

**AWARENESS AND KNOWLEDGE OF THE SUSTAINABLE
DEVELOPMENT GOALS (SDGs) AMONG UNIVERSITY
OF IBADAN STUDENTS**

BY

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ABSTRACT

The Sustainable Development Goals otherwise known as the global goals are collection of 17 ambitious goals set by the United Nations which have been ascribed for implementation with a deadline of 2030. Education has been identified as one of the major drivers towards sustainable development and higher educational institutions have been charged with the responsibility of increasing students awareness about the global goals to enable them participate in the implementation. Little research has been conducted in tertiary institutions on this phenomenon. This study was conducted to investigate the level of awareness and knowledge about the Sustainable Development Goals among University of Ibadan students.

A descriptive cross-sectional survey was conducted among 387 students of the University of Ibadan. The study involved undergraduate and postgraduate students who were selected based on their level of education i.e undergraduate/postgraduate category using a 50/50 ratio. Multi-stage probability sampling was used to select respondents from each faculty. Data were collected using a pre-tested semi-structured questionnaire and was analyzed using SPSS version 21. Knowledge was determined using an 18 point knowledge scale which was categorized into good knowledge (≥ 13), fair knowledge ($\geq 7 < 13$), poor knowledge ≤ 6 points. Chi-square test was used to determine if there is an association between level of education and knowledge about the SDGs. T-test was used to determine if knowledge occurs differently among undergraduate and postgraduate students.

The mean age of the respondents was 23.7 ± 4.0 . About two-thirds (66.3%) of the respondents (Male, 42%; Female, 24.4%) were aware of the SDGs, with the major source of information from internet/social media (34.9%) and the University course work (10.1%). Majority of the respondents, 73.0% and 78.6% stated correctly that there are 17 SDGs and the deadline for achieving the goals is year 2030 respectively. Only 48.6% of the respondents correctly defined sustainable development. Only 25.1% of the respondents had “good” knowledge and “fair” knowledge was 23.0%. Good knowledge was associated with higher level of education ($p=0.00$). Majority of the respondents (77.5%) had positive perception towards implementation of the SDGs and 60.3% opined the goals are achievable by 2030. More than half of the respondents

(59.9%) affirmed voluntary contribution towards socio-economic development of their community/town/nation in the areas of education and empowerment, health, poverty eradication and food security and environmental protection among others. However, major constraints to respondents' volunteerism include: inadequate/ lack of fund to participate in volunteerism (34.6%), time constraint (13.1%) and language barrier (3.4%) among others.

The result revealed high level of awareness about the SDGs but low level of knowledge about the goals. This might have negative implication on students' participation in implementation of the SDGs. It is recommended that SDG related issues should be embedded into the institution's curriculum and co-curricular activities.

Keywords: Sustainable Development Goals, University of Ibadan students, Awareness, Knowledge

Word count: 453

DEDICATION

This project write up is dedicated to the Almighty, the Creator and the Sustainer of the Universe.

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LAWAL, FatimahBisola

CERTIFICATION

This is to certify that this study was conducted by Lawal, Fatima Bisolain the department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria under my supervision.

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GLOSSARY OF ABBREVIATIONS

SDG	Sustainable Development Goals
MDG	Millennium Development Goals
HEI	Higher Education Institutions
HESI	Higher Education Sustainability Initiative
SULITEST	Sustainability Literacy Test
UN	United Nations
ESD	Education for sustainable development
YALI	Young African Leaders Initiative
AISEC:	Association Internationale des Etudiants En Sciences Economique et Commerciales/ International Association of Students in Economics and Management)

CHAPTER ONE

1.0

INTRODUCTION

1.1 Background to the Study

The Sustainable Development Goals (SDGs) are a global agenda which consists of 17 goals set by the United Nations (UN). The 17 Sustainable Development Goals form a cohesive and integrated package of global aspirations the World commits to achieving by 2030 (Sustainable development solutions network, 2015). Like every other member State of the United Nations, Nigeria adopted the UN Sustainable Development Goals otherwise known as “Global goals” or “2030 Agenda” for sustainable development as a vehicle for freeing humanity from poverty, securing a healthy planet for future generations, and building a peaceful, inclusive society as a foundation for ensuring a life of dignity for all (Office of the senior special assistant to the president on SDGs & National Bureau of statistics, 2016).

The goals which were adopted in 2015 with its deadline in 2030 were preceded by the Millennium Development Goals (MDGs). Building on the accomplishments of their predecessors the MDGs, the SDGs address the most pressing global challenges of our time, calling upon collaborative partnerships across and between countries to balance the three dimensions of sustainable development: economic growth, environmental sustainability, and social inclusion (Sustainable development solutions network, 2015). The SDGs have a broader agenda than the MDGs, with 17 goals, 169 targets, and well over 200 indicators (Shehu&Shehu, 2018) used to measure progress towards reaching the targets for the next 15 years {2015-2030}. The SDGs differ from the MDGs in several significant ways that make them far more influential and consequential than the MDGs. The SDGs cover a much broader range of challenges than the MDGs. They emphasize the interlinkages between the social, economic, and environmental dimensions of sustainable development, as well as between the goals themselves (Shehu&Shehu, 2018). The MDGs on the other hand focused on the many dimensions of extreme poverty, including low incomes, chronic hunger, gender inequality, lack of schooling, lack of access to health care, and deprivation of clean water and sanitation, among others (Sustainable development solutions network, 2015). Although the MDGs achieved some success, yet, many countries did not make sufficient progress (Sustainable development solutions

network, 2015), particularly on environmental sustainability, furthermore, there was consensus that the scope of the MDGs needed to be broadened to reflect the challenges the world faces today (Sustainable development solutions network, 2015) among which include: around 700 million people still live below the World Bank's poverty line (Sustainable development solutions network, 2015), and billions more suffer deprivations of one form or another, many societies have experienced a rise of inequality even as they have achieved economic progress on average, moreover, the entire world faces dire environmental threats of human-induced climate change and the loss of biodiversity. Poor governance, official corruption, and in dramatic cases overt conflict, afflict much of the world today (Sustainable development solutions network, 2015).

In addition, success in the MDGs was un-even due to the fact that the level of global awareness for the MDGs remained low with little popular drive to monitor and accelerate progress (Microsoft in education, 2017). The SDG Agenda responds to these compound challenges, and is therefore broader and more complex than the MDGs. The SDGs seek to build on and complete the unfinished business of the MDGs: realize the human rights of all, achieve gender equality in all sectors and spheres of life, and importantly, strike a balance between economic, social and environmental dimensions of development (Office of the senior special assistant to the president on MDGs, 2015). This global momentum has at its heart a promise to leave no one behind (Office of the senior special assistant to the president on SDGs & National Bureau of statistics, 2016). In effect, the 2030 agenda is both ambitious and transformational, with a set of 17 integrated and indivisible Sustainable Development Goals (SDGs) broken down to measurable targets and indicators (Office of the senior special assistant to the president on SDGs & National Bureau of statistic 2016). Essentially, the Agenda is a shared plan to transform the world and look after the welfare of the people by stimulating action on the following themes: people, planet, peace, prosperity and partnership (Sustainable development solutions network, 2015). They include targets devoted to mobilizing the means required to implement the SDGs, such as partnerships, financing and enabling policies (Shehu&Shehu, 2018). They recognize that addressing the Worlds challenges is everybody's responsibility and explicitly calls on governments, business, civil society, and academic sectors among others to collaborate on the achievement of the SDGs (Shehu&Shehu, 2018). The achievement of the SDGs will also hinge on first the awareness and knowledge of the SDGs (Shehu&Shehu, 2018), as similarly stated by Nashash, 2013 in a study conducted to

determine level of development goals awareness among University students, where it was stated that to achieve the goals, grassroots is required before demand, where people must first be aware of the goals and work with them to demand their fulfillment from their governments (Nashash, 2013).

Education proves to be a crucial element for the progress of sustainable development as it fosters the change of lifestyle that is needed to achieve the sustainable patterns of consumption and other behavior required to ensure the needs of future generations will also be met (Nashash, 2013). Education empowers students to develop awareness, skills, understanding and values to take part in decisions being made (Nashash, 2013). Education is essential in supporting the implementation of the sustainable development agenda, and its importance for human development is well recognized in Sustainable Development Goal 4 on education (Didham, 2018). Across the targets of all of the Sustainable Development Goals (SDGs), education can provide a valuable means in supporting their implementation and achievement (Didham, 2018). All educational institutions, from preschool to tertiary education including non-formal and informal education should consider it their responsibility to deal intensively with matters of sustainable development and to foster the development of sustainability competencies (UNESCO, 2017).

The United Nations Conference on Sustainable Development held in Rio in 2012 highlighted that Higher Education Institutions (HEI) must and should play an increasingly important role in developing their students' awareness of sustainability challenges through Education for Sustainable Development (ESD) (Cateronet *al.*, 2017). This buttresses the role of educational institutions especially the tertiary institutions as important stakeholders in ensuring SDG awareness among students. Increasing SDG awareness among students can help to propagate SDG implementation as they possess significant qualities which when tapped could serve as important resources for implementing the SDGs (Barreda, 2018). Youth's knowledge, creativity, energy, enthusiasm, and social networks could be tapped and channeled towards various areas of SDG implementation such as disaster risk reduction (DRR) processes (Barreda, 2018). To create a more sustainable world and to engage with sustainability-related issues as described in the SDGs, individuals must become sustainability change-makers. They therefore require the knowledge, skills, values and attitudes that empower them to contribute to sustainable development which can be instilled through education. This buttresses the fact that education is crucial for the

achievement of sustainable development. International recognition of Education for Sustainable Development as a key enabler for sustainable development has been growing steadily (UNESCO, 2017). The now well-established approach of Education for Sustainable Development (ESD) empowers learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society for present and future generations (UNESCO, 2017). Education for Sustainable Development has to be understood as an integral part of quality education, inherent in the concept of lifelong learning. All educational institutions should consider it their responsibility to deal intensively with matters of sustainable development and to foster the development of sustainability competencies (UNESCO, 2017). Education for Sustainable Development provides an education that matters and is truly relevant to every learner in the light of today's challenges. Education for Sustainable Development is explicitly recognized in the SDGs as part of Target 4.7 of the SDG on education which is: "To ensure that all learners acquire knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development". Education which is goal 4 of the SDG's is central to achieving the other 16 goals. Education for Sustainable Development can produce specific cognitive, socio-emotional and behavioral learning outcomes that enable individuals to deal with the particular challenges of each SDG, thus facilitating its achievement (UNESCO, 2017). Education for Sustainable Development enables all individuals to contribute to achieving the SDGs by equipping them with the knowledge and competencies they need, not only to understand what the SDGs are about, but to engage as informed citizens in bringing about the necessary transformation (UNESCO, 2017).

This study was conducted to investigate the level of awareness and knowledge about the Sustainable Development Goals among students of University of Ibadan, in addition, the study aims to identify the sources of information about the SDGs most accessible to the students and to determine if students' level of awareness differs across year levels.

1.2 Statement of the problem

The participation of students in SDG implementation can be enhanced when they have high level of awareness about the goals and about sustainability challenges, however studies have shown that awareness and knowledge about the goals among students is quite low. Some studies which have been conducted among students to determine SDG awareness and knowledge have indicated that SDG awareness is just fair while knowledge is quite low. According to a study by Omisore et al (2018) to determine SDG awareness and knowledge among a University community in South-West Nigeria, awareness of the SDGs was 42.7% while knowledge was 4.2%. Similarly, a study conducted by Shehu&Shehu (2018) among Medical students of Bingham University Teaching Hospital Jos , indicated that the level of knowledge about the SDGs was generally very poor, with only 15.20%, 7.60% and 0.58% knowing the correct number of goals, targets, and indicators respectively.

