



**NEAR EAST UNIVERSITY**

**INSTITUTE OF GRADUATE STUDIES**

**ENVIRONMENTAL EDUCATION AND MANAGEMENT DEPARTMENT**

**ENVIRONMENTAL KNOWLEDGE AND ENVIRONMENTAL  
BEHAVIOR OF STUDENTS RECEIVING ENVIRONMENTAL  
EDUCATION: LIBERIA CASE**

**M.Sc. THESIS**

**Catherine Kuku DOLO**

**Nicosia**

**January, 2023**

**Catherine Kuku DOLO**

**ENVIRONMENTAL KNOWLEDGE AND  
ENVIRONMENTAL BEHAVIOR OF STUDENTS  
RECEIVING ENVIRONMENTAL EDUCATION**

**M.Sc. THESIS**

**January, 2023**



**NEAR EAST UNIVERSITY**  
**INSTITUTE OF GRADUATE STUDIES**  
**ENVIRONMENTAL EDUCATION AND MANAGEMENT DEPARTMENT**

**ENVIRONMENTAL KNOWLEDGE AND ENVIRONMENTAL  
BEHAVIOR OF STUDENTS RECEIVING ENVIRONMENTAL  
EDUCATION: LIBERIA CASE**

**M.Sc. THESIS**




**Catherine Kuku DOLO**

**Supervisor**  
**Prof. Dr. Aşkın KİRAZ**

**Nicosia**  
**January, 2023**

## Approval

We certify that we have read the thesis submitted by Catherine Kuku DOLO titled **“Environmental Knowledge and Environmental Behavior of Students Receiving Environmental Education: Liberia Case”** and that in our combined opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Educational Sciences.

| Examining Committee    | Name-Surname                  | Signature  |
|------------------------|-------------------------------|--|
| Head of the Committee: | Assoc. Prof. Dr. Engin Baysen |   |
| Committee Member:      | Assoc. Prof. Dr. İpek Danju   |   |
| Supervisor:            | Prof. Dr. Aşkın Kiraz         |  |

Approved by the Head of the Department

21.02/2023

  
Prof. Dr. Aşkın Kiraz  
Head of Department

Approved by the Institute of Graduate Studies

...../...../20....

  
Prof. Dr. Kemal Hüsnü Can Başer  
Head of the Institute



## **Declaration**

I hereby declare that all information, documents, analysis and results in this thesis have been collected and presented according to the academic rules and ethical guidelines of Institute of Graduate Studies, Near East University. I also declare that as required by these rules and conduct, I have fully cited and referenced information and data that are not original to this study.

Catherine Kuku DOLO

...../...../.....

## Acknowledgments

My time at Near East University was distinguished by a variety of hurdles, including changing weather, a language barrier, and difficulty adapting. Throughout it all, my drive to attain my goals and increase my ability was my first priority, which kept me going. At this point, I am grateful to God for his protection, and blessings, and for carrying me through this rich life experience.

Mr. Tomah Seh Floyd, I am grateful for your unending assistance. You have been the engine since the beginning of our journey. Your commitment, drive, and financial support have sustained me throughout the years. Thank you for your faith in me. Thank you for altering my story. Mother Yei Gbatu Brown, your love and support made this possible. Your daily phone calls and text messages to check on me kept me going during this ordeal. I am grateful for your prayers along the journey.

I'd want to express my gratitude to my eldest sister and her wonderful husband, Mr. Joseph Jackson, for their help. You both have been quite helpful in assisting me in reaching my objective and increasing my capabilities. The love you both show me every day is tremendous.

My instructors in the Department of Environmental Education and Management, notably Dr. Askin Kiraz, Head of the Department, have been extremely helpful and supportive. Your directions and teaching style are excellent. I will be eternally thankful to you for shaping me.

I am grateful to everyone who made significant contributions to my education, and I thank you for  
making my trip memorable and successful.

Thank you!

Catherine Kuku DOLO

## **Abstract**

### **Environmental Knowledge and Environmental Behavior of Students Receiving Environmental Education: Liberia Case**

**DOLO, Catherine Kuku**

**MA, Department of Environmental Education and Management**

**January 2023, 78 pages**

Through the process of environmental education, people are encouraged to learn about environmental challenges, participate in problem-solving activities, and take steps to enhance their immediate environment. In particular, undergraduate students from the departments of General Agriculture, Forestry, and Environmental Sciences at the University of Liberia are the subject of this study project.

By examining university students' environmental behaviors and knowledge, this study aims to solve pressing societal challenges. 300 students from the University of Liberia participated in this study. Basically, the results were determined using quantitative research techniques. A Google form was developed and given to the responses. This study looks at the significance of environmental education in our society, the value of environmental awareness, the function of environmental knowledge and conduct, and most significantly, the connection between environmental education and the repercussions of our lifestyle.

Human behavior needs to take into account specific challenges and the investigation of remedies for the negative effects of climate change. Global awareness of environmental challenges has led to the development of national policies for environmental education. The study tends to have an understanding of how humans react to that the environment taking into consideration best practices. The data collection shows that the practice of having a safe environment is very low because of the lack of knowledge among of people.

**Key Words:** environmental behavior, awareness, environmental education, environmental knowledge

## Table of Contents

|                            |     |
|----------------------------|-----|
| Approval.....              | i   |
| Declaration .....          | ii  |
| Acknowledgements .....     | iii |
| Abstract .....             | iv  |
| Table of Contents .....    | v   |
| List of Tables.....        | vii |
| List of Figures .....      | vii |
| List of Abbreviations..... | vii |

### CHAPTER I

|                                 |   |
|---------------------------------|---|
| Introduction .....              | 1 |
| Statement of the Problem .....  | 3 |
| Purpose of the Study .....      | 4 |
| Research Questions .....        | 4 |
| Significance of the Study ..... | 4 |
| Definition of Terms .....       | 4 |

### CHAPTER II

|                             |    |
|-----------------------------|----|
| Literature Review .....     | 6  |
| Theoretical Framework ..... | 6  |
| Related Research .....      | 26 |

### CHAPTER III

|                                  |    |
|----------------------------------|----|
| Methodology .....                | 29 |
| Research Design .....            | 29 |
| Population & The Sample .....    | 30 |
| Data Collection Tools.....       | 31 |
| Data Collection Procedures ..... | 32 |
| Data Analysis Plan .....         | 32 |

### CHAPTER IV

|                |    |
|----------------|----|
| Findings ..... | 33 |
|----------------|----|

## CHAPTER V

|                  |    |
|------------------|----|
| Discussion ..... | 51 |
|------------------|----|

## CHAPTER VI

|   |    |
|---|----|
| Conclusion and Recommendations .....        | 53 |
| Recommendations .....                       | 54 |
| Recommendations According to Findings ..... | 54 |
| Recommendations for Further Research .....  | 55 |
| REFERENCES .....                            | 56 |
| APPENDICES .....                            | 63 |



**List of Tables**

|              |    |
|--------------|----|
| Table 1..... | 33 |
| Table 2..... | 37 |
| Table 3..... | 45 |

## **List of Abbreviations**

|              |                                  |
|--------------|----------------------------------|
| <b>CLTS:</b> | Community Led Total sanitation   |
| <b>LDC:</b>  | Least Developed Countries        |
| <b>MNE:</b>  | Ministry of National Education   |
| <b>OD:</b>   | Open Dumping                     |
| <b>ODF:</b>  | Open Defecation Free             |
| <b>SWM:</b>  | Solid Waste Management           |
| <b>TRNC:</b> | Turkish Republic of North Cyprus |

## **CHAPTER I**

### **Introduction**

Environmental education is very important for people to understand the environmental challenges that are being faced by societies. The people's lack of environmental knowledge and behavior impacts the atmosphere and results in dreadful challenges over the years (Ramadhan, Sukma & Indriyani, 2019). This chapter focuses on the importance of environmental education for the public and the initiatives that are aligned to protect the environment against the growing adversities of climate change.

Societal development is dependent on education that can be delivered to the public in different forms. The information shared in the form of knowledge allows society to understand the underlying problems and craft solutions for remedying the harmful effects of environmental change (Saeed et al., 2019). The awareness of particular issues and exploring strategies that can remedy the harmful effects of climate change needs to be incorporated into human behavior. Environmental issues have been realized globally and countries are developing their policies for environmental education (Indriani, Rahayu & Hadiwidjojo, 2019). Society aims at correcting the practices of the people and making them aware of the unintentional damage that they are incurring to society. The curriculum that is designed for environmental education is critical as it determines the policies and philosophy that must be delivered to the people (Beery, 2020). This helps them understand the future challenges along with the remedial alternatives to control the outcomes.

Living in a neat and clean environment is a necessity for people and defines the basic parameters of human rights. Developed and underdeveloped countries need to structure policies and procedures to provide for the people and spread awareness and knowledge regarding preserving the ecosystem (Li, Zhao, Ma, Shao & Zhang, 2019). The ecosystem can be enhanced by implementing environmentally friendly alternatives within society. The Liberian government has realized its mistakes conducted in the past and is working dynamically toward enhancing the role of the education system (Heidbreder, Bablok, Drews & Menzel, 2019). The system is being updated with policies and procedures that are aligned with the latest trends in environmental protection and altering the behavioral practices of the people for conserving the environment (Yang & Chen, 2018). 21<sup>st</sup> century promotes change in

practices and adapting to trends that enable them to manage harmful environmental impacts.

