UNIVERSITY OF EDUCATION, WINNEBA

ASSESSMENT OF ENVIRONMENTAL AWARENESS, ATTITUDES AND BEHAVIOURS OF UNDERGRADUATE SOCIAL STUDIES STUDENTS OF UNIVERSITY OF EDUCATION, WINNEBA

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A thesis in the Department of Social Studies Education, Faculty of Social Sciences, submitted to the school of Graduate Studies, in partial fulfilment of the requirements for the award of the degree of Master of Philosophy (Social Studies Education) in the University of Education, Winneba

JULY, 2023

DECLARATION

Student's Declaration

I, Mary Yoho, declare that this thesis, with the exception of quotations and references contained in published works which have been identified and duly acknowledged, is entirely my own work, and it has not been submitted either in part or whole for another degree elsewhere.

Signature……...

Date……

Supervisors' Declaration

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of Thesis as laid down by the University of Education, Winneba.

Supervisor: Professor Vincent Adzahlie-Mensah

Signature……..

Date……..

DEDICATION

To my dear, caring, loving and supporting family.

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I owe allegiance to God the Almighty for the source of strength and wisdom given me in the preparation of this thesis. I duly render to Him from the depth of my heart all praises and thanks.

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TABLE OF CONTENTS

LIST OF TABLES

ABSTRACT

The study sought to assess the environmental attitudes and behaviours of undergraduate students of the Social Studies Department in the University of Education Winneba, and to determine whether there is correspondence between their environmental awareness and attitudes on one hand and their environmental behaviour on the other. The study adopted the descriptive approach. The target population of the study was 2567 undergraduate students offering social studies in the University of Education, Winneba. Out of the target population, two hundred and forty (240) students were sampled using simple random technique to constitute the sample for the study. Data was collected using questionnaire. The data was analyzed with frequency, percentages, means, standard deviation and correlation. The findings revealed that students have moderate awareness about their environment and health issues in their communities. They also hold positive attitude towards their environment. It is concluded that there exists a correspondence between the environmental attitude of the students and their environmental behaviour. It was recommended that the head of department of Social Studies Education should routinely arrange education and sensitization campaigns among the undergraduate students. These programmes should be designed to educate students about environmental awareness and strategies to preserve a healthy, tranquil environment.

CHAPTER ONE

INTRODUCTION

1.0 Background to the Study

Sanitation plays a key role in the development of a nation; it extends beyond the cleanliness to warding off environmental-related diseases such as malaria, cholera, and dysentery (MyJoyOnline.com, 2014). Globally, poor sanitation has been recognised to impede socio-economic development and the survival of humans (Acheampong, 2010), yet it remains one of the crucial, unsolved, problems especially in the developing world (World Health Organisation (WHO), 2004) A report by the WHO (2019) indicated that poor sanitation is linked to transmission of diseases such as cholera, diarrhoea, dysentery, hepatitis A, typhoid and polio exacerbates stunting. Poor sanitation reduces human well-being, social and economic development, due to impacts such as anxiety, risk of sexual assault, and loss of educational opportunities. Furthermore, the WHO (2019) report highlighted that inadequate sanitation is estimated to cause 432 000 diarrhoeal deaths annually, and it is a major factor in several neglected tropical diseases, including intestinal worms, schistosomiasis, and trachoma. According to The World Bank (2012), 18 African countries lose around US$5.5 billion every year due to poor sanitation, with annual economic losses between 1 percent and 2.5 percent of their gross domestic product (GDP) and these 18 African countries account for 554 million people, constituting more than half of Africa's population.

Recognising the negative effects of poor sanitation to human progress, several programs and policies have been formulated to ameliorate the menace. For example, the Sustainable Development Goal 6.2 aims that by 2030, countries would achieve

access to adequate and equitable sanitation and hygiene for all. Although some progress has been made, records have it that a staggering 300 million Africans lack adequate sanitation (Santiago, 2015).

Ghana as a nation has performed poorly in the area of sanitation due to a lot of factors, including bad attitudes of its citizens, inadequate education on the importance of sanitation, improper planning by local authorities and agencies in charge of sanitation, and the failure to enforce sanitation laws by the government and other stakeholders (Nuhu, 2017). It was of no surprise when Ghana was ranked as the world's 7th dirtiest country by the World Health Organization in 2015. According to IMANI Ghana (2018), Ghana's poor state of sanitation might have contributed to its low ranking of 108/159 in the world's happiness report.

One way of improving the sanitation situation in Ghana is through a positive attitude by the citizenry, and so several calls have been made by past and present government officials on the issue. For example, in 2008, the Vice President Alhaji Aliu Mahama, made the call that sanitary conditions in the country were nothing to write home about, pointing out that situation was deteriorating each day with its attendant public health consequences (GhanaWeb, 2008). In 2012, former President Mahama directed the Ministry of Local Government and Rural Development to come up with a short-term strategy to deal with the poor sanitation in the country, and this gave birth to the 'National Sanitation Day'. In 2016, President Akuffo-Addo created the Ministry for Sanitation and Water Resources, with one of its goals to promote behavioral change programs, and also increase access to safe hygiene practices among the populace (The Ministry of Sanitation and Water Resources, 2017).

Clearly, our immediate environment needs proper management since it supports and contributes to the eminence of the lives of human beings. A whole and hearty environment is important because the health status of society to a large extent affects its total productivity and national development. It is therefore necessary that all persons maintain a clean environment. The environment in developing countries; the sub Saharan region especially Ghana is crippled with poor sanitation (World Health Organization [WHO},2005). It is therefore, no surprise that the region is battling with the outbreak of primitive diseases such as typhoid, tuberculosis, cholera, chicken pox, scabies etc. According to Tarloy (2011), human attitude and behaviour is the main contributor to these environmental problems posing serious threats to sustaining life on earth. The day-to-day activities of people affect the environment either positively or negatively.

Environmental awareness is the reaction that an individual or society faces environmental problems with acts and thoughts for the protection of the environment parallel with the development of solutions against these problems. Environmental awareness has emotional and behavioural dimensions. In other words, environmental awareness consists of the thoughts including decisions, principles and interpretations about the environment and behaviours that are the transfer of such thoughts to life and several feelings regarding all these.

Environmental awareness is an important condition for studies aimed at preventing environmental pollution and for environmentally friendly attitudes but it is not sufficient. All of society should be included. According to Wong (2010), people's environmental awareness is the perception representing the sum of the changes in

environmental and socio-economic dimensions of a nation in a given space and time. The resolution of problems is difficult unless individuals and families participate and wrong habits are changed. According to Erkal et al. (2001), people with environmental awareness select the least negative way and method with potential harm to the environment in the production or consumption of these products in their daily lives

Environmental education is a way of teaching people the means to protect the environment in which we live, and its importance through systematic and scientific ways (Burke & Sutherland, 2004). As Croll and Moses (2000) note, formal environmental education should be started from preschool and continued up to university level. Also, lessons about environmental science and environmental issues should be taught from elementary school up to the university. Informal environmental education on the other hand involves all educational processes conducted outside of school. It is directed to all age groups, especially mature people who have finished their studies (Wojcik, 2004)

Doğan (2000) makes an assessment about the environmental education to be an eternal process in which individuals and societies acquire awareness about sustainable development through knowledge, values, abilities and experiences, and obtain the determination to act in order to resolve current and future environmental problems. Environmental education is the process to make thoughts comprehensible and verify the values in order to develop important attitudes and abilities so as to understand and accept the relationship among environmental education, humans, culture and the biophysical environment. Another definition of environmental education is the helping process that other people to acquire appropriate behaviours and skills to understand and

protect the relations and interactions between their cultural and biological environments (Kabaş, 2004).

The individuals that have had environmental education are supposed to have the properties that are indicated below under the natural, social, value and action content titles when compared to the individuals without environmental education (Keleş, 2007).

The handling of environmental issues has become more urgent because of its important role in sustaining human life. If we look at this situation more carefully, one of the sources of these problems may come from poor awareness of all stakeholders including government, businesses, consumers and community.

Educational institutions have a very important role in spreading knowledge about climate change and environmental protection, especially to younger generations who will need the knowledge to influence their attitude towards the environment. They should be equipped with adequate knowledge so that they can play active roles in addressing climate change and environmental protection issues. Educational institutions will be at the forefront of creating a young generation who protect and preserve the environment.

Education should bring immediate impact on the elevation of knowledge and awareness that human beings should be involved in creating a sustainable environment. Knowledge and awareness on the importance of environment sustainability should lead to positive attitudes that maintaining environmental sustainability will reduce negative environmental impacts. In the end, accumulation of good knowledge and positive attitudes should lead to potential behaviours to perform an active role in protecting the environment. According to the United Nations Conference on Environment and

Development (UNCED), better known as the Earth Summit, environmental education is a process to build the world's population who are aware and concerned about the environment and all the problems associated with it, and people who have the knowledge, skills, attitudes and behaviour, motivation and commitment to work together, both individually and collectively, in order to solve the current problems, and prevent the emergence of new environmental problems (Wright, 2002)

Solid and liquid wastes from homes, institutions and schools are not properly disposed off in Ghana. People's perception and attitude towards refuse disposal are either limited or primitive. As a result, some residents feel at ease disposing garbage indiscriminately instead of dumping it in a refuse container. This garbage ranges from plastic which are non-degradable to packaging items, food scraps, empty water sachets pieces of papers and a host of others. The end results of these attitudes impart so much on global warming.

It appears Ghana has progressed in its development efforts, but unsanitary conditions in the cities and communities including some institutions of learning, seem to be an embarrassing situation. Apart from the health risks, unsanitary environments bring embarrassment and discomfort to inhabitants. Bacterial actions from waste products emit unpleasant smells that could sometimes cause ill-health or in some cases death as was the case in La Cote d'Ivoire where a French company was reported to have discharged waste materials in the country's coastal boarders that killed numerous people (Boateng & Nkrumah 2006).

The phenomenon of indiscriminate refuse disposal practices which area rooted in human attitude and behaviour has crept into our educational institutions of learning right down from the basic schools to the tertiary institutions. Refuse such as empty

water sachets, polythene bags, fruit peels, pieces of paper, food scraps and all sorts of garbage generated from dormitories, classrooms, kitchen, halls of residence, lecture halls etc find their way into drains, lawns, gutters, bushes and unauthorized places. People go as far as dumping rubbish beside dustbins instead of putting them in the dustbins or refuse receptacles. These insanitary conditions, if not properly checked will affect the health statues and academic work in many schools and institutions.

It is expected that students who have undergone some form of environmental education would be conscious of the environment so that they can in turn serve as catalysts to positively influence their peers to be environmentally friendly. Unfortunately, this ideal situation is not the case in most schools, institutions, and communities in Ghana. Some Understanding the attitudes and behaviours of students towards the environment is essential for designing effective educational programmes and policies. have blamed the society of the existing environmental problems whereas others think schools ought to do more in stimulating environmental consciousness or awareness, In the midst of these arguments, the need to examine the problem on a systematic basis becomes clear and very relevant.

Rosa and Collado (2019) maintain that all things being equal, improving access to environmental cleanliness would increase and sustain the benefits of access to safe water and will also reinforce the links that environmental friendliness has with other areas of the society to ensure quality of life.

Therefore, this research assessed environmental awareness, attitude and behaviour levels among undergraduate students of Social Studies Department of the University of Education, Winneba, to determine the correspondence between students' environmental awareness, attitude as well as environmental behaviour.

1.1 Statement of the Problem

The environmental attitudes and behaviours of students play a crucial role in sustainable development and the future well-being of our planet. Environmental issues have gained significant attention globally due to their impact on ecosystems and human well-being and universities play a crucial role in shaping the attitudes and behaviours of students towards the environment.

The literature on environmental attitudes and behaviours among students highlights several key factors that influence their engagement in pro-environmental activities. Smith and Jacobson (2019) emphasize the importance of environmental education in fostering positive attitudes and behaviours towards the environment. They argue that effective environmental education programs should focus not only on knowledge acquisition but also on developing environmental values, attitudes, and behaviours. Similarly, Brown and Larson (2018) stress the influence of social and cultural factors on environmental attitudes and behaviours. They suggest that students' attitudes and behaviours are shaped by social norms, peer interactions, and cultural beliefs.

However, there is a lack of comprehensive studies specifically focused on assessing the environmental attitudes and behaviours of undergraduate students of Social Studies Department in the-University of Education, Winneba. Students of the department, like any other university are at a critical stage of personal and professional development. The environmental values and practices they adopt during their university years can influence their future decision-making, both in their personal lives and future careers. Understanding student environmental attitudes can help inform interventions to instill pro-environmental values and behaviors early on.

By addressing these objectives, this study aims to contribute to the existing literature on environmental education and provide insights into the environmental attitudes and behaviours of the undergraduate students of Social Studies Department at the University of Education, Winneba. The findings will serve as a basis for designing targeted interventions, educational programs, and policy recommendations to enhance students' environmental awareness and promote sustainable behaviours on campus and in their future professional roles.

1.2 Purpose of the Study

The purpose of this study is to assess the environmental attitudes and behaviours of undergraduate students of Social Studies department in the University of Education Winneba, and to determine whether there is correspondence between their environmental awareness and attitudes on one hand and their environmental behaviour on the other.

1.3 Objectives of the Study

The specific objectives were to:

1. examine the level of environmental awareness among the Social Studies students of University of Education Winneba.
2. investigate the environmental attitude among Social Studies of the University Education Winneba.
3. assess the environmental behaviour among the Social Studies students of University of Education Winneba.
4. determine the extent to which the assessed environmental awareness and attitude correspond with environmental behaviours.

1.4 Research Questions

The following research questions were formulated in line with the objectives of the study.

1. What is the level of environmental awareness among the students of Studies of University of Education Winneba?
2. What is the environmental attitude held by the students of the University of Education Winneba?
3. What are the environmental behaviours exhibited by the students of University of Education Winneba?
4. To what extent do the environmental attitudes of the respondents correspond with their environmental behaviours?

1.5 Significance of the Study

It is hoped that insights of this study will inform policy makers on viable strategies for achieving positive knowledge on environmental awareness, attitude and behaviour of undergraduate students of Social Studies department in the University campus in Ghana. Policy makers will understand what hinders the individual student from been environmentally friendly. Through the findings of this study, the policy that guides the protection of the environment may be reviewed. The finds may also inform the Ministry of Local government, Environmental Protection Agency (EPA), The Metropolitan Municipal and District Assemblies (MMDAs) and other stakeholders in the field of the environment to introduce environmental specific policies and programs to equip the individual with positive knowledge, attitudes and skills in order to raise concerns for the environment and to work towards solutions of environmental problems and the

prevention of new ones. It will enlighten students on the need to keep the environment clean thus resulting in positive change in both environmental behaviour and attitudes of the people. It will be of significance to institutions and add to the existing literature in the study area.

1.6 Delimitation of the Study

The study was delimited to assessing the environmental attitude and behaviour of undergraduate students of Social Studies department in University of Education Winneba, and to determine whether there is correspondence between their environmental awareness and attitudes on one hand and their environmental behaviour on the other.

1.7 Definition of Terms

Environment: The natural and built surroundings that make up the physical space, including land, water and buildings.

Environmental Awareness: Environmental awareness referred to people's understanding and awareness of the environment and the related issues (such as waste disposal, noise and air pollution, water pollution, soil pollution, ozone layer destruction, greenhouse effect, and acid rain).

Environmental Attitude: Environmental attitude, refers to how people view environmental issues, their perspective, beliefs and levels of support, including their finding towards the specific people, and object involved.

Environmental Behaviour: Environmental behaviour is regarded as the responsible action towards the improvement of environmental.

1.8 Organization of the Study

This study was organized into five chapters. The Chapter One focused on the introduction of the study. This covers the background to the study, statement of the problem, purpose of the study, research questions and hypotheses. The significance of the study, the delimitation of the study, definition of terms and the organization of the study make up the rest of chapter one. Chapter Two of the study involved the review of literature related to the study that include the theoretical, conceptual framework and empirical framework for the study. Chapter Three focused on the methodology for the study. It described the research philosophy, research approach, research design, the population, the sample and sampling procedures used as well as the instruments and procedures involved in the collection and the analysis of data. The presentation of the results and discussions were discussed in Chapter Four. Finally, the summary, conclusions and recommendations of the study were discussed in Chapter Five of the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

This chapter reviews literature on how people's environmental awareness, attitude and behaviours affect the sustainability of the environment. Literature was organized under the following themes; the environment and environmental awareness, the environmental attitude, the environmental behaviour and the correspondence between the environmental awareness and attitude of the people including students on one hand their environmental behaviour on the other.

2.1 Theoretical Framework

A theoretical framework comprises the theories expressed by experts in the field into which a researcher plans to research, which a researcher draws upon to provide a theoretical coat hanger for data analysis and interpretation of results (Kivunja, 2018). Put differently, the theoretical framework is a structure that summarizes concepts and theories, which a researcher develops from previously tested and published knowledge which a researcher synthesizes to help a researcher to have a theoretical background, or basis for data analysis and interpretation of the meaning contained in a research data. Swanson (2013, p. 122) explicitly asserts, "The theoretical framework is the structure that can hold or support a theory of a research study". The theoretical framework for a research proposal or thesis is not a summary of ones' own thoughts about the research. Rather, it is a synthesis of the thoughts of giants in the field of research, as they relate to the proposed research or thesis, as one understands those theories, and how to use

those theories to understand the data collected. In this study, the theory of planned behaviour was used to guide the study.

2.1.1 The Theory of Planned Behaviour

The theory of planned behaviour has developed as an extension of Fishbein and Ajzen's (1980) and Ajzen and Fishbein's (1980) theory of reasoned action, which aims to predict behaviours from attitudes as well as to explain the process through which the two are related. Both the theory of planned behaviour and the theory of reasoned action focused on the importance of intention of performing a particular behaviour. The addition of a variable concerned with perceptions of control over behaviours, also called perceived behavioural control, served to extend the theory of reasoned action into the theory of planned behaviour (Ajzen, 2005). The theory has been applied to a large variety of contexts such as sexual behaviour driving, health-related practices, and recently environmental behaviours such as recycling, water conservation, 0Vgreen consumerism, and storm water management.

According to the theory, the most proximal predictors of behaviour are behavioural intentions, which in turn are influenced by (a) the extent to which individual holds a favorable attitude toward the behaviour, (b) individual's perceptions of the norms and conventions regarding the behaviour (i.e., subjective norms), and (c) the extent to which the individual perceives the behaviour at hand to be under his or her personal control or perceived behavioural control (Ajzen, 1992). The latter relates to an individual's belief that their behaviour will successfully promote expected goals.