The low level of awareness and knowledge mapped among students indicate that much needs to be done in order to raise awareness and knowledge about the SDGs among students. The low level of awareness about the SDGs seems to be a trend that has been in existence since the era of the MDGs. A number of studies which were conducted to determine the level of MDG awareness among students also indicated that awareness was low. A study conducted by Nashash (2013) to investigate the level of awareness about the Millennium Development Goals among students of Al- Balqaa' Applied University - Princess Alia University College, Jordan, indicated that students awareness about the Millennium Development Goals is generally low (Nashash, 2013).

According to a statement by Nashash 2013, in order to achieve the goals, grassroots is required before demand i.e people must first become aware of the goals and work with them in order to demand their fulfillment from their governments. It is important to create awareness and inculcate knowledge about the goals into students in order to enable them to participate in implementation of the goals and participate in solving the challenges facing the World. For example according to Fernandez and Shaw (2013), youth awareness on climate change which is one of the major challenges that the goals aim to address must be increased and integrated in the formulation of disaster risk reduction plans, this is important because youth possess significant qualities which when tapped could serve as important resources for households and communities in preparing for, responding to, and

recovering from disasters (Fernandez & Shaw, 2013). In addition youth knowledge, creativity, energy, enthusiasm, and social networks could be tapped in various phases of disaster risk reduction (DRR) processes to help themselves and others (Barreda, 2018). The United Nations International Strategy for Disaster Reduction, UNISDR (2000) purported that youth can help in the successful implementation of disaster prevention and risk management strategies because they can promote the necessary change in behaviors and a shift in mentalities. This is possible because they are adaptable as well as able to quickly make low-carbon lifestyles and career choice (Pandveet *al.*, 2009). Further, they can share and apply what they learned especially within their households, families, and the wider community (Shaw et al. 2009).

This buttresses the importance of ensuring youth awareness about sustainability challenges as well as the Sustainable Development Goals and the need to empower them which is essential in order to equip them with the necessary competencies and resources needed to make an impact in solving sustainability challenges, this can be achieved through education (Barreda, 2018). As the United Nations Framework Convention on Climate Change (2007) argues, “education provides the skills people need to thrive in the new sustainable economy, working in areas such as renewable energy, smart agriculture, forest rehabilitation, the design of resource-efficient cities and sound management of healthy ecosystems. The traditional mission of higher education institutions (HEIs) is to enhance youth awareness through teaching and research function (Triplet *al.*, 2014). Therefore, the role of higher education institutions in the society must be expressed in its key mission of producing and disseminating knowledge and of engaging the community in the learning process. This highlights the important role that higher education institutions have to play in ensuring their students awareness about sustainability challenges through education and empowering them with the necessary competencies and resources needed to make an impact in solving these challenges.

Another problem is that although the motion for Education for Sustainable Development has been passed by the United Nations as indicated in SDG 4 on Education, a lot of educational institutions are yet to implement this motion. It is imperative for all education institutions to incorporate education for sustainability into teaching and learning in order to produce sustainability literate students. A lot of students are not aware of the SDGs, while those that are aware have poor in-depth knowledge about the goals (Omisoreet *al.*, 2017). With this being the situation, achieving the SDGs may still remain a mirage since

the students who are supposed to act as vehicles of transformation and achievement of the SDGs through their creativity, innovative ideas and critical thinking ability are un-aware of the SDGs. It is important to ensure that students see themselves as important stakeholders and understand their role in achievement of the SDGs.

The 2030 target set for the achievement of the goals seems to be far away, but it is important to be mindful that there is still much to be done in order to achieve the goals. A greater sense of urgency must drive the goals, therefore more efforts need to be put in place to first ensure wide awareness and knowledge creation about the global goals among all stakeholders including students, this can transform to understanding and then action for the goals by participating in its implementation.

1.3 Justification

This study is important for various reasons. It will help to document the level of SDG awareness and knowledge among UI students. This will help to identify gaps that exist in terms of knowledge and will also give the modalities for further educating the target population about the SDGs. Information about the extent of students awareness and knowledge on the SDGs could be used as baseline information for the University to evaluate its curricular programs, and academic activities in such a way that will enhance the level of awareness of their students about the SDGs.

This study will also document the contribution of the University towards increasing students awareness and knowledge about the SDGs, this will provide information to the University institution on how to improve in this area and it will help to identify effective channels and medium that can be used to contribute to students awareness and knowledge.

In addition this study will help to document the extent of students' participation in SDG implementation and will highlight some of the constraints faced by students in terms of participating in SDG implementation. Information about some of the constraints faced in terms of SDG implementation can be useful to international organizations, Non-governmental organizations, National and local governments, so that they can identify avenues through which some of these constraints can be alleviated in order to encourage increased participation in SDG implementation among students.

1.4 Research Questions

1. What is the level of awareness of the Sustainable Development Goals among University of Ibadan students?
2. What is the level of knowledge of the Sustainable Development Goals among University of Ibadan student
3. What is the extent of University of Ibadan's contribution towards students' knowledge about the SDGs?
4. What is the perception towards participation in the implementation of the Sustainable Development Goals among University of Ibadan students?
5. What is the level of University of Ibadan students' participation towards SDG implementation?

1.5 General Objective

To investigate the level of awareness of SDGs, knowledge of SDGs, perception and participation towards implementation of the SDGs among University of Ibadan students.

1.6 Specific Objectives

1. To determine the level of awareness about the Sustainable Development Goals among University of Ibadan students.
2. To determine the level of knowledge about the Sustainable Development Goals among University of Ibadan students.
3. To identify the extent to which University of Ibadan contributes towards student's knowledge about the SDGs.
4. To highlight the perception of University of Ibadan students towards participation in the implementation of the Sustainable Development Goals.
5. To determine the level of University of Ibadan students participation towards Sustainable development Goals implementation.

1.7 Hypotheses testing

The following hypotheses were tested to assess the relationship between independent variables and dependent variables.

Null Hypothesis (H₀):

- I. There is no significant association between the demographic characteristics (age, level of education) and knowledge about SDGs among University of Ibadan students.

- II. There is no significant difference in the knowledge of the SDGs between undergraduate and postgraduate students of University of Ibadan.
- III. There is no significant association between SDG awareness and knowledge among University of Ibadan students.
- IV. There is no significant association between the knowledge and perception of University of Ibadan students towards participation in the implementation of the SDGs

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CHAPTER TWO

2.0 LITERATURE REVIEW

This section presents the review of literature related to the focus of the study. It presents an overview about sustainable development, the role of education in creating awareness about the SDGs, literature on a number of studies which have been conducted in the past to determine students' awareness about the SDGs and the role of higher education institutions in enhancing the awareness of students about the SDGs

2.1 Overview on sustainable development

The Brundtland Report became the first document to support sustainable development as a multi-disciplinary field, as it explained that the economy, society, and the environment were key to sustainable development (Ejechi, 2018). According to the Brundtland report, sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Ejechi, 2018). The international community has recognized the fact that current development trends are not sustainable, this calls for the need to develop sustainable means of development and patterns of living.

According to the former Secretary General of the United Nations Ban Ki-Moon stated that: "We don't have plan B because there is no planet B", hence the need to imbibe sustainable patterns of living. Sustainable development requires simultaneous and balanced progress in the following inter-dependent areas: economy, society and the environment. The SDGs have thus been formulated to provide balanced progress in these (society, economy, environment) development areas (UN, 2016). The goals call for action for all countries to promote economic growth and address a range of social needs including education, health, social protection and job opportunities while tackling climate change and environmental protection (UN, 2016). Although the SDGs are not legally binding, it is expected that governments should use them to establish national frame works and policies that will trigger innovation at a global scale. However the task of complying with the SDGs should be a shared responsibility with citizens of each country as it is unlikely that governments would be able to act by themselves without peoples support (UN, 2016).

2.2 Role of education in the global goals awareness

Creating wide awareness is crucial to achieving the global goals by the 2030 target. With reference to the Millennium Development Goals (MDGs), based on the annual assessment reports of MDGs achievements, United Nations member states became vigilant of the fact that the goals were not achievable by the 2015 deadline, mainly due to the lack of awareness, access to financial resources and accountability among others (Nashash, 2013). African countries, including Nigeria, were reported to have had a very slow start to the MDGs and this was a major impediment to the achievement of the MDGs (Omisoreet *al.*, 2017). Perhaps the slow start to the MDGs was probably not unconnected with the low level of awareness and knowledge on the MDGs among the populace (Omisoreet *al.*, 2017). It is plausible that if the level of societal awareness is high, various stakeholders from varying sectors can challenge governments to implement global development plans nationally. Therefore to improve in terms of awareness with regards to the SDGs, the United Nations has put in much effort to communicate the SDGs to a wider audience, including through education institutions.

The role of education with SDGs enlightenment as its central focus is central to achieving the SDGs (Nashash, 2013). Education is an essential tool for achieving sustainability. The international community has recognized that current development trends are not sustainable and that public awareness, education and training are key to moving society toward sustainability (McKeown, 2006). Education proves to be a crucial element for the progress of sustainable development as it fosters the change of lifestyle that is needed to achieve the sustainable patterns of consumption and other behaviour required to ensure the needs of future generations will also be met (Nashash, 2013). Education empowers students to develop awareness, skills, understanding and values to take part in decisions being made. This will lead to an individual and collective improvement in the quality of life both on the local and global level (Nashash, 2013).

Education for Sustainable Development (ESD) is explicitly recognized in the SDGs as part of Target 4.7 of the SDG on education, this buttresses the importance on the need to instill education for sustainable development. Education for Sustainable Development has to be integrated in all curricula of formal education, including early childhood care and education, primary and secondary education, technical and vocational education and training, and higher education (UNESCO, 2017). Mainstreaming Education for

Sustainable Development requires integrating sustainability topics into the curricula, there is need to ensure that all children and young people learn not just foundation skills, but also transferable skills such as critical thinking, problem solving, advocacy and conflict resolution, to help them become responsible global citizens (UNESCO, 2017). From the development of sustainability curricula it is expected to improve the capacity of our education systems to prepare people to pursue sustainable development (UNESCO, 2017). In order to solve the Worlds challenges, the next generation who will serve as the leaders of tomorrow should be aware of these challenges, a good way to ensure this is to create wide awareness and increase their knowledge about the SDGs through education.

2.3 The role of Higher Education Institutions (HEI) in enhancing students' awareness about the SDGs

The United Nations Conference on Sustainable Development held in Rio in 2012 (Rio +20) highlighted that Higher Education Institutions (HEI) must and should play an increasingly important role in developing their students' awareness of sustainability challenges (Cateron et al., 2017). The Higher Education Sustainability Initiative (HESI), a partnership between United Nations Department of Economic and Social Affairs and other United Nations offices was created in 2012 in the run-up to the United Nations Conference on Sustainable Development (Cateron et al., 2017). In the Higher Education Sustainability Initiative (HESI) launched for Rio +20, Chancellors, Rectors, Deans and leaders of Higher Education Institutions and related organizations, acknowledged the responsibility that they bear in the international pursuit of sustainable development (Cateron et al., 2017).