Environmental education is linked with spreading knowledge and awareness to the people so that they can remedy the damage and adapt to policies that protect the environment. The strategic implementation focuses on identifying the challenges and developing problem-solving strategies to remedy the damage (Gkargkavouzi, Halkos & Matsiori, 2019). This requires suggesting alternate practices and enlightening the people to make a prompt self-driven decision that aims at conserving nature. Environmental education works to make people aware and capable of countering the challenges that come along the change process (Yuriev, Dahmen, Paillé, Boiral & Guillaumie, 2020). The methods that are applied don't have a spontaneous effect on the practices of the people rather they are slow initiatives that transform the people through changing their habits and realizing the things that damage the environment (Liu et al., 2020). Providing adequate training to the people and giving them goals makes the community capacity to understand the challenges and develop actions that remedy the problems.

The researchers and philosophers are evaluating the need for change by relating to demographics, policy implementation flaws, and understanding the role of emerging technologies. Technological change is the biggest contributing factor in correcting the practices of the people (Lee, 2019). Technology was earlier blamed for its harmful impact on the environment but as time has passed technology has proved to be a guiding light for people making them aware of the need for change. The role of education is primarily in correcting the practices and research methods that can be applied to improve the outcomes of society (Gilbertson, Ewert, Siklander & Bates, 2022). The Liberian education system has been refined over the years after the end of the civil war. The civil war prevailing in Liberia hindered the government from focusing on primary issues and implementing practices to correct the problems (Ramadhan, Sukma & Indriyani, 2019). The recent initiatives of the government are inclined toward change, aiming to create measures for preparing policymakers and leaders that set an example for society.

Behavioral change of the people is a process that takes time to reform people and their practices. Through environmental education, people become capable of relating to the situation and enforcing measures that correct society (Saeed et al., 2019). Environmental knowledge can be delivered to the people through multiple

initiatives that are crucial for examining the issues and opportunities being faced in society. The goals and strategies of environmental education are linked with rectifying the negative outcomes associated with the usage of resources and opting for alternatives that are environment-friendly (Indriani, Rahayu & Hadiwidjojo, 2019). The environmental challenges and the curriculum designed for environmental education must be aligned with the needs of the students that have the capability of transforming the practices of future generations.

### **Statement of the Problem**

The planet earth is depleting with time through the life practices of human beings. Environmental education spreads awareness of the damage and prepares people to impart the practices that are damaging the environment (Beery, 2020). Behavioral change is a process that requires time through modifying the ecosystem of the world. The role of education is inevitable as it presents knowledge and awareness to the people and makes them understand the complexity of the situation (Firat, Sepetçioğlu, & Kiraz, 2012). Change is mandatory to overcome the damage but the realization of the change process is more important (Li, Zhao, Ma, Shao & Zhang, 2019). Education not only shares the source of the problem but also suggests the change initiatives that can be applied to counter the adverse effects.

Liberia is an underdeveloped country with a huge population below the poverty line. The major concerns of the people are providing for their families and not sharing concerns for the environment (Heidbreder, Bablok, Drews & Menzel, 2019). The change initiatives that must be incorporated in this region need to be very strict and stern to force the people to change their existing practices and opt for environment-conserving practices. Climate change and global warming are the major problems associated with environmental depletion (Yang & Chen, 2018). The process of environmental education needs to share concerns with the people and motivate them to implement practices in their lifestyles that can protect the environment. Quality of life is a basic right of human beings that can only be given to them through reformed practices (Gkargkavouzi, Halkos & Matsiori, 2019). The research study aims at emphasizing the change in practices and spreading environmental education to the people to create awareness about the essentials of quality life in Liberia.

## **Purpose of the Research**

The study aims at addressing critical issues of society by reinforcing the practices of the people. Realizing the effects of environmental education and spreading knowledge and behavior for reforming the practices of the people are critical goals that determine the purpose of the study.

## **Research Question**

The research questions that will be addressed in this research are the following:

- What is the distribution of the scores of the participants from the Environmental Knowledge Form?
- What is the distribution of the scores of the participants from the Environmental Behavior Form?

## **Significance of the Research Study**

Environmental education is a critical issue being faced by society. The goal is to explore the environmental challenges and spread knowledge amongst the people leading them to behavioral change (Liu et al., 2020). The analysis will be conducted from the perspective of Liberia which requires creating awareness about environmental challenges and protecting the environment. Liberia is an underdeveloped country that has dynamic issues related to environmental changes (Lee, 2019). The role of environmental education aims at prescribing the necessary knowledge and behavioral change that prepares people to remedy the challenges of environmental challenges.

## **Definition of Terms**

**Climate Change:** Climate change is the change in the environment and climatic conditions that are altering the intensity of heatwaves and floods in the region. These factors impact the health of the people and lead to sickness in society (Beery, 2020). Climate change is the greatest threat to human health that requires transforming the habits that conserve the environment.

**Development:** Any progress that takes place with the change process aiming to change or conserve biodiversity. The aspects of water quality, groundwater contamination, soil contamination, use of natural resources, waste management,

sustainable development, reduction of disasters, air pollution, and noise pollution are all contributing factors to biodiversity (Indriani, Rahayu & Hadiwidjojo, 2019).

**Ecosystem:** The temperature and geography of a region that relies on the presence of interdependent species such as plants, animals, and organisms. Various biological and non-biological elements are present in society (Ramadhan, Sukma & Indriyani, 2019).

**Environment:** The environment is the surroundings in which people reside and interact to perform their ecological activities (Saeed et al., 2019).

## **CHAPTER II**

### **Literature Review**

#### **Theoretical Framework**

Environmental education is essential for making people aware and assisting them in altering their behavior and knowledge about the issue. The behavioral change of the people reforms their practices and helps individuals develop practices that can reduce the impact of harmful practices (Lange & Dewitte, 2019). The practices and behavioral evolution can curtail the problems of environmental depletion and develop sustainable methods that are suitable for conserving the environment. Liberia is an underdeveloped country and many practices of waste disposal and carbon emission are least considered to conserve the environment (Zhang, Li, Uddin & Guo, 2020). The weakness of the infrastructure and lack of awareness of the people connects with the problems and creates environmental problems that have a long-lasting impact on society.

#### **Awareness of Environmental Education and Problems**

The awareness of environmental problems is essential for developing problem-solving behaviors and remedying the damage that has been induced on the environment. The individuals explore the issues through environmental education and make decisions that are informed and responsible (Jaiswal & Kant, 2018). Environmental education raises the bar of knowledge in the people and evolves their behavior and responsiveness toward climate change issues. The awareness of the people increases and creates sensitivity about the problems (Sogari, Velez-Argumedo, Gómez & Mora, 2018). The most challenging aspect of environmental education is the lack of knowledge and understanding that raises attitudes and assists people in maintaining environmental quality. The skills of the people are lifted in an attempt to resolve the environmental issues and participate in the initiatives to rectify the problems (Kim, Kim, Choi & Phetvaroon, 2019). Environmental issues persist with consistent activities of human being over the years that slowly and gradually damages the environment.

The global population is increasing at a dynamic rate which is amplifying the sustainability concerns of society. The policymakers and environmentalists are on the same page to focus on enhancing the scope of environmental education to increase



awareness of the people and reform their behaviors (Lange & Dewitte, 2019). The global institutions are towards introducing courses that are linked with environmental science aiming to raise awareness of the people and transform their behaviors towards the social good. The consciousness of the people of their surroundings needs to be enhanced to raise the level of awareness in the people (Zhang, Li, Uddin & Guo, 2020). The consideration of people towards the environment can increase their knowledge of the surroundings and also provide them with suggestive methods for improving living standards. The studies that are delivered through environmental knowledge aim at enhancing the participation of the students and highlighting real-world problems to the masses (Jaiswal & Kant, 2018). The ecological issues require drastic attention from the people as an initiative of remedying the environment and correcting the practices that can protect the environment.

The social damage incurred to the environment is mainly due to human practices. The ecological issues are raising the concern of the authorities as climate change and environmental problems are all interlinked (Sogari, Velez-Argumedo, Gómez & Mora, 2018). Students at all levels need to be aware of their contributive role toward society and take stern initiatives for conserving the environment. The adequate use of technology and availing the natural resources to conserve the ecology are the primary goals delivered through environmental education (Kim, Kim, Choi & Phetvaroon, 2019). The practices of the people and their awareness of the damage that they incur on the environment can only be made possible through awareness. The role of society as a whole converges with the alteration of behaviors (Ahmed, Ahmad, Rjoub, Kalugina & Hussain, 2022). The knowledge span of the modern generation must be enhanced to introduce strategies that aim at protecting the environment and conserving the resources of the planet. Society needs modern-day learners to be equipped with adequate knowledge to understand the problem and associate the challenges with remedial alternatives (Qi, Jones, Li, Liu & Yan, 2020). The lifestyle of society must be reformed by enforcing conserving practices that correct society and help in preserving the environment.