Several studies have demonstrated the theory's value in predicting environmental behaviours. For example, Boldero (1995) found that intentions to recycle newspapers

directly predicted actual recycling and that attitudes toward recycling predicted the recycling intentions.

The Theory of Planned Behaviour (TPB) can be applied to the study objectives to provide a theoretical framework for understanding and analyzing the relationship between environmental awareness, attitude, and behaviour among undergraduate students of Social Studies department at the University of Education, Winneba.

The TPB suggests that environmental awareness can be influenced by subjective norms and perceived behavioural control. In this objective, the TPB can be used to examine the influence of subjective norms (e.g., social influence and perceived norms) and perceived behavioural control (e.g., personal efficacy and control beliefs) on students' level of environmental awareness. The TPB can guide the development of survey questions or interview protocols that assess these factors and provide insights into the determinants of environmental awareness among the students.

The TPB proposes that attitudes towards a behaviour are shaped by individual beliefs about the outcomes of that behaviour and their evaluation of those outcomes. To assess environmental attitudes, the TPB can guide the examination of students' beliefs about the positive and negative outcomes of engaging in environmentally responsible behaviours. By exploring their evaluations of these outcomes, researchers can gain insights into the factors that shape students' environmental attitudes.

The TPB states that behavioural intentions are influenced by attitudes, subjective norms, and perceived behavioural control. To assess environmental behaviour, researchers can examine students' intentions to engage in environmentally responsible

behaviours, as well as the factors that influence these intentions. This can include evaluating the influence of attitudes, subjective norms (such as social pressures or approval from significant others), and perceived behavioural control (such as self-efficacy and perceived barriers) on students' likelihood of engaging in environmentally friendly behaviours.

The TPB emphasizes that behavioural intentions and behaviours are strongly related. In this objective, the TPB can guide the examination of the relationship between assessed environmental awareness and attitude and actual environmental behaviours among the students. By comparing the levels of environmental awareness and attitude with self-reported or observed behaviours, researchers can determine the extent to which these factors correspond with students' actual engagement in environmentally friendly behaviours.

By applying the TPB to the study objectives, researchers can gain a comprehensive understanding of the factors influencing environmental awareness, attitude, and behaviour among undergraduate students of Social Studies department at the University of Education, Winneba. This theoretical framework provides a systematic approach to analyzing the relationship between these variables and can guide the design of data collection instruments, analysis methods, and interpretation of findings.

2.1.2 The Theory of Reasoned Action

The Theory of Reasoned Action (TRA) is a psychological framework that explain and predict human behavior based on individuals' attitudes, subjective norms, and perceived behavioral control (Ajzen & Fishbein, 1980). TRA posits that behavioral intentions are

the primary determinant of actions, and these intentions are influenced by two main factors: attitudes toward the behavior and subjective norms.

Attitudes toward a specific behavior refer to individuals' positive or negative evaluations of performing that behavior. These attitudes are shaped by beliefs about the outcomes associated with the behavior and the importance of those outcomes (Fishbein & Ajzen, 1980). For example, if an individual believes that recycling is environmentally beneficial and values protecting the environment, their attitude toward recycling is likely to be positive, increasing their intention to recycle.

Subjective norms, on the other hand, capture the perceived social pressure to engage or not engage in a particular behavior. This aspect of TRA emphasizes the influence of social norms, such as the expectations of significant others or societal norms, on individuals' intentions (Ajzen & Fishbein, 1980). For instance, if a person's peers or family members encourage recycling and express disappointment in not doing so, the individual may feel compelled to recycle to align with these social expectations.

Additionally, TRA incorporates the concept of perceived behavioral control, which reflects individuals' beliefs about their ability to perform the behavior successfully (Ajzen, 1991). This factor acknowledges that intentions alone may not always translate into actions if individuals perceive barriers or lack the necessary skills to execute the behavior. Perceived behavioral control accounts for external constraints and internal factors affecting individuals' ability to enact the behavior.

Several studies have applied the Theory of Reasoned Action to various contexts, including health behavior, consumer behavior, and environmental behavior (Armitage

& Conner, 2001; Montaño & Kasprzyk, 2008; Stern, 2000). These studies have demonstrated the utility of TRA in predicting and understanding individuals' intentions and behaviors across diverse domains. In summary, the Theory of Reasoned Action provides a comprehensive framework for understanding human behavior by considering the interplay between attitudes, subjective norms, and perceived behavioral control. By incorporating these factors, TRA offers valuable insights into the determinants of behavioral intentions and facilitates the development of effective interventions aimed at promoting desired behaviors.

The theory has several implications on the study. Firstly, TRA suggests that individuals' behavioral intentions are influenced by their attitudes toward the behavior and subjective norms. Therefore, in this study, assessing students' intentions to engage in environmentally friendly behaviors, such as recycling or reducing energy consumption, would provide insights into their readiness to act.

The theory emphasizes the role of attitudes in shaping behavioral intentions. By examining students' attitudes toward environmental issues, researchers can identify factors contributing to positive or negative evaluations of environmentally friendly behaviors. This understanding can inform interventions aimed at promoting pro-environmental attitudes among students.

TRA suggests that individuals' perceptions of their ability to perform a behavior influence their intentions. Examining students' perceived behavioral control over environmentally friendly actions, such as access to recycling facilities or knowledge of sustainable practices, can identify barriers hindering their engagement in these

behaviors. Interventions aimed at enhancing students' perceived control may involve providing resources, skills training, or infrastructure improvements.

TRA posits that behavioral intentions predict actual behaviors. Therefore, by assessing students' intentions to engage in environmentally friendly behaviors and the factors influencing these intentions, researchers can make predictions about their actual engagement in such behaviors. This predictive capability enables the development of targeted interventions to promote environmentally sustainable practices among students of the Social Studies department at the University of Education, Winneba.

The Norm Activation Theory

The Norm Activation Theory (NAT) is a psychological framework that seeks to explain individuals' engagement in pro-environmental behaviors by examining the influence of personal norms, awareness of consequences, and social norms. Developed by Schwartz (1977) and further elaborated by Stern (2000), NAT posits that people's actions are shaped by their moral obligations, perceptions of environmental consequences, and the influence of social norms.

According to NAT, individuals are motivated to act in environmentally responsible ways when they perceive a moral obligation or personal norm to protect the environment. These personal norms are influenced by factors such as upbringing, education, and personal values (Kaiser & Schultz, 2009). For example, someone who values nature and believes in the importance of environmental preservation is more likely to engage in eco-friendly behaviors due to their internalized norms.

Additionally, NAT emphasizes the role of awareness of consequences in shaping behavior. Individuals are more likely to take pro-environmental actions if they understand the potential impact of their behaviors on the environment and society as a whole. This awareness can be influenced by education, media campaigns, and personal experiences (Steg & Vlek, 2009). For instance, learning about the harmful effects of plastic pollution may motivate individuals to reduce their use of single-use plastics.

Furthermore, NAT highlights the importance of social norms in driving behavior. People are influenced by the perceived expectations of their social groups, including friends, family, and colleagues (Cialdini et al., 1990). When individuals believe that environmentally friendly behaviors are valued and supported by others, they are more likely to adopt such behaviors themselves. Conversely, if pro-environmental actions are not perceived as normative within a social group, individuals may be less inclined to engage in them.

The theory has several implications on this present study.

NAT emphasizes the importance of awareness in influencing behavior. Therefore, assessing students' knowledge and understanding of environmental issues, such as climate change or pollution, would provide insights into the extent of their environmental awareness. This could involve measuring their familiarity with environmental concepts and current environmental challenges through surveys or interviews.

NAT suggests that individuals are influenced by their perceptions of what others consider appropriate or desirable behavior. Investigating students' perceptions of social norms related to environmental behaviors, such as recycling or energy conservation,

can reveal the influence of peer groups, family, and societal expectations. This information can guide interventions aimed at leveraging social norms to encourage environmentally friendly behaviors.

NAT proposes that individuals feel a sense of responsibility toward the environment, which motivates them to engage in pro-environmental actions. Assessing students' sense of responsibility for environmental stewardship can provide insights into their willingness to adopt sustainable behaviors. Understanding the factors that enhance or diminish this sense of responsibility can inform strategies to cultivate environmental consciousness among students.

NAT suggests that individuals' behavioral intentions mediate the relationship between awareness, attitudes, social norms, and actual behaviors. Therefore, in this study, researchers can examine students' intentions to engage in specific environmentally friendly behaviors and compare them with their actual behaviors. Understanding the factors influencing the translation of intentions into actions can inform targeted interventions to bridge the intention-behavior gap and promote sustainable practices among students.

2.2 Environmental Education

As a concept, environmental education transcends a particular definition. There are various conceptions put forward by various authors. Environmental Education is a process that lasts a lifetime and which aims through both formal and non-formal education to try to inculcate among students' aspects such as environmental awareness, ecological knowledge, attitudes, values, commitment to action and ethical

responsibilities for rational use of resources, in order to achieve adequate and sustainable development (Maravić et al. 2014).

Others argue that environmental education represents an important area in today's society, although not all academic contexts recognize this or grant it the true value it should have. This is reflected in the lifestyle of most modern people, which has led society to create the environmental problems we are experiencing today. This characterizes one of the crises of the modern world (Barrett, 2021).

For some scholars, the raison deter of Environmental Education at academic institutions lies primarily in these, as they form into "micro societies" that reproduce social aspects on a small scale. Here, they consume energy, materials, there are interrelationships among its members, waste is generated, people live together, there are common spaces, decisions are taken, many activities are generated, culture and values are transmitted, information flows, etc. All this creates situations of conflict, but also many opportunities to bring about change and improve the environmental conditions of the surrounding environment, thus generalizing the habits acquired from everyday life in mainstream society (Tobin et al., 1994).

Some presentations of environmental education emphasize teaching about the Environment through interdisciplinary approaches and problem solving. This has to start as early as possible in education. In that sense of the argument is presented that primary school is the most natural place to incorporate children into Environmental Education, as it is at this level that they instinctively have a global view of the environment. The suggestion is that, at that level, children have not yet been trained to compartmentalize their learning as separate issues as they will have to do in secondary

education and, of course, even more especially, in higher education. This is always without overlooking, as Amador and Esteban (2011) set out, that environmental Education should be a discipline whose intervention must take into account the educational and social aspects, as it is individuals, groups and communities that are the ones affected and the beneficiaries of changes in the environment.

It is essential to introduce critical thinking and a problem-solving approach in Environmental Education at each and every educational level; considering that students have to be able to identify and solve environmental problems as students, and later as adult citizens and possibly as decision makers. Therefore, Environmental Education should propose information that increases knowledge about the Environment and as an extension thereof lead to a reflection that allows them to improve the quality of life, enhancing environmental quality and which necessarily brings them to take action in favor of the environment (Ross-Hill, 2009).

Environment (from the French word to circle or surround) can be defined as the circumstances and conditions that surround an organism or group of organisms or the social and cultural conditions that affect an individual or community (Curringham, 2001). The concept of "Environment "is an all -embracing term describing the terrestrial, aquatic and atmospheric systems of the world in its widest use. It refers to all the biophysical features, organic and inorganic resources and all bio-diversity disposable to humankind.

Definitions of the word environment are very similar in their description of what the word entails, for example, Bell et al., (2001) describe the environments as one's surroundings which include one's social environment, for example the people and

groups among which we live; one's physical environment, for example the non-animal aspects of one's surroundings such as the wilderness, cities or one's farmlands, the natural (non-human) and the built (human made) environment.

As posited by Eni -Olorunda, (2005), human beings have characteristically lived in two worlds. The first is the natural world of nature consisting of plants, animals, soils, air and water that preceded the existence of man by hundreds of millions of years of which humans is an integral and inescapable part. The second is the world of social institutions and artifacts (built world) that humans deliberately created for him/herself using science, technology, culture, political organization and so forth.

Environment has been variously conceptualized to include all the natural resources of air, land and water, visible and invisible elements that affect the development of an organism for its life time. Environment refers to all the conditions and influences affecting the development of an organism in its life time. Man's total environment includes all the living and non-living elements in his surroundings which could be natural or built (man-made) etc. in a complex network of systems (Eni -Olorunda, 2005).

It also refers to all natural resources' joint property of many of which one's right of use must not adversely affect the right of use of other joint owners (Eni –Olorunda, 2005). The current global awareness of the environment and its pivotal role to human endeavors and survival started monitoring with the 1972 United Nation's Conference on Human Environment.

Environmental education has been viewed as an important approach to educate students about environmental issues, and to identify challenging environmental problems at all educational levels, including university (Fernández-Manzanal, Rodríguez-Barreiro, & Carrasquer, 2007; Tuncer, 2009). Therefore, environmental education is crucial to prepare environmentally literate graduates who will play an active role in protecting the environment by making informed decisions and engaging in environmental-friendly behaviours (UNESCO, 1980). The main aim of environmental education is to encourage citizens to act in an environmentally conscious manner that balances current social, economic, and environmental needs without compromising those of the future (Yorek, Ugudu, Salin, & Dogan, 2010); as well as to define and set goals at the cognitive, metacognitive, affective and behavioural levels (Tuncer, 2009). Furthermore, environmental education aims to help people develop positive attitudes, emotions, thoughts or behaviours that increase their sensitivity towards the environment (Erten, Özdemir & Güler, 2003). Therefore, many studies put forward outcomes of environmental education that, given in different systems of education (formal and informal), enable people to: (a) develop positive changes in their attitudes and behaviours towards the environment (b) protect and sustain the environment. Thus, environmental education should be an essential part of education at all levels, including university (Grodzińska-Jurczak, Stepska, Katarzyna, & Bryda, 2006; Palmberg & Kuru, 2000).

Environmental education is believed to have a substantial impact on students' environmental awareness, daily routines, and consumer behaviour (Walker 2017; Williams et al. 2017; Zsóka et al. 2013). Several studies have shown that education is a key factor in increasing environmental awareness (Freymeyer and Johnson 2010;

Duroy 2005; Kolmuss & Agyeman 2002). Environmental awareness involves both the cognitive and affective domains of learning. Students should have sufficient knowledge of environmental issues and a good perception of one's impact on the environment. Deiarme and Hagos (2008) reported that integration of environmental education is necessary to produce students who are earth-friendly, committed to environmentally sound lifestyles and prepared to contribute to the environment. Zsóka et al. (2013) examined the relationship between environmental education and students' knowledge, attitudes and reported actual behaviour for both university and high school students. Their findings demonstrated a significant relationship between the level of environmental education and students' environmental understanding. In order to move toward a sustainable future, it is important to create scientific information about the factors that motivate students to act in an environmentally responsible manner (Shafiei & Maleksaedi, 2020).

2.3 Understanding of Environment and Environmental Awareness

Mankind has become desensitized to nature, leading to major environmental problems. Humanity must find solutions to ensure environmental sustainability and natural resources for future generations (Ozsoy, 2012). The natural environment sustains human well-being in many different and complex ways, providing both tangible and intangible benefits. Effective conservation of ecosystems requires a context-specific understanding of human interactions with nature (Özdemir, Yıldız, Ocaktan, & Sarısen, 2004).

In general terms, knowledge refers to an individual's understanding of the concept about their environment. Environmental knowledge involves the information an individual has to determine and confirm the issues concerning the environment, which, in turn, gives the consumer the ability to transform such knowledge into an influential behaviour. Environmental knowledge is the consumers' evaluation of, and reaction to, the process of consumption behaviour and its effects on the environment as well as the demand for green products (Duroy, 2005). Environmental knowledge contributes to environmental attitude and environmental behaviour (Kollmuss & Agyeman, 2002)

Environmental knowledge can also be defined as the information an individual has regarding the reciprocal relationship between people and the environment. Such knowledge reveals how an individual perceives their own responsibility towards the environment, which leads to their environmental behaviour. The individual is also aware of how their environmental behaviour contributes to sustainability. A study conducted by Hidayah and Agustin (2017) found that thorough environmental knowledge enables an individual to determine a positive environmental behaviour. Another study ascertained a positive correlation between an increase in environmental knowledge and an increase in environmental attitude and behaviour that has benefited the environment (Haynes &Tanner, 2015).

Further research has demonstrated significant correlations between a participant's knowledge and attitude as well as between environmental knowledge and environmental attitude (Haryanto, 2014). Another study conducted by Lawson (2014) also suggested a relationship between the consumption of green products and positive

emotions. Given that the application of environmental knowledge leads to the experience of positive emotions, the following hypotheses are proposed.

2.3.1 Environmental Awareness

Environmental awareness does not have a uniform meaning. It means different things to different people. Li (2019) regarded environmental awareness as the formation of cognition in the memory through the process of sensory stimulation, notice, identification, and perception. Crowe (2013) defined environmental awareness as the emotional attitudes towards the environment and environmental value, leading students emotionally and conceptually to respect the environment, concern about the environment, and to further correctly treat the environment. Morrison, Roderick, and Parton (2015) regarded environmental awareness as the public perceiving the understanding of the entire environment and the related problems. Thus, environmental awareness referred to people's understanding and awareness of the environment and the related issues (such as waste disposal, noise and air pollution, water pollution, soil pollution, ozone layer destruction, greenhouse effect, and acid rain). The so-called environmental awareness, also called "environmental consciousness", referred to the concerns and comprehension of environmental problems (Ramkissoon, Smith, & Weiler, 2013), meaning that an individual could be aware of the existence of problems and cultivate the perception, appreciation, and exploration of the environment through the interaction with the environment and the cultivation of aesthetics (Gifford & Nilsson, 2014). Environmental awareness was the process of people storing, understanding, and reassembling environmental stimulation. In this case, environmental awareness was the process of people storing, understanding, and

reassembling environmental stimulation. It involved in the elements in the environment as well as the involved events, the emotion of individuals and groups, and the symbolic meanings (Hirsh, 2014)

Referring to Lee (2017), environmental awareness in this study contains the following three dimensions.

1. Environmental knowledge: Including issues in biology and ecology, e.g. the composition and function of ecosystem, the flow of materials and energy in ecosystem, ethnic groups and clusters, and effects of humans on ecosystem.
2. Problem knowledge: Containing the resources in natural environment and the environmental problems derived from the overuse of resources.
3. Action knowledge skills: The variety of environmental action, the use of proper actions to solve problems, and the use of environmental action knowledge and skills.

Ecological concern has been commonly defined as the awareness about the environmental problems and the willingness of a person to be a part of the solution (Dunlap et al., 2000). According to Zimmer et al. (1994), ecological concern as "a general concept that can refer to feelings about many different green issues (p. 234)". Ecological concern has been quite often conceptualized as unidimensional construct that ranges from low to high concern towards environment at large (Milfont & Duckitt, 2010).