According to the Sustainable Development Goals Fund (an international multi-donor and multi-agency development mechanism created by the United Nations to support sustainable development activities through integrated and multi-dimensional joint programs), Universities can play the following roles in fulfilling the 2030 Agenda for Sustainable Development. These roles include: expanding human capital with an SDG perspective: by training students to understand how the SDGs are going to make their work better and more sustainable (Duran, 2017). The SDGs shouldn't only be part of international development programs but of most disciplines. It is not only about memorizing or learning the 17 goals, but about embedding sustainable development principles across disciplines (Duran, 2017). The SDGs are not isolated goals but are instead deeply interconnected. Universities will need to educate their students on the

social, economic and environmental implications of their future careers and professional work (Duran, 2017). Secondly, Universities can also be part of new training programs for non-university students. Massive open online courses are a clear example of what can be done in this realm and many more hybrid training formats will contribute to continuous and lifelong learning modalities (Duran, 2017).

Another role of Universities in fulfilling the 2030 Agenda for Sustainable Development is through research. Researchers at universities have a privileged vantage point to look at the different SDGs, understand what approaches are more effective and analyze the process of implementing the 2030 Agenda (Duran, 2017). Research will help us to understand better the costs of implementing the SDGs, and also the opportunity costs of not investing sufficiently in the SDGs. Action-oriented research, with an understanding of its different users i.e. policy-makers as well as the private sector and civil society, will be necessary (Duran, 2017). As a universal agenda, researchers should help address the SDGs at the global and also at the local level, with attention to underlying similarities and differences among countries and territories (Duran, 2017).

Lastly Universities have a role to play in implementing the agenda as they are increasingly becoming actors in multi-stakeholder partnerships for the SDGs. University researchers and students are participating hands-on in projects with their expertise, time and financial resources (Duran, 2017). They can contribute to knowledge transfer and build the tools that the SDGs will require. Universities do indeed invest in development, a trend that is becoming more frequent in the academic world. However, it is important that university development projects are not isolated and are integrated in larger efforts that include government, civil society and the private sector (Duran, 2017).

2.4 Awareness/knowledge of the Sustainable Development Goals

Awareness and knowledge of the SDGs have been observed to vary as awareness is often higher than knowledge, most people might have heard of it but may not have an in-depth knowledge.

Many initiatives have been launched towards raising awareness of the Sustainable Development Goals through the educational system i.e. in schools and Universities, where the targeted people “students” are considered to be the vehicle for a faster sustainable development (Nashash, 2013). Launching a partnership with Universities as a main stakeholder provides the benefit of dealing with students and academia in parallel,

therefore, this course of action ensures the establishment of a sustainable virtuous circle between knowledge creation and knowledge dissemination (Nashash, 2013).

Sustainability Literacy is the knowledge, skills and mindsets that allow individuals to become deeply committed to building a sustainable future and assisting in making informed and effective decisions to this end (United Nations, 2017). The SULITEST (Sustainability Literacy Test) was created following the Rio+20 conference as an easy to use, online, multiple choice assessment platform, consisting of a set of questions identical for all users throughout the world, and other specialized modules that consider national, regional and cultural realities (United Nations, 2017). SULITEST was developed as a tangible implementation of HESI (Higher Education Sustainability Initiative). SULITEST is a pedagogical tool of reference and is used worldwide (Cateron *et al.*, 2017). SULITEST is used to assess what students of higher education institutions know about the SDGs. It provides higher education institutions, including companies and other organizations around the world with an internationally recognized and locally relevant tool to measure and improve sustainability literacy for all (Cateron, 2017). It also gives tangible indicators to monitor sustainability literacy. Each SULITEST question is aligned with one or more goals from the global agenda, creating the largest database on citizens' awareness and understanding of the SDGs. Reports from SULITEST indicate that 16,575 candidates from 170 Universities in 31 countries who took the SULITEST between September 2016 and July 2017, had an average score of 55% of expected answers (Cateron, 2017). This sample is expected to grow as more Universities and organizations use the SULITEST in the nearest future.

In the past, the UNDP established an initiative with Cairo University to assess students' awareness of the Millennium Development Goals, by conducting surveys among the University students (Nashash, 2013). The initiative incorporated two components, the first was to raise students' awareness and the second to promote Millennium Development Goals related research, this initiative can be replicated as an assessment tool with regards to the SDGs, to measure where students' knowledge lies when it comes to the goals and subsequently identify how their knowledge levels can be boosted (Nashash, 2013). Results from the Cairo University and UNDP study indicated that about 75% of students were not aware of the MDGs (Wamala *et al.*, 2012).

Similarly according to a study conducted by Nashash in 2013 in Princess Alia University College Jordan, assessing students' awareness and knowledge of the MDGs, the study indicated that students' awareness of the Millennium Development Goals is generally low. This result goes in line with several previous studies that were conducted to assess the public's awareness on the MDGs. The World Bank noted that in a survey conducted in the European commission, 88% of respondents in 25 European Union countries had never heard of the Millennium Development Goals (Nashash, 2013).

These results however are in contrast to that reported by a study conducted by Wamala et al in 2012 among Ugandan and Kenyan Universities, indicating that out of 1,920 students, 1484 (77.3%) were aware of the MDG's. More than half (74.1%) 1100 of students aware of the MDG's reported that their University of enrollment contributed to their awareness about the MDGs. However, further analysis of students aware of MDGs according to Wamala et al (2012) revealed that only 44.4% were able to mention the right number of MDGs (8), while only 47.7% knew the correct deadline (2015) for the achievement of the goals. The proportion that was aware of both the right number and the target date for the achievement of the goals was 23.4%. This low figure suggests a shallow knowledge base of issues related to the goals despite the high level of awareness of MDGs (Wamala et al., 2012).

With reference to the SDGs, Omisoreet *al.*, 2017 conducted a study assessing awareness and knowledge about the SDGs among a University community in South-West Nigeria, out of the 450 respondents, only 192(42.7%) had ever heard of the SDGs and out of those aware only 4.2% had good knowledge of the SDGs. This is in contrast to results from a study by Shehu&Shehu (2018) where 82.46% of respondents were aware of the SDGs, however the level of knowledge about the SDGs according to Shehu&Shehu study was generally very poor, with only 26 (15.20%), 13 (7.60%) and 1 (0.58%) knowing the correct number of goals, targets, and indicators respectively.

It can be deduced from the reports of various studies conducted in the past that generally there was low level of awareness about the MDGs and this trend has eaten into the SDG awareness. This low level of awareness might have a negative implication on the SDG 2030 agenda achievement.

2.5 Conceptual framework

Theories are essential statements identifying factors that are likely to produce certain results under specified conditions. A theory presents a systematic way of understanding events or situations. It is a set of concepts, definitions, and propositions that explain or predict these events or situations by illustrating the relationships between variables (Glanz and Rimer, 1997). Theories aim at identifying and helping to understand elements that affect seemingly diverse classes of behaviours and tell us how the elements function (Hochhbaum *et al.*, 1992).

For this study, the Information-Motivation-Behavioural skills (IMB) model by Fisher & Fisher was adapted. This model is used to explain how Information, motivation and behavioural skills are associated with the performance of behaviour. The model asserts that information, motivation and behavioural skills are fundamental determinants of behaviour performance. It asserts that if individuals are well informed, motivated to act, and possess the requisite behavioural skills for effective action, they are likely to initiate and maintain health-promoting behaviours.

According to the IMB model, information that is directly relevant to the performance of behaviour and that can be easily enacted by an individual in his or her social ecology is a critical determinant of behaviour performance (Fisher & Fisher, 1992), i.e providing students with information through education about sustainability challenges and the sustainable development goals is a determinant of whether or not students will participate in proffering solutions to some of the sustainability challenges and participate in implementation of the goals.

In addition, the IMB model specifies that motivation is an additional determinant of behaviour performance, and influences whether even well informed individuals will be inclined to undertake health promotion actions, i.e if students are well informed about sustainability challenges and the development goals but are not well motivated to act such as through: the provision of funds, enabling environment, toolset to enable them develop necessary solutions and innovations to overcome challenges such as climate change, provision of grants to enable them work in areas such as renewable energy, smart agriculture, forest rehabilitation, the design of resource-efficient cities and sound management of healthy ecosystems, being informed alone might not translate to

participation in solving sustainability challenges. This indicates that information as well as motivation are key determinants as to whether or not students will participate in implementing the development goals.

Behavioural skills for performance of health promotion actions are an additional critical determinant of whether or not well-informed and well-motivated individuals will be capable of effectively enacting health promotion behaviours, i.e. when students are adequately informed and well-motivated coupled with the behavioural skills that they possess such as knowledge, creativity, energy, enthusiasm, and critical thinking ability, they are more likely to participate in implementation of the goals. In essence, the effects of information and motivation are seen primarily as a result of the application of behavioural skills to the initiation and maintenance of behaviour.

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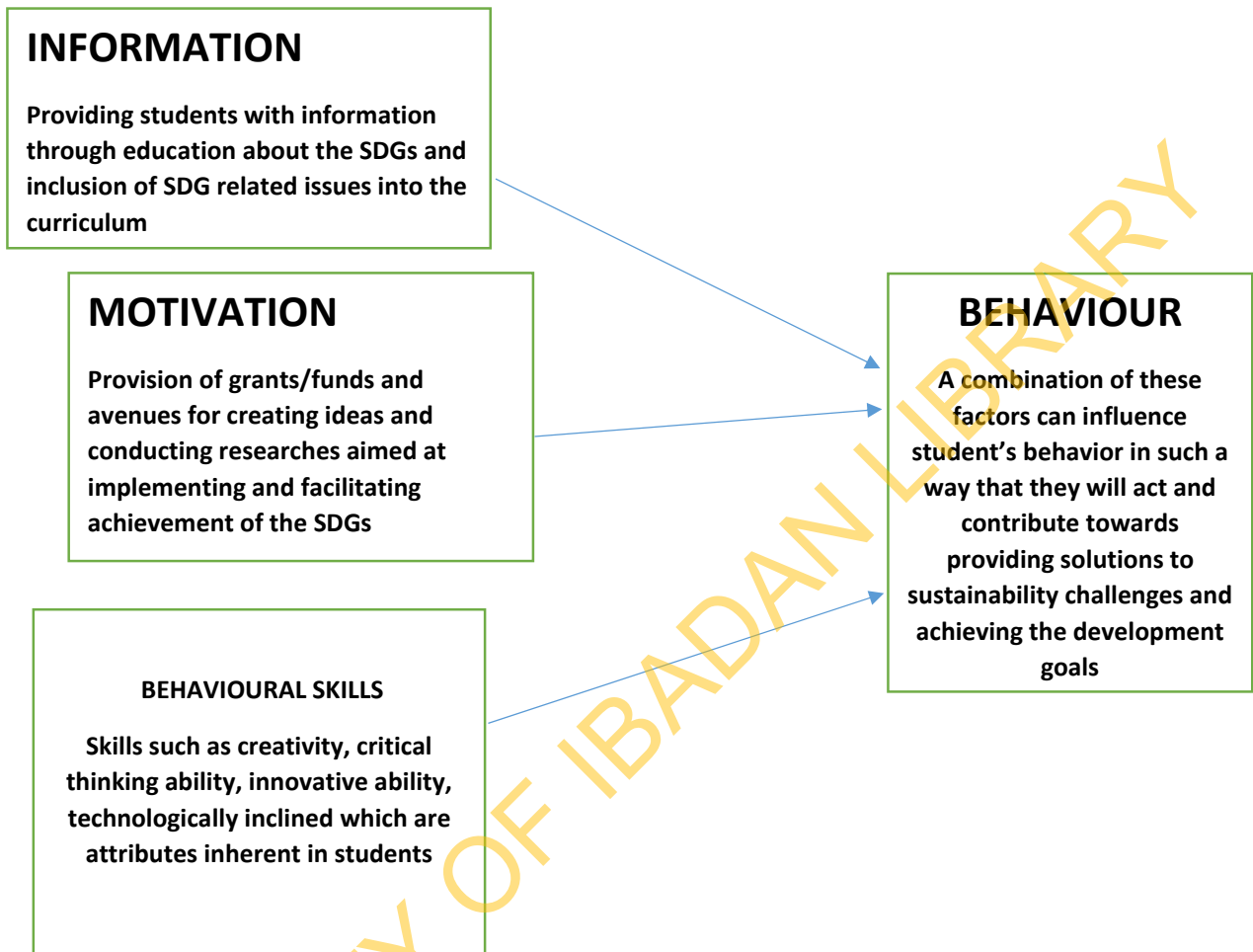


Fig 2.1: Schematic diagram showing how provision of information & motivation coupled with behavioural skills interact to promote behavior.