Environmental education is completely unbiased to conserve the environment and spread awareness amongst the people. The goal is to educate the people and reform their behaviors toward society (Ahmed, Ahmad, Rjoub, Kalugina & Hussain, 2022). Critical thinking in people needs to be developed so that problem-solving can be initiated and the decision-making skills of the individuals can be redeveloped (Qi,

Jones, Li, Liu & Yan, 2020). Through environmental education, people get an opportunity to weigh the issues and adopt methods that can protect the environment (Ulu & Kiraz, 2014). The basis of education is dependent on the National Environment Education Act of 1990 requiring the Environmental Protection Agency to provide national leadership that can enhance the scope of environmental literacy (Khan, Ahmed & Najmi, 2019). The position of this program is to spread environmental knowledge in third-world countries and make sure that people understand the underlying issues of climate change.

### **Increasing Public Awareness**

The aspect that must be understood globally by people is understanding the fact that environmental education is not limited to learning about the environment rather it is linked to understanding the information about the environment (Thomas et al., 2019). The scope of this education is to increase public awareness about the issues and provide them with best practices through opinions to reform their habits and practices. Critical thinking skill of the people enables them to curate alternate responses and look at the problems from a wider sense of understanding (Chen, 2018).

The knowledge about a problem does not necessarily teach individuals critical thinking which is crucial for problem-solving and decision-making skills of the people. The viewpoint of the authorities over the issue also clearly raises the scope of understanding of the people and makes them destined towards the socio-economic possibilities (Yu, Yang, Zhu, Bai & Ma, 2019). Environmental knowledge is not about educating the people rather it is connected with spreading a behavioral change that evolves the habits of the people. Educating the people and delivering knowledge to them has limited distinctions where the people know about the problem and are aware of their role in solving the problem (de Freitas Netto, Sobral, Ribeiro & Soares, 2020). The magnitude of the problem and the knowledge possessed about the problem to limit the spread of the issue is connected with environmental knowledge.

### **Pro-Environmental Behavior**

Knowledge about environmental issues is considered to be a precondition of pro-environmental behavior that acts as a transmitting component for implementing

the environmental education program. Knowledge of the problem is a key factor for resolving the issues and preparing the people to resolve the issues (Mahlia et al., 2020). This predicts the role of the people and their practices towards the environment aiming directly at the attitudes of the people. The subjective evaluation of the problems leads people towards awareness and the role they can play in remedying the problem. The objectivity of the problem and the solutions that underlay the people themselves is the crucial goal of environmental knowledge (De Sá, Oliveira, Ribeiro, Rocha & Futter, 2018).

The basis of education starts with the realization of the problem and taking small initiatives for resolving the problems step by step. The practical implications show that people need to understand their role as individuals and take measures for establishing an environmentally significant attitude. Environmental competence of the people makes them aware of the problems and designs their thinking abilities in a socially compatible manner (Taufique & Vaithianathan, 2018). This distinction must be developed in third-world countries to monitor their activities and prepare the people to reform practices towards environmentally sustainable goals.

### **Environmental Education**

Environmental education has a deep-rooted role in spreading awareness to the people and making them knowledgeable about their roles in conserving nature. The scope of education is to make people aware and help them indulge in real-world issues objectifying the subject (Sima, Gheorghe, Subić & Nancu, 2020). This enhances the competence of society making them capable of countering the complex environmental issues crucial for confronting the planet.

Creative problem-solving and advocating the importance of the problems open the scope of solutions from a worldly view (Liu & Guo, 2018). The climate change issues are intense and require remedying the indoor habits of people from a diverse natural setting. The natural environment is the nourishment of the soul that can solve environmental problems through a more creative approach (Li, 2018). The need of society can be improvised through cultivating leadership qualities of the people and developing cognitive abilities that limit the outcomes of environmental problems.

## **Justifying Environmental Education**

There are many justifications for highlighting the need for environmental education that reforms the awareness spectrum, sensitivity, attitudes, and knowledge of the people. The crucial understanding is connected with monitoring the ecosystem and recording the habits of the people that damage the overall infrastructure (Khan, Ahmed & Najmi, 2019). The students are well informed about the challenges due to excessive use of social media which assists in spreading the message to the masses and makes them participate in positive initiatives. The planet is considered home for the species that exist and sustaining the environment must be the goal of the people (Thomas et al., 2019). Ecological conservation has become a popular agenda for a society where countries evaluate their surroundings and focus on corrective policies. Implementation of these policies requires awareness from within the society which cannot be governed without spreading knowledge and reforming behavior (Chen, 2018). Environmental education is the source of behavioral change in society that assists in changing the practices and looking deeply towards helping sustain the atrocities of climate change issues.

Environmental problem is man-made and linked with the regular practices of society. The challenge associated with this problem is the realization of the people aiming to overcome the environmental problems and sustain the already incurred damages (Yu, Yang, Zhu, Bai & Ma, 2019). The transmission of information to the generations and looking deeply to promote conservation are critical goals of society. The education system requires establishing a planned approach through enforcing ethical guidelines that educate the learners and motivate them to indulge in the corrective initiatives of society (Netto, Sobral, Ribeiro & Soares, 2020).

Many alternate practices can be adopted to conserve the environment which is not known to the people. the goal of the policies and practices is towards reducing environmental problems and ensuring that students take responsibility. This can guarantee to present a sustainable future that is destined to solve the natural challenges of the ecosystem (Mahlia et al., 2020). The change initiatives are linked with social behavior where people desire to make a change and embrace the need for social reforms.

### **Reformed Habits of Students**

The reformed habits of the students reduce the environmental gaps and rectify the issues of the people. The goal is to spread awareness and raise the bar of enthusiasm in society (Yeşilyurt, Balakoğlu & Erol, 2020). The traditional pedagogy of teachers' connection with the students making them more responsible towards environmental concerns requires engagement. The larger benefits of educating people are linked with establishing healthier learning environments and providing support to decision-making practices that aim at conserving the environment through socioeconomic practices (Sun, Teh & Linton, 2018). Focusing on sustainability by addressing the environmental issues that keep the world healthy and productive is the crucial goal aiming to conserve natural resources. The awareness can make people realize the importance of change and implement that change aspects in social environments (Helvacı & Helvacı, 2019). Learning about climate change and preparing future societies for initiatives for monitoring negative impacts on the environment can change the goals and objectify the role of environmental change.

### **Societal Adherence and Practices**

Environmental education enhances the adherence of individuals to the world and its happenings. The social and societal practices of human beings change the habitat and alter the environment in which they reside (Türkoğlu, 2019). The goal is to conserve the natural environment and make sure that it remains protected. The problem with environmental education is linked with environmental knowledge where the people are least aware of the issues. The lack of awareness of the people makes them vulnerable to the environment, causing damages that can't be remedied through simple initiatives (Maurer & Bogner, 2020). The goal is to build a natural and sustainable environment that is protected from the adversities of human nature. The world can be sustained through reformative practices of the people and abstaining from habits that damage the environment (Marpa, 2020). The behavioral change of people is subjective to their habits and practices that can reform nature. Humans need to act individualistically to play their role in conserving the environment (Kovács, Medvés & Pántya, 2020). When people correct their behaviors that society automatically starts correcting itself resulting in the betterment of the sustainable environment.

### **Restoring Ecological Balance**

Education enables people to create awareness and structure strategies that can restore the ecological balance. The ecological balance of society can be restored by making people realize their responsibilities towards the environment (De Sá, Oliveira, Ribeiro, Rocha & Futter, 2018; Kiraz & Aytaç, 2020). This assists in conserving the environment and altering the behavior of the people towards social good. The responsibility of maintaining the ecological balance is developed through educating the modern child and making them realize their role towards the environment (Taufique & Vaithianathan, 2018). The involvement of the people has strength enabling coexistence with the other species residing on the planet. Human beings are responsible for the damage and they must make a decision that conserves the environment and protect the endangered species (Sima, Gheorghe, Subić & Nancu, 2020). Environmental education looks forward to training and educating the community by suggesting behavioral alterations that aim at conserving the natural environment (Liu & Guo, 2018). The people are instructed about change which dominates their actions for nurturing the ecosystem.

The learning institutions get a chance to expand their knowledge and form a correlation with human culture and life. The people become encouraged to be accountable which enhances ecological conservation and teaches learners about their actions to preserve the environment (Li, 2018). This guarantees a sustainable future where environmental concerns are prioritized and remedied through small initiatives. The sense of appreciation that is intrigued in the learners through education makes them connect with the environment and consider its protection as a priority (Yeşilyurt, Balakoğlu & Erol, 2020). Being conscious of natural disasters reflects on ecological problems that relate to the lives of the people. Education is also important as it motivates the students to innovate certain practices that can converge with the safety and security of the environment. Developing an informed society that is responsible for its actions allows for appreciating and valuing the clean environment (Sun, Teh & Linton, 2018). Taking responsibility for the actions and altering the behavior to change the practices are sustainable goals of environmental education.

### **Knowledge Delivery Aspects**

Education is connected with knowledge delivery aspects that make the students understand their environments. The natural habitat and its requirements can

be either taught within the classroom environments or outside the classrooms (Huang, 2018). The importance of education connects with the knowledge of the people that can be developed within or without the classrooms. The training of young students can make them aware of the problems and guide others they see doing wrong (Ramadhan, Sukma & Indriyani, 2019). They can adapt to sustainable practices and inform others to adopt sustainable practices. The objective is to enhance the knowledge of the people and transform their behaviors. Environmental education is being delivered formally to the people in classroom environments but the responsiveness of the people is instinctive (Thor & Karlsudd, 2020). The care and consideration of the environment can lie within the individual irrespective of the fact that whether they were or were not formally educated.