Frantz and Mayer (2014) specifically conceptualized ecological concern from value orientations perspective such as self-interest, anthropocentric altruism (referred to as belief that degraded environment poses a threat to well-being of people) and eco-

centricity. In one of the earlier studies, Maloney and Ward (1975) discovered that those consumers who depict higher ecological concern are more ready than others to change their behaviour and explore green product alternatives.

Crosby et al. (1981) argued that ecological concern acts as a precursor to positive attitude towards environmental preservation. Indeed, an individual's ecological concern stems from his or her fundamental belief or value (Schultz, 2000) and influences subsequent attitude, finally leading towards specific behavioural action ranging from recycling to the purchase of environment-friendly product. As identified by Kim and Choi (2005), this relationship depicts a well-established hierarchical model of value-attitude behaviour that has been studied in various contexts (Mahbub, 2008) and holds true for understanding green purchase behaviour.

Gifford (2014) found that ecological concern significantly and positively influences attitude towards environment friendly products. Stern (2007) show that people with higher ecological concern are more likely to depict a positive attitude towards using eco-friendly parking facilities. Stern (2007) also found a positive link between ecological concern and consumer attitude while studying Chinese consumers. Tewari (2004) also argued that attitude of consumers towards eco-friendly behaviour turns positive as environmental consciousness increases, and that consumers are more likely to behave in an environment-friendly manner. However, none of the previous studies investigated the link between ecological concern and two separate aspects of consumer attitude, viz. inward and outward environmental attitude.

Environmental awareness is an essential product of environmental education (Maravić et al. 2014). So, environmental education can result in direct benefits to the

environment and address conservation issues concretely. Atkins (2016) reviewed substantial types of research and provided robust positive data on environmental education's contributions to conservation and environmental quality outcomes. Barrett (2021) concluded that several environmental education programs achieve cognitive and affective outcomes by highlighting conservation outcomes which showed that focusing on local issues, partnerships, and action is a key to achieving cognitive and affective conservation behaviour outcomes

Nowadays we have witnessed an increased environmental awareness performed by society, government, and scientists. Human-environment interaction deals with the fulfillment of food and resource demand. It goes further to how human treats and affects the environment. Hanisch et al. (2014) argue that such environmental awareness is very important in environmental management and the protection of living creatures. Moreover, environmental awareness may give a more powerful effect when implemented. Atkins (2016) states that environmental sustainability may be achieved when environmental awareness is performed in an integrated manner by all elements of the people, such as the scientists, engineers, and other communities. Environmental awareness is to attend to an environmental issue and its respective action leading to realizing a good practice to achieve a sustainable environment. According to Atkins (2016), environmental awareness can be defined as a conscious behaviour towards the environment like the environmental behaviour. Brehma, Eisenhauerb and Stedman (2013) presume environmental awareness as the science which helps people attain the value, skills, and knowledge required to live sustainably. Environmental awareness plays a significant role in building people's awareness of the environment and becomes

a responsible part of the country that cares about the environment. Environmental awareness constitutes an ultimate drive to green behaviour. Shafiei and Maleksaeidi (2020) argue that there is a cause-effect relationship between individual environmental awareness and environmental behaviour. An individual who applies a strong environmental value tends to be aware of how his/her behaviour affects the environment. This is to justify that environmental awareness leads to environmental behaviour. When an individual receives good information about his/her environment, one will be more aware of human-caused environmental issues, which will also motivate them to live a sustainable life. The knowledge of the environment will construct their attitude, belief, and eventually resulting in the expected behaviour.

Environmental awareness helps social groups and individuals become aware of the environment. Shafiei and Maleksaeidi (2020) presume environmental awareness as the science which helps people attain the value, skills, and knowledge required to live sustainably. The awareness towards the environment plays an integral role in building people's awareness towards the environment, making them responsible beings to their surroundings. It may also be defined as the ability to understand environmental issues and respective actions one needs to take to reach the good practice for realizing a sustainable environment. Hanisch et al., (2014) explain that environmental awareness is very important for environmental management as well as the protection of the living organism. Atkins (2016) states that environmental sustainability may be achieved when environmental awareness is performed in an integrated manner by all elements of the people, such as the scientists, engineers, and other communities. Taylor (2016) argues that one with a higher education tends to have a better understanding and awareness of

the environment, compared to one with lower education. Meanwhile, Pena et al., (2018) found that local issues would be more influential in the construction of pro-environmental behaviour than the regional or national issues would be. The integration of environmental issues in one area can improve education and be translated to positive environmental behaviour.

Environmental awareness is necessary for improving life quality where it can help achieve a life in harmony. One's awareness of the environment may be seen from his or her behaviour. According to Hanisch et al., (2014), environmental awareness can be defined as a conscious behaviour towards the environment like the pro-environmental behaviour. Atkins (2016) found that environmental awareness positively affects pro-environmental behaviour. The higher one's awareness towards the environment, he/she would be more likely to show a higher environmental behaviour.

In a few of the studies, it has been found that there is a significant difference between consumers with high and low ecological concern with respect to information receptivity about sustainable products (van Birgelen et al., 2009). Atkins (2016) reported that people with low ecological concern respond to packaging claims differently from people with high ecological concern. Atkins (2016) found a strong link between ecological concern and attitude towards environment-friendly packaging in America. Shafiei and Maleksaeidi (2020) showed that consumers purchasing green wines are highly concerned about environment. Such consumers have a more favorable attitude towards environment-friendly packaging, which further stimulates green behaviour. However, none of the previous studies have focused on this relationship.

From the above discussion. It could be inferred that that this is the reason why in order to investigate the environmental behaviour and attitudes of undergraduate students of Social Studies department in University of Education Winneba, it is very relevant to assess their level of awareness of the environment.

2.4 Knowledge and Practice of environmental awareness

Knowledge and practice of environmental awareness among university students have greatly improved over the years resulting in more favorable social environment. Environmental education is also the basic things among society and ethical of society (Atkins, 2016)

There are positive relationships between the level of education and the level of awareness, knowledge and practice. Some of countries in the world experienced the difficulties economic framework for environmental protection and the lack of participation among general public in pro environmental behaviours among the communities. Although environmental awareness problems in critical level, it is widely known because of the growing awareness of all levels of society, including governments, general public and the scientific community (Yorek, Ugulu, Sahin, & Dogan, 2010).

Basically, the knowledge and the practice of environmental management are important to improve the ability among communities about the environmental issues and to achieve the environmental awareness and ethics, values and attitudes, skills and behaviours. The effectiveness of environmental education and development must be conducted from early age especially to students. Besides that, the implementation of environmental education is expected to provide knowledge in order to create the

community about environmentally responsible society. It will increase the awareness and concern (attitude) in the future towards the environment.

Yorek, Ugulu, Sahin, and Dogan, (2010) found that the knowledge and attitude of students was at a high level but the practice of the environment was at moderate level. The findings are in line with Brehma, Eisenhauerb and Stedman (2013) opinion that students have good awareness of environmental issues but this awareness is no longer being changed to a practical one. Awareness of environmental issues and awareness that the environment needs to be preserved has increased in society, but the level of individual involvement in environmental preservation activities is still at a low level. Research findings show that there is a need to know the level of awareness of the environment in aspect knowledge and practices among students of university. This suggests that in order to improve the practice of knowledge and practice in maintaining the environment, the communities need to build awareness and develop positive attitudes towards the environment. It is also recommended that early environmental education be applied in all ages to ensure consistency in environmental practices among the community. At the university level, lecturers should also play a proactive role in improving student behaviour to safeguard and preserve the environment. Activities that require more serious attention are such as bringing environmental awareness campaigns and other programs including weekly "Gotong-royong" at universities, accompanied by staff and students, especially by residential colleges. Furthermore, government agencies, non-governmental organizations and the mass media also play an important role in improving student practice towards the environment (Fowler, 2013). Students must also change their way of life with more priorities in the environment and actively

participate in the natural world. Through this association, they can actively participate more actively in resolving environmental issues collectively. This next, will indirectly be overcome problems in resolving environmental issues individually. That is what should be done by a group of students. This is because they are agents of change to make sure that the environment is preserved. Among the reasons why the society has low environmental awareness includes lack of understanding and education on environmental issues, lack of knowledge and information on the environment is still unaware that environmental problems existed due to their own actions (Fowler, 2013). The results showed that respondents felt that individual actions could not tarnish and threaten the quality of the environment compared to large scale actions. The current environmental situation and problems demand improvement efforts to understand and develop policies, theories, studies, curriculum, Personal Development Plan (PDP) processes as well as evaluations and assessments in a more holistic plan (Brehma, Eisenhauerb & Stedman (2013). A lot of displays have been broadcast by the mass media regarding environmental issues which are the impact of human hands. Among the important topics being discussed are pollution issues from all areas, including landslides, extreme forest exploration, toxic waste disposal, ozone depletion and no exception to environmental management. This situation has resulted in a serious deterioration in environmental quality and directly affects the quality of human life. Although various initiatives have been undertaken such as the involvement of government agencies, nongovernmental organizations (NGOs) and the private sector in the implementation of PAS programs and training but environmental awareness is still in low standard (Shafie, & Maleksaeidi, 2020). The government also needs to intensify

another campaign to educate the general public regarding the importance of consumerism practice green through various channels like letters newspapers, television, radio and exhibitions. Campaigns so it should be intensified throughout the country so that consumers are aware of the behaviour purchasing practices and consumerism practices they will have a big impact on environment. In addition to the recycling campaign have been organized, the government can be organizing other campaigns focus on reduce and reuse as well as knowledge of friendly product.

2.5 Environmental Behaviour

The meaning of the term "environmental behaviour" unwinds from the contemporary conditions in which social studies study environmental behaviour (Stern, 2000). In the period when the society registers changes of the environment, ecosystems, biosphere and climate which proceed in connection with human activity, the attention of professionals is focused ma-inly on such environmental behaviour which is connected with the usage of energy, raw materials, waste production and pollution. Environmental behaviour therefore is, in narrow sense, such a behaviour which has a significant impact on the environment.

Environmental behaviour is regarded as the total action mankind towards the improvement of environmental (Stern, 2007). These behaviours are recognized as important due to the effects that the consequences of not acting in an environmentally-conscious way, not recycling plastic items have on society and on the quality of human life in future (Stern, 2007).

Environmental behaviour is perceived by some authors as anv active responsiveness to current environmental issues believed to bc pro- environmental by the person performing the response. This implies a person's active involvement at all levels, working towards resolution of environmental problems (Adjzen, 1985). Environmental behaviour can also be explained as the observable and reported behaviour of the individuals, either done or unwillingness to do in future regarding the protection of the environment.

Similarly environmental behaviour is regarded as the range of human actions or activities, all shaped by intentions to protect both the physical and natural environment (Suneetha, 2007). A change in behaviour especially in the area of sanitation can bring about a tremendous improvement in the health and lifestyle of people.

According to Azwar (2015), environmental behaviour is also described as a behaviour that consciously seeks to contribute to positive or negative impact of one's action on the natural and the built environment. This therefore means that if a person has positive environmental attitude it might result in the person exhibiting positive behaviour towards the environment. Many environmental problems exist in Ghana due to the environmental behavoiur of most Ghanaians, especially those with low standards of living. It may seem that such propositions were outlined in the adoption of The National Sanitation Day was instituted on November 2014 by the ministry of Local Government and Rural Development. By its design, the NSD organized the first Saturday of every month seeks to

impress on all citizens to participate in maintaining environment sanitation and to subsequently adopt positive environmental behaviour.

Previous literature has used different terms to describe behaviours relevant to pro-environmental behaviour, such as green behaviour, ecological behaviours, responsible environmental behaviours, and other terms. Vicente-molina et al. (2013) reveal some factors that affect pro-environmental behaviours, such as attitude, knowledge, motivation, and customer perception effectiveness. Lack of understanding of the environment may limit the construction of environmental behaviour. This is in line with Zsóka, et al. (2013) who describe that attitude and knowledge are so significant that they will potentially impact the construction of positive environmental behaviours.

Additionally, a different finding was declared by Azwar (2015), stating that environmental behaviours are affected by several factors, including internal and external factors, coming from the dimension of the past, present, and the future. These factors may complexly contribute to the environmental behaviours because human by nature is not simple to understand or predict either.

Individual participation in this exercise is compulsory. National Sanitation Day was inaugurated to ensure that there are periodical clean up exercise in every part of the country. This according to the waste management experts will help change the behaviour and attitude of Ghanaians towards sanitation in the country. During the commissioning of the 9th edition of the programme, the country director of Zoomlion, the national waste management company, Robert Coleman retreated the need for waste management in the country to be a shared responsibility and urged the Ghanaian public

to be responsible for the cleaning of their immediate surroundings. A similar article by the Daily Graphic on June 4, 2015 ended with a thought provoking question "Why will people decide to dump waste behind their home, into gutters and in the middle of their neighborhood knowing very well that a waste truck will come to collect it once they are gathered in the waste bin, could it be that they do it with intent, is it financial problems or they just do not get the importance of clean environment" (www.graphiconline.com).

Despite the provision of waste bins in communities, some individuals prefer to dump the rubbish around the bin instead of putting it in the containers. This is a behaviour that needs to change in our society 'Aith immediate effect. Environmental behaviour serves as an active responsiveness to current environmental issues, believed to be pro-environmental by the person performing the action. Environmental behaviour therefore requires transfer of skills and increase in motivation for one to act in environmentally responsible manner.

Environmental behaviour is viewed as environmental literacy which requires transfer of skills and increase in motivation for one to act in "environmentally responsible" manner. Adopted behaviour by an individual help the him or her to decide consciously to minimize his or her negative impacts on both natural and constructed milieus" (Jacobson, Duff & Monroe, 2006).

According to Ajzen and Fishbein (2005), attitudes make the greatest impact on human behaviour if only there are favourable conditions. In other words, even if someone has a positive attitude toward a behavior, their actual performance of that behavior will depend on whether they perceive social pressure to do it and believe they have the

capability to successfully carry it out. Favorable conditions exist when all three of these factors are aligned in a way that facilitates the desired behavior.

Attitudes give stimulus for behaviour to emerge, these are influenced by personal, social or informational factors, and they help evaluate a behaviour in a positive or negative way, surrender to or resist social pressure and behave in one way or another. Moreover, as indicated by Ajzen and Fishbein (2005) the same factors also make an impact on person's perceptions whether he or she is able to exhibit such behaviours or keep it suppressed. These personal, social or informational factors have a direct influence on behavioural intentions that help to predict behaviour. As a nation, we need to move from doing things in a primitive way to a more modern way of doing things. An article was published about the state of drainage systems in the country. According to the news item, apart from the fact that they are poorly constructed, they are few and are left uncovered. Most people take advantage of the situation and dump rubbish in them, causing them to be choked heavily. Most government designated dumping sites are full and the treatment of the waste has become a problem. These fields then turn into breeding grounds for all kinds of germs, rats flies, reptiles and other toxic gasses. People contract all kinds of diseases including malaria, a leading cause of maternal mortality in pregnant women (www.citifmonline.com).

Respectively, if someone perceives behaviour as too complicated (i.e.recycling goods), it is less likely that such behaviour will be performed. Education, population pressure and happiness are also significantly correlated with environmental behaviour (Suneetha, 2007). By this assertion, a person's level of education together with

population pressure is significant determinants that affect behaviour towards the environment.

2.6 Environmental Attitude

Attitude has been understood in different dimensions by different authorities. According to Scholl (2002), attitudes are mental disposition to act that is expressed by evaluating a particular entity with some degree of favour or disfavour. Similarly, Milfont and Duckitt (2010) also see environmental attitude as a psychological tendency expressed by evaluating the natural environment with some degree of favour or disfavour. This disposition can be expressed by different types of evaluative responses. Attitudes express values, evaluate or show feeling about some idea, a person, object, event, situation or relationship. They are likes or dislikes involving some degree of evaluation and some action-preparedness too.

Attitudes are excellent predictors of conceptual cognitive process and reliably determine how individuals make sense of their world. For instance, if an individual towards the environment. It means that has a good environmental attitude and will express and act positive towards the environment.

Focusing on the concept of environmental attitude, it has been defined by Wortman (1992) that environmental attitudes are thoughts and feelings that encourage people to act as if they dislike or like a person, an object and issues. Ile further argues that the relationship between human beings and environment is thus a function of culture. Blaire et al., (1978) and Asare (2005) consider environmental attitude as interest in relation

with a wider related concept such as understanding human life including protecting our physical environment.

Environmental attitude has also been defined by Rajeeki (1982) as an "enduring combination of motivational, emotional, perceptual and cognitive process with respect to some aspects of our environment." Environmental attitude, therefore, refers to how people view environmental issues, their perspective, beliefs and levels of support, including their finding towards the specific people, and object involved.

Examples include their beliefs regarding environmental issues, environmental value, sense of responsibility, agreement or disagreement, flivour or dislike, opinion and inclination (Widegren, 1998). Widegren (1998) adds that environmental attitude is a characteristic acquired over a long period of time, and the individual will persist in environmental concern and eventually participate in environmental protection if they have that attitude. Hines et al., (1980) define the concept as an individual's support or opposition toward environmental protection, and his likes or dislikes such as toward energy crises, use of unleaded gas and recycling process. Whynie (2003) define environmental attitude as a relatively stable and predominantly learnt disposition of an individual towards specific object (people, things, ideas or the physical environment). This means that one's environmental attitude manifest in their actions and reactions toward the environment. Loui (1989) on the other hand explains environmental attitude as tendencies that are expressed by evaluating a particular entity (for example the environment) with some degree of favour or disfavour. According to Holahan (1992) environmental attitude is people favourable or unfavourable able feeling toward some features of the physical environment or towards issue which pertains to the physical

environment. It can be deduced from these definitions that environmental attitude is a mental state of readiness formed by an individual towards an object or the physical environment and this can be either positive or negative. This attitude should be directed towards the protection of the environment or improving the quality of the environment.

Schultz, Silver, Tabanico and Khazian (2004) also refer to environmental attitude as the collection of beliefs, effect and behavioural intentions a person holds regarding an environmentally related activities or issues. Newhouse (1990) explain environmental attitude as enduring positive or negative feelings about some persons, object or issue. The notion that environmental attitude is an enduring feeling is corroborated by Fishbein and Ajzen (1980) who has noted that "environmental attitude is a learned predisposition response in a consistently favourable or unfavourable manner with respect to a given object, person or a situation.

Environmental attitude in a way is perceived as how to be in proper relationship with regard to one's environment. Judging from the above literature, almost every one of' the authors is of the belief that environmental attitude is the concern one shows towards the physical environment. Zoomloin, a local waste management team was employed by the government of Ghana to embark on a massive clean-up exercise and also plant coconut (www.thechronicles.com.gh). Since it began it activities on September 2011, students, especially those at the university hardly participate in any of the clean-up exercise. The cold attitudes shown by students indicate a lack of no interest in their environment.