CHAPTER THREE

METHODOLOGY

3.1 Study Design

The study was a descriptive cross-sectional study. It was conducted among undergraduate and post graduate students of University of Ibadan. A self-designed semi-structured questionnaire was administered to the students who fulfilled the inclusion criteria and consented to participate in the study.

3.2 Study Site

The study was carried out in University of Ibadan, the premier university in Nigeria. The campus is located in the city of Ibadan, the capital of Oyo state, in South-western Nigeria. The institution occupying over 1,032 hectares of land was originally established on the 17th of November, 1948 as an external College of University of London. It was called University of Ibadan in 1962 and had over 2000 students (University of Ibadan). University of Ibadan (UI) campus spans over 1,032 hectares of land in Ibadan North Government Area. The institution was originally established on 17 November 1948 as an external College of the University of London. As at that time, it was called the University College and had 104 students spread across the three existing faculties at the time: Arts, Science and Medicine (University of Ibadan, 2016).

Currently, the University of Ibadan has sixteen (16) faculties with a population of over 20,000 students with over 35% of enrolled students as postgraduate students (University of Ibadan, 2016). The sixteen faculties are: Arts, Education, Law, Basic Medical Sciences, Clinical Sciences, Pharmacy, Public Health, Dentistry, Veterinary Medicine, Technology, Agricultural Sciences, Sciences, Social Sciences Environmental design and management, Renewable and Natural Resources and Economics. There are eleven (11) Departments under the Faculty of Arts, nine (9) Departments under the Faculty of Sciences, under the Faculty of Education there are eight (8) Departments and one (1) Centre – Abadina Media Resource Centre, whereas the Faculty of Social Sciences has six (6) Departments, the Faculties of Technology, and Agriculture & Forestry both have eight (8) Departments. There are also seven (7) Departments under the Faculty of Veterinary Medicine, five (5) Departments under Public Health, seven (7) Departments under the Faculty of Basic

Medical Sciences, five (5) under the Faculty of Pharmacy and thirteen (13) Departments, four (4) Institutes and two (2) Centres under the Faculty of Clinical Sciences. Six (6) educational Centres are under the University as well, offering courses in diverse specialties, one of the centers called the center for sustainable development (CESDEV) offers courses in development practice and sustainable development which includes issues relating to the SDGs (University of Ibadan, 2016).

The University of Ibadan also has three (3) postgraduate halls namely: Tafawa Balewa, ObafemiAwolowo and AbdusalamiAbubakar halls all cited within a walking distance from the University Library (University of Ibadan, 2016).

3.3 Study population

The study population consists of selected undergraduate and post graduate students of the University of Ibadan.

3.4 Inclusion Criteria

Selected registered, full time undergraduate and post graduate students of the University of Ibadan who gave their consent to participate were included in the study.

3.5 Exclusion criteria

Students on part time studies and also those that do not give their consent to participate were excluded from the study.

3.6 Sample size determination

The sample size was estimated using Leslie Fischers formula using a 50% prevalence, minimum sample size was obtained as shown below.

$z = 1.96$ (level of significance), $p =$ prevalence (50 %), $q = 1-p$ (50 %), $n =$ minimum sample size, $d =$ margin of error (0.05).

$$n = \frac{z^2 pq}{d^2}$$

$$n = 384$$

$$\text{Estimate for non-response} = 10/100 \times 384 = 38$$

Therefore, minimum sample size = $384 + 38 = 422$ and to improve accuracy, the sampling size was rounded up to 430.

3.7 Sampling technique

A multistage probability sampling method was adopted to select respondents for the study. The sampling method was carried out in four stages. The study population involved undergraduate and postgraduate students. A proportionate sampling technique was used to determine the number of students to be selected from each department for the study using the current population of students obtained from the Academic Planning Unit of University of Ibadan

In the **first stage**, the respondents were selected using a 50:50 ratio for undergraduate and post graduate category, i.e based on a sample size of 430, undergraduate students were 215 while postgraduate students were also 215. This was done to ensure representativeness of the sample.

In the **second stage**, simple random sampling by ballot was used to select one department from each faculty.

In the **third stage** a proportionate sampling technique was used to select respondents in each of the selected departments for the undergraduate and post graduate category.

In the **fourth stage**, based on the data of the number of males and females in each department, stratified random sampling technique was used to determine the number of male and female respondents to be selected from each department.

3.8 Instrument for data collection

A semi-structured, pre-tested, self-administered questionnaire was used to collect information from the research participants. The questionnaire consisted of six (6) sections. Section 1 focused on the socio-demographic information of the respondents, section 2 assessed the awareness of respondent's about the SDGs, section 3 determined respondent's knowledge about the SDGs, section 4 determined the extent of University of Ibadan contribution towards student's knowledge about SDGs, section 5 explored the perception of the respondents towards participation in implementation of the SDGs and section 6 determined contribution of respondents to implementation of the SDGs.

3.9 Validity of instrument

Validity of the instrument was ensured through consultation of relevant literature and subjection of the drafted questionnaire to critical review by the research supervisor, other lecturers in the faculty and peers. The questionnaire was developed based on the set objectives, the pretest, review of literatures and guidance of my research

supervisor. Validity was also ensured by using simple language and ensuring clarity of questions in the research instrument.

3.10 Reliability of Instrument

To ensure reliability, the instrument was pre-tested among 10% of the sample size using students of the University of Ilorin, Ilorin due to their similar characteristics with students of the University of Ibadan. The alpha cronbach reliability reported from the pre-test was 0.88 and this shows a good reliability.

3.11 Data Collection Procedure

Two research assistants who are literate, mature and have had previous experience on data collection were recruited for the study. They assisted in administering of questionnaires within University of Ibadan campus premises. Questionnaires were administered to the respondents in lecture halls/ classrooms. Copies of the questionnaire were administered to study participants by the researcher and the research assistants after obtaining a valid informed consent through provision of adequate information about the study, the purpose, the risk involved, the benefit and the requirement of the participants. Questionnaires were self-administered except in situations where clarifications were sought by respondents on any item or questions. Copies of questionnaires were administered simultaneously to the participants by the research assistants. One of the challenges faced during data collection was that some of the respondents were at first un-willing to fill the questionnaires due to data fatigue, respondents complained that they had recently filled so many questionnaires from other researchers. This was resolved by allowing the participants to complete the questionnaires whenever it will be comfortable for them, the researcher and the research assistants collected contact details of such respondents in order to retrieve the questionnaire. Eventually only 387 questionnaires were retrieved from the field.

3.12 Data Management and Analysis

All copies of administered questionnaire were checked for completeness and accuracy. Serial numbers were assigned to each questionnaire for easy identification and for correct data entry and analysis. A coding guide was developed to code and enter each question into the computer for analysis. Analysis was done with the use of Statistical package for Social Sciences (SPSS) version 21.

Data on knowledge was analyzed by assigning 3 points to each correct answer provided to multiple choice questions, while zero point assigned to both incorrect and don't know answers provided by the respondents. While 1 point was assigned to each correct answer provided to true/false questions. This resulted in an 18-point SDG knowledge scale, with 0 being the lowest and 18 the highest points. Respondents with ≤ 6 points were regarded as having poor knowledge, $\geq 7 < 13$ was regarded as fair knowledge while ≥ 13 was regarded as good knowledge of SDGs. T-test statistics was used to compare the mean knowledge score of the undergraduate and postgraduate category. Data were presented on tables.

Data on perception was analyzed by assigning 2 points to each correct answer while 3 points was assigned to questions 26 and 27. The reason for the disparity is that questions 26 and 27 are very cogent perception questions which are major determinants of positive perception towards SDG implementation. This resulted in a 14 point SDG implementation Perception scale, with 0 being the lowest and 14 the highest points. Respondents with ≤ 8 points were regarded as having negative Perception, while $\geq 8-14$ was regarded as positive perception towards SDG implementation.

Chi-square was used to determine if associations between the socio-demographic characteristics of the respondents and knowledge about SDGs. Chi-square was also used to determine if an association exists between level of education and knowledge about SDGs.

3.13 Limitation of the study

The study was limited by time and resource constraints which prevented the study from being extended to other higher education institutions.

3.14 Ethical Consideration

All identifiers were removed from the questionnaire and confidentiality was ensured through protection of data collected from participants. Data collected was stored in a safe place under lock and the data on the computer was pass-warded.

Translation of protocol to local language

Research participants are literate in English language.

Beneficence to participants

There is no direct benefit of the study to the research participants but results from the study will serve as platform for orienting and educating students about the SDGs, the findings from this study will generate information that will document level of awareness and knowledge about SDGs among students, this will inform the need to include/scale-up SDG teaching and learning through the curriculum. This will ensure that sustainability literate students are produced from higher institutions and this will ensure more hands on deck towards participation in SDG implementation.

Non-maleficence

The study posed no harm/injury to the participants since it did not involve any invasive procedure but required the time of the participants and provision of some sensitive information.

Voluntariness

Participation in this study was strictly voluntary and participants were informed they are free to withdraw from the study at any time.

3.15 Outcome Expectation

The conduct of this research will provide a clear picture about the level of awareness and knowledge of the Sustainable Development Goals among students and help to identify the gaps in knowledge about the SDGs. The results from this research can also be used as baseline information for the University to evaluate its curricular programs, academic and co-curricular activities in such a way that they will enhance student's awareness and knowledge of the SDGs. In addition, results from the study will provide information on other medium that can be used to enhance SDG awareness among students.

CHAPTER FOUR

RESULT

4.1 Socio-Demographic Characteristics

A summary of the profile of the respondents is presented in Table 4.1. The ages of the respondents ranged from 16 years to 37 years of age with a mean age of 23.7 ± 4.0 . Majority of the respondents (44.4%) were between 21-25 years, followed by ages 26-30 years (28.3%), 15-20 years (22.5%), 31-35 (4.3%), 36-40 (0.5%). More than half (62.3%) of the respondents were males while 37.7% were females. Most of the respondents were Christians (69.0%) followed by the Islamic religion (30.5%) and other traditional religion accounted for (0.5%) of the total population. About half 50.9% of the respondents were postgraduate students while 49.1% were undergraduate students.

The respondents ethnicity depicted a multi-cultural mix of different tribes which include the Yoruba, Hausa, Igbo, Fulani, Igala, Ibibio, Nupe, Afam, Tiv, Kanuri, Urobo, Isoko, Ijaw, Idoma and Kalabari amongst others. Yoruba constituted the majority of the respondents (76.7%), followed by Igbos (7.0%) then 1.6% were Hausa while 14.7% were from other tribes. Majority of the students did not have any occupation (87.3%), while 12.2% had occupations of which majority belonged to the post graduate category.