### **Formal Method of Enlightening**

Environmental education is a formal method of enlightening the masses and spreading awareness about conserving the environment. Education is important for teaching the youth, educators, schools, and communities preparing them to drive on a path of environmental education (Zelenika, Moreau, Lane & Zhao, 2018). The importance of education is only to establish a path of social learning and enlighten people about the contributive roles of society. The planet earth is suffering due to the people and their practices (Edsand & Broich, 2020). These practices prevailed over the years depleting the ozone and resulting in climate change. The problem that lies in society is not related to the lack of education rather it is linked to the lack of awareness of the people (Dolenc Orbanic & Kovac, 2021). The spread of awareness is important to reform the behaviors of the people so that they can't act responsibly and try their best to control the depletion of the earth. The objective question that is raised through this analysis is whether an individualistic approach can conserve the planet or not (Ongon, Wongchantra & Bunnaen, 2021). The response is that individualistic responses are the most sustainable actions and they benefit the environment at large.

Many researchers and analysts have tried to establish a connection between education, knowledge, and the behavior of people. Education is important and spreads awareness to the people but knowledge on the contrary is connected with the behavioral responses of the people (Liobikienė & Poškus, 2019; Kiraz & Siddik, 2018). The considerable action that is encrypted in the behavior of the people is

linked to their knowledge and awareness about an issue (Liao & Li, 2019). The path that they select and the actions that they impose towards correcting their responses dwindle with the knowledge of the problem and the consideration of the environment. Education and knowledge about the environment do not create a sense of consideration in the people (Sousa, Correia, Leite & Viseu, 2021). The actions of the people are responsive to their practices and the behavior change can only be acknowledged through establishing a sense of consideration.

### **Benefits to Human Health**

Environmental safety and health are crucial for human health as it enriches the body and protects it from the harmful effects of climate change. Health issues such as obesity, anxiety, and lifestyle changes are prevailing in the communities being subject to environmental depletion (Helvaci & Helvaci, 2019). The toxicity in the environment depresses people and keeps them away from engaging in social and physical activities. The harmful practices of humans make them vulnerable to their surroundings and limit their social cognition (Türkoğlu, 2019). Behavioral change makes people realize the long-term damages and ensures that actions are taken that have the potential of reforming their lifestyles. Lifestyle change motivates people to indulge in activities that converge with environmental modification (Maurer & Bogner, 2020). The awareness campaigns that are taught to the students in classroom environments are exhibited in the natural environment. This makes their lives active and reduces the outcomes of stress (Marpa, 2020). The risk of falling subject to mental health issues also gets limited which supports physical inactivity.

The passion of the students to conserve the natural environment can only be increased through environmental education. The creativity of the learners expands and intrigues them to enquire more about participation in ecological issues (Kovács, Medvés & Pántya, 2020). The green school increases the imagination of the people and expands the learning process toward resolving ecological issues. Expanding their knowledge of the people facilitates and empowers the learners increasing their proficiency and mindsets (Huang, 2018). Creative thinking skills strengthen the future of a sustainable environment and safeguard the environment. Through environmental education, the educationist can take the students to field trips, awareness campaigns, crusades, and cleaning exercises (Ramadhan, Sukma &



Indriyani, 2019). The practical lessons allow students to discover nature and explore the initiatives they can contribute to preserving nature.

### **Social Consideration**

Environmental education is becoming popular within modern-day society as it raises the bar of consideration in the people and makes them consider being responsive. This sense of responsibility that is embraced within the actions of the people is delivered to them through education (Sukma, Ramadhan & Indriyani, 2020). The environment is depleting and so the initiatives of the society need to be more governing and responsive. The goal is to amplify the understanding of the people and make them understand the significance of considering the environment (Choe, Kim & Ri, 2020). Education plays a vital role in this process as it raises awareness and alters the course of the behavior of the people. There are many benefits of environmental education that work hand in hand to transform the environment and alter the destructive habits of the people (Gules Bal & Karakas, 2018). Through education, people relate to the issues and try to get involved with considerable enthusiasm for resolving the problems. The imagination of the people starts amplifying which allows them to understand the issues and work towards constructive solutions for remedying the issues (Siegel, Cutter-Mackenzie-Knowles & Bellert, 2018).

### **Enthusiastic Solutions**

The learning methods that engage with the audience can be used to control the actions of the people and provide enthusiastic solutions to accredit the responsive behavior of the students. The major effect of education on behavioral change is through getting the people involved and making them look into the problems with a problem-solving attitude (Faize & Akhtar, 2020). The application of learning developed in the classrooms allows people to think clearly and look at the problems upfront to understand the damage that is being sustained by the planet. The approach is to establish connections between the problems and suggest solutions that align with the social, ecological, economic, cultural, and political issues (Al-Rabaani & Al-Shuili, 2020). Environmental education amplifies the creative thinking skills in the behavior of the people and makes them look at the problems through a distinctive approach. The new generations are more apt to critical thinking which makes them

implement change-oriented behavior and extract positivity in connection to nature (Abiolu, 2019).

### **Environment-Friendly Initiatives**

Environmental education is linked with expanding the apt of the people through knowledge building and behavioral change. The crucial goal is associated with making sustainability a fun thing and converging with the practices that can save the environment (Thor & Karlsudd, 2020). The pollution in the environment needs to be reduced through channelizing environment-friendly initiatives. Water pollution, air pollution, and noise pollution are all witnessed through the activities of the people (Zelenika, Moreau, Lane & Zhao, 2018). Urbanization, wetland destruction, deforestation, and emission of environmental waste are all subjective to pollution. The practices of the people need to be reformed to limit waste excretion and resort to solving societal problems (Edsand & Broich, 2020). People need to establish learning habits and evaluate their surroundings to control the damaging effects. The activities that pollute the water, air, and land must be controlled to emphasize correcting the environment. Water, air, and land are ecological components that need the attention of the people aiming to protect the environment (Dolenc Orbanic & Kovac, 2021). The burning of waste and the lack of recycling facilities in society contribute to this problem. In some countries, the waste is dumped in the sea which impacts critically on aquatic and marine life.

The skills of the learners that are delivered through environmental education courses expand. The development of new skills allows people to contribute their knowledge and behavior through a professional channel (Ongon, Wongchantra & Bunnaen, 2021). The students can derive a passion for conserving the environment and learn through courses to contribute professionally. The courses in aquatic and marine biology help us understand the aquatic lives of animals. Cleaning the waters and preserving the natural resources is possible through marine life (Liobikienė & Poškus, 2019). Water resource management is another area that requires attention while aiming to conserve the environment. There are fields like earth systems and soil ecology that expand in different areas of the ecosystem. The students can learn these skills and contribute to the environment by working professionally with organizations that are working towards a similar goal (Sousa, Correia, Leite & Viseu, 2021). The structuring of environmental laws is possible by encouraging people and

enrolling in environment-related courses. Structuring the alternate course of action is the core strategy of environmental education that raises the scope of problem-solving and ecological protection. The benefits associated with protecting the ecosystem are essential for learning new skills and resolving issues that affect the surroundings (Liao & Li, 2019). The behavioral attributes associated with environmental education affect the welfare of the environment and are considered crucial for promoting a sustainable future.

### **Tolerance and Resilience**

The tolerance of the people is supported by behavioral change that enhances the views of different cultures. This behavioral change encourages people to investigate the issues and promotes tolerance and resilience toward societal impacts (Liu, Teng & Han, 2020). The connection between knowledge associated with environmental change prepares them to adopt resilient behavior and implement change-oriented practices. Implementing environmental education practices into the curriculum satisfies the normative standards enhancing the approach of the students and making them more responsive toward environmental change issues (Hsu & Feng, 2019). This creates interdisciplinary learning and increases the resilience of people toward behavioral change that is more environmentally responsible (Yildiz & Budur, 2019). Care and consideration for nature is an instinctive process that can change the perspective of society and makes the students look at the underlying issues of climate change responsibly.

The communal role of understanding behavioral change is the need of desperate times that can only be initiated through raising the bar of understanding. Community involvement in taking responsible actions is required for mediating the actions of the people and generating a feeling of consideration (Gao, 2018). The community experts in the neighborhood allow the society to practice eco-friendly trends that reform the behaviors of the people. The need of implementing responsible actions is mandatory for societal actions and promoting a new trend of care and consideration for the environment (Esteban Ibanez, Musitu Ferrer, Amador Munoz, Claros & Olmedo Ruiz, 2020). The connection between education, knowledge, and change in behavior shows the importance of altering the perspective for correcting the long-term behavior of society. The optimum goal is sustainability which can only be established through forming a connection between the teachers and the students

(Wang et al., 2021). The reflective understanding of the environment and the blessing of nature develop a sense of understanding in the people and drives them on a path of preserving the environment.

### **Environmental Education in Liberia**

Climate change is the most important social issue of recent times which requires spreading awareness in developing countries. Liberia is a developing nation that is aiming to reform its societal practices and converge the infrastructure to the social benefits (Aliman & Astina, 2019). The past practices of Liberia show that the land has faced many dominating issues due to the prevailing social issues and civil war. The consideration of the people towards the environment is the bare minimum that is impacting the practices of the locals (Ramadhan, Sukma & Indriyani, 2019). The corrective measures can be enforced on the people by making them aware of the social problems and instigative with a responsibility to consider the environment. The social cause can be addressed by introducing people to social issues by educating them (Saeed et al., 2019). The most effective method of spreading awareness can be possible through establishing a curriculum that is environmentally equipped.