Schultz (2002) posits that environmental attitude is about the perception of values about a given environmental issue. In other words, it is how an individual shows concern and act friendly or favourably towards the environment. It can also be perceived as an

individual as connectivity to a specific situation that serves as the basis for evaluating a reaction in a situation. Tobin, Tippins and Gallard (1994) also view environmental attitude as a learned belief develops from an individual's beliefs, knowledge and values about the environment that governs his or her action to support or sustain the environment. Again, the relationship between man and environment is highlighted. One way or the other, all these authors are elaborating the term environmental attitude, as "an evaluation of ideas, events, objects or human beings and their relationship with their physical environment". Since the environmental has to do virtually everything around us, it is safe to refer to it as an attitude or "an interest one has in relation with under related concepts such as the understanding of human life including the protection of our environment". This means environmental attitude does not deal both favorable and unfavourable feelings one has towards an object or issue but also the nature of human beings and how they can preserve their surroundings.

Attitude is considered one of the most important influences on behaviour. In this context, environmental attitude could be considered a relatively enduring positive or negative feeling toward a particular aspect of an environmental object or issue. The attitude of caring for the environment can affect a person's behaviour towards the environment depending on their level of knowledge (Aliman et al., 2019). This attitude towards the environment is seen as important to foster community attitudes and behaviour, particularly among students. A study by Altin et al. (2014) showed a high level of environmental awareness among participant students. It is recognized, however, that environmental disclosures made in schools are insufficient, and that student participation in environmental initiatives is low. The findings of this study

revealed that a high degree of environmental awareness among students did not turn into active participation and led them to environmental attitudes (Altin et al. 2014)

Environmental attitude studies have served an important psychological function in that they have helped people to make decisions involving the use and care of the physical environment, such as decisions to put litter into waste recycling receptacles, join environmental organizations, use public transportation to school or work, or sign petitions calling for greater protection of natural scenic beauty and against environmental destruction. According to Ahmad et al., (2012), environmental attitudes constitute an important focus of environmental studies and their studies is guided by the assumption that environmental attitudes can be meaningfully related to future behaviour.

The potential benefits to society from the application of environmental attitude studies include considerations in the enactment of environmental law and preparation of environmental impact statements. Research on environmental attitudes can also be applied to programs to change public behaviour in respect to conservation and the preservation of the natural environment. One valuable tool in environmental studies would be an attitude measure capable of assessing an individual's relatively enduring beliefs and feelings about ecology.

2.7 Environmental Consciousness

Environmental consciousness is not only pertinent to one's perception and knowledge towards environmental issues but also towards the behaviour that one consequently conducts. Hence, the consumers' usage of green products leads to values and beliefs that are beneficial to the environment (Agarwal, 2018). Environmental consciousness

is an element of individual beliefs that guide consumers to conduct behaviour beneficial to the environment (Ahmad et al., 2012). It has also been shown that those who have environmental consciousness also exhibited characters and attitudes such as loyalty and a strong sense of commitment.

A study conducted by (Ahmad et al., 2012). indicated that environmental consciousness and environmental knowledge could cause positive changes in environmental attitude and further affect green consumption and purchasing behaviour. Similarly, an international green survey conducted by Ahmad et al., (2012) revealed that individual environmental consciousness, green attitude, and green consumption were positively correlated. This study also pointed out that environmental consciousness could nurture the real green consumers. As a result, the consumers with a stronger environmental knowledge and consciousness could more easily present positive green attitudes, which would then bring about the market competition arising from the green consumption behaviour (Carmi, 2013)

Other research has demonstrated that environmental education imposed significant effects on the consumer's attitude (Carmi, 2013). As environmental consciousness grew, consumers' attitudes toward environmental protection also became more favorable. There were various ways to transform environmental knowledge into environmental consciousness. After that, consumers became more sensitive to environmental issues. Based on these observations, the following hypotheses are proposed.

2.8 Conceptual Framework

A conceptual framework is the total, logical orientation and associations of anything and everything that forms the underlying thinking, structures, plans and practices and implementation of the entire research project. So, the conceptual framework comprises thoughts on identification of the research topic, the problem to be investigated, the questions to be asked, the literature to be reviewed, the theories to be applied, the methodology to use, the methods, procedures and instruments, the data analysis and interpretation of findings, recommendations and conclusions to make (Ravitch & Riggan, 2017). Thus, the conceptual framework is the logical conceptualization of the entire research project. Saying that it is a logical conceptualization means that a conceptual framework is a metacognitive, reflective and operational element of the entire research process.

The conceptual framework is thus the umbrella term relating to all the concepts and ideas that occupy ones' mind as he/she contemplate, plan, implement and conclude the research project. Thus, whereas the conceptual framework could be the product of ones' own thinking about a research study, the theoretical framework comprises other people's theoretical perspectives that one interprets as relevant to the research, and in particular, helpful in data analysis and interpretation. It is the basic structure from which concept or theory is built or formulated. This means that conceptual framework is assumption on which principles and rules regarding theories are structured. In this research I am associated studies conducted by Dunlap and Van Liere (1984) which suggest a relationship between environmental attitude and environmental behaviour. Attitude refers to a hypothetical construct about a mental state which is inferred from a

verbal report and behavioural observation while behaviour is usually influenced by the norm of his or her society.

The norms in this context refer to the culture, values and social morals. The norm of a society tends to affect or influence a person's judgment or way of thinking, this means that social morals, values and culture have a way of affecting how a person comply to certain beliefs in their environment (Ahmad et al., 2012).

This conceptual framework is an adaptation of theory of planned behaviour by Ajzen (1985). The theory of planned behaviour explains how behaviour tends to influence people beyond their control. This implies that the product of attitude which is usually behaviour does not always follow a particular pattern. In other words, just because a person's attitude is geared towards a certain concept does not mean that their behaviour will follow. This does explain why upon interaction with some students, one can deduce that they are aware of the dangers of throwing waste at unapproved places but still do it.

Environmental behaviour is influenced by a wide range of factors, ranging from social values and morals which form the norms of every society. This means that factual knowledge which is acquired through sensitization programmes only plays a partial role (that is if it is taught properly) in influencing the attitudes of people which then manifest in the actual behaviour of the people.

Low or poor environmental awareness attitude, attitude refers to a hypothetical construct about a mental state which is inferred from a verbal report and behavioural observation. In other words, attitude is a thought or an idea that an individual has about

a concept, be it positive or negative. These thought or ideas go a long way to manifest in the actions or behaviours of individuals. It therefore means that if an individual has a positive attitude towards the environment, it will reflect on how well that individual nurtures or treat the environment. In the diagram below, environmental attitude (positive or negative) id the independent variable and the environmental behaviour is the dependent variable.

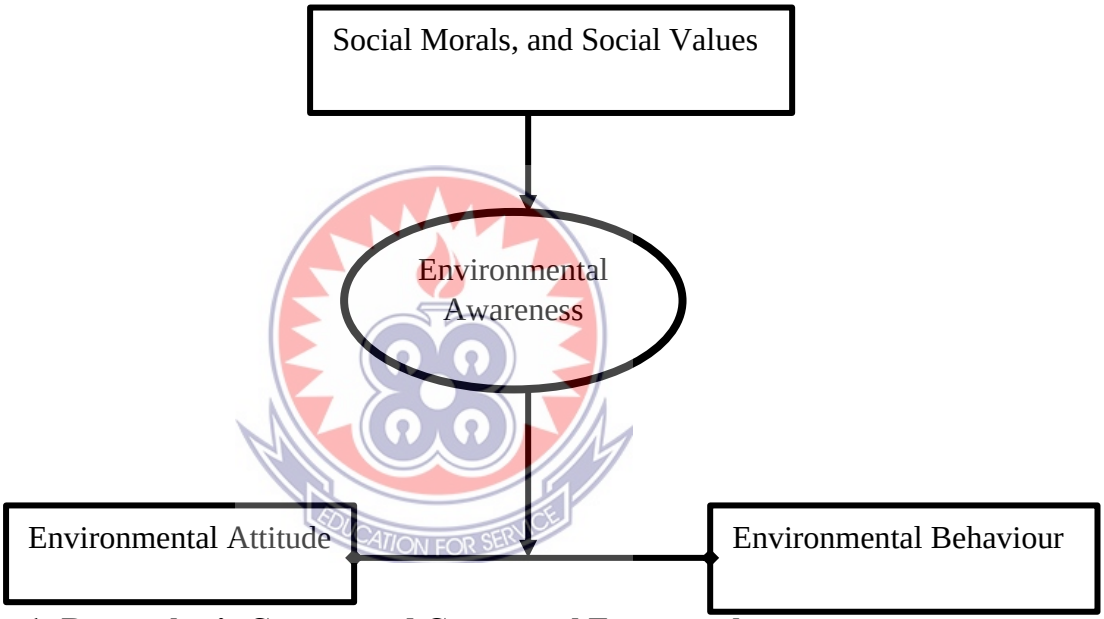

Figure 1: Researcher's Constructed Conceptual Framework

From figure 1, environmental attitude and behaviours are influenced by social and moral values

2.8.2 Social morals and values

Social morals and value here refer to the norms upheld by the students. These norms include their beliefs, culture and traditions. These norms are the embodiment of a society and most of the time defines the individuals of the society. If the norm of a

society is hostile to environment the indigenes will have hostile attitude and behaviours towards the environment. Since attitude is formed and passed from generation to generation, whatever views they hold about the environment has become a part of them and will be passed on to the next generation.

The knowledge one has about a concept reflects on the person's actions and reactions towards that particular concept. In the same way the limited knowledge these students have about their environment can mainly be blamed for the way and manner they treat their environment.

Factual knowledge is the scientific proven fact that is free of societal or cultural sentiments. Factual knowledge is usually acquired through formal education and it is no secret that the level of education of the students are high. This according to Obeng (2005) has a great influence on their attitude and behaviour.

2.9 Empirical review

Sanitation is a very important issue because it is akin to the health of an individual. Literature has it that sanitary environments are possible where there is a will and effort of the people in that environment (Igwe et al., 2017). The will and effort to maintain a clean environment is equated to having a positive attitude towards environmental sanitation. Students, like any other people, need a positive approach to their environment; to have a need a clean, healthy environment, in order pursue their educational goals without hindrance of diseases, pollution and dangers from reptiles (Igwe et al., 2017).

Ozdemir et al., (2005) investigated environmental awareness and sensitivity among medical students of Ankara University, and identified a low level of awareness and sensitivity. In another study, Ozmen et al., (2005) investigated the attitudes of university students toward environmental issues and the effective factors conducted with students attending the Faculty of Medicine and the Vocational School of Health, while 65 percent of the students were sensitive toward environmental issues, 84.9 percent did not participate in any activity of environmental organisations. This indicates a gap between students' attitudes and their actual engagement in environmental actions and initiatives. Moreover, the study found the female students had a higher level of environmental attitude in comparison to the male students. This suggests that gender may be a factor influencing environmental awareness and concern among university students.

The discrepancy found in the study by Ozmen et al., (2005), where students had positive environmental attitudes but low participation in environmental organizations, suggests the need to assess both the attitudes and the actual environmental behaviors of undergraduate students of Social Studies department at the University of Education, Winneba. This can provide insights into the factors that may be hindering the translation of environmental attitudes into concrete actions.

In a study titled “The attitudes of undergraduate students toward the environment and environmental issues,” Sama (1997) reported more a positive attitude toward the environment for female students and no significant difference between the attitudes of the first and the fourth-year students. In addition, the students with higher paternal educational attainment had a more positive attitude than those with lower paternal

educational attainment, and those in the middle-income group had a more positive attitude than those with lower income.

The findings of the study carry important implications for understanding and shaping environmental awareness and engagement among the student population. The observation that female students exhibited more positive attitudes toward the environment suggests that there may be inherent differences in the way genders perceive and respond to environmental concerns. This could stem from socialization processes, educational experiences, or innate predispositions, and warrants further investigation to uncover the underlying factors driving this gender divide. The lack of significant difference in attitudes between first-year and fourth-year students was somewhat unexpected, as one might have anticipated that exposure to environmental education and increased awareness over the course of their studies would lead to more favorable attitudes among senior-level students. This finding implies that the university curriculum and campus culture may not be effectively instilling a strong environmental ethic in its students, highlighting the need for more comprehensive and impactful approaches to environmental education and engagement.

By drawing parallels between the Sama (1997) study and the context of the University of Education, Winneba, the assessment of environmental attitudes and behaviors can provide valuable insights to inform the development of comprehensive strategies and interventions that foster environmental stewardship among the student community. This holistic approach can contribute to the university's efforts to nurture environmentally responsible graduates who are equipped to address pressing environmental challenges.

In the study conducted by Nwakile et al., (2017), the researchers examined the effects of sanitation practices on the health of students at the University of Nigeria, Nsukka. Using a case study research design, the study aimed to address four key research questions. The study population consisted of 197 students from the Faculty of Vocational and Technical Education, with a sample of 100 students selected through non-stratified random sampling, comprising 20 students from each of the five departments within the faculty. Data was collected using a 30-item questionnaire, which was validated by three experts, and the reliability of the instrument was established using Cronbach's alpha, yielding a coefficient of 0.76. The study's findings provide valuable insights into the multifaceted aspects of sanitation practices and their impact on student health. Firstly, the researchers identified various causes of poor sanitation, such as inadequate infrastructure, lack of proper waste management, and limited access to clean water. These factors were found to have direct consequences on the physical and mental well-being of the students, leading to the spread of diseases, increased absenteeism, and decreased academic performance. Furthermore, the study revealed the ways in which the school management attempted to address these issues, including the provision of equipment and facilities to enhance sanitation. However, the researchers also highlighted the need for more comprehensive and coordinated efforts to improve school sanitation effectively.

The implications of these findings are far-reaching. Addressing the poor sanitation practices within the University of Nigeria, Nsukka, is not only crucial for the health and well-being of the student population but also has broader societal implications.

Improved sanitation can lead to reduced healthcare costs, increased educational attainment, and a healthier, more productive workforce in the long run.

In another study by Senyurt et al., (2011) on socio-demographic factors that affect university students' attitudes toward the environment, the researchers found that although 45.2 percent of the students regarded environmental issues to be at an alarming level, 83.2 percent did not participate in environmental activities. Furthermore, although the environmental attitudes of the students displayed significant differences with respect to gender and department at university, there was no significant difference with respect to maternal education and family income level

In another study by Igwe et al (2017), they examined students' perception of environmental sanitation by reviewing various work done on perception of environmental sanitation. The results showed that the sanitation practice of many schools was weak and this was as a result of lack of sanitation facilities, poor environmental awareness of environmental sanitation and non-challant attitude of school administrative on sanitation practices

Anijaobi-Idem et al., (2015) work on environmental awareness and school sanitation in Calabar Metropolis of Cross River State, Nigeria, revealed that the desire and need of the school personally to maintain a healthy school environment depended completely on their level of awareness concerning the environment. School personnel who were aware that the environment is part of their existence tended to make their schools convenient and conducive for teaching and learning with the availability of ecofriendly facilities.

A study by Musa and Haque (2016) to assess the factors responsible for the poor environmental sanitation in the male hostel of Bayero University, Kano. A total of six hundred students were sampled. A questionnaire was used for data collection and descriptive statistics and percentages were used to assess the students' responses. The result obtained was that 75 percent of the students had no adequate personal attitude to clean the hostels, 64 percent indicated no regular water supply and 59.1 percent reported lack of waste disposal facilities. However, 78.3 percent agreed that students' attitude contributed to poor hygienic conditions in the hostels while 70.3 percent affirmed that there was a lack of maintenance of waste facilities.

Adeolu et al., (2014) carried out a study to assess the knowledge, attitude and practices of secondary school students towards waste management in Ibadan, Nigeria. Structured questionnaire was administered to 358 students to collect data. Data collected was subjected to percentage, mean, standard deviation, correlation and chi-square statistical analysis. Findings revealed students' level of knowledge, attitudes and practice of waste management was relatively moderate in the selected secondary schools, and the percentage of those who used indiscriminate solid waste disposal methods like open dumping and open burning was higher. Educational status, age and gender, among others, were factors that influenced solid waste management in the schools in Ibadan. Significant relationships were observed between students' sex, age and class and their level of awareness, knowledge and their practices of waste management.

Aduku (2014) assessed the attitude of senior high school students towards environmental sanitation in Ghana using six public senior high schools in the Ga

Metropolis as a case study. Questionnaire and interviews were used to collect data from 400 students, selected government institutions and private waste management companies involved in environmental sanitation. The study revealed that the students had poor attitude towards sanitation. It was also found that high expectation of school health and environmental sanitation education programme did not always been fulfilled. In many countries, schools are not safe for children due to neglect of the operation and maintenance of facilities. In addition, environmental sanitation education given to students was not relevant or effective. The study found that the effective management of environmental sanitation requires strategies that bring about fundamental change in how students perceive environmental sanitation in the city and service delivery.

Aduku's (2014) study has several implications. The study found that the senior high school students had a poor attitude towards environmental sanitation. This suggests that there is a need to address this issue and improve the students' perceptions and behaviors towards environmental cleanliness and responsible waste management. The study revealed that the school health and environmental sanitation education programs did not always meet the high expectations of the students. This highlights the need to review and improve the content, delivery, and relevance of such educational programs to make them more effective in shaping students' attitudes and behaviors.

It is clear from the empirical studies that even though attentions have been paid in terms of research on students' awareness and attitude towards environmental sanitations, a lot these studies were done outside Ghana, and were concentrated on senior high school students. This creates a population gap. The study in Ghana by Aduku (2014) also

focused senior high school students. The findings of Aduku cannot be generalized to cover university students because of the different characteristics such as age and maturity levels, developmental stage, life and learning experiences and even learning between senior high school students and university student. Therefore, there was the need to conducted a study examining environmental awareness, attitudes and behaviours of university students.

2.10 Summary

This chapter explored various literature on the concept of environment, environmental awareness and factors underlining environmental attitudes and behaviours. It argued that studies reported environmental attitude and behaviours among students is mainly negative due to ignorance on one hand, and social morals and values on the other, using the theory of planned behaviour this work is framed within a thinking and theorization which argues that environment attitude and behaviour are constants that are demonstrated in how people dispose of waste and live with them. In the next chapter, I explained the methodological approaches to the research.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter contains information about methodology. Specifically, it covers the philosophical underpinnings or paradigm, research approach, research design, study area, study population, the sample size and sampling procedures, research instruments, validity and reliability, ethical consideration, procedures for data collection and data analysis.