Table 4.1 Socio-demographic characteristics of respondents

Socio demographic characteristics	Frequency	Percentage
Age (years) N=374		
≤20	84	22.5
21-25	166	44.4
26-30	106	28.3
31-35	16	4.3
≥36	2	0.5
Sex N = 387		
Male	241	62.3
Female	146	37.7
Religion N= 387		
Islam	118	30.5
Christianity	267	69
Others	2	0.5
Ethnic group N= 387		
Yoruba	297	76.7
Hausa	6	1.6
Igbo	27	7.0
Others	57	14.1
Level of Education N = 387		
Undergraduate	191	49.4
Post graduate	196	50.6
Occupation N= 387		
Yes	47	12.1
No	340	87.9

4.2 Awareness of the Sustainable Development Goals

Table 4.2 depicts University of Ibadan student's awareness about the Sustainable Development Goals. When asked if they were aware of the SDGs, about two-thirds 66.3%(256) of the respondents answered yes while 33.7% (130)reported that they have not heard of the Sustainable Development Goals. Majority of those that were aware belonged to the post graduate category 49.4% (172), while a fewer number 50.6% (84) belonged to the undergraduate category.

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Table 4.2: Frequency and percentage of SDG awareness

Awareness variable N=386	Frequency	Percentage(%)
Yes	256	66.3
No	130	33.7
Total	386	100

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Table 4.2.1 Awareness of SDGs disaggregated by level of education

N= 386	Postgraduate (%)	Undergraduate (%)
Aware	172 (87.8)	84 (44.2)
Not aware	24 (12.2)	106 (55.8)
Total	196 (100)	190 (100)

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4.2.1 Source of information about the SDGs

About 34.4% (133) of those who stated they are aware of the SDGs reported internet/social media as their main source of information. 6.5% (25) of the respondents stated they became aware of the SDGs through the NYSC program, this group of individuals belonged to the post graduate category. 10.1% (39) of the respondents reported that they became aware of the SDGs through the University course work, while 4.1% (16) reported they became aware through seminars, conferences and workshops they attended out of their volition, 2.8% (11) of the respondents reported they became aware through friends. Other sources of information include: from journal publication/newspaper 2.1% (8), personal reading 0.3% (1), undergraduate lectures 1.0% (4), government gazette 0.3% (1), TV 2.6% (10), workplace 0.3% (1), 1.0% (4) of the respondents reported that they became aware of the SDGs through NGOs such as YALI (Young African Leaders Initiative), AISEC, Queens young leaders award etc.

Table 4.2.2: Source of information about the Sustainable Development Goals

N= 256

Major source of information	Frequency	Percentage (%)
Social media	135	34.9
Secondary school	1	0.3
Personal Reading	1	0.3
Undergraduate lectures	4	1.0
Government Gazette	1	0.3
Journal publication/News paper	8	2.1
Through a friend	11	2.8
School coursework	39	10.1
TV	10	2.6
Seminar/workshop/conference	16	4.1
NYSC	25	6.5
NGOs	4	1.0
Workplace	1	0.3
Total	256	100

4.3 Knowledge of the Sustainable Development Goals

Table 4.3 depicts knowledge of University of Ibadan students about the sustainable development goals. When asked the question, “Do you know what the SDGs are? Out of 256 who stated they were aware of the SDGs (130 respondents were not eligible to answer as they had stated earlier that they were not aware), 85.9% (220) answered yes while 14.1%(36) answered no. The mean knowledge score was 6.7 ± 6.55 .

Other variables used to assess knowledge of the respondents about the SDGs include: how many are the SDGs? Out of the 220 respondents who stated they were knowledgeable about the SDGs, only 146 correctly stated that the SDGs are 17 in number while 21 of the respondents admitted they don't know how many SDGs were formulated by the United Nations.

In order to determine if the respondents knew the goals formulated by the United Nations, a number of goals were listed for the respondents to identify the incorrect option from the list. Out of 220 respondents who stated they were knowledgeable about the goals, only 60.5% (133) correctly identified that access to improved internet service is not one of the SDGs, 23 of the respondents stated that both provision of internet service and provision of decent jobs for all are not part of the SDGs, 14.1% (31) of the respondents admitted to not knowing which of the options listed was not one of the goals, while 56 (25.5%) out of the 220 respondents who stated they were knowledgeable about the goals did not know that availability of clean water and sanitation, access to sustainable and clean energy and provision of decent jobs for all are part of the 17 goals formulated by the United Nations.

Only 113(51.4%) respondents out of 220 who stated they were knowledgeable about the development goals were able to correctly state 2015 as the year the SDGs were adopted. While 173 (78.6%) respondents correctly stated 2030 as the deadline set for achieving the goals. Other variables that were used to determine knowledge of the respondents about the SDGs include the following statement: The SDGs aim to achieve peace, progress and prosperity for all people regardless of race, gender or nationality. A total of 207 (94.1%) of the respondents out of the 220 respondents who stated they were knowledgeable about the goals agreed this statement is true while 5(2.3%) stated this statement is false and 8 (3.6%) admitted to not knowing if the statement is true or false.

Overall, only 25.1% (97) respondents actually had good knowledge about the goals, whereas 220 respondents stated they were knowledgeable about the goals. Only 23.0% (89) of the respondents had fair knowledge and 8.8% (34) of the respondents had poor

knowledge, while 43.2% (167) respondents stated they do not have any knowledge about the goals.

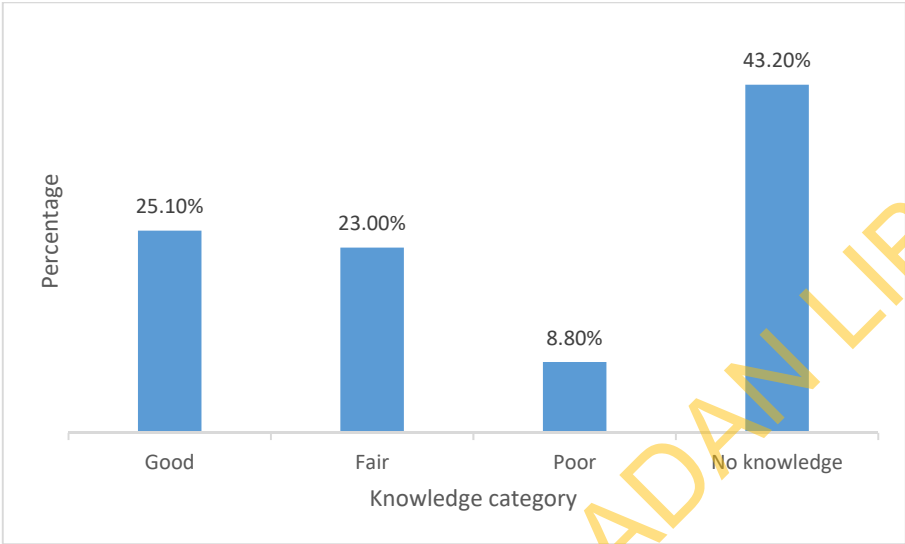


Fig 4.3: SDG knowledge categories

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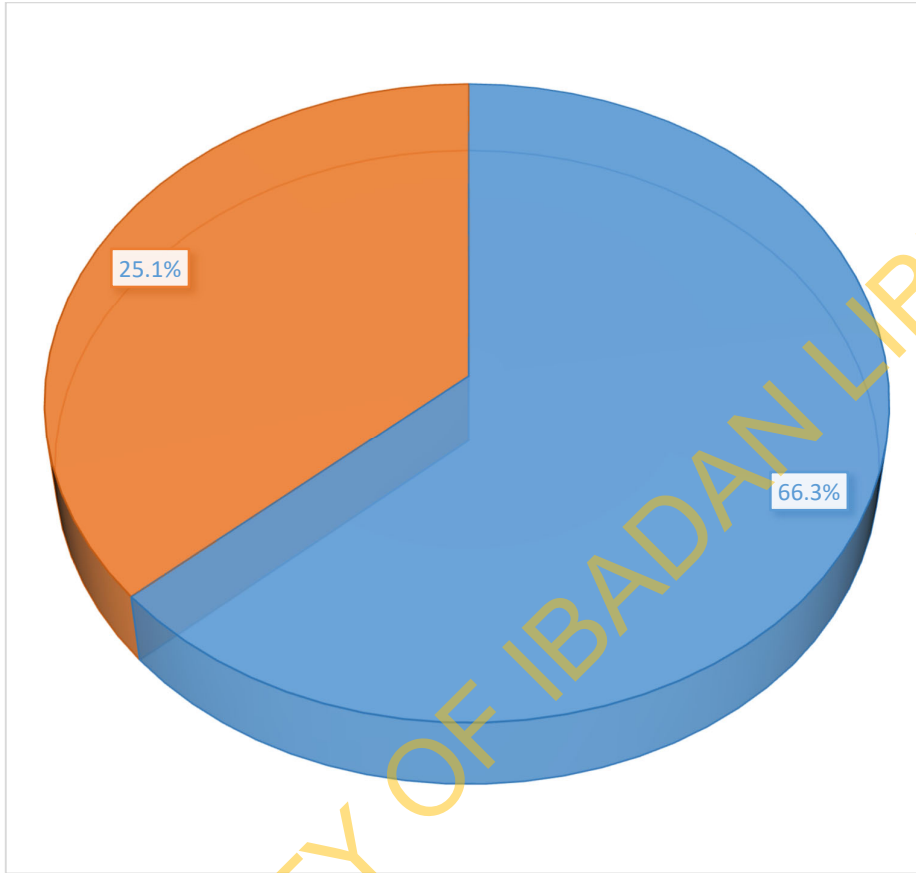


Fig 4.3.1 SDG awareness and knowledge among UI students.

(Awareness, knowledge)

Table 4.3 Knowledge of the Sustainable Development Goals

Knowledge of the SDGs N= 256	variable	Frequency
Do you know what the SDGs are?		
	Yes	220
	No	36
Knowledge variable N= 220	Frequency	Percentage
How many are the SDGs?		
16	21	10.5
15	21	10.5
17	146	73
18	11	5.5
Total	220	100
Which of the following is not one of the SDGs? N=220		
Availability of clean water and sanitation for all	2	0.9
Access to sustainable energy for all	4	1.8
Access to improved internet service for all	133	60.5
Provision of decent jobs for all	27	12.3
Improved internet service/provision of decent jobs	23	10.5
I don't know	31	14.1
Total	220	100
What year were the SDGs adopted? N=220		
2015	113	51.4
2014	46	20.9
2016	28	12.7
2017	2	0.9
I don't know	31	14.1
Total	220	100
When is the deadline for achieving the SDGs? N=220		
2020	29	13.2
2025	11	5.0
2030	173	78.6
2050	5	2.3
I don't know	2	0.9
Total	220	100
The SDGs aim to achieve peace, progress and prosperity regardless of nationality, gender or race N= 220		
True	207	94.1
False	5	2.3

I don't know	8	3.6
Total	220	100

Table 4.3 b Knowledge of the Sustainable Development Goals

The SDGs are inter-linked and indivisible N= 220	Frequency	Percentage
True	181	82.3
False	18	8.2
I don't know	21	9.5
Total	220	100

Which of the following best describes sustainable development? N= 220

A form of development that respects the environment	6	2.7
a form of development that meets the need of the present without compromising the ability of future generations to meet their own need	107	48.6
A form of development that find a balance between environment, economic and social issues	95	43.2
I don't know	12	5.5
Total	220	100

The dimensions of sustainable development include: Society, economy & environment N= 220

True	211	95.9
False	3	1.4
I don't know	6	2.7
Total	220	100

4.4 University Contribution towards students' knowledge about the Sustainable Development Goals.

This section depicts the level of University of Ibadan's contribution towards students' knowledge about the Sustainable Development Goals. When asked the question "Have you had any form of education or enlightenment relating to the SDGs through the University? Out of 387 respondents, 132(34.1%) answered yes while 249(64.3%) answered they have not received any enlightenment or education relating to the SDGs through the University.