Environmental education needs to be spread to the people of Liberia to spread knowledge about the issue and create a mechanism for behavioral changes. The goal is to enhance the awareness of the people and spread a sense of consideration towards the environment (Indriani, Rahayu & Hadiwidjojo, 2019). This measure establishes an approach of correction and amplifies the social status of the people. the induction of environmental education in schools is necessary to enhance the aptitude of the students and make them destined to work towards conserving the environment. A curriculum that discusses social issues and highlights the climate change challenges can make the students responsible and motivate them to participate in the change process (Beery, 2020). The education standards can make the students aware and enable them to participate in social initiatives required for correcting the social approach (Li, Zhao, Ma, Shao & Zhang, 2019). Environmental education is a measure of correction for a society where the students learn about climate change and the challenges that it brings society.

### **Change Oriented Behavior**

The world has realized the climate change issues and is working to provide change initiatives that have the potential of conserving the environment. The actions of the people are not sufficient for the problems that are underlying within the society (Sukma, Ramadhan & Indriyani, 2020). Businesses and governments are focused on implementing change-based initiatives to resolve climate change issues. Societal transformation is linked with exploring the issues of climate change and communicating it to the people (Choe, Kim & Ri, 2020). The actions of the people when informed about climate change is an essential concern to transform the interface of society. Climate change communication is aligned with values and identities that support the views over the behaviors of the people (Gules Bal & Karakas, 2018). The policy changes linked with governments and climatic conditions associated with resolving climate-based issues. The situation that is being faced in Liberia is subjective to the attitudes of the people that are included within the system (Siegel, Cutter-Mackenzie-Knowles & Bellert, 2018). The education of people from third-world countries is critical for remedying the harmful effects and ensuring sustainability.

Liberia needs to change the thought process of the people by reforming their habits. Certain actions of people and their responses damage the environment significantly. This is linked with mitigating climate change issues and resolving the problems that confer with society (Faize & Akhtar, 2020). People suffer from biases and overestimate the likelihood of positive things that take place in the environment. The chances of bad things happening to society are underestimated and this is exactly the case with floods, natural disasters, and wildfires (Al-Rabaani & Al-Shuili, 2020). People need to think rationally to develop processes to control the happening of harmful instances. The people of Liberia need to be educated so that their actions that are harming the environment can be controlled (Abiola, 2019). The crucial aspect of modification requires developing insurance for disasters to protect the people and the environment. Natural calamities are increasing with time and this is forcing people to lose their assets (Liu, Teng & Han, 2020). The actions of the people are sometimes indifferent to the environment whereas they are extremely focused on other issues happening to them.

## **Reforming Behaviors and Practices**

Environmental conservation has become a priority for many organizations that are considering enforcing environmentally friendly products. The transportation industry has evolved and companies are offering alternate fuel for the user (Lange & Dewitte, 2019). Solar vehicles are being introduced in the industry that is not only changing the interface of the world rather it is transforming the practices of the people using the products. The initiatives that are implemented on an individual level and enforced on an organizational level vary in magnitude (Zhang, Li, Uddin & Guo, 2020). The organizational change transforms a larger set of customers by offering them an alternate to choose and select from the available options in the market. The trends and practices of the people can't transform if they don't have alternate options. Organizations are realizing this need for change and are incorporating this into their sustainability patterns (Jaiswal & Kant, 2018). The organizations that are working towards sustainability goals and offering alternate solutions to customers are prospering more dynamically.

The human attitude is habitual and incentive driven where people don't change when they don't have a motive behind the change process. Conserving the environment requires offering people change-based initiatives where habits have the potential of changing based on incentives (Sogari, Velez-Argumedo, Gómez & Mora, 2018). The practices and behaviors are subjective to change in environments where people are aware of their evolving trends. The practices that were used in the past need to be altered to conserve the damage that is being incurred to the environment (Kim, Kim, Choi & Phetvaroon, 2019). The goal is to maximize government implementations and offer the public alternate solutions that can be applied to conserving the environment. Similar trends are being witnessed in Liberia where businesses are offering the public environmentally friendly solutions and changing the regular practices of the people (Ahmed, Ahmad, Rjoub, Kalugina & Hussain, 2022). The organizations can enforce the goals easily in the market and transform the practices by offering unique methods that align the objectives of the people towards conserving the environment.

The eco-centric goals of environmental education are to enlighten this purpose and show the people about the change in behavior by opting for sustainable solutions. The knowledge that is transferred through education makes people aware of the need of the planet and the practices that can be applied in their routine to

contribute towards conserving nature (Qi, Jones, Li, Liu & Yan, 2020). The essential objectivity is linked with critical goals of policy changes where little changes in the pattern transform the complete industry. The transportation industry has been revolutionized with the introduction of electric vehicles (Khan, Ahmed & Najmi, 2019). The initial consideration while making electric-powered vehicles seemed impossible but through technology, this has become possible. The choice of opting for a gasoline-powered vehicle or an electric vehicle lies with the customer (Thomas et al., 2019). The main consideration is that people change and so do their practices. The requirement for change is the availability of alternate products in the market (Chen, 2018). This leaves an option of selection for the customers and makes them think about choosing alternates that conserve nature.

### **Initiatives of Liberia Towards Change**

Liberia is a third-world country where development initiatives are being enforced. The goal is to sustain the challenges and transform the practices of the people. The initiatives that are enforced in Liberia can't be implemented without the intervention of the corporations (Yu, Yang, Zhu, Bai & Ma, 2019). Huge corporations need to offer alternatives to the people that can market environmentally friendly behavior. The option of selection that will be offered to the people will transform a larger portion of the world and introduce a change-oriented behavior (de Freitas Netto, Sobral, Ribeiro & Soares, 2020). Conserving the environment is a joint initiative where the users need to enforce change and implement sustainable practices. The practices of people relating to waste management, managing the salinity of water, and disposal trends need to be introduced by corporations to initiate the process of change (Mahlia et al., 2020). The optimum goal is to maximize the approach of humans and introduce well-defined practices.

The Liberian government is foreseeing the implementation of infrastructure that shall reduce carbon emissions and protect the ozone layer. The transportation trends are changing and electric vehicles are being introduced in major cities of the country (De Sá, Oliveira, Ribeiro, Rocha & Futter, 2018). The infrastructure lacks adequate charging stations and spare parts which is increasing the cost of the vehicle. The change will apply in the industry over the years resulting in a slow and gradual change process (Taufique & Vaithianathan, 2018). The government is also destined to enhance the salination facilities of water so that clean drinking water can be

provided to the people. Waste disposal is a huge challenge for households and the government that results in either burning the waste or dumping it in the sea (Sima, Gheorghe, Subić & Nancu, 2020). This is impacting the aquatic life of the people and changing the footprints of the country. The goal is to introduce landfills and waste management systems where this waste can be reused for acquiring energy (Liu & Guo, 2018). The recycling of waste will enhance the infrastructure of the country and save the cost of energy production.

Disposable products need to be actively used so that transmission of sickness through diseases can be stopped. Climate goals can only be accomplished when policy changes are introduced for the masses (Li, 2018). The policy changes are required to enforce significance in the environmental changes and introduce reformed practices for the people. The use of plastic utensils needs to be limited and emphasis needs to be put on using recycled plastics that save energy and conserve the environment (Yeşilyurt, Balakoğlu & Erol, 2020). The disposal trends must be introduced by huge corporations to set an example for the people. The objective is to refine the use of products and adapt to environment-friendly practices (Sun, Teh & Linton, 2018). The behavior of the people can be changed by establishing an influence and providing them with alternate technology and trends to reform their practices.

The financial viability of change-based practices needs to be introduced to make the transition of people easier and more convenient. The change process cannot be introduced if introducing new technology was difficult (Helvaci & Helvaci, 2019). The method that needs to be reinforced is introducing the trends and highlighting their benefit at large to the audience. The requirement of time shows that the practices need to be evolved so that the environment can be conserved (Türkoğlu, 2019). Changing the trends and patterns of consumption is the most viably possible action that can reform the attitudes of the people. The planet needs to be protected from the atrocities of human consumption because the planet is home to other species which are incapable of protecting themselves (Maurer & Bogner, 2020). This is the loan that human being has to the planet and must be recovered through the responsiveness of the people.



## **Household Heating and Energy**

Household heating and energy remain a major area of emission control that is difficult to influence the people. People need to switch to green energy providers that install products that meter and monitor consumption (Marpa, 2020). The upgradation of technology is crucial for transforming the emission footprints. The implementation of this change is challenging for the service providers as the entire dynamics of the industry will need to be reformed through the application of these practices (Kovács, Medvés & Pántya, 2020). The massive speed of construction that is progressively happening in the commercial and residential sectors changes the consumption patterns of the people. The goal is to introduce technology that conserves nature in the long run (Huang, 2018). The people need to implement practices that are environment friendly and apply a change that has the scope of financial benefits. The change process in this segment will be slow as the existing infrastructure will take time to enforce its actions and the process of beneficial energy implementation will become an important factor as time passes (Ramadhan, Sukma & Indriyani, 2019).