3.1 Philosophical Underpinning

This study was anchored in the positivist philosophy. Positivism beliefs in the scientific method of investigation and will be used in the natural world (Scotland, 2012). Positivists believe that different researchers will generate a similar result using the same statistical tools and following the same research process while investigating large samples paving a path for context-independent universal generalization (Wahyuni, 2012). Thus, it advocates the use of quantitative research methods (Kivunja & Kuyini, 2017). Positivist believes that there exists only one true reality which is apprehendable, identifiable and measurable.

Positivists prefer quantitative methods such as social surveys, structured questionnaires and official statistics because these have good reliability and representativeness. The positivist tradition stresses the importance of doing quantitative research such as large-scale surveys in order to get an overview of society as a whole and to uncover social

trends, such as the relationship between educational performance and social class. This type of sociology is more interested in trends and patterns rather than individuals.

Epistemology of positivist is that of objectivism. Here the researcher and subjects are independent of each other and the conscience of the researcher is not important as the meaning lies with the subjects (Babbie, 2015). Positivism interacts with the world impartially (objectivism) and discover the absolute knowledge about objective reality. In this study, positivism was the guiding research philosophy because of its scientific nature. Positivism relies on four aspects of science, namely, that science is deterministic, mechanistic, methodical, and empiricist. The main principles of positivism philosophy adapted from Babbie (2015) that informed this study are:

1. In scientific studies, there are no differences in logic of inquiry.
2. Positivistic studies are aimed at explaining and predicting phenomena.
3. Positivistic researches are empirically observable via human senses. Inductive reasoning is used to develop hypotheses that will be tested during the research process.
4. Positivistic studies do not allow common sense because this may result in biased conclusions.

3.2 Research Approach

The study employed quantitative approach. Babbie (2015) defines quantitative research as a strategy that focuses on quantification of data in terms of their collection and analysis. According to Yilmaz (2013), quantitative research can be defined as a phenomenon based on numerical data that are analyzed statistically. Quantitative

research is formal, objective, rigorous, deductive approach, and systematic strategies for generating and refining knowledge to problem solving (Kivunja & Kuyini, 2017). Its designs are either experimental or non-experimental and seek to obtain accurate and reliable measurements (Rahman, 2017). It consists of systematic observation and description of the characteristics or properties of objects or events for the purpose of discovering relationships between an independent (predictor) variable and a dependent (outcome) variable within a population.

The word "quantitative" means quantity or amounts (how many) information collected in the course of the study and is in a quantified or numeric form (Bryman, 2012). Quantitative research explains phenomena by collecting numerical unchanging detailed data that are analyzed using mathematical based methods, in particular statistics that pose questions of who, what, when, where, how much, how many, and how. It deals in numbers, logic, and an objective stance. It is original research in which the researcher decides what to study, asks specific, narrow question, collects quantifiable data from participants, analyze these numbers using statistics, and conducts the inquiry in an unbiased, objective manner (Creswell, 2014). It considers interpersonal relationships, personal values, meanings, beliefs, thoughts, and feelings with human beings. It manipulates variables and control natural phenomena.

Quantitative approach was driven by investigators with the need to quantify data. Since then, quantitative research has dominated both local and western cultural as the research method to create new knowledge. This method was originally developed in the natural sciences to study natural phenomena (Joppe, 2016). In quantitative research, a variable

is a factor that can be controlled or changed in an experiment (Creswell & Plano-Clark, 2017). It deals with quantifying and analyzing variables in order to get results. It is strictly positivistic, objective, scientific, and experimental. It should be used when a highly structured research design is needed and can be naturally imposed on the experiment being conducted. According to (Creswell 2014), the researcher needs to be totally objective; is not part of what he(s) observes, and does not bring his/her own interests, values, or biases to the research, and although the phenomena being captured may be complex, they can be broken down and assigned some type of numerical value. Quantitative research methods deal with numbers and anything those are measurable in a systematic way of investigation of phenomena and their relationships. It is used to answer questions on relationships within measurable variables with an intention to explain, predict and control a phenomenon (Bryman, 2012). In quantitative research researchers decide what to study, asks specific and narrow questions, collects quantifiable data from participants, analyzes these numbers using statistics, and conducts the inquiry in an unbiased and objective manner. According to Babbie (2015), statistical, mathematical or computational techniques are applied to obtain accurate results in quantitative research. Recently this type of research is widely used in business studies, natural sciences, mathematical sciences and social sciences. The quantitative research data are collected through closed-ended questionnaires. The type of data is in numerical form, such as statistics, percentages, graphs, etc. The data are used to develop and employ models based on the form of mathematical models, theories, and hypotheses to obtain the desired result. According to Kumar (2019), a research

hypothesis is an empirically testable statement that is generated from a proposition, which is clearly stated relation between independent and dependent variables.

In the quantitative methodology, researchers use the scientific method that starts with the specific theory and hypotheses for research procedures and also attempt to achieve rich, real, deep, and valid data (Nwankwo, 2013). She observed the world as objective and seek measurable relationships among variables to test and verify their study hypotheses. Creswell (2014) posited that the findings from quantitative research can be predictive, explanatory, and confirming. The objective of quantitative research is to develop and use mathematical models, theories and hypotheses/propositions pertaining to phenomena.

3.3 Research Design

This study is descriptive, incorporating a cross-sectional study in order to specifically describe a subject matter pertaining to a specific environment. With the descriptive design, Bryman (2012) explained that a researcher tries to describe the characteristics of certain groups, to estimate the frequency or proportion of subjects in a specified population, to analyse relationships between variables, or to make specific predictions. According to Creswell (2014), descriptive survey research designs are procedures in quantitative research in which investigators administer a survey instrument to a sample or to the entire population of people to describe the attitudes, opinions, behaviours, or characteristics of the population. The descriptive study design as said by Burns and Grove (2015), presents the current picture of the situation being studied in its natural form as it happens. Descriptive study is normally used to study a phenomenon at a specific time when time or resources for more extended research is limited (Creswell

& Plano-Clark, 2017). Descriptive design has the potential of providing or giving information from quite a large number of individuals. It is practical and applicable in that it identifies a present condition and points to present needs. It is believed that descriptive survey is basic for all types of research in assessing the situation as a pre-requisite for conclusions and generalizations.

Since the current study sought to assess the environmental awareness, attitude and behaviour of student of Social Studies department in the University of Education Winneba and determine, whether there is correspondence between their environmental awareness and attitudes on one hand and their environmental behaviour on the other, descriptive design is seen as the most appropriate and adequate research design in describing the phenomenon. Descriptive designs can be used with greater confidence with regards to particular questions which were of special interest and value to researchers.

3.4 Study Area

The study was conducted at the Department of Social Studies Education, University of Education, Winneba in the Effutu Municipality. My choice of the department was influence by her attempt to get participant who have deeper knowledge and can provide information to assess the environmental awareness, attitude and behaviour of student in University of Education Winneba and determine, whether there is correspondence between their environmental awareness and attitudes on one hand and their environmental behaviour on the other.

3.4 Population

The population of the study comprised undergraduate students from the University of Education, Winneba who study courses related to environment. Population refers to a set of elements, objects, people of which the researcher is interested in investigating in a given geographical area (Yelkpieri & Tamanja, 2019). This implies that research population is the larger group of many cases from which a researcher draws a sample and uses for data collection. The target population of the study was undergraduate students studying Social Studies in the University of Education, Winneba. The total number of undergraduate students as at the time of the study was 2567 students. Table 3.1 below shows the distribution of the students according to their levels.

Table 3. 1: Target Population Undergraduate Students

Level of Students	Population
100	459
200	841
300	718
400	519
Total	**2537**

Source: Undergraduate Regular Students Enrolment Statistics, 2021/2022

3.5 Sample Size and Sampling Procedure

A sample is a subset of a population that is used to represent the entire group as a whole. (Cherry, 2022). The purpose of selecting a sample is to make inferences about the larger population based on the characteristics of the sample (Babbie, 2016). That is, a sample of those who the researcher selects to actually represent the population and participate

in the study. A sample size of 345 constituting 13.5% percent of the target population was selected for the study.

The sample size was determined using Yamane (1967) method to calculate the sample size for the survey. This is presented as:

$$n = \frac{N}{1 + Ne^2}$$

Where, "n" represents the required minimum sample size subject to calculation, and "N" is the size of the target population of which a sample is drawn, that is, the total number of undergraduate students offering Social Studies Education. The letter 'e' which is the 'margin of error' largely depended on the required confidence level targeted by the study. A confidence level of 95% was adopted. The 'e' value was 5% (0.05) at 95% confidence level. Based on the statistics of the teachers in the municipality, the estimated target population stood at approximately 2537.

Using the target population size of the teachers to be 2567, the minimum sample size was estimated as follows:

$$\mathrm{n} = \frac{\mathrm{N}}{1 + \mathrm{Ne}^2} = \frac{2537}{1 + 2537(0.05)^2} = \frac{2537}{7.3425} = 345$$

Sampling is a process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of characteristics found in the entire group (Orodho, 2014). To determine number of students from each level to participate in the study, the proportionate stratified sampling approach was used. With this approach, the levels of the students formed a stratum and each stratum was sampled as an independent sub-population, out of which individual students were randomly selected. Proportionate stratification occurs when each stratum's size is

proportionate to the size of the population of the stratum when viewed across the entire population was used. The sampling fraction for each stratum was the same. The sampling fraction is the ratio of the sample size (n) to the population size (N), n/N. It represents the proportion of a population to be included in a sample (see Table 3.1). Where the sample size figures were in decimals, the figures were rounded to obtain whole numbers.

Table 3.2. Sample Size Selection Table

Stratum	**Population (N)**	**% of Stratum Sampled (%)**	Sample Size (n)
Level 100	459	13.5%	62
Level 200	841	13.5%	115
Level 300	718	13.5%	97
Level 400	519	13.5%	71
Total	**2537**	13.5%	**345**

Source: Author's Construct (2022)

The justification for the choice of stratified random sampling was shared by Gay (1992) that stratified random sampling is suitable for making expressive comparisons between sub-groups within a population. Again, stratified random sampling has the tendency to produce means that are likely to be closer to the overall population mean (Robson, 1993). And finally, based on my conviction that there is a wide variance between the students in each of the classes.

Then simple random sampling (using non-replacement lottery sampling) was used to obtain the required respondents from each of the strata. In using the random selection,

the students picked cards on which 1 and 2 were written. Students who chose cards with the number 1 were selected. This method allowed every student in the population the opportunity to participate in the study. The choice of the simple random sampling technique was made because it is less complex and less time-consuming (Quaye, 2013. As a result, a moderate sample size, which is sufficient statistically and operationally, was chosen. In all, the sample size for the study was 345 which was twenty 13.5% of the target population. According to Gall, Gall and Borg (2007), a sample size between 10-30 per cent of the population is appropriate. The sample size was not so large to prolong the study nor too expensive to collect data from (McLeod, 2019).

3.6 Data Collection Instrument

The data was collected using a questionnaire. The questionnaire items on environmental awareness were adapted from Milfont and Duckitt (2010), whiles that of environmental attitude was adapted from Dunlap and Van Liere (1984). The questionnaire was presented to the respondents to answer. According to Kumar (2019), a questionnaire is a research instrument used in a survey made of carefully constructed questions to obtain self-reported answers about general and personal issues. The questionnaire contained four sections. Section A covered the background or demographic data of respondents. The Section B solicited information from the respondents on the level of environmental awareness among the undergraduate students of Social Studies department of University of Education Winneba. Section C collected data on the environmental attitude among the students. The environmental behaviour among the students was collected through items in section D. The section E collected data on the extent to which

environmental awareness and attitude correspond with environmental behaviours. Sections B, C, D and E of the questionnaire was a five-point Likert-type scale with the grading; Strongly Agree, Agree, Disagree and Strongly Disagree.

3.7 Validity and Reliability of Research Instrument

Joppe (2016) provides that validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are. The questionnaire was validated by the researcher's supervisor by checking the content validity. Again, Joppe (2016) defines reliability as the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable. The reliability of the instrument (questionnaire) was obtained by calculating the Cronbach coefficient after the pilot test. The Cronbach alpha coefficient was 0.87, hence the questionnaire was considered reliable. Bryman (2012) posited that a Cronbach Alpha coefficient of at least 0.70 is indicative of reliability.

3.8 Data Collection Procedure

In order to successfully collect data for the study, an introductory letter was obtained from the Department of Social Studies Education introducing the researcher and the purpose of the research to the authorities in the selected departments. Before the administration of the questionnaire, the researcher made preliminary enquires in the selected departments to obtain permission from heads of departments to conduct the study. The students were group together in one of the lecture theatres and the purpose

of the study was made known to them. The students were guided as to how to answer the questionnaire. In order not to skip some of the response, respondents were encouraged to read the questionnaire before selecting the appropriate responses. Students were given the opportunity to ask any question that baffles them in order to complete the questionnaire.

3.9 Ethical Issues

Creswell (2014) argues that it is necessary in every research study to treat ethical issues with high degree of caution. As such ethical issues galvanizing the human subjects in the research were strictly adhered to. An introductory letter was obtained from the Department of Social Studies Education. Again, the features of the questionnaires such as ease of completion and sensitivity of the questionnaires were considered. There were no biases towards any religion, race or culture. The consent of the respondents was also be sought before administering the test. The names of the subjects were not mentioned during the course of the research report with anonymity and confidentiality highly assured. Also, all cited sources were fully acknowledged.

3.10 Data Analysis Procedure

The data was checked for accuracy and then entered into the computer and transformed. Statistical Package for Service and Solutions (SPSS) version 26 was used to describe the basic features of the data. Descriptive statistics such as Simple tables, figures, percentages and frequencies, means and standard deviation were used to organize and present the data in an easy-to-read way. Data gathered for research questions 1, 2, and 3 were analysed using frequency, percentage, mean and standard deviation while the

data for research question 4 was analysed using correlation. The statistics provided simple summaries about the samples and the measures.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

This chapter is devoted to the presentation of the results of the analyses of data. The chapter is organized under three sub-sections. Firstly, the response rate and justification of the adequacy of respondents were discussed followed by the presentation of demographic characteristics of the respondents. The third sub-section delves into the presentation of results of the research questions.

4.1 Response Rate

The response rate of the questionnaire was 73.7%. This was because 254 out of questionnaires were useable. This response rate is appropriate for statistical analysis based on the suggestion of Dillman (2000) that a response rate of at least 70% is adequate in surveys.

4.2 Bio Data of the Respondents

The study examined the bio data of the respondents. The bio data included the sex and age. The results of the analysis were presented in Table 4.1.

Table 4. 1: Bio Data of Respondents

Variables	Categories	Frequency	Percent
Sex	Male	114	55.0
	Female	140	45.0
	Total	**254**	**100**
Age (in years)	Less than 20	27	10.8
	21 to 30	162	63.8
	Above 30	65	25.4
	Total	**254**	**100**
Academic level	Level 100	50	19.8
	Level 200	87	34.2
	Level 300	77	30.3
	Level 400	40	15.7
	Total	**254**	**100**

Source: Fieldwork Data (2022)

The data in Table 4.1 shows that majority of the students' respondents were females (n=140, 55.0%) than the male respondents (n=114, 45.0%). This does not suggest that there is more female student than their male in the Social Studies department, rather, it indicates that more female students answered the questionnaire.

It was revealed in the study that majority of the respondents were between 21-30 years (n=162, 63.8%) as compared to those above 30 years (n=65, 25.4%), and those less than 20 years (n=27, 10.8%). This implies that majority of the students who participated in the study were within the age range of 21-30 years. This is likely to be due to the fact that majority of first-degree students fell within 21-30 years.

Regarding the academic level of the respondent, it was recorded that majority of the students were level 200 student (n=87, 34.2%). Closely followed are level 300 students (n=77, 30.3%). Then was level 100 (n=50, 19.8%) and finally, level 400 (n=40, 15.7%)

4.2 Section B: Analysis of Main Data

4.2.1 Environmental awareness of students

Table 4. 2: Environmental Awareness

S/N	Environmental Awareness	Yes		No		Total	%
1	I am concerned about the environment because of the consequence on health and global warming	219	86.2	35	13.8	254	100.0
2	Raw sewage disposal indiscriminately adversely affects human life.	191	75.2	63	24.8	254	100.0
3	Stagnant water can breed mosquitoes	242	95.3	12	4.7	254	100.0
4	Polluting our environment can affect global climate	210	82.7	44	17.3	254	100.0
5	Protecting the environment will help students enjoy a quality life	221	87.0	33	13.0	254	100.0
6	My actions in our communities can put some plant and animal species into extinction some time to come	210	82.7	44	17.3	254	100.0
7	Environmentally friendly products help to sustain the environment	210	82.7	44	17.3	254	100.0

Source: Fieldwork, 2022

Table 4.2 presents the results of the response to the statement “I am concerned about the environment because of the consequence on health and global warming reveal that 219 (86.2%) of the respondents said they are concerned about the environment because

of the consequence on health and global warming while 35 (13.8%) of them responded "No" implying that they are not concerned about the environment because of the consequence on health and global warming. The results suggest that majority of the respondents are concerned about the environment because of the consequence on health and global warming.

The results of the response to the statement "Raw sewage disposal indiscriminately adversely affects human life" was that 191 (75.2%) of the respondents said they are concerned about the environment because of the consequence on health and global warming while 63 (24.8%) of them responded "No" implying their unawareness of the fact that raw sewage disposal indiscriminately adversely affects human life. The results suggest that majority of the respondents are aware of it.

Similarly, the results of the response to the statement, "Stagnant water can breed mosquitoes" was that 242 (95.3%) of the respondents said "YES", indicating their agreement that stagnant water can breed mosquitoes. The number of the respondents who said "No" to the statement were 12 (4.7%). The results suggest that almost all the respondents are aware that stagnant water can breed mosquitoes.

The results of the response to the statement "Polluting our environment can affect global climate" revealed that 210 (82.7%) of the respondents said "Yes" to the statement, "polluting our environment can affect global climate" while 44 (17.3%) of them responded "No" implying that polluting our environment cannot affect global climate. The results suggest that majority of the respondents do not understand how pollution can affect global climate.

Regarding the statement "Protecting the environment will students enjoy a quality life". It was recorded that 211 (87.0%) of the respondents said "Yes", showing their agreement to the statement, while 33 (13.0%) of them responded "No" implying that protecting the environment will not help enjoy a quality life. The majority of the respondents are aware that protecting the environment will help students enjoy a quality life since this result is most likely to reflect in their actions toward the environment.

Response to the item 7, "my actions in our communities can put some plant and animal species into extinction some time to come" revealed that 210 (82.7%) of the respondents said their actions in our communities can put some plant and animal species into extinction some time to come. The number of respondents who responded "No" stood at 44 (47.3%). This implies that majority of the respondents believe that actions in our communities can put some plant and animal species into extinction some time to come. Good as this may be, there is significant number of respondents who think otherwise. Therefore, there is the need for sanitization of respondents on the impact of their actions on pants and animals.