When the respondents were asked if they have been enlightened on the concept of education for sustainable development, 91 answered yes while 291 answered no.

When asked if the learning content of education for sustainable development which includes issues pertaining to climate change, bio-diversity, disaster risk reduction, sustainable consumption and production etc where aspects of any of the courses taken by the respondents, 192 answered yes, 106 answered no while 89 stated I don't know.

When the respondents were asked if in their own opinion they felt adequately equipped through the University with enough information and knowledge that will enable them contribute towards implementation of the goals, 85 answered yes, 180 answered no while 122 indicated they were not sure they had been equipped with enough information about the global goals through the University.

Table 4.4: University contribution to student's knowledge about the SDGs

N= 387	Freq	Percentage
Have you had any form of education or enlightenment relating to the SDGs through the University		
Yes	132	34.1
No	249	64.3
I don't know	6	1.6
Total	387	100
Have you been enlightened through the University on the concept of Education for Sustainable Development		
Yes	91	23.5
No	291	75.2
I don't know	5	1.3
Total	387	100
The learning content of Education for sustainable development includes the following: climate change, bio-diversity, disaster risk reduction. Is there any of your courses that contains aspects of the above listed options?		
Yes	192	49.6
No	106	27.4
I don't know	89	23
Do you think the University has equipped you with enough knowledge and information that can enable you develop ideas and contribute to the implementation of the SDGs		
Yes	85	22.0
No	180	46.5
Not sure	122	31.5

Total	387	100
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4.5 Perception of students towards participation in the implementation of the Sustainable Development Goals

This section was used to determine students' perception towards participation in the implementation of the SDGs using the following variables: Being adequately informed about the SDGs can influence me to develop ideas and participate in the implementation of the SDGs? Majority of the respondents 362 (93.8%) agreed that being informed about the SDGs can influence them to participate in the implementation of the SDGs while 15(3.9%) respondents disagreed to this statement and 10(2.6%) stated I don't know.

When asked about their view on the relationship between providing students with information about sustainability challenges and students participation in the implementation of the goals, 347(89.2%) respondents agreed that adequately equipping students with information about sustainability challenges can translate to student participation in the implementation of the goals, 32(8.3%) respondents disagreed while 8(2.1%) stated I don't know.

Majority of the respondents 355(91.7%) perceived that provision of grants/fund for students to conduct researches and develop ideas to solve sustainability challenges can motivate students to contribute to the implementation of the SDGs while 24(6.2%) respondents disagreed to this statement and 8(2.1%) indicated I don't know.

Majority of the respondents 303 (78.3%) agree that student participation in the implementation of the SDGs is necessary while 76(19.6%) respondents disagree and 8(2.1%) respondents stated I don't know. 232(60.3%) of the respondents agree that the SDGs are achievable the 2030 deadline while 142 (36.9) disagree that the goals are achievable by the deadline and 13(2.9%) stated I don't know.

When the respondents were asked for their opinion on who should contribute towards implementation of the SDGs, majority 330(85.5%) agreed that everybody should contribute towards implementation of the SDGs, 25(6.5%) of the respondents think it is the responsibility of the government, 7(1.8%) think NGO's should be the one to contribute towards SDG implementation, 4(1%) are of the opinion that students alone should

contribute to implementation of the SDGs while 11(2.8%) of the respondents think the youth alone should contribute towards SDG implementation.

The mean perception score was 10.89 ± 2.95 . Majority(79.2%) of the respondents had positive perception towards SDG implementation while (20.8%)had negative perception.

Table 4.5: Perception of students towards participation in the implementation of the Sustainable Development Goals

Being adequately informed about the SDGs can influence me to develop ideas and participate in the implementation of the SDGs(N= 387)	Frequency	Percentage
Agree	362	93.8
Disagree	15	3.9
I don't know	10	2.6
Adequately equipping students with information about sustainability challenges and the sustainable development goals can translate to participation in implementation of the goals		
Agree	347	89.7
Disagree	32	8.3
I don't know	8	2.1
Provision of grants/fund for students to conduct researches and develop ideas to solve sustainability challenges can motivate students to contribute to the implementation of the SDGs		
Agree	355	91.7
Disagree	24	6.2
I don't know	8	2.1
Student participation in SDG implementation is not necessary		
Agree	76	19.6
Disagree	303	78.3
I don't know	8	2.1
The SDGs are achievable by the deadline		
Agree	232	60.3
Disagree	142	36.9
I don't know	13	2.9
Who in your opinion should be involved in contributing to the implementation of the SDGs		
Government	25	6.5
NGO	7	1.8
Students	4	1.0
Youth	11	2.8

Everybody	330	85.5
I don't know	10	2.3
Perception		
Positive	300	77.5
Negative	79	20.4
Not applicable	8	2.1
Total	387	100

4.6 Respondents contribution towards socio-economic/ environmental development

This section determined the number of students who voluntarily contribute towards socio-economic/environmental development in any community/town or the nation at large. 59.9% of the respondents indicated that they contribute towards socio-economic/environmental development while 40.1% indicated that they do not contribute. Majority (33.9%) of those who contribute do so in the area of education and empowerment, closely followed by health (27.5%), environmental protection (21.5%), poverty eradication and food security (8.2%), good governance and leadership (8.2%), gender equality, women trafficking and child labor eradication (0.4%) and community development (0.4%).

The respondents who stated that they contribute towards socio-economic development indicated some constraints to their volunteerism which include: in-adequate/lack of fund (34.6%), difficulty in trying to orientate people (13.5%), time constraint (13.1%), lack of encouragement/support from public/people (11.8%), corruption/selfish interest of people (1.7%), choice of leadership (0.8), lack of enabling environment (2.1%), lack of social amenities (0.4%), illiteracy/ignorance (3.0%), language barrier/communication (3.4%), inadequate equipment/facilities (5.1%), socio-cultural/religious issues (1.7%), security (2.1%), dubious nature of people (1.7%), lack of data availability (0.4), religious discrimination (0.4%). Few (2.5%) of those who do not contribute indicated that they don't due to lack of enabling environment to engage in volunteerism, 0.8% indicated they do not contribute due to busy schedule/time constraint while 0.8% attributed their non-contribution to their lack of awareness/knowledge about the SDGs.

Table 4.6: Respondents contribution towards socio-economic/ environmental development

Do you contribute to the socio-economic/environmental development of any community/town/ to the nation N= 387	Freq	Percentage
Yes	232	59.9
No	155	40.1
Total	387	100
If yes, please indicate which N= 232		
Poverty eradication and food security	19	8.2
Education and empowerment	79	33.6
Health	64	27.6
Environmental protection	50	21.6
Good governance and leadership	19	8.2
Gender equality, women trafficking & Child labor eradication	1	0.4
Community development	1	0.4
Total	232	100
Please indicate some constraints to your work/volunteerism N= 232		
Inadequate/lack of fund	82	34.6
Corruption/selfish interest of people	4	1.7
Lack of encouragement/support from public/people	28	11.8
Time constraint	31	13.1
Choice of leadership	2	0.8
Difficulty in trying to orientate people	32	13.5
Lack of enabling environment	5	2.1
Lack of social amenities	1	0.4
Illitracy/ignorance	7	3.0
Language barrier/communication	8	3.4

Inadequate equipment/facilities	12	5.1
Socio-cultural/religious issues	4	1.7
Security	5	2.1
Dubious nature of people	4	1.7
Lack of data availability	1	0.4
Religious discrimination	1	0.4
Total	232	100

4.7 Test of hypothesis

- I. There is no significant association between the demographic characteristics (age, level of education) and knowledge about SDGs among students of University of Ibadan.
- II. There is no significant difference in the knowledge of the SDGs between undergraduate and postgraduate students of University of Ibadan.
- III. There is no significant association between SDG awareness and knowledge among students of University of Ibadan
- IV. There is no significant association between SDG knowledge and perception of University of Ibadan students towards participation in the implementation of the SDG

Hypothesis I

Test of association between knowledge and some socio-demography (age, gender, level of education, religion)

From the study it was indicated that a statistically significant association exists between knowledge about the SDGs and age of respondents, at $p = 0.00$. Therefore we reject the null hypothesis, there was also a statistically significant association between knowledge and level of education ($p = 0.00$).

Further analysis indicated that there was no statistically significant association between knowledge about the SDGs and gender of the respondents ($p = 0.47$), therefore we fail to reject the null hypothesis. There was no statistically significant association between knowledge and religion ($p = 0.74$), there was also no statistically significant association between knowledge and tribe.

Table 4.7.1: Association between socio demographic variables and knowledge of the SDGs (* significant)

Age N = 374	Poor knowledge(%)	Fair knowledge(%)	Good knowledge(%)	No knowledge	X²	Df	p-value
15-20	5 (15.6)	10 (11.6)	6 (6.5)	63 (38.7)	59.13	12	0.00*
21-25	14 (43.8)	36 (41.9)	47(50.5)	69 (42.3)			
26-30	11 (34.4)	33 (38.4)	35(37.6)	27 (16.6)			
31-35	2 (6.3)	5 (5.8)	5 (5.4)	4 (2.5)			
≥36	0.00 (0)	2 (2.3)	0.00	0.00			
Total	32 (100)	86 (100)	93 (100)	163 (100)			
Sex N= 387							
Male	24 (70.6)	61 (68.5)	53 (54.6)	103 (61.7)	4.9	3	0.17
Female	10 (29.4)	28 (31.5)	44 (45.4)	64 (38.3)			
Total	34 (100)	89 (100)	97 (100)	167 (100)			
Level N= 387							
Undergraduate	14 (41.2)	29 (32.6)	25 (25.8)	123 (73.7)	71.94	3	0.00*
Postgraduate	20 (58.8)	60 (67.4)	72 (74.2)	44 (26.3)			
Total	34 (100)	89 (100)	97 (100)	167 (100)			
Tribe N= 387							
Yoruba	26 (76.5)	67 (75.3)	72 (74.2)	132 (79.0)	7.311	9	0.605
Hausa	0.00	2 (2.2)	1 (1.0)	3 (1.8)			
Igbo	0.00	8 (9.0)	9 (9.3)	10 (6.0)			

Others	8 (23.5)	12 (13.5)	15 (15.5)	22 (13.2)	
Total	34 (100)	89 (100)	97 (100)	167 (100)	

Religion

Islam	9 (26.5)	30 (33.7)	23 (23.7)	56 (33.5)	5.059	6	0.536
Christianity	25 (73.5)	58 (65.2)	74 (76.3)	110 (65.9)			
Other	0.00	1 (1.1)	0.00	1 (0.6)			
Total	34 (100)	89 (100)	97 (100)	167 (100)			

Hypothesis II: There is no significant difference between mean knowledge score and level of education

The mean knowledge score for the undergraduate category is 3.93 while the mean knowledge score for the postgraduate category is 9.49. With a p- value of 0.00, the Null hypothesis of no difference is rejected as there is a statistically significant difference in mean knowledge score of undergraduate and postgraduate students.

Table 4.7.2: Significant difference between level of education and mean knowledge score

Level of Education	Mean knowledge score	SD	Mean Difference	P-value	t
Undergraduate	3.93	5.77	5.56	0.00*	9.2
Post graduate	9.49	6.09	5.56		

***Significant**

Hypothesis III: Test of association between awareness and knowledge of the SDGs

There was a statistically significant association between knowledge of SDGs and awareness of the SDGs. Hence, the null hypothesis is rejected ($p=0.00$).