The incentives that are offered to the people for facilitating the change process must not always be financial. Environmental sustainability initiatives need to be introduced that apply a distinct practice of consumption over the years (Thor & Karlsudd, 2020). The impact of energy on the environment is massive and accepting technology that applies alternate energy sources requires enforcing energy-based incentives. The monetary benefits that are associated cannot remedy the damages that are associated with this changing aspect (Zelenika, Moreau, Lane & Zhao, 2018). The health of the people is severely impacted by this form of insulated heating. The change can be enforced by showing the people the problems that they will face with old technology and the benefits of new technology for the change process. Facilitating behavioral change requires understanding the issues and providing worthwhile solutions for dealing with the problems (Edsand & Broich, 2020). The optimization of environmental practices and focusing on environment-friendly solutions are extremely viable for the environment to facilitate the aspects of change.

Energy use is an area that requires the most amount of public education that can stimulate the change process. The impact that technology and past practices have on the environment can't be neglected but the application of remedial actions is the most important goal of the businesses (Dolenc Orbanic & Kovac, 2021). The

insulation practices applied in the building are much more tangible than the other practices that are applied. The application of smart heating and cooling technology needs adequate education towards understanding the process. The application of this trend is a must for people to control the unnecessary number of emissions and smoke (Ongon, Wongchantra & Bunnaen, 2021). The initial cost of application is high but the long-term benefits are significantly higher for the health and environmental benefits of the people.

### **Practices of Food and Diet**

The food and dietary practices of the people are directly correlated with the practices of global emissions. The diet is an area where the role of individuals is important as people are themselves responsible for their dietary practices (Liobikiene & Poškus, 2019). The consumption patterns of the people and the amount of food they intake depend on individual practices. The consumer behavioral changes towards their food practices are also demeaning to the environment (Sousa, Correia, Leite & Viseu, 2021). The recent trends are more apt towards preparing quick foods that are not healthy and organic. The consumption patterns of foods need to be altered towards change so that planetary health can be redeemed (Liao & Li, 2019). The business model innovation requires improving the practices of humans and reducing environmental stress. The method of handling livestock and agriculture is a major source of initiative for maintaining the health and wellness of the people (Sukma, Ramadhan & Indriyani, 2020). These practices sustain the environment and protect the planet from the damages that are being faced by people.

The diet and practices of the people are changing from the consumption of meat, fish, and dairy and are being changed to the consumption of plant-sourced protein. The change of patterns requires implementing the technology and enforcing the behavior patterns of the public for the betterment of society (Choe, Kim & Ri, 2020). The goal is to conserve energy and opt for organic practices so that the planet can be protected. The wastage of food is a major challenge that contributes to damage to the environment (Gules Bal & Karakas, 2018). The people need to amend their practices and stop the wastage of food so that the global imbalance of resource availability can be rectified. The food resources are wasted at the time of production too where a large amount of product rot in the markets whereas there are areas where the same food is scarce and unavailable (Siegel, Cutter-Mackenzie-Knowles &

Bellert, 2018). The benefit for some is the loss for others creating an imbalance of resources globally. Some bodies are working to protect and conserve the food reserve and consider making it available for the people that lack the facility. The management of food resources is an integral part of environmental conservation that requires attention and resolution (Faize & Akhtar, 2020). The initiatives need to be enforced on the government levels to make sure that the food resources are not wasted and the circulation of resources carries out easily in the markets.

The change process can be implemented by altering the portion sizes making sure that the nutritional values are not impacted. The research and development in these areas require adequate funding to conserve the people and their mindsets (Al-Rabaani & Al-Shuili, 2020). The optimum goal is to accept the use of plant-based meat alternatives that saves the food from rotting without taking away its nutritional value. The choices of the people are the major initiators of change that requires spreading awareness to them and preparing them for changing their health practices (Abiolu, 2019). These actions are critical for conserving the health and environment and benefitting people in the long run. The aspects of nutrition must be labeled on the food for making people aware of the things that they are consuming (Liu, Teng & Han, 2020). The emission intensity of food needs to be tackled for making informed public decisions and limiting people from consuming expired products.

### **Role of Educational Bodies in Liberia**

Many educational bodies are working on this model and performing their role toward correcting the overall behavior of the people. The change enhances the understanding of the students about the problems and increases their knowledge about initiatives that can be incorporated into regular practices (Heidbreder, Bablok, Drews & Menzel, 2019). The existing projects in Liberia such as the YES projects are working towards educating the students and planting trees to curb the damaging effects of global warming. In the past, the export of trees from Liberia to developed countries for monetary returns has significantly damaged the natural infrastructure of Liberia (Yang & Chen, 2018). The education of the students can prevent such policies and their implementation in the future, rectifying the social gaps. The damage that was incurred to Liberia limited the development of Liberia and at the same time sabotaged the forest life of the country (Gkargkavouzi, Halkos & Matsiori, 2019). The presence of environmental education is important to control the

depletion and allow people to act responsibly. Awareness shall be created in the people about the blessings of nature that have been vested in Liberia as a land and have created a strong social understanding of nature (Yuriev, Dahmen, Paillé, Boiral & Guillaumie, 2020).

### **Interconnection of Education and Knowledge in Liberia**

Education and knowledge about the issues are interlinked which allows the students to understand the problem and work towards optimized solutions. Knowledge can be created in the people through the education of the modern generation which will ultimately lead the country in the upcoming future (Liu et al., 2020). The role of environmental education in schools is critical to raise awareness for the people and making them understand the importance of behavioral change to control climate change issues. The practices of the people can be reformed by the modern generation as they can create programs and social movements to educate the people (Lee, 2019). This will promote a social establishment of consideration in the people and force a behavioral change that can be adopted by the masses. The change in the people can change the environment and transform the practices into being sustainable and responsive (Gilbertson, Ewert, Siklander & Bates, 2022).

### **Related Research**

Youth who are empowered and aware of the environment may be the most influential change agent for the environment's long-term protection and stewardship (UNEP, 2004). Therefore, if implemented successfully in Nigeria, environmental education that encourages such change will enable these youths to have a greater voice on environmental issues. (2003, Robertson). As a result, the purpose of this study was to determine the students' environmental attitudes and knowledge levels. 130 full-time environmental education students at a federal university in Nigeria's Edo state participated in the survey. The outcome revealed that the students had a positive outlook on the environment and a high level of knowledge. Additionally, a negative, weak, or nonexistent relationship was observed between their environmental awareness and mentality. As a result, it was concluded that environmental literacy is being nurtured to promote EE in Nigeria, particularly among students attending tertiary institutions.

Nature education is multidisciplinary in nature because of its content. Nature education aims to educate participants about nature in natural settings and to teach them how to use natural materials, tools, and content made from nature's products. Nature education, according to a lot of researchers, helps participants learn about natural processes, makes them more sensitive to the natural world, makes them more aware of their impact on the environment, and helps them become more self-reliant (Ozoner, 2004). Ecologic philosophy asserts that human interaction with nature teaches us to consider the needs of the natural world. Interaction with the natural world can teach us about its meaning. According to Ozer (2004), nature education should be conducted in the natural environment to foster an appreciation for and interest in nature. 2001, Palmberg and Kuru). According to a few studies (Erten, 2004; Erten et al.), it is easier for environmental education to turn into behavior and cultivate positive attitudes toward the environment when conducted in the natural environment through fieldwork. Farmer and other, 2007; (2004) Ozoner.

Despite its importance to biotic and abiotic survival, the environment is plagued by numerous crises. According to Tariq & Aziz (2015), the growth of the population has a negative impact on the environment and leads to poverty. Water, air, and soil pollution are just a few examples of the environmental harms caused by population growth. Furthermore, according to Hussain, Haseeb, Tvaronaviciene, Mihardjo, and Jermisittiparsert (2020), the extraction of natural resources results in an increase in energy consumption and a negative impact on human life. Additionally, many anthropogenic activities in tropical forested countries result in fragmented landscapes, and the conversion of natural forests to agricultural lands contributes to plantation loss (Meyer, Struebig, & Willig, 2016). As mandated by the 1972 World Conference on the Environment in Rio de Janeiro, the international community has been fully aware of the significance of this environmental knowledge for sustainable development. Unfortunately, there is still a growing need for products and natural resources. As a result, the effects on the environment are getting worse and more complicated. According to Wu, Cheng, & Zhang (2020), having information about the environment can assist in managing human behavior to become eco-friendlier. According to Shimaoka, Kuba, Nakayama, Fujita, & Horii (2016), comprehensive environmental knowledge can aid in comprehending the relationship between human activities and ecological issues. However, people's levels of expertise in these areas vary based on their experiences and educational backgrounds. This knowledge can

be formally acquired by students at school, which means that it can be incorporated into subjects to make the information relevant and simpler to comprehend in daily activities. In addition, it can be acquired formally through family and social interactions. They can get it from current digital information sources, magazines, newspapers, and television. Aside from that, some nations have a variety of ecological education programs and curricula that are required for undergraduate students of biology, arts, science, and commerce. Some of these programs include integrating environmental concepts into textbooks (Verma & Dhull, 2017). Postgraduate students in Indonesia are also required to participate in environmental education.

## CHAPTER III

### Methodology

This study uses quantitative research method of which the researcher focuses on number data to be able to analyze the responses received from data collection. A technique known as the quantitative method, which entails the utilization and analysis of numerical data using specific statistical methodologies, may be used to provide answers to questions such as who, how much, what, where, when, how many, and how, among others. The procedures that can be employed to provide a numerical explanation for a problem or phenomenon are also covered (Oberiri Apuke, 2007)

The effects of environmental education on environmental knowledge and behavior will be analyzed to evaluate the importance of environmental education in Liberia. The allocation of quantitative data will enable the assessment of information and align it with the research goals. The primary information is extracted from interviews and questionnaire analysis that accumulates the relevant data as aligned with the study. The information is extracted from multiple sources to present a connection with the research findings.