Finally, responses to item 8, "Environmentally friendly products help to sustain the environment was that 210 (82.7%) of the respondents said "Yes" to the statement "environmentally friendly products help to sustain the environment" while 44 (17.3%) said "No" to the statement implying that environmentally friendly products do not help to sustain the environment. Even though majority of the respondents are aware that environmentally friendly products help to sustain the environment, it is important that

steps are taken to educate students on the benefits of environmentally friendly products on sustaining the environment.

4.2.2 Environmental Behaviour

Table 4. 3: Environmental behaviour of students

S/N	Environmental Behaviour	Yes	%	No	%	Total	%
1	I dump waste at places heaped with refuse	166	65.4	88	34.6	254	100.0
2	I dump refuse into bins even when they are full so they overflow	81	31.9	173	68.1	254	100.0
3	I dump refuse anywhere when no one is watching	143	56.3	111	43.7	254	100.0
4	It is insanitary to dump refuse indiscriminatory	206	81.1	48	18.9	254	100.0
5	Defecating anywhere pollutes the environment	220	86.6	34	13.4	254	100.0
6	I pass urine at any place I find convenient	221	87.0	33	13.0	254	100.0
7	Keeping refuse at the hostel for days can lead to sickness	226	89.0	28	11.0	254	100.0

Source: Fieldwork, 2022

Table 4.3 captured that the results of the response to the item, "I dump waste at places heaped with refuse" showed that 166 (65.4%) of the respondents said "Yes" to the statement. This means these group of respondents agreed that they dump waste at places heaped with refuse. However, 88 (34.6%) of them responded "No". This suggest that

they do not dump waste at places heaped with refuse. In general, the results show that majority of the respondents dump waste at places heaped with refuse.

The response to the item "I dump refuse into bins even when they are full so they overflow" was that, 81 (31.9%) representing few of the respondents said they dump refuse into bins even when they are full so they overflow. One hundred and seventy-three (173) representing majority (68.1%) of the respondents responded "No" suggesting that they do not dump refuse into bins even when they are full do they overflow. It can be inferred from the results that majority of the respondent do know the right thing to do so bins do not overflow. Good at it may seem, it is surprising and worrisome to find out that almost one-third of the respondent dump refuse into bins even when they are full so they overflow. This behaviour is unacceptable from the respondents especially considering their level of education.

The results of the response to the item "I dump refuse anywhere when no one is watching" was that 143 (56.3%) of the respondents said they dump refuse anywhere when no one is watching. The number of respondents who responded "No" stood at 111 (43.7%). This implies that majority of the respondents dump refuse anywhere when no one is watching. This a bad environmental behaviour and must be dealt with accordingly.

It was captured that the statement, "It is insanitary to dump refuse indiscriminatory show that 206 (81.1%) of the respondents said "Yes" to the statement. This is an indication that these respondents agree that it is insanitary to dump refuse indiscriminatory. This is good news since this assertion by the respondents could

influence their environmental behaviour. However, 48(18.9%) of the respondents responded "No". This suggest that they do not agree that it is insanitary to dump refuse indiscriminatory. Considering the level of education of the respondents it is expected that the respondents know better. However, their responses did not communicate same. In general, the results show that majority of the respondents said it is insanitary to dump refuse indiscriminatory.

Responses to the statement, "Defecating anywhere pollutes the environment was that 220 (86.6%) of the respondents said "Yes". This is a demonstration of their awareness that defecating along the beach affect pollutes the environment. The number of the respondents who said "No" to the statement were 34 (13.4%). The results suggest that, defecating along the beach does not pollutes the environment lives according to this group of respondents. The results imply that majority agree that defecating along the beach pollutes the environment.

The statement "I pass urine at any place I find convenient" was responded to as yes by 221 (87.0%) while 33 (13.0%) of them responded "No" implying that they do not pass urine at any place they find convenient. The results suggest that just few of the respondents have good environmental behaviour in respect to this statement while majority of them have bad environmental behaviour.

Finally, responses to "Keeping refuse at the hostel for days can lead to sickness" was that 226 (89.9%) of the respondents said "Yes" to the statement. This is an indication that these respondents agree that keeping refuse at the hostel for days can lead to sickness. This is good news since this behaviour by the respondents is likely to

influence their environmental behaviour. It is however, interesting that 28 (11.0%) of the respondents said “No”. This suggest that they do not agree that keeping refuse at the hostel for days can lead to sickness. Considering the level of education of the respondents, one would have expected that the respondents know better.

4.2.3 Environmental Attitude

For the purpose of these analyses strongly agree and agree were combined as agreed to the given statement responded to by the respondents while disagree and strongly disagree were combined as disagreed to a given statement on environmental attitude.

Table 4. 4:Environmental attitude of students

S/N	Environmental Attitude	SA +A	U	SD +D	Mean	Std Dev
1	I believe that information is increasingly necessary to be aware of the effects of our actions on the environment	209	19	26	2.83	0.45
2	Environmental education activities are only useful for children	80	53	112	1.86	0.77
3	I like to participate in field activities because it is a good way of understanding the environment in which I live	50	71	133	1.66	0.69
4	Environmental education for people cannot help resolve environmental problems, only technology can do this.	62	25	167	1.53	0.73
5	Universities should schedule more activities because they help to understand the matter better	216	15	23	2.87	0.41
6	I believe that environmental problems are exaggerated, nature balances out over time	82	42	130	1.88	0.79
7	I try to choose subjects that deal with matters that related to the environment because I feel I don't know enough	23	13	218	1.31	0.55
8	I am willing to consume less and go without some comforts if it helps to protect the environment	18	12	224	1.28	0.51
9	When I buy a product, I assess the type of packaging and choose one that is recyclable.	11	5	238	1.19	0.41
	Mean of means				1.601.	

Source: Fieldwork, 2022

The result in table 4.4 revealed that the statement, "I believe that information is increasingly necessary to be aware of the effects of our actions on the environment" was agreed to by 209, however, 19 of the respondents were undecided and 26 disagreed. The mean and standard deviation for the distribution were 2.83 and 0.45 respectively. This suggest that more information should be provided to intensify education on good environmental attitude.

It was also captured that 80 of the respondents agreed to the statement "environmental education activities are only useful for children". Fifty-three (53) were undecided, while 112 disagreed. The mean and standard deviation for the distribution were 1.86 and 0.77 respectively. The results imply that majority of the respondents disagreed that Environmental education activities are only useful for children. It can therefore be deduced that environmental education is for both children and adult.

With regards to the statement "I like to participate in field activities because it is a good way of understanding the environment in which I live". It is observed that few, 50 of the respondents agreed they like to participate in field activities because it is a good way of understanding the environment in which they live, 71 of them were neutral and majority, 133 disagreed. The mean and standard deviation for the distribution were 1.66 and 0.69 respectively. The results imply that majority of the respondents disagreed that they like to participate in field activities because it is a good way of understanding the environment. This means that majority of the respondents did not like to participate in field activities because it is a good way of understanding the environment in which they live.

Responses to the statement, “environmental education for people cannot help resolve environmental problems, only technology can do this” was that 62 of the respondents agreed to the statement, 25 of them were neutral and majority, 167 disagreed to the statement. The mean and standard deviation for the distribution were 1.53 and 0.73 respectively. The results imply that majority of the respondents disagreed that environmental education for people can also help resolve environmental problems but not only technology can do this. Environmental education thus, becomes important for authorities in their bid to develop positive environmental attitude among students.

Response to the 5th item, “universities should schedule more activities because they help to understand the matter better” found majority, 216 of the respondents agreed to the statement. Fifteen of the respondents representing were neutral and 23 disagreed. The mean and standard deviation for the distribution were 2.87 and 0.41 respectively. The results imply that the respondents are of the view that Universities should schedule more activities because they help to understand the matter better.

With regards to the statement “I believe that environmental problems are exaggerated, nature balances out over time”, 82 of the respondents agreed, 42 of them were neutral and majority, 130 disagreed. The mean and standard deviation for the distribution were 1.88 and 0.79 respectively. The results imply that majority of the respondents disagreed that environmental problems are exaggerated, nature balances out over time. This implies that the respondents appreciate the campaign about protecting the environment through positive environmental attitude.

Furthermore, it was recorded that 23 of the respondents agreed to the statement “I try to choose subjects that deals with matters that related to the environment because I feel

I don't know enough", 13 of them were neutral and majority, 218 disagreed. The mean and standard deviation for the distribution were 1.71 and 0.55 respectively. The results imply that majority of the respondents do not try to choose subjects that deals with matters that related to the environment because I feel I don't know enough.

It was again recorded that 18 of the respondents agreed to the statement "I am willing to consume less and go without some comforts if it helps to protect the environment". Twelve of them were neutral and majority, 224 disagreed. The mean and standard deviation for the distribution were 1.28 and 0.51 respectively. The results imply that majority of the respondents are not willing to consume less and go without some comforts if it helps to protect the environment.

Finally, 11 of the respondents agreed to the statement "when I buy a product, I assess the type of packaging and choose one that is recyclable." 5 of them were neutral and majority, 238 disagreed. The mean and standard deviation for the distribution were 1.19 and 0.44 respectively. The results imply that majority of the respondents do not assess the type of packaging and choose one that is recyclable when they buy a product.

The mean of means was 1.601. The implication is that, on average, the respondents tend to have a generally positive environmental attitude. This suggests that overall, the respondents tend to have a favorable environmental attitude, as indicated by their agreement with the statements presented. The low mean values across most of the questions indicate that the respondents generally agree with pro-environmental statements and are willing to engage in environmentally-friendly behaviors.

4.2.4 Relationship between environmental attitude of students and their environmental behaviour

Environmental attitudes (EA) are a psychological tendency that is expressed by evaluating perceptions of or beliefs regarding the natural environment, including factors affecting its quality, with some degree of favour or disfavor are likely to to be linked behaviours aiming to minimise any adverse effects on natural environment. To this end the research question sought to ascertain the relationship between environmental attitude and behaviour. The results are presented in Table 4.27.

Table 4. 5: Correlation between Environmental Attitude and Environmental Behaviour

Variable	N	R	R^2	P
Environmental Attitude	254			
		.581	0.338	.036
Environmental Behaviour	254			

Source: Field Work 2022

Table 4.5 presents the correlation matrices between Environmental attitude and Environmental behaviour. The correlation co-efficient was 0.581 resulting in the coefficient of determination (R^2 = 0.338) at a sig value (p = 0.036). The correlation coefficient (R) of 0.581 indicates a positive correlation between environmental attitude and environmental behaviour. This means that as an individual's positive environmental attitude increases, their environmental behaviour also tends to increase in a corresponding manner.

The R^2 value of 0.338 indicates that 33.8% of the variation in environmental behaviour can be explained by the variation in environmental attitude. This implies that environmental attitude is an important predictor of environmental behaviour, but there are other factors that account for the remaining 66.2% of the variation in environmental behaviour. A sig. value ($p<0.05$) means that there is a statistically significant relationship between Environmental attitude and Environmental behaviour.

4.3 Discussions of the results

The first research question was aimed at finding out Environmental awareness among students of the Social Studies department of University of Education Winneba. The data from the findings in the Chapter Four of this study indicated that majority of the respondents claimed they were conscious of the environment because it has health implications for them. An overwhelming majority of the indicated that they are concerned about the environment because of the consequence on health and global warming. The respondents also indicated their awareness about the fact dumping refuse indiscriminatory adversely affects marine life, stagnant water can breed mosquitoes and polluting our environment can affect global climate. These findings concur with Asare (2005), who opines that a host of Ghanaians are aware of the dangers associated with the way their environment is kept. Being environmentally informed or aware enables an individual enlightens an individual to observe good sanitary conditions, but this is not the case with students. Widegren (1998) explains environmental awareness is an attribute acquired over a long period of time, which eventually lead to environmental concern and participation of activities that protect the environment.

The second research question for discussion was on environmental attitude held by the undergraduate students of Social Studies department at the University of Education, Winneba. Hines, Hungerford and Tomera (1986) define the concept of attitude as an individual's support or opposition toward environmental protection. The results of the study shows that majority of the respondents believe that information is increasingly necessary to be aware of the effects of their actions on the environment and so universities should schedule more activities because they help to understand the matter better. The results further revealed that the respondents do not like to participate in field activities because even though it is good way of understanding the environment. Also, they are not willing to consume less and go without some comforts if it helps to protect the environment. The results imply that the attitude an individual hold can either be positive or negative and can therefore be acted on any of them at any given time. The results indicated that majority of the respondents have positive attitudes towards the environment. The results agree with the opinion of Lawson (2014), who writes that communities in Ghana have some indigenous or local, knowledge of the effects of their attitude and behaviour on their environment. Dupont (2004) argues that even though one may show both the positive and negative attitudes, they can stills show negative attitude towards the environment. Aizen (1985) writes that the relationship human beings and their environment is thus a function of their culture.

This research question sought to find out environmental behaviour among the undergraduate students of Social Studies department of University of Education Winneba. Environmental behaviour is explained by Kollmus and Agyemang (2002, pp.240) as the literacy which requires transfer of skills and increase in motivation for

one to act in "environmentally responsible" manner. This definition connotes that one can act friendly towards the environment only when he or she is well informed about the environment. The results show that students have both positive and negative environmental behaviours. Some negative environment behaviours by students as revealed by the results include dumping of refuse at places heaped with refuse, dumping of refuse anywhere when nobody is watching. Furthermore, the results revealed that students believe that it is insanitary to dump refuse indiscriminately. Also, majority of the student pass urine anywhere they find convenient. It is puzzling why the students are not using their basic knowledge on the environment, to behave properly towards the environment. According to Lawson (2014), adopted behaviour by an individual helps him or her to decide consciously to minimize his or her negative impacts on both natural and constructed milieus. Unlike the first two themes that were characterized by responses that were totally contrary to the reality on the ground, the response for this is one that can be best described as a mixed reaction. Items like dumping refuse at unapproved site, overflowing bins and gutters received positive response from such respondents. It is heartwarming to note that students exhibit some positive environmental behaviours including student resistance to dump refuse into bins to overflow. Since the attitudes and behaviours of the students do not correspond, based on response for students' environmental attitude, it falls in sharp contrast with the opinions of environmentalists such as Ajzen (1885) and Fishbein and Ajzen, (1975) who are all of the view that an individual's environmental behaviour is strongly influenced by his or her environmental awareness and attitude. It is interesting to note that based on the data from the three scales, the observation and the interview, the

responses from the environmental behaviour was the only data that gave the true reflection of what is happening at the Winneba beach.

Research question four (4) sought to determine the extent to which the assessed environmental attitude correspond with environmental behaviours. The data from the environmental attitude of the respondents proved that they have positive attitude and are environmentally aware leading to a significant correlation between environmental attitude of the people and their environmental behaviour.

The results shows that students' environmental attitude is related to their environmental behaviour. Majority of the respondents (students) said the dumping of refuse at unapproved site, over flowing bins, cutting of trees and other environmentally hostile activities were wrong. In line with this response, the students see everything wrong with dumping indiscriminatory. In fact, environmental attitude scale saw most of the students exhibiting positive attitude or having average knowledge of their environment and the same could be said about the environmental behaviour. The result from the relationship between environmental attitude and environmental behaviour scale supports the opinions of environmentalist like Fazio (1986) who believes that there is a correlation between environmental attitude and environmental behaviour. According to him, there is a correlation between the two especially when the attitude can be accessed cognitively and when the attitude bears direct experience with the behaviour. He concludes that behaviour and attitude are always consistent. Fishbein and Ajzen (1975) also noted that, there is correspondence between environmental attitude and environmental behaviour, but not without the following conditions; when attitude is

compared in certain or specific level with behaviour, when behaviour is relevant to attitude and when the behaviour intention is taken into account.

However, results contradict the opinion of Kuitumnen et al., (2006), who are of the view that environmental knowledge does not always support or influence environmental practices. In other words, having a positive attitude towards the environment does not mean that one will automatically have a positive behaviour towards the environment. The description of Kuitumnen et al., (2006) did not describes the respondent in this study.

Just as some environmentalists have taken a stand that there is a correlation between environmental attitude and behaviour and others who believe there is no correlation between them, there is a third school of thought by environmentalist such as (Franzen, 2003) who have taken the neutral position. Even though these writers have taken entrenched position, the data from the respondents indicated that their environmental attitude does relates to the environmental behaviour in anyway.

4.4 Summary of Chapter

This chapter analysed and discussed the data obtained from fieldwork survey on environmental awareness, attitude and behaviour of undergraduate students of Social Studies department of University of Education, Winneba. The analysis was carried out using descriptive statistics such as frequencies, percentages, means and standard deviation and inferential statistics such as corelation. The chapter began with an overview, followed by the response rate from the questionnaire. Then the bio data of

the participants were discussed. Next was the analysis of the data captured according to the researcher questions. This was followed by the discussions of the findings.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter consists of the summary of the study, key findings, conclusions and. recommendations. The chapter also discusses suggestions for further studies.

The study was conducted at the University of Education, Winneba. The study sought to assess the environmental attitude and behaviour of undergraduate students of Social Studies department in University of Education Winneba and determine, whether there is correspondence between their environmental attitudes and their environmental behaviour. Specifically, the study sought to:

1. examine the level of environmental awareness among the undergraduate students of the Social Studies department of University of Education Winneba.
2. investigate the environmental attitude among the students of the department
3. assess the environmental behaviour among the students
4. determine the extent to which the assessed environmental awareness and attitude correspond with environmental behaviours.

To achieve these objectives, four (4) research questions were formulated. Literature was reviewed on the works of other researchers that are related to the study. The theoretical framework of the study was situated into the theory of planned behaviour. The study was supported by the positivist research philosophy and was directed by the quantitative approach. This study employed the descriptive research design to specifically describe the environmental attitude, awareness and behaviour of students.

Two hundred and forty (240) students were sampled using simple random technique to constitute the sample for the study. Data was collected using questionnaire and the reliability of the questionnaire was determined using Cronbach Alpha co-efficient. The data was analyzed with descriptive statistics such as frequency, percentages, means and standard deviation. Ethical considerations governing the conduct of research were observed. The analysis of results and discussions of the findings provide answers to the research questions. It can be concluded that the purpose of the study was achieved.

5.1 Summary of Research Findings

The first research question focused on environmental awareness of the students. It was found out that students have moderate awareness about their environment and health issues in their communities. These results imply that students are aware of the environment and health issues on campus.

The second research question revealed that the students hold positive attitude towards their environment. They indicated that they were ready to solve environmental problems in their community, once the government decides to take care of the expenses. They claim that it is important for the society to solve environmental problems.

