on the SDGs programme than their female counterparts. In the same vein, years of teaching experience and school location are shown as significant factors in the science lecturers' level of access to information on the SDGs programme. This was in favour of the male lecturers, experienced lecturers and urban lecturers over their female, inexperienced and rural science lecturers respectively. The implication of this is that conscious efforts should always be made by government and its agencies to carry every segment of the citizenry along in the scheme of things. This could be done through enhanced sensitization programmes such as mass enlightenment campaigns as well as sponsorship to workshops and conferences. The above findings and the accompanying assertions are in line with the findings of Nworgu (cited in Agbi, 2018) that non-involvement of teachers in decision-making as well as their low access to information on the MDGs programme were major constraints to teachers' perception of the programme.

It was also discovered that the highest level of knowledge indicated by the science lecturers was in the area of gender parity. This was at a mere moderate level. This is traceable to their non-involvement in the planning of the SDGs programme. This finding is in line with the finding of Ejechi (2018) that low awareness of reform programmes by teachers is a function of their non-involvement in the planning and decision-making process of policies and programmes of government. Thus, the government needs to be very conscious of this constraint that may impede the realization of the SDGs programme and other similar programmes of government. Teachers as opinion leaders in their respective communities are the heart-beat of the society. Therefore, their exclusion from planning of developmental programmes by government is a harbinger to failure.

The factors militating against the efforts of the science lecturers in performing their roles in line with the demands of the SDGs programme include inadequate provision of educational infrastructure/teaching resources, non-involvement of science teachers in decision-making, and the poor security situation in the country. Others include poor funding, lack of incentives to the teachers (lecturers), lack of political will towards education by the government and poor academic planning/implementation. The government needs to be very sensitive to these factors that may impede the realization of the SDGs programme. The development modalities should be planned in such a way that would overcome these constraints. Functional education which the SDGs demands requires adequate provisions of learning and teaching resources, beside other vital requirements. It is therefore necessary for the government to do the needful towards ensuring effective teaching and learning in line with the demands of the SDGs programme.

It was also discovered that male science lecturers have a higher perception of the SDGs programme than their female counterparts. Naturally, great differences exist between male and female. These differences may emanate from the biological differences in the socio-cultural demands on male and female. Hormones play a role in behavior and cognitive sex differences but are not solely responsible for those differences (Wizamann & Pardue, 2001; Patterson, 2017). This has given credence to the fact that basic genetic and physiological differences, in combination with environmental factors, result in behavioural and cognitive differences between male and female. The environmental factors in this case, with particular reference to this study are the level of access to information on the SDGs programme. The fact that it was discovered in this study that male science lecturers had more access to information on the SDGs programme explains the higher level of perception of the programme than their female counterparts.

It is therefore pertinent that conscious efforts be made by government and its agencies to also carry the female lecturers along like their male counterparts. The female should be given more incentives towards participation in conferences and workshops like their male counterparts. It therefore, follows that for effective and efficient attainment of global sustainable development, equitable harnessing and maximization of the human resources irrespective of gender is necessary. Thus, females should equally be fully incorporated in the planning and implementation of government developmental programmes to enhance their perception and participation in their implementations.

The study also revealed that experienced science lecturers have higher perception of the SDGs programme than their inexperienced counterparts. This is in line with the assertion of Ribeiro (2014) that past experience has significant effect on perception. According to him, for instance, two individuals with distinct sets or degrees of experience may actually perceive different things within the same perceptual scene. That is, their phenomenal fields have been shaped differently given the different levels of experience they have had in the past. The implication is that in the involvement of teachers in the scheme of things, both the experienced and inexperienced teachers should be carried along for a balanced perception of the issue at stake. Both group of teachers certainly have contributions to make in one way or the other. This will help to avoid the lapses and poor implementation that was experienced in the MDGs programme.

Conclusion

The education sector has a major role to play, especially in building the capacities of the populace towards the implementation of its programmes such as the SDGs programme. Education empowers the citizenry to change the way they think and work towards a sustainable future. Therefore, the government needs to be very sensitive to the identified factors in this study that may impede the realization of the SDGs programme. The implementation modalities should be such that would overcome these impediments. For Nigeria to achieve the objectives of the SDGs programme using education as a major tool, not only should there be adequate provision of fund and other educational resources, the science lecturers apart from being given incentives, must be adequately integrated in the entire process of the SDGs programme.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. There is need for adequate involvement of teachers at all levels of the educational sector in the planning and implementation of developmental programmes such as the MDGs and SDGs. Imposition of policies and programmes on the teachers to implement does not augur well for the society.
2. Workshops, seminars and conferences should be organized for the teachers to enable them keep abreast of the developments and issues in their profession. For no man can give out what he does not have. Such efforts will also serve as incentives and motivation towards effective delivery of their duties.
3. The government needs to be very sensitive to the factors that may impede the realization of the SDGs programme. These include poor provision of educational infrastructure, poor funding and non-involvement of teachers in decision-making/policies. The implementation modalities should be designed in such a way to overcome these hurdles.
4. The government should empower the teachers in the use of their initiative to keep abreast of current issues in the society. One of such ways is by provision of free

internet services (WiFi) in the society. This will enhance the access of the teachers, and indeed the general populace into the internet and information technology.

Financial Support

I wish to thank the Tertiary Education Trust Fund (TETFUND), Abuja, Nigeria for the financial support for this study.

References

- Agbi, A. I. (2018). Science, technology and society literacy level of secondary school science students. (Unpublished Research Project). Tertiary Education Trust Fund, Abuja.
- Ejechi, V. I. (2018). Awareness and perception of sustainable development goals among library personnel in Edo State University Library. Retrieved from <https://www.research-gate.net/publication/323391987>
- Federal Ministry of Education (FME, 2013). *National Policy on Education* (6th Edition), Abuja: NERDC Press.
- Iedunote (2020). Perception: definition, importance, factors, perceptual process, errors. Retrieved from www.iedunote.com/perception.
- Ike, E. A. & Nwosu, E. E. (2020). Perception of teachers and principals on the extent the innovations in science curriculum is managed to achieve SDGs among Senior Secondary Schools in Ikwuano LGA of Abia. *British Journal of Education*, 8 (7), 9-17.
- Patterson, J. (2017). Female perception Vs Male perception. *Everyday Health*. Retrieved from <https://www.everydayhealth.com?f...>
- Rebeiro, R. (2014). The role of experience in perception. *Human Studies*, 37, 55p-481. Retrieved from [link.springer.com>article](http://link.springer.com/article).
- Schacter, D. L. (2011). How to help a bully. Recommendations for counselling the proactive aggressor. *Professional School Counselling*, 11, 120-128.
- United Nations Development Programme (UNDP, 2015). Sustainable development goals. Retrieved from www.undp.org/.../post.
- United Nations Organization (UNO, 2012). The future we want. Retrieved from <https://sustainable.development.un.org/content/document/733>.
- United Nations Organization (UNO, 2021). UN-Secretary-General Presents 10 priorities for 2021. Retrieved from <http://sdgs.iisd.org/news/un-sec...>
- Wizemann, T. M. & Pardue, M. L. (2001). Exploring the biological contributions to human health: Does sex matter? Retrieved from <https://www.ncbi.nlm.nih.gov/books>.