The methodology provides important details about the population, sample, data collection tools, data collection techniques, and data analysis. The technique for data analysis provides for the structuring and analysis of the information gathered from many sources in order to create a structured output that is pertinent to the dynamics of the research.

From several perspectives that support the findings, the composition of the study framework will be assessed. For providing insights that correspond with the study's findings, it is imperative to use the appropriate instruments and procedures. Aligning the facts and defending the ideological viewpoints allows for the presentation of a logical conclusion. Aligning various resources and research information will be made possible by the quantitative data.

#### **Research Design**

The quantitative research tools will be applied presenting the research study. The quantitative information will be gathered through interviews and getting responses from the people through a structured questionnaire. The role of

quantitative information in understanding the knowledge of the students of The University of Liberia from the Agriculture, Forestry and Environmental Science Departments. This will allow an understanding of the importance of environmental education in Liberia and developing knowledge and behavior of the students respectively.

The research design that will be developed will be based on a survey. This method will allow for reviewing the information relevant to the study and determining the current situation related in environmental knowledge and environmental behaviors. The research design evaluates the format of the thesis that aims at connecting with the literature findings and compiling information to draft a conclusion relevant to the research components. Environmental education is important for spreading environmental knowledge and the behavior of the people.

Environmental knowledge alters the behavior of people and makes them responsible for the world. The behavioral responses of people change as they get awareness about their actions and implement the steps that are necessary for limiting environmental damage. The methodological approach that is linked is a constructive mechanism that aligns information and provides a connection with the research outcomes. The application of adequate data consolidation tools and analyzing data using structured resources solidifies the outcomes of the study.

### **Population and Sample Sizing**

The population size of the students at the university of Liberia is 18000 students (National Data 2021). The main target population is the department of General Agriculture, Forestry and Environmental Science which have the total population of 1,100 students.

The convenience sampling method will be used for acquiring data relevant to the research. The information will be gathered using a structured and close-ended questionnaire that will evaluate the responses of the Students of the University of Liberia from the departments of Agriculture, Forestry and Environmental Science. The responses of the students will allow suggesting recommendations for improving environmental education and working towards reforming the behavior of the students. Environmental sustainability is a critical area of study that is allocated through awareness of the people. The knowledge of the issue and the goals that relate to practical implementation requires understanding the viewpoint of the respondents.



A questionnaire analysis will be gathered for evaluating the responses of three hundred respondents from Students of the University of Liberia from the departments of Agriculture, Forestry and Environmental Science. This will show the awareness level of students from distinguished age groups and the practices that can be suggested for correcting the behavior of the people. This will reduce environmental depletion and assist in gathering responses from the students.

Sample sizing is a term used to understand the sizable community of respondents and to calculate the sample size inclusive will be the margin error, standard deviation, population size and confidence level. The number of participants was calculated in line with the information mentioned below and in accordance with the formula. According to this, 307 respondents are needed for this survey, of which 300 persons responded to this survey and this can be considered as the minimum sample size for this study.

Confidence level 90%, margin error is 4%, population proportion 50%, and population size 1100

$$\text{Sample size} = \frac{Z^2 \times P(1-P)}{e^2}$$

Z = Z – score

e = margin of error

P = standard of deviation

### **Data Collection Tools**

Structures close-ended question forms were prepared that evaluates using the worksheet analysis. The responses of the students from the University of Liberia; departments of Agriculture, Forestry and Environmental Science were evaluated using data analysis techniques present in the worksheet tool. The significance of behavioral change was analyzed using primary resources gathered through quantitative analysis. The quantitative analysis was used for understanding the awareness level of the students and their knowledge that is relevant to the topic.

The data collection tool consists of three parts. The first part is the demographic part, which includes personal information. Second and third parts Environmental Knowledge Form and Environmental Behavior Form prepared by the

researcher were used as data collection tools in the study. In order to create a measurement tool, the literature was searched and similar scales were collected. First of all, a pool of questions was prepared for the forms, and the questions were evaluated according to expert opinions. The forms, in which language and expression compatibility were also taken, were applied to the University students.

### **Data Analysis Procedure**

The descriptive statistic technique that is available with the worksheet analysis method will be used for gathering information. The description of the data selected and the application of statistical methodology will be done to form a relevant outcome of the research. The goal is to analyze the data that is cleaned and represented using graphs, percentages, and frequencies. The analysis will establish foundations of research and allow assessing the awareness of the students. Environmental knowledge is crucial for sustaining challenges that align research goals and enable understanding of the responses of the students of the University of Liberia.

### **Study Plan**

The ethical consideration of research is essential for drafting the research findings. The ethical foundation presents a neutral view of political assessment relevant to the study. The credible findings allocate complex issues that are linked to the economic situation of Liberia. Promoting environmental education in a complex environment requires resources and an understanding of the people about the importance of environmental education. The external modalities include interventions that must be analyzed and limited from biasing the responses of the students of the State run university Students from the departments of Agriculture, Forestry and Environmental Science. The behavioral changes regarding environmental sustainability are subjective to many social and economic norms that prevail in society. Ethical aspects will be applied to the research outcomes and data extraction methods for maintaining the confidentiality of the respondents. Abstaining from biases is critical to deriving research outcomes that are relevant to the facts of the research.

## CHAPTER IV

### Findings

The analysis of the form is shown below that evaluates the demographics, knowledge about the environment, and behavior in the environment. The responses have been categorized in percentages to understand the weight-age of responses. The descriptive analysis of responses will be developed about the research outcomes. It is critical to understand the direction of the research and draw conclusions based on responses.

#### Demographic Information

Table 1.

*Demographic of the Respondents*

|                                     |                    |     |      |
|-------------------------------------|--------------------|-----|------|
| Age                                 | Less than 20 years | 30  | 10%  |
|                                     | 21-30 years        | 76  | 25%  |
|                                     | 31-40 years        | 143 | 48%  |
|                                     | 41-50 years        | 32  | 11%  |
|                                     | Above 50 years     | 19  | 6%   |
| Gender                              | Male               | 167 | 56%  |
|                                     | Female             | 133 | 44%  |
| Education level                     | Masters            | 0   | 0    |
|                                     | Undergrad          | 300 | 100% |
|                                     | High School        | 0   | 0    |
| Respondents' occupation             | Never been         | 0   | 0    |
|                                     | Informal sector    | 143 | 48%  |
|                                     | Formal sector      | 38  | 13%  |
|                                     | Contractors        | 30  | 10%  |
|                                     | Others             | 89  | 30%  |
| Household size                      | 2 to 5             | 93  | 31%  |
|                                     | 6 to 9             | 84  | 28%  |
|                                     | 10 to 14           | 37  | 12%  |
|                                     | 15 to 19           | 45  | 15%  |
|                                     | 20 to 25           | 39  | 13%  |
| Household income in Liberian dollar | 26 to 30           | 2   | 1%   |
|                                     | Less than 5000LD   | 41  | 14%  |
|                                     | 5001LD-25000LD     | 87  | 29%  |
|                                     | 25001LD-50000LD    | 93  | 31%  |
|                                     | 50001LD-100000LD   | 62  | 21%  |
|                                     | 100001LD and above | 17  | 6%   |

The demographic assessment is important for the research as it allows for analyzing the responses. The target respondents and their relevance to the research are crucial for the research. The consistent evaluation processes allow understanding of the actions of the people and their understanding of the importance of behavioral education.

The graphical representation is shown below that evaluates the classification of the respondents. The age of the respondents shows that most of the people fall in the age bracket of 31-40 years which amounts to 143 respondents and 48% people. 10% are less than 20 years, 25% are 21-30 years, 11% are 41-50 years and 6% are above 50 years. The tabular representation is shown below:

Figure 1

*Age of Respondents*

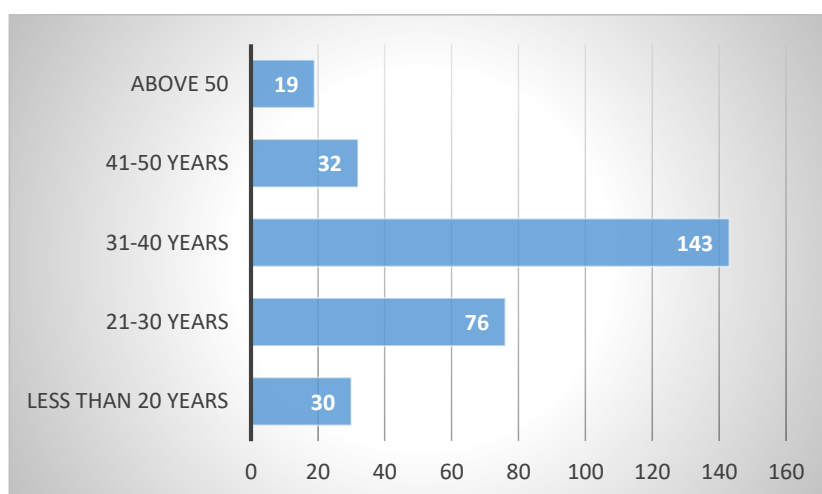
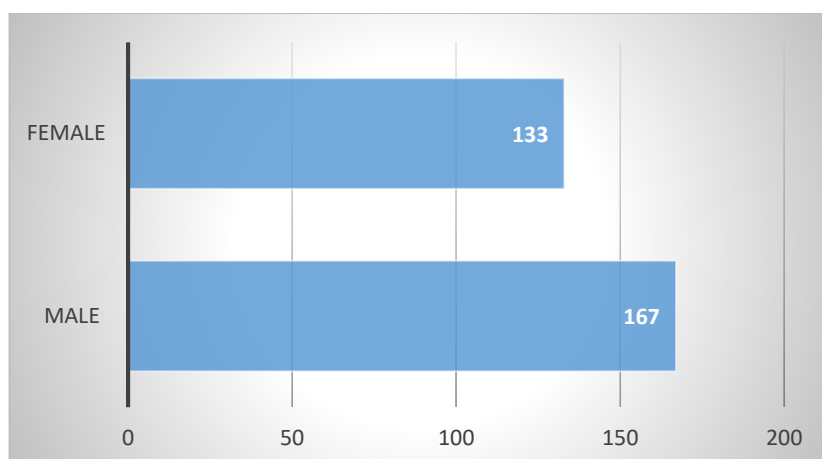