For research question three (3), it was found that, students have poor environmental behaviour. Some negative environment behaviours by students as revealed by the results include dumping of refuse at places heaped with refuse, dumping of refuse anywhere when nobody is watching. Furthermore, the results revealed that students believe that it is insanitary to dump refuse indiscriminatory. Also, majority of the student pass urine anywhere they find convenient.

The results of research question four (4) revealed that there is a correlation between environmental attitude and behaviour. The correlation coefficient (R) of 0.581 indicates a positive correlation between environmental attitude and environmental behaviour. This implies that students who exhibit positive attitudes towards the environment are more inclined to engage in environmentally friendly practices. This alignment between environmental attitudes and behaviours can be attributed to various factors, awareness and knowledge, social values, and social norms.

Students with positive environmental attitudes often possess a higher level of awareness and knowledge about environmental issues. They understood the importance of protecting the environment and the consequences of unsustainable behaviours. This knowledge motivates them to align their behaviour with their attitudes. Environmental attitudes are often influenced by social values. Students who hold strong values related to environmental preservation, sustainability, and social responsibility are more likely to translate those beliefs into actions. Their environmental behaviour becomes an expression of their core values.

The social context plays a significant role in shaping environmental attitudes and behaviours. Students who are surrounded by peers, educators, and institutions that promote sustainable practices are more likely to adopt and exhibit pro-environmental behaviours. Social norms, such as recycling, reducing waste, or conserving energy, can influence individuals to align their behaviours with prevailing norms.

5.2 Conclusions

Based on the findings, the following conclusions are drawn. Students have moderate awareness about their environment and health issues in their communities. These results imply that students are aware of the environment and health issues on campus.

They believe that information is increasingly necessary to be aware of the effects of their actions on the environment and so the social studies department of the university should schedule more activities because they help to understand the matter better. They do not like to participate in field activities because even though it is good way of understanding the environment.

Students are not conscious of their environment. They put up unacceptable environmental behaviours which are dangerous to survival of both human and animal lives. It is concluded that students dump refuse at places heaped with refuse, they dump refuse anywhere when nobody is watching

It is concluded that there exists a correspondence between the environmental attitude of the students and their environmental behaviour. There is a relationship between the attitude and behaviour, especially when the attitude can be accessed cognitively and when the attitude bears direct experience with the behaviour. Thus, behaviour and attitude are always consistent.

5.3 Recommendations

Based on the findings gathered and conclusions drawn, the following recommendations were made:

1. In order to raise students' understanding and consciousness of the environment, the head of department of Social Studies education should provide an environmental education programme for the students. Organization of such programmes by the heads of academic department will enable students to better understand the impact of their actions on the environment.

2. The university authorities and hostel owners should provide adequate trash cans for individual homes or hostels where necessary. Effective waste collection at the local level is necessary to encourage residents to use waste collection sites rather than dumping them indiscriminatory. There should be more rubbish collection locations, and waste should be picked up frequently.

3. In cooperation with the university community, health, and sanitation offices of the local government should routinely arrange education and sensitization campaigns among the students. These programmes may be designed to educate students about environmental awareness and strategies to preserve a healthy, tranquil environment.

4. The university should promote pro-environmental norms and values among students. This can be achieved through the implementation of campaigns, initiatives, and programmes that encourage environmentally responsible behaviours. Peer influence plays a significant role in shaping attitudes and

behaviours, so creating a positive social norm around sustainable practices can help reinforce the correspondence between environmental attitude and behaviour.

5.4 Suggestions for Further Studies

It is suggested that future studies should:

1. Compare the environmental attitudes and behaviours of students from different faculties or disciplines within the University of Education, Winneba. This would help identify any variations or patterns that may exist based on the academic background or field of study of the students.

REFERENCES

Acheampong, P. T. (2010). *Environmental sanitation in the Kumasi metropolitan area.* Kumasi: Kwame Nkrumah University of Science and Technology. 12-16

Adeolu , A. T., Enesi , D. O., & Adeolu , M. O. (2014). Assessment of secondary school students' knowledge, attitude and practice towards waste management in Ibadan, Oyo State, Nigeria. *J. Res. Environ. Sci. Toxicol, 3*(5), 66-73.

Aduku, J. M. (2014). *An assessment of the attitude of shs students towards environmental sanitation in Ghana: A case of some selected SHSs within the Greater Accra Region*. Legon, Accra: University of Ghana.

Agarwal, S., (2018). Environmental biotechnology. *Publishing Corporation. 18*(2), 1-8.

Ahmad, A. L., Rahim, S. A., Pawanteh, L., & Ahmad, F. (2012). The understanding of environmental citizenship among Malaysian youths: A study on perception and participation. *Asian Social Science*, 8(5), 85-92.

Ajzen, 1., & Driver, B. L. (1992). Application of the theory of planned behaviour to leisure choice. *Journal of Leisure Research*, 24, 207-224.

Ajzen, 1., & Fishbein, M. (1980). *Understanding attitudes and predicting social Behaviour.* Prentice-Hall, Upper Saddle River. 25-28

Ajzen, 1., & Fishbein, M. (2005). The influence of attitudes on behaviour. In D. Albarracfn, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 173-221). Mahwah, NJ: Erlbaum. 112-113

Ajzen, I. (1985). From intentions to actions: 'A theory of planned behaviour'. In J. Kuhl & Bechkman (Eds), *Action control: from cognition to behaviour*. Springer-Verleg. 20-23

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Prentice-Hall.

Alghazo, E.M., Gaad, E. (2004). General education teachers in the United Arab

Ali, M.M., Mustapha, R. and Jelas, Z. M. (2006). An empirical study on teachers' perceptions towards inclusive education in Malaysia. *International Journal of special Education, 21* (3), 15-30

Aliman, J., Bartram, J., Chartier, Y., & Sims , J. (2019). Water, sanitation and hygiene standards for schools in low-cost settings. Geneva: WHO. Africa. *PLoS Neglected Tropical Diseases, 2*(2), 173.

Altin, O. A., Ikumawoyi, O. B., Olotu , Y., & Ologunagba , M. M. (2014). Environmental Impact of polyethylene generation and disposal in Akure City, Nigeria. *Global Journal of Science Frontier Research Agricultural & Biology, 12*(3), 3.

Amador, C. & Esteban, R. (2011). *Use of sociological surveys for assessing environmental information needs.* GRID, Arendal. 12-20

Amedahe, F. K., Asamoah, G. (2018). *Fundamentals of educational research methods*. Mimeograph, UCC, Cape Coast. 12-17

Andreoni & Vesterlund, (2001*). Environmental literacy in America: What ten years ofNEETF/Roper research and related studies say about environmental literacy in the U.S*. The National Environmental Education & Training Foundation. 33-36

Anijah-Obi , F., Eneji , C.-V. O., UbomBassey, A. E., Dunnamah, A. Y., & William, J. J. (2013). Introducing environmental sanitation education in the primary school curriculums. *International Research Journal, 4*(3), 227-230.

Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology, 40*(4), 471–499.

Asare, S. J. (2005). Attitudes and the prediction of behavior: a meta-analysis of the empirical literature. *Personality Social Psychology Bulletin*, 58-75.

Asare, S. O. (2005). *In search of indices for measuring the standard of education: a need for a shift in Paradigm.* A special seminar by West African Examinations Council. Lagos 7th May.

Atkins, E. (2016). Environmental conflict: A Misnomer? *Environment, Climate Change and International Relations 99*, 10-30

Azwar, S. (2015). *Developing psychological scales*. Pustaka Belajar. 65

Babbie, E. R. (2015). *The practice of social research*. Nelson Education.

Barrett E. (2021). Attitudes toward the environment and use of information and communication technologies to address environmental health risks in marginalized communities: *Prospective cohort study. J Med Internet Res 23*: 9.

Bell, P. A., Greene, T. C., Fisher, J. D. & Baum, A. (2001). Environmental Psychology (5th ed.). Harcourt College Publishers. 63-68

Blaire, C. J., Waliczek , T. M., & Zajicek , J. M. (1978). Relationship between environmental knowledge and environmental attitude of high school students. *J. Environ. Edu.*, *30*(3), 17-21.

Boateng, C. and Nkrumah, D. (2006). *Managing waste! The attitudinal change.* Daily Graphic, 16th December. 20.

Boldero, J. (1995). The prediction of household recycling of newspapers: The role of attitudes, intentions, and situational factors. *Journal of Applied Social Psychology*, 25(5), 440–462

Bradley, J. C, Waliczek, T. M., & zajicek, J. M., (1999). 'Relationship between environmental knowledge and environmental attitude of High School Students'. *Journal of Environmental Education*, 30(3), 1-21.

Bradley, R. R. & Packer, J. M. (1996). 'Teaching and learning in environmental education: developing environmental conceptions'. *The Journal of Environmental Education*, 27 (2),pp, 25-32

Brehma, F. N., Ukata, B. N., & Bisong, N. N. (2013). Environmental awareness and school sanitation in Calabar metropolis of Cross River State. *Journal of Education and Practice*, *6*(4), 68-71.

Brehma, J. M., Eisenhauerb, B. W., & Stedman, R. C. (2013). Environmental Concern: Examining the Role of Place Meaning and Place Attachment. Society & Natural Resources: *An International Journal*, *26*(5). 40.

Brown, M. J., & Larson, L. R. (2018). The influence of social norms, social contact, and skills training on student environmental attitudes and behaviors. *Environmental Education Research*, 24(6), 793-806.

Bryman, A. (2012). *Social research methods*. Oxford university press. 19-23

Bryman, A., & Cramer, D. (2012). Quantitative data analysis with IBM SPSS 17, 18 & 19: A guide for social scientists. *Routledge*, 75-80.

Burke, K., & Sutherland, C. (2004). 'Attitudes towards inclusion: Knowledge vs. Experience'. *Education, 125*(2), 163—72.

Burns, P. J., & Grove , R. (2015). Factors influencing children' environmental attitudes. *J. Environ. Edu*, *30*(4), 33.

Carmi, N. (2013). Caring about tomorrow: Future orientation, environmental attitudes and behaviours. *Environmental Education Research*, 19(4), 430-444.

Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology, 58*(6), 1015–1026. https://doi.org/10.1037/0022-3514.58.6.1015

Cohen, L., Manion, L., & Morrison, K. (2013). *Research methods in education*. London. 111-115

Creswell, J. (2014). *Research design: Educational Research 4thed.)*. SAGE Publications. 101-106

Creswell, J. W., & Plano-Clark. V. L. (2017). *Designing and conducting mixed methods research.* 121-26

Croll, P. & Moses, D. (2000). 'Continuity and change in Special School Provision: Some perspectives on local education authority policy making'. *British Educational Research Journal*, 26(2), 177-190.

Crosby, H. N., Ogdum, P., Duzgun, G., & ve Seker, S. (1981). Attitudes and sensitivities of first and final year students, receiving education at different academical branches of Adnan Menderes University, aimed at environmental problems. *Kastamonu Journal of Education, 17*(1), 125-136.

Crowe, J. L. (2013). Transforming environmental attitudes and behaviours through eco-spirituality and religion. *Intl Electr J Environ Educat* 3 (1): 75-88.

Croyle, R. T. (2005). *Theory at a glance: application to health promotion and health behavior* (2nd ed.). U.S: Department of Health and Human Services, National Institutes of Health.

Deiarme G, Hagos B. 2008. The need to integrate themes of environmental education in the school curriculum in Kenya. *Intl J Acad Res Progr Educat Dev* 2 (1): 51-57.

Dogan, A. (2000). Loss of selected a macrine cell subpopulations': a new class of genetic defects in the vertebrate retina. *Developmental Biology, 285*(1), p. 138-155

Dunlap, J. B., & Impara, J. C. (2000).'The Impact of an environmental education programme on knowledge and attitudes. *Journal of Environmental Education, 22*, 36-40.

Dunlap, R. E. (2008). 'The new environmental paradigm scale: From marginality to worldwide use'. *Journal of Environmental Education, 40* (l), 3—18.

Dunlap, R. E., & Olsen, M. E. (1999). 'Hard-path versus soft-path advocates: A study of energy activists'. *Policy Studies Journal, 13*,413-428

Dunlap, R. E., & Van Liere. K. D. (1984). 'Commitment to the Dominant Social Paradigm and concern for environmental quality'. *Social Science Quarterly, 65,* 1013-1028.

Dunlap, R., Van Liere, K., Mertig, A., & Jones, R. E. (2000). 'Measuring endorsement of the New Ecological Paradigm: A revised NEP scale'. *Journal of Social Issues*, 56(3), 425—442.

Dunport, M. G., & Millar, K. U. (2004). 'The effects of direct and indirect experience on affective and cognitive responses and the attitude-behaviour relation'. *Journal of Experimenta1 Social Psychologv 32*, 561-597

Dupont, D. P. (2004). 'Do children matter? An examination of gender differences in environmental valuation'. *Ecological Economics*, *49*, 273-286.

Duroy Q. M & Ben-Zeev, T. (2003). 'Do high-achieving female students under perform in private? The implications of threatening environments on intellectual processing'. *Journal of Educatiohal Psychology*, 95, 796—805.

Duroy, Q., M. (2005). The determinants of environmental awareness and behaviour. Rensselaer Working Papers in Economics. Rensselaer Polytechnic Institute, Department of Economics. DOI: 10.22004/ag.econ.113244.

Eagly , A. H., & Chaiken, S. (1993). *The psychology of attitude*. Harcourt Brace Jovanovich College Publisher. 152-155

Emirates and their acceptance of the inclusion of students with disabilities. British *Journal of Special Education*, 31.2, 94-99

Enger, E. D., Smith, B. F., & Bockarie, A. T. (2000). Environmental science: A study of interrelationships (p. 434). McGrawHill. 45

Eni-Olorunda, J. T. (2005). Inclusive Education in Nigeria: A Myth or Reality? *International Journal of Emotional Psychology and Sport Ethics*, 7, 72-78.

Erkal, M. B., Wanjala, C., Shaviya, N., Barasa, M., Sowayi, A. G., Vincent, A. O., . . . Josphat, O. A. (2001). State of sanitation and hygiene of public primary schools in Kakamega municipality, Western Kenya. *International Research Journal of Public and Environmental Health, 2*(12), 215-224.

Erten, S., Özdemir, P., & Güler, T. (2003). Determination of the pre-school teachers' levels of environmental awareness and the status of environmental education in

these schools, Proceedings from the OMEP 2003 World Council and Conference, *Turkey (2)*, 334-350.

Evaluating change processes: Assessing extent of implementation (constructs, methods and implications). *Journal of Educational Administration*, 51(3), 264–289.

Fazio, Russell H. (1986). How do Attitudes Guide Behaviour?' In R. M. Sorrentino and E. T. Higgins (eds), *'Handbook of Motivation and Cognition*: Foundations of Social Behaviour. 204-223.

Fernández-Manzanal, R., Rodríguez-Barreiro, L., & Carrasquer, J. (2007), Evaluation of environmental attitudes: Analysis and results of a scale applied to university students. *Science Education, 91*, 988–1009.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research.* Addison-Wesley.

Fowler, A. (2013). *Striking a balance: A guide to enhancing the effectiveness of non-governmental organisations in international development*. Routledge. 59

Frantz, C. M., & Mayer, F. S. (2014). The importance of connection to nature in assessing environmental education programs. *Evaluating Environmental Education*, 41, 85–89.

Freymeyer R, & Johnson B. (2010). A cross-cultural investigation of factors influencing environmental actions. *Soc Spectrum 30* (2),184-195.

GhanaWeb. (2008, May 1). All hands-on deck on sanitation - Aliu. *GhanaWeb*, p. 1. Retrieved October 10, 2022, from https://www.ghanaweb.com/GhanaHomePage/NewsArchive/All-hands-o

Gifford, R. (2014). Environmental Psychology Matters. *Annual Review of Psychology, 65*(1), 541-579. https://doi.org/10.1146/annurev-psych-010213-115048

Gifford, R., & Nilsson, A. (2014) Personal and social factors that influence pro-environmental concern and behaviour: A review. *International Journal of Psychology*, 49(3), 141–157.

Gore, G. (1993). 'Predicting dishonest actions using the theory of planned Behaviour'. *Journal of Research in Personality, 3*(3) 140–150.

Grodzinska-Jurczak, M., Stepska, A., Katarzyna, N., & Bryda, G. (2006). Perception of environmental problems among preschool children in Poland. *International Research in Geographical and Environmental Education, 15*(1), 62-76

Hanisch, A., Rank, A., & Seeber, G. (2014). How green are european curricula? a comparative analysis of primary school syllabi in five european countries. *European Educational Research Journal*, *13*(6), 661-682.

Haryanto, Budhi. (2014). The Influence of Ecological Knowledge and Product Attributes in Forming Attitude and Intention to Buy Green Product. *International Journal of Marketing Studies 6*, 10-15

Haynes K, Tanner, TM. (2015). Empowering young people and strengthening resilience: youth-centred participatory video as a tool for climate change adaptation and disaster risk reduction. *Children's Geography 13* (3), 357-371.

Hidayah N, Agustin R. (2017). Assessing high school students' pro-environmental behaviour. *J Phys: Conf Ser 895* (1). 2002

Hines, H. R., & Volk, T. L., Hines, J (1990). Changing learner behavior through environmental education. *Journal of Environmental Education, 21*, 8-22.

Hines, J. M., Hungerford, H. R. & Tomera, A. N. Z . (1986). 'Analysis and synthesis of research on responsible environmental behaviour: a meta-analysis'. *Journal of Environmental Education, 18*, 118

Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and synthesis of research. *International Journal of Higher Educatio*n 2 (11), 25 – 47.

Hirsh, K., Rimer, B. K., & Lewis, F. M. (Eds.). (2014). *Health behavior and health education: theory, research and practice* (3rd ed.). Jossey-Bass.28-30

Holahan, D. (1992). The functional approach to the study of attitudes. *Public Opinion Quarterly, 24*, 163-204.

Howell, S. E. and S. B. Laska. (1992). The changing face of the environmental coalition: A research note. *Environment and Behaviour, 24*(2), 134-144

IMANI Ghana. (2018). *Ghana's sanitation policy and strategy has failed: winning the war against waste & filth.* Accra: Author.

Jacobson, S. K., Mc Duff, M. D., Monroe, M. C., (2006*). Conservation Education and Outreach Techniques.* Oxford University Press. 63-66

Jones, R. E., & Dunlap, R. E. (1992). The social bases of environmental concern. Have they changed over time? *Rural Sociology, 57*(1), 134-144.

Joppe, M. (2016). *The research process*. Retrieved on November, 2021 from kk http://www.ryerson.ca/~mjoppe/rp.htm

Kabas, B. (2004). Views of elementary school teachers towards students with cochlear implants inclusion in the Process of Education. *Collegium Antropologicum, 33*(2):495-501.