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Table 4.7.3: Association between knowledge and awareness of SDGs

Awareness	SDG Knowledge				X ²	P-value
	Poor (%)	Fair (%)	Good (%)	No knowledge(%)		
Yes	34(100)	89 (100)	97 (100)	36 (21.7)	259.780	0.000*
No	0.00	0.00	0.00	130 (78.3)		
Total	34(100)	89 (100)	97(100)	166 (100)		

*Significant**

Hypothesis IV: Association between knowledge and perception of students towards participation in the implementation of the SDGs

A statistically significant association exists between knowledge about the SDGs and perception towards implementation. A total of 220 respondents stated there were knowledgeable about the SDGs, out of which 34 had poor knowledge, 89 had fair knowledge and 97 had good knowledge, while 300 respondents (77.5%) had positive perception about the SDGs.

	Perception		X ²	P- value
	Positive (%)	Negative (%)		
Knowledge				
Good	90 (30.0)	7 (8.9)		
Fair	78 (26.0)	9 (11.4)	32.484	0.00*

Table 4.7.4: Association between knowledge of the SDGs and perception on contribution towards implementation of the SDGs

Poor	22 (7.3)	12 (15.2)
No Knowledge	110 (36.7)	51 (64.6)
Total	300 (100)	79 (100)

*Significant**

CHAPTER FIVE

DISCUSSION

5.1 Socio-Demographic Profile

The mean age of the respondents was 23.74±4.03 years with majority between the ages of 21 and 25 years.

The respondents in this study were mostly Yoruba. This can be ascribed to the location of the University which falls into the South Western region of the Country where the Yoruba tribe constitute the majority.

The fact that Christianity is predominant among the students of University of Ibadan as identified from this study can also be attributed to the geographical region of Nigeria in which the University is located, as Christianity is the most common religion practiced in this region compared to the Northern part of the country where Islam is the predominant religion. The two (2) major religions practiced in Nigeria are Christianity and Islam and this can be explained in the observed religion percentage seen among the respondents that constitute mostly Christians and Muslims.

More of the respondents were male (62.3%) while 37.7% were female. An equal number of undergraduate and postgraduate students were selected for the study to ensure representativeness.

5.2 Awareness/Knowledge of the Sustainable Development Goals

Results from this study indicate that awareness does not necessarily lead to knowledge as 256(66.3%) respondents stated they were aware about the SDGs while only 97(25.1%) had good knowledge. This is also the case in a study conducted by Omisoreet *al.*, 2017 to determine awareness and knowledge of SDGs among a University community in South Western Nigeria, where it was identified that 43% of the respondents were aware about the SDGs while only 4.2% had good knowledge. This difference in level of awareness and knowledge can be attributed to the fact that people may have heard about the SDGs but may not have an in-depth knowledge about the goals. However awareness and knowledge level observed from this study are significantly higher than what was reported from Omisore et al 2017 study of 43% and 4.2% level of awareness and knowledge respectively. The level of awareness in this study and Omisore et al study is also higher than that observed in a global survey of the SDGs conducted in 2016(Globe scan, 2017), involving 13 countries including Nigeria and Kenya, the level of awareness ranged from 16% in Russia to 44% in India, with Nigeria and Kenya having 34% and 30% respectively(Globe scan, 2017). Similarly in another survey conducted across Europe in 2015(Euro barometer report, 2016), among 27,672 respondents, the level of awareness of the SDGs was 36%, which is lower than what was obtained in this study. From the results obtained in the past years, there seems to be an increasing level of awareness in more recent years. This increasing level of awareness in more recent years can be attributed to the effort in terms of publicity which the international community is using to ensure that there are substantial improvements in terms of raising awareness level.

In addition higher level of education was observed to be associated with more knowledge about the SDGs as the mean knowledge score for the undergraduate category was 3.93 while the mean knowledge score for the postgraduate category was 9.49, with a mean difference of 5.56 which was found to be statistically significant at $p=0.00$, this is similar to what was reported in a study by Omisoreet *al.*, 2017 where more respondents who had doctorate (PhD) or higher degree (90.5%) were aware compared to those who had first or master's degrees (70.2%) and those who had secondary or post-secondary education.

The higher awareness level among the postgraduates in this study as compared to the undergraduates can be attributed to the fact that undergraduate students don't usually explore outside their course of study and are not likely to be knowledgeable about issues except that which they are taught as part of their course work, while postgraduate students on the other hand tend to spread their tentacles to other areas whether or not such areas relate to their course work, this can be attributed to their higher level of education, maturity and age.

In addition, more male (42%) were aware of SDGs compared to female (24.4%). This is similar to what was reported from a study by Omisoreet *al.*, 2017 where more of those aware of the SDGs were male at 52.3% while female were 35.3%.

The major source of information about the SDGs from this study is from internet/social media at 34.9%, this was followed by the University as a source of information 10.1% and then NYSC (for postgraduate students) 6.5%. The internet as a source of information for majority of the respondents can be attributed to the tremendous improvement in technology which has gained popularity among all age groups as compared to other sources such as television, radio and print media. This is however in contrast to what was reported from a study by Omisoreet *al.*, 2017 where the most common source of information was Tv/radio (39.6%) followed by internet (36.5%).

The increase in the number of respondents who stated internet as their source of information about the SDGs compared to that reported from Omisore et al study which was conducted in 2017 can be attributed to the increasing popularity that the internet is gaining among the populace, therefore due to this reason the number of people who had access to information through the internet in 2018 will be much more than the figure that will have been recorded the previous year which is 2017.

Some of the questions asked to determine knowledge of respondents about the goals indicated that not all respondents who stated they were knowledgeable about the goals actually had good knowledge about the goals. For instance when asked how many are the SDGs? Out of those who stated they were aware of the SDGs, only 73.0%% of the respondents correctly stated 17 as the number of development goals set by the UN, only 60.5% of the respondents could correctly identify that access to internet service is not one of the SDGs, only 51.4% correctly stated 2015 as the year the SDGs were adopted while 78.6% correctly indicated 2030 as the deadline set to achieve the goals.

5.3 University Contribution towards students' knowledge about the Sustainable Development Goals

Results from this study indicate that only 34.1% of the respondents have had any form of education or enlightenment about the SDGs through the University. This is however different from results reported from a study which was conducted among Ugandan and Kenyan students which reported that 74.1% respondents confirmed that their University of enrolment had contributed to their knowledge of the development goals (Wamala et al, 2012).

When the respondents were asked if issues relating to some of the contents of Education for Sustainable Development (ESD) which include: climate change, bio-diversity, disaster risk reduction, sustainable consumption and production are included into any of their courses offered for their course work, 49.6% of the respondents indicated yes. This figure is quite more than the number of respondents who indicated that the University had contributed to their knowledge about the development goals which is 34.1%. It can be deduced from this report that although the University is contributing to student knowledge about the goals, quite a number of students do not know that issues relating to climate change, bio-diversity, disaster risk reduction etc are issues that are pertinent to the development goals. There should be more deliberate and conscious linkage of such issues to the development goals, so that the students will be conscious about the fact that such issues are all related to the development goals.

5.4 Perception of students towards participation in the implementation of the SDGs

Overall, majority of the respondents (77.5%) had positive perception towards participation in SDG implementation. This is commendable as having a positive perception towards participation in implementation of the SDGs will likely translate to actual participation in implementation of the goals once an enabling environment to do so is available. A good number of the respondents (93.8%) agreed that being adequately informed about the development goals can influence them to develop ideas and participate in the implementation of the SDGs. 78.3% of the respondents indicated that student participation in the implementation of the SDGs is important. This is also an indicator that students see themselves as important stakeholders in terms of participation in SDG implementation. Therefore, these students will more likely participate once an avenue to do so is created. A good number of the respondents (60.3%) think that the goals are achievable by the 2030 deadline. This shows that more than half of the respondents have a positive mindset about achieving the goals by 2030, this is more likely to influence them to participate in implementing the goals in order to ensure they are achieved by 2030.

5.5 Student contribution towards socio-economic development

Results from the study indicate that about 60% of the respondents contribute towards socio-economic/environmental development of the society in some areas such as Education and empowerment, poverty eradication & food security, health, environmental protection etc. This indicates that the young population are already working towards becoming the leaders of tomorrow as they are already impacting positively towards improvement in the society. However these contributions are hindered by constraints which include: financial constraint, time constraint, in-adequate facilities and infrastructure and language barrier which impede communication.

5.6 Implication for Health promotion and Education

This study established low level of knowledge among the respondents about the Sustainable Development Goals as a gap that should be addressed with relevant health promotion and education strategies. The approaches and tools of health promotion can also be useful for civil society groups, local/ National governments and multilateral/non-governmental organizations that are working to operationalize the 2030 agenda for sustainable development. The strategies that can be used to address the identified gaps include:

Education: This can be done by creating institution wide awareness about the Sustainable Development Goals through teaching, research and operations and identifying aspects of the goalsthat are most relevant to each discipline and teaching it to students. In addition students should be made to understand the nexus between their respective disciplines and the development goals.

Training: Trainings and capacity buildings should be conducted for academic staff on how to incorporate sustainability literacy into teaching and learning through the curriculum.

Advocacy: Advocacy should be conducted to government, NGOs and international organizations to support students financially in order to create an enabling environment for the students, this can be in form of scholarships or making grants available for developing tools, innovations and ideas that can solve critical challengeswhich the SDGs aim to solve such as climate change, sustainable energy etc. Students possess a number of unique characteristics such as creativity, social networking, passion and critical thinking abilities among others which when tapped will be useful in developing ideas, innovations and tools required to solve some of the challenges that the SDGs intend to solve, unfortunately, this could be hindered by lack of finance.

5.7 Conclusion

Results from this study reveal that SDG awareness is a little high but knowledge is low. Internet/social media remains the major source of SDG awareness among students. A little number of the respondents indicated the University as their source of information about the SDGs. This shows that the University is not doing much to increase its students' awareness about the development goals. The study identified other avenues such as NYSC programthrough which SDG knowledge can be impacted although this can only be done after the students have completed their undergraduate studies.

The study also indicated that students with higher level of education were more knowledgeable about the SDGs compared to those with lower level of education. Majority of the students have positive perception towards SDG implementation. More students also perceive that the goals are achievable by the 2030 deadline, this is commendable as having a positive mindset can enhance increased participation in implementation of the goals. In addition, majority of the respondents think it is everyone's responsibility to contribute

towards implementation of the goals. With majority having this mindset, this will ensure that all hands are on deck in terms of contributing towards implementation of the goals.

A good number of students are already contributing towards socio-economic development of the society through volunteerism, however this is hindered by a number of constraints which include finance, time, inadequate infrastructure, socio-cultural/religious issues among others.

5.8 Recommendations

Institution

- The University institution should develop an approach that will fully integrate and include sustainable development issues and themes related to the different SDGs into the curriculum through teaching, research and operations. The SDGs should not only be part of international development programs but should also be part of most disciplines, therefore Universities should inculcate sustainability literacy into their students and help students identify the nexus between their respective disciplines and the development goals.
- Higher education institutions such as the University of Ibadan should join inter-university agency bodies such as the Higher Education Sustainability Initiative (HESI), International Association of Universities (IAU) etc, to network with other higher education institutions around the World in order to develop approaches on how sustainable development can be taken into account in higher education institutions and how to tailor curriculum development and content to incorporate the concept of sustainable development into all academic and operational activities.
- The University should ensure all students take tests and courses about sustainable development such as the Sustainability Literacy Test (SULITEST), by making such courses a pre-requisite for graduation just the way courses such as Digital literacy and GNS courses are compulsory for all students. This will ensure that all students produced are sustainability literate students.
- The University institution should ensure that there is a deliberate linkage between the development goals and issues such as climate change, disaster risk reduction, bio-diversity etc. The study revealed that nearly half of the respondents already take courses that treat such issues but some of the respondents do not know that such issues are related to the SDGs.

Government and NGOs

- Should provide support and sponsorship for students to conduct research in areas relating to the SDGs such as climate change, sustainable energy, waste management etc, this will capacitate students to contribute towards SDG implementation.

Students

- Students are important stakeholders in terms of participating in SDG implementation, therefore they should contribute more towards implementation of the SDGs through innovative research. This is important because students possess intellectual skills, knowledge, creativity and social networks which could be tapped to solve global challenges facing the World. Students can also contribute by participating hands-on in projects, contribute to knowledge transfer and build the tools that the SDGs will require. In addition, students can disseminate what they have learnt about the development goals to a wider audience outside the school premises such as in their homes, to their peers and within communities. This will help to spread the word about sustainability, keep everyone aware about the goals and how they can contribute towards achieving the goals. This will help to accelerate progress towards achieving the goals and will ensure “no one is left behind” just as the slogan of the global goals indicates.

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APPENDIX I

Informed Consent Form

Title of the research:

Assessment of Sustainable Development Goals Knowledge among students of University of Ibadan.

Name(s) and affiliation(s) of researcher(s) of applicant(s):

This study is being conducted by **LAWAL FATIMAH BISOLA** from the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Oyo State.

Sponsor(s) of research:

The research is self-sponsored.

Purpose(s) of research:

The research is aimed at determining the level of Sustainable Development Goals Knowledge among students of University of Ibadan.

Procedure of the research, what shall be required of each participant and appropriate total number of participants that would be involved in the research:

Multi-stage sampling technique will be applied in selecting 430 study participants among undergraduate and postgraduate students from selected departments. The study will adopt quantitative method using semi-structured self-administered questionnaire and will assess the knowledge of the Sustainable Development Goals among the respondents.

Expected duration of research and of participant(s)' involvement:

The study will require a maximum of about 10 minutes of your time to fill the questionnaire.

Risk(s):

The study will not involve any risk as it does not involve use of any invasive material.

Costs to the participants, if any, of joining the research:

Your participation will cost a little time required to provide relevant information.

Benefit(s):

There is no direct benefit to the participants but will help inform recommendations that will be used in orienting students on the Sustainable Development Goals and will inform the need to include issues relating to the Sustainable Development Goals into the curriculum, it will also inform the strategies to be used to increase sustainability knowledge among students, this will ensure that sustainability literate students are being produced, who can improve success towards the Sustainable development Goals through ideas, creativity, innovation and critical thinking ability., thus increasing chances of achieving a sustainable society.

Confidentiality:

Information collected from the participants will be kept confidential as there is no means of identification on the instrument and all data will be kept under lock and assessed by only authorized individuals.

Voluntariness:

Your participation in this study is strictly voluntary and may choose to withdraw from the study at any time.

Alternatives to participation:

Your non-participation will not affect you in any way.

Consequences of participant's decision to withdraw from research and procedure for orderly termination of participation:

You may choose to withdraw from the research at any time. Please note that some of the information that has been obtained about you before you chose to withdraw may have been modified or used in reports and publications. These cannot be removed anymore. However the researchers promise to make effort in good faith to comply with your wishes as much as is practicable.

What happens to research participants and communities when the research is over:

The outcome of the research would be pasted on the notice board of each hall after obtaining permission from the appropriate authority.

Statement of the person obtaining informed consent:

I have fully explained this research to..... and have given sufficient information, including risks and benefits to make an informed decision.

DATE..... SIGNATURE.....
NAME.....

Statement of person giving consent:

I have read the description of the research and had it translated into the language I understand. I understand that my participation is voluntary. I know enough about the purpose, methods, risks and benefits of the research to judge that I want to take part in it. I understand that I may freely stop being part of this study at any time. I have received a copy of this consent form and additional information sheet to keep for myself.

DATE..... SIGNATURE.....
NAME.....

Detailed contact information including contact address, telephone, fax, email and other contact information of researcher(s), institutional HREC and head of the institution:

The research has been approved by the Ethics Committee of the University of Ibadan and the Chairman of this committee can be contacted at Biode Building, Room 210, 2nd floor, Institute for Advanced Medical Researcher and Training, College of Medicine, University of Ibadan, E-mail: uiuchirc@yahoo.com and uiuchec@gmail.com

In addition, if you have question about your participation in this research, you can contact the principal investigator.

Name.....

Department..... Phone.....

.....

Email.....

.....

PLEASE KEEP A COPY OF THE SIGNED INFORMED CONSENT

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APPENDIX II

QUESTIONNAIRE

AWARENESS AND KNOWLEDGE OF THE SUSTAINABLE DEVELOPMENT GOALS AMONG UNIVERSITY OF IBADAN STUDENTS

Dear respondent,

I am Lawal Fatimah, a post graduate student of the Faculty of Public Health, University of Ibadan. I am conducting a research titled “Awareness & knowledge of the Sustainable Development Goals among University of Ibadan students. The result of this study will inform recommendations to include/scale-up SDG awareness and knowledge among students through the teaching curriculum.

The Information you provide will be treated with utmost confidentiality, so your candid opinion will be highly appreciated. Your participation in this research will be voluntary and you have the right to withdraw at any time from the study. Your honest responses to questions will be highly appreciated.

I have read and understood the consent form and voluntarily agree/disagree to participate in the study by ticking either of the boxes the box below.

Agree Disagree

Section A: Socio demographic characteristics of respondents

1. Age as at last birthday: _____
2. Gender : Male Female
3. Religion: Islam Christianity other
4. Tribe: _____
5. Course of study: _____
6. Level of education: Undergraduate Post graduate
For under graduate, please indicate your level _____
For postgraduate, please indicate either masters or Ph.D. _____
7. Occupation _____ (Pls indicate NA if not applicable)

Section B: Awareness of the Sustainable Development Goals (SDGs)

8. Are you aware of the Sustainable Development Goals? Yes No

8b. If yes, please state your major source of information about the SDGs

9. When did you become aware of the SDGs? (please indicate year) _____

Section C: Knowledge of the Sustainable Development Goals (SDGs)

10. Do you know what the Sustainable Development Goals are? Yes No

(If you answered yes above, pls answer questions 11-19, if you answered no, pls proceed to section D)

11. How many are the SDGs? a. 16 b.15 c.17 d.18

12. Which of the following is not one of the SDGs?

a. Availability of clean water and sanitation for all

b. Access to sustainable energy for all

c. Access to improved internet service for all

d. Provision of decent jobs for all

e. I don't know

13. What year were the SDGs adopted? a.2014 b.2016 c.2015 d.2017

14. What year is the deadline for achieving the SDGs?

a.2020 b.2025 c.2030 d.2050

15. The SDGs aim to achieve progress, peace and prosperity for all nations and all people regardless of nationality, gender or race. True False I don't know

16. The SDGs are interlinked and indivisible. True False I don't know

17. Which of the following best describes Sustainable development?

a. A form of development that respects the environment

b. A form of development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

c. A form of development that finds a balance between environmental, social and economic issues.

d. I don't know

18. The dimensions of sustainable development include: Society, economy and environment

True False I don't know

Section D: University contribution to students' knowledge about the SDGs (Please tick either Yes or No).

19. Have you had any form of education or enlightenment relating to the SDGs through the University? Yes No

20. Have you been enlightened through the University on the concept of Education for Sustainable Development? Yes No

21. The learning content of Education for sustainable development includes the following: climate change, bio-diversity, disaster risk reduction, sustainable consumption and production. Is there any of your course or courses that contains aspects relating to the above listed issues?

Yes No I don't know

22. Has the University equipped you with enough knowledge and information that can enable you develop ideas and contribute to the implementation of the SDGs?

Yes No Not sure

Section E: Perception of students towards participation in the implementation of the Sustainable Development Goals.

23	Being adequately informed about the SDGs can influence me to develop ideas and participate in the implementation of the SDGs.	Agree	Disagree
24	Adequately equipping students with information about sustainability challenges and the Sustainable Development Goals can translate to student participation in implementation of the SDGs		
25	Provision of grants/fund for students to conduct researches and develop ideas to solve sustainability challenges can motivate students to contribute to implementation of the SDGs		
26	Student participation in the implementation of the SDGs is not necessary		
27	The Sustainable Development Goals are achievable by the 2030 deadline date		

28. Who in your opinion should be involved in contributing to the implementation of the SDGs?

a. Government b. NGOs c. Students d. Youth e. Everybody

SECTION F: Students' participation in SDG implementation

29a. Do you contribute to the socio-economic/environmental development of any community/town/nation?

Yes No

29b. If you answered yes above, which of the following areas do you work/volunteer

- Poverty eradication and food security
- Education and empowerment
- Health
- Environmental protection
- Good governance and leadership
- Do not contribute
- Other (please specify) _____

30. Please briefly indicate some major constraints to your work/volunteerism

APPENDIX III



INSTITUTE FOR ADVANCED MEDICAL RESEARCH AND TRAINING (IAMRAT) College of Medicine, University of Ibadan, Ibadan, Nigeria.



Director: **Prof. Catherine O. Falade**, MBBS (Ib), M.Sc., FMCP, FWACP
Tel: 0803 326 4593, 0802 360 9151
e-mail: cfalade@comui.edu.ng lillyfunke@yahoo.com

UI/UCH EC Registration Number: **NHREC/05/01/2008a**

NOTICE OF FULL APPROVAL AFTER FULL COMMITTEE REVIEW

Re: Assessment of Sustainable Development Goals knowledge among University of Ibadan students.

UI/UCH Ethics Committee assigned number: UI/EC/18/0464

Name of Principal Investigator: **Fatimah B. Lawal**
Address of Principal Investigator: Department of Health Promotion & Education,
College of Medicine,
University of Ibadan, Ibadan.

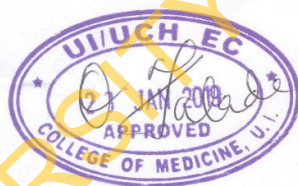
Date of receipt of valid application: 17/09/2018

Date of meeting when final determination on ethical approval was made: **N/A**

This is to inform you that the research described in the submitted protocol, the consent forms, and other participant information materials have been reviewed and *given full approval by the UI/UCH Ethics Committee.*

This approval dates from **23/01/2019 to 22/01/2020**. If there is delay in starting the research, please inform the UI/UCH Ethics Committee so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of these dates. *All informed consent forms used in this study must carry the UI/UCH EC assigned number and duration of UI/UCH EC approval of the study.* It is expected that you submit your annual report as well as an annual request for the project renewal to the UI/UCH EC at least four weeks before the expiration of this approval in order to avoid disruption of your research.

The National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the Code including ensuring that all adverse events are reported promptly to the UI/UCH EC. No changes are permitted in the research without prior approval by the UI/UCH EC except in circumstances outlined in the Code. The UI/UCH EC reserves the right to conduct compliance visit to your research site without previous notification.



Professor Catherine O. Falade
Director, IAMRAT
Chairperson, UI/UCH Ethics Committee
E-mail: uiuchec@gmail.com

Research Units • Genetics & Bioethics • Malaria • Environmental Sciences • Epidemiology Research & Service
• Behavioural & Social Sciences • Pharmaceutical Sciences • Cancer Research & Services • HIV/AIDS