Figure 2

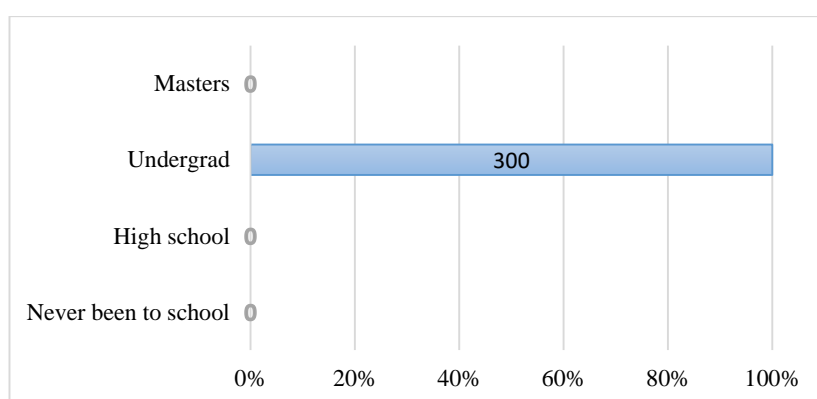
*Gender of Respondents*



The gender of the respondents shows 167 respondents or 56% people are male and 133 respondents or 44% people are female. The tabular representation is shown above. The level of education of the respondents shows that 0% are a doctorate, 0% are a master's, 100% are undergraduates, 0% are high school pass outs and 0% have not received any formal education. All of the respondents are undergraduates which shows that people are aware of the basic importance of environmental education. The tabular representation is shown below:

Figure 3

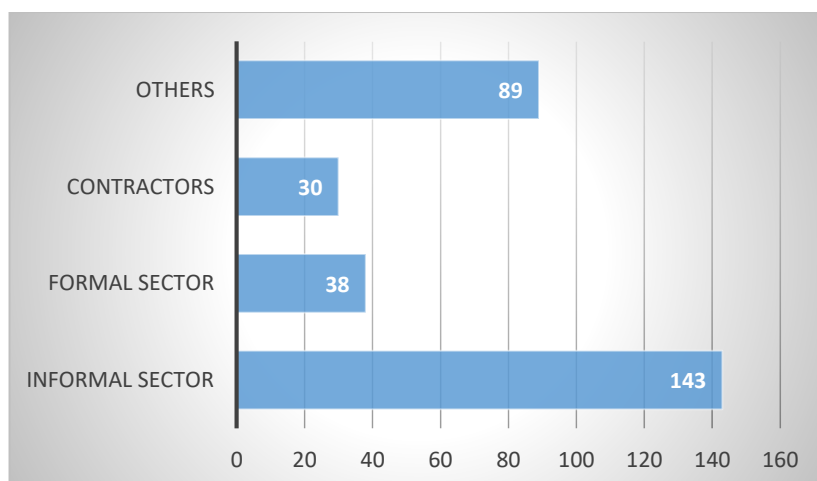
*Education Level of Respondents*



The occupation of the respondents shows that 48% of people work for the informal sector, 13% work for the formal sector, 10% are contractors, and 30% work in different other sectors. The tabular representation is shown below:

Figure 4

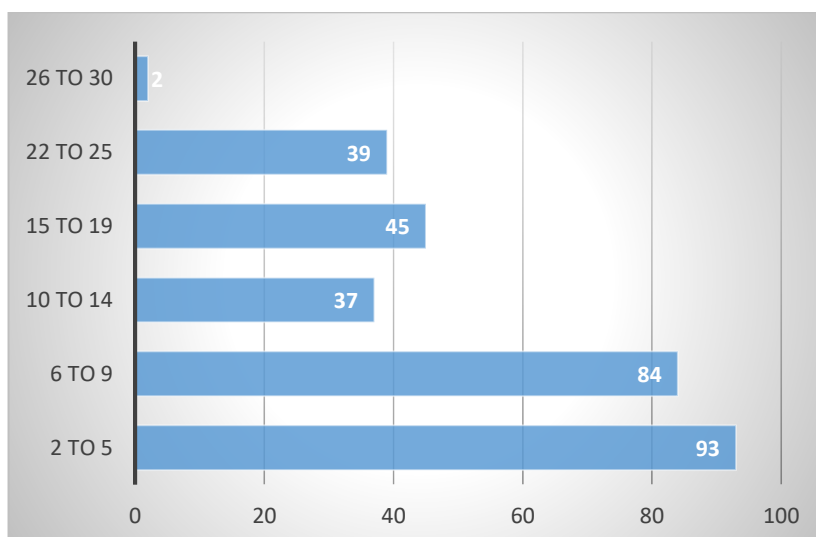
*Respondents' Occupation*



The household size of the respondents shows that 2 to 5 are 31%, 6 to 9 are 28%, 10 to 14 are 12%, 15 to 19 are 15%, 22 to 25 are 13% and 26 to 30 are 1%. Most of the respondents show that their household sizes are between 2 to 9 people reflecting the average household size. The tabular representation is shown below:

Figure 5

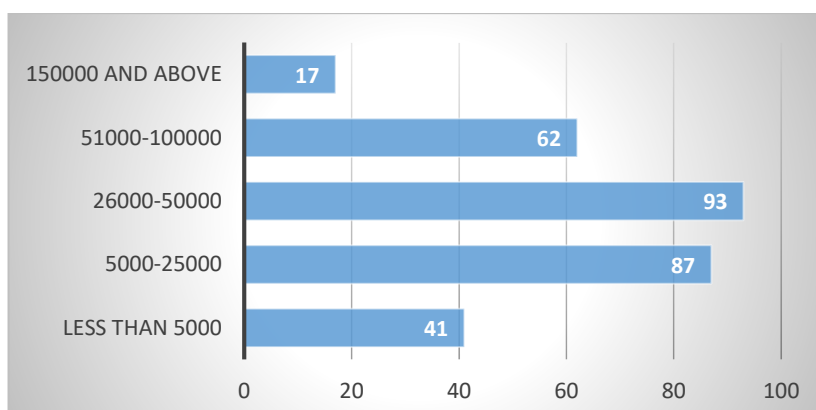
*Household Size of Respondents*



The household income of the respondents shows that 14% are less than 5,000, 29% are between 5,000 to 25,000, 31% are between 26,000 to 50,000, 21% are between 51,000 to 100,000, and 6% are between 150,000 and above. This shows that the average monthly income of the respondents falls in the range of middle-class income earners. This category of people shows that they can adequately understand the importance of environmental education.

Figure 6

*Household Income*



The demographic responses of the people show the classification of the respondents. The adequacy of responses is related to the age, gender, education, occupation, household size, and household income of the people.

### **Environmental Knowledge**

It is a social responsibility that people are aware and have knowledge about the environment. Environmental education must be made accessible to the people of Liberia so that their awareness and behavior can change with time. The critical goal of the people is to relate to the environment and adopt practices that benefit the environment in the long run. The critical understanding is developed based on the education of the people and the amount of exposure they have to environmental knowledge. In this study, the respondents were asked about environmental subjects by the Environmental Knowledge Form. The form was analyzed and the tabular representation is shown below (Table 2). In the analysis of the form, the items used in the form were shown with figures one by one and explained in detail.

Table 2.

#### *Analysis of Environmental Knowledge Form*

|   |  |     |     |
|---|--|-----|-----|
| What is environmental education?                              | Full knowledge of exploring environmental issues, problems solving and action taking   | 48  | 16% |
|   | Very limited Knowledge   | 123 | 41% |
|   | Good Knowledge   | 44  | 15% |
|   | Don't know   | 85  | 28% |
| What is the objective of environmental education?             | Raise consciousness about environmental education  | 82  | 27% |
|   | To teach environmentally appropriate behavior  | 97  | 32% |
|   | Create an environmental ethic that fosters awareness about the ecological interdependence of economic, social, and political | 69  | 23% |
|   | Don't know   | 52  | 17% |
| Which of the following is not influenced by human activities? | Depletion of groundwater   | 105 | 35% |
|   | Destruction of mangroves and wetlands  | 67  | 22% |
|   | The increased extinction rate