Kaiser, F. G., & Schultz, P. W. (2009). The attitude-behavior relationship: A test of three models of the moderating role of behavioral difficulty. *Journal of Applied Social Psychology, 39*(8), 1861–1884.

Kaiser, F. G., & Schultz, P. W. (2009). The attitude-behavior relationship: A test of three models of the moderating role of behavioral difficulty. *Journal of Applied Social Psychology, 39*(8), 1861–1884.

Keles, D. (2007). Environmental Concern: Conceptual and Measurement Issues'. In Dunlap and Michelson (Ed), *Handbook of Environmental Sociology* (pp. 482-542). Greenwood Press.

Kim, D., Choi, S. (2005). Attitudes of university students towards environmental problems. *Tsk Preventive Medicine Bulletin, 4*(6), 330-334.

Kivunja, C. & Kuyini, A. B. (2017). Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education*, 6(5), 26–41

Kivunja, C. (2018). Distinguishing between theory, theoretical framework, and conceptual framework: *A Systematic Review of Lessons from the Field. 2*(2), 12-22

Kollmuss, A. & Agyeman, J. (2002). Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behaviour? *Environmental Education Research*, 8(3), 239-260.

Kollmuss, A. & Agyeman, J. (2002): Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behaviour? *Environmental Educational Research*, 8(3), 239-260

Kuitumnen, R., Martha, C., Powell & Carol J. (2006). 'The Role of Attitude Accessibility in the Attitude-to-behaviour Process'. *Journal of Consumer Research*, 16, 280-288.

Kumar, R. (2019). *Research methodology: A step-by-step guide for beginners*. London: Sage.

Lawson, E.T. (2014). When Rhetoric Meets Reality: Attitudinal Change and Coastal Zone Management in Ghana. *Environment and Natural Resources Research,* 4 (4), 37-50

Lee B. (2008). Environmental attitudes and information sources among African American College Students. *J Environ Educ 40*, 1

Lee, K. S. (2017). *The urban evolution of the state of selangor - a study from the historical perspective of Kajang Town* (Published in the Proceedings of the Kajang Seminar), 10-1-2017, Kajang Heritage Centre

Li, Y. (2019). Study of the effect of environmental education on environmental awareness and environmental attitude based on environmental protection law of the People's Republic of China. *Eurasia J Math Sci Technol 14* (6), 2277-2285.

Loui, S. (1989). Development and validation of an environmental attitudes scale for high school students. *Faculty of Education Journal, 30*, 240-250.

Maguire, W. J. (1976). 'The concept of attitudes and their relations to behaviour'. In H. W. Sinaiko & L. A. Broedling (Eds) *Perspectives on attitude assessment: Sun,'eys and their alternatives.* Pendleton. 90-99

Mahbub, T. (2008). 'Inclusive education at a BRAC school-perspectives from the Children'. *British Journal of Special Education, 35*(1), 33-41.

Maloney, M. & Ward, M. (1975). 'A revised scale for measurement of ecological attitudes and knowledge'. *American Psychologist 30*, 787-790.

Maravić M, Cvjetićanin S, Ivkovic S. 2014. Level of environmental awareness of students in Republic of Serbia. *World J Educ 4* (3), 2014.

Milfont, D. S., Duckitt, G. L. (2010). Which behaviours do attitudes predict? Meta-analyzing the effect of social pressure and perceived difficulty. *Review of General Psychology, 9*(3), 214-227.

Montaño, D. E., & Kasprzyk, D. (2008). Theory of reasoned action, theory of planned behavior, and the integrated behavioral model. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research, and practice* (pp. 67–96). Jossey-Bass.

Morrison, M., Roderick, D., & Parton, K. (2015). Religion does matter for climate change attitudes and behaviour. *PLoS ONE, 10*(8), e0134868. https://doi.org/10.1371/journal.pone.0134868

MyJoyOnline.com. (2014, September 9). *President Mahama: Great call on sanitation*. Retrieved October 10, 2023, from https://www.myjoyonline.com/opinion/2014/November-9th/imani-to-pre

Newhouse, N., Z. (1990). 'Implications of attitude and behaviour research for environmental conservation'. *Journal of Environmental Education 22*, 26132.

Nuhu, S. B. (2017, March 14). *Poor sanitation in Ghana (Kumasi in perspective)*. pp. 1-3. Retrieved October 10, 2023, from https://www.ghanaweb.com/GhanaHomePage/features/Poor-sanitation-i

Nwakile, T. C., Eze, C. C., & Okanya, A. V. (2017). Sanitation practices on students health: A case study of students of vocational and technical education in the University of Nigeria, Nsukka. *International Journal of Multidisciplinary and Current Research, 5*, 1120-1125. Retrieved from http://ijmcr.com

Nwankwo, I. N. (2013). *Research report and article writing in educational management and social sciences*. LoveIsaac Consultancy Services. 35-50

Obeng, R. A. (2005). *Examining the sanitation situation in a market environment: the case of Kasseh market*. Unpublish project work, University of Education, Winneba, Winneba.

Orodho, J. A. (2009). *Elements of Education and Social Science Research Methods*. Kenezja Publisher. 115-116

Ozdemir, O., Yildiz, A., January, E., & Sarisen, O. (2004). Awareness and sensitivity of medical students about environmental problems. *Ankara University Faculty of Medicine Journal*, *57*(3), 117-127.

Özdemir, O., Yıldız, A., Ocaktan, E., & Sarısen, Ö. (2004). Environmental awareness and sensitivity level of medical students. *The Journal of Ankara University*, 57(3), 117-127.

Ozsoy, S. (2012). Survey of Turkish pre-service science teachers' attitudes towards the environment. *Eurasian Journal of Educational Research, 12*, 121-140.

Palmberg, I. E., & Kuru, J. (2000). Outdoor activities as a basis for environmental responsibility. *The Journal of Environmental Education, 31*(4), 32-36.

Pena, P. N. D., Macale, A. M., & Largo, N. N. (2018). Environmental awareness and pro-environmental behaviours of high school students in Los Baños, Laguna. *Journal of Nature Studies*, *17*(1), 56-67.

Rahman, L. B. (2017). Waste management education: a panacea for effective solid waste management. *Journal of Scientific and Industrial Studies, 5*(3), 69-73.

Rajeeki, N. (1982). Implications of attitude and behavior research for education. *Journal of Environmental Education, 22*(1), 26-32.

Ramkissoon, R., Smith, S., & Weiler, N. (2013). Determination of environmental risk perception and environmental attitudes of university students. *Journal of Academic Perspective, 20*, 1-13.

Ramsey, C. E., & Rickson, R. E. (1976). 'Environmental knowledge and attitudes'. The *Journal of Environmental Education, 8*(1), 10-18

Rashid, M. Z. A., & Ho, J. A. (2003). Perceptions of business ethics in a multicultural community: The case of Malaysia. *Journal of Business Ethics, 43*(1-2), 75-87.

Ravitch, S. M. & Riggan, M. (2017). *How conceptual frameworks guide research*. Sage. 200-2002

Rosa C, Collado S. (2019). Experiences in nature and environmental attitudes and behaviours: Setting the ground for future research. *Front Psychol 10*. DOI: 10.3389/fpsyg.2019.00763

Ross-Hill R. (2009). 'Teacher Attitude towards inclusion practices and special needs Students'. *Journal of Research in Special Educational Needs*, *9*(3): 188-98.

Sama, E. (1997). *A study on the attitudes of university youth towards environment and environmental problems.* PhD Thesis, Gazi University, Institute of Social Sciences, Ankara.

Santiago, S. (2015). *How do we solve Africa's sanitation problems?* World Economic Forum. Retrieved from How do we solve Africa's sanitation problems? | World Economic Forum https://www.weforum.org/agenda/2015/08/how-do-we-solve-africas-sanit...

Scholl, N. (2002). Environmental knowledge, attitudes, and behavior in Dutch secondary education. *Journal of Environmental Education, 30*(20), 4-14.

Schultz, B. (2002). Sustainable environmental education for a sustainable environment: lessons of Thailand for other nations. *Walter Air Soil Pollut, 123*(1-4), 489-503.

Schultz, P. U., Silver, W. I., Tabanico, C. L. & Khazian, P. A. (2004). A review of students' perception of environmental sanitation. *International Journal of Rural Development, Environment and Health Research (IJREH), 1*(4), 29-30.

Schultz, P. W. (2000). 'Empathizing with nature: the effects of perspective taking on concern for environmental issues'. *Journal of Social Issues*, 56(3), 391— 406.

Schwartz, S. H. (1977). Normative influences on altruism. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 221–279). Academic Press.

Scotland, J. (2012). Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms. *English Language Teaching*, 5(9), 9. CA: Sage.

Senyurt, A., Temel, A. B., & Ozkahraman, S. (2011). Environmental issues of university students' sensitivity analysis. Suleyman Demirel University. *Journal of the Institute of Health Sciences*, 8-15.

Shafiei A, Maleksaeidi H. (2020). Pro-environmental behaviour of university students: Application of protection motivation theory. *Glob Ecol Conserv*. DOI: 10.1016/j.gecco. 2020.e00908.

Smith, A., & Jacobson, R. (2019). The role of education in fostering environmental literacy and sustainable development. *Sustainability Science*, 14(6), 1619-1631.cxc

Songsore, J., & McGranahan, G. (1996). Environment, wealth and health: towards an analysis of intra-urban differentials within the Greater Accra metropolitan area, Ghana. *Environment and Urbanization, 5*, 10–34.

Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behavior: An integrative review and research agenda. *Journal of Environmental Psychology*, 29(3), 309–317. https://doi.org/10.1016/j.jenvp.2008.10.004

Stern, N., (2007). 'The Economics of climate change: The stern review. Cambridge University Press. 20-22

Stern, P. C. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues, 56*(3), 407–424.

Stern, P. C. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues, 56*(3), 407–424. https://doi.org/10.1111/0022-4537.00175

Stern, P. C. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues, 56*(3), 407–424. https://doi.org/10.1111/0022-4537.00175

Suneetha, W. (2007). *Health behaviour models. Report for European commission DG environment. Bio intelligence service.* Chicago, USA: Representations in Rural Development.

Taylor, B. (2016). The Greening of Religion Hypothesis (Part One). *Journal for the Study of Religion, Nature & Culture*, 10(3), 268-305.

Tewari B. K. (2004). *Environmental literacy and awareness among the women of Mountain Region of Uttaranchal, India*: A Situational Analysis. 13-16

The World Bank. (2012). *Inadequate sanitation cost 18 African countries around $5.5 billion each year*. Author. Retrieved October 10, 2023, from https://www.worldbank.org/en/news/press-release/2012/04/16/inadequate

Tobin, V. J., Tippins, B. M., Gallard, I. M. (1994). The role of self-efficacy in achieving health behavior change. *Health Education Quarterly, 13,* 73-92.

Tuncer, G. (2009). University students' perceptions on sustainable development: A case study from Turkey. *International Research in Geographical and Environmental Education, 1,* 10-25.

Ugulu, I., Sahin, M., & Baslar, S. (2013). High school students' environmental attitude: Scale development and validation. *International Journal of Educational Science,* 5 (4), 415- 424.

UNESCO (1980). *Environmental Education in the light of the Tbilisi Conference*. Oslo: Unipub.

van Birgelen, G. U., Ayuba, M. D., & Peter, G. (2009). Awareness, attitude and practices of environmental sanitation by informal sector partakers in Barkin-Ladi Town Plateau State, Nigeria. *Civil and Environmental Research, 10*(10), 75.

Van Liere, Kent D., and Riley E. Dunlap. (1980). 'The Social Bases of Environmental Concern: A Review of Hypotheses, Explanations and Empirical Evidence'. *Public Opinion Quarterly 44*: 181—199.

Veisten, K., Hoen, H.F., Navrud, S. and Strand, J. (2004). 'Scope insensitivity in contingent. *International Journal of Higher Education, 5* (4), 415- 424.

Vicente-molina, M., Rabiu , M. M., & Mainul , H. (2013). Assessment of factors to contributing poor environmental sanitation in the university's student's male hostel. *International Journal of Pharmaceutical Research, 8*(3), 122.

Wahyuni, D. (2012). The research design maze: Understanding paradigms, cases, methods and methodologies. *International Journal of Educational Science*, 5 (4), 415- 424.

Walker C. (2017). Tomorrow's leaders and today's agents of change? Children, sustainability education and environmental governance. *Childr Soc*, 31 (1): 72-83.

Whynie, E. (2003). *Education for environment: A study for primary students' environmental attitude and environmental knowledge*. Doctoral Dissertation, Bursa: Uludağ University, Turkey,.

Widegren, O., (1998). 'The new environmental paradigm and personal norms'. *Environment and Behaviour 30* (1), 75—100.

Williams S, McEwen LJ, Quinn N. 2017. As the climate changes: Intergenerational action-based learning in relation to flood education. *J Environ Educ* 48 (3): 154-171.

Wójcik P. (2004): Uptake of mineral nutrients from foliar fertilization (review). *Journal of Fruit and Ornamental Plant Research, 12 (special issue),* 201–218.

Wong, D., Lin, C. M., & Tan, P. (2014). Migration, settlement and the rise of a new middle class in Malaysian Chinese Society: A case study of Kajang. Malaysian *Journal of Chinese Studies*, 3(1), 61-78.

Wong, J. J. (2010). *Influence of knowledge of environmental sanitation on health practices on senior secondary school students in Taraba state*. University of Zaria: Unpublished master's thesis. Retrieved from http://acedemia.com

World Health Organisation Report (2005). *Make every mother and child count*. Retrieved from http://whqlibdoc.who.int/publication s/2007/9241546077.pdf

World Health Organization (WHO). (2004). *The sanitation challenge: turning commitment into reality*. Retrieved October 10, 2023, from http://www.who.int/water_sanitation_health/hygiene

World Health Organization (WHO). (2019). *Sanitation*. Author. Retrieved October 10, 2023, from https://www.who.int/news-room/fact-sheets/detail/sanitation

Wortman, P. (1992). Risk perception and affect. *Current Directions in Psychological Science, 4*(15), 322-325. Retrieved from https://www.jstor.org/stable/20183144

Wright, F. (2002). Solo status, stereotype threat, and performance expectancies: Their effects on women's performance. *Journal of Experimental Social Psychologv*, 39, 68—74.

Yelkpieri, D. & Tamanja, E. M. J. (2019). *Fundamentals of Educational Research*. UEW Printing Press. 15-22

Yilmaz, K. (2013). Comparison of quantitative and qualitative research traditions: Epistemological, theoretical, and methodological differences. *European Journal of Education*, 48(2), 311–325. doi:10.1111/ejed.12014

Yorek, N., Ugulu, I., Sahin, M., & Dogan, Y. (2010). A qualitative investigation of students' understanding about ecosystem and its components. *Natura Montenegrina, Podgorica, 9*(3), 973-981.

Yusop, A. H., Jailani, M. Y. & Esa. A. (2003). *Improving knowledge, practices and attitudes towards environmental education among students*. Proceedings of the National Seminar on Environmental Management. Universiti Kebangsaan Malaysia. 14-15

Zimmer, H. (1994). Prospective of elementary school teacher's attitudes towards environment and environmental problems. *International Journal of Environmental and Science Education, 1*(1), 65-77.

Zsóka Á, Szerényi ZM, Széchy A, Kocsis T. (2013). Greening due to environmental education? Environmental knowledge, attitudes, consumer behaviour and everyday pro-environmental activities of Hungarian high school and university students. *J Clean Prod 48:* 126-138.

APPENDIX

QUESTIONNAIRE FOR RESPONDENTS

Dear Sir/Madam,

This questionnaire is designed to assess the environmental awareness, attitude and behaviour of undergraduate social studies student in University of Education Winneba and determine, whether there is correspondence between their environmental awareness and attitudes on one hand and their environmental behaviour on the other**.** This research is purely for academic purpose and any information provided would be treated with all the confidentiality it deserves**.**

You are assured that your identity will not be associated with any aspect of the research report**.** To protect you, do not write your name or any personal details that can identify you on this questionnaire.

Your participation is highly anticipated**.**

SECTION A: DEMOGRAPHIC INFORMATION

Please, tick [ ] the appropriate space [ ] or column; or write in the blank spaces where necessary

1. Gender: Male [ ] Female [ ]
2. Age: Below 20 years [ ] 21– 30 years [ ] Above 30 years [ ]
3. What kind of toilet facilities are available in your hostel?

   Water closet [ ] KVIP [ ] Pit Latrine [ ] Free range

SECTION B: ENVIRONMENTAL BEHAVIOUR

Please respond to all items given below by putting a tick [ ] in the appropriate space.

S/N	Environmental Behaviour	Yes	No
1	I dump waste at places heaped with refuse		
2	I dump refuse into bins even when they are full so they overflow		
3	I dump refuse anywhere when no one is watching		
4	It is insanitary to dump refuse indiscriminatory		
5	Defecating anywhere pollutes the environment		
6	I pass urine at any place I find convenient		
7	Keeping refuse at the hostel for days can lead to sickness		

SECTION C: ENVIRONMENTAL ATTITUDE

Please respond to all items given below by putting a tick [ ] in the appropriate space using the following scale: 1 = Strongly Disagree (SD), 2 = Disagree (D); 3 = Uncertain (U), 4 = Agree (A) and 5 = Strongly Agree (SA).

S/N	Environmental Attitude	SA	A	U	D	SD
1	I believe that information is increasingly necessary to be aware of the effects of our actions on the environment					
2	Environmental education activities are only useful for children					
3	I like to participate in field activities because it is a good way of understanding the environment in which I live					
4	Environmental education for people cannot help resolve environmental problems, only technology can do this.					
5	Universities should schedule more activities because they help to understand the matter better					
6	I believe that environmental problems are exaggerated, nature balances out over time					
7	I try to choose subjects that deal with matters that related to the environment because I feel I don't know enough					
8	I am willing to consume less and go without some comforts if it helps to protect the environment					
9	When I buy a product, I assess the type of packaging and choose one that is					

recyclable.

SECTION D: ENVIRONMENTAL AWARENESS

Please respond to all items given below by putting a tick [ ] in the appropriate space.

S/N	Environmental Awareness	Yes	No
1	I am concerned about the environment because of the consequence on health and global warming		
2	Raw sewage disposal indiscriminately adversely affects human life.		
3	Stagnant water can breed mosquitoes		
4	Polluting our environment can affect global climate		
5	Protecting the environment will help students enjoy a quality life		
6	My actions in our communities can put some plant and animal species into extinction some time to come		
7	Environmentally friendly products help to sustain the environment		

Thank you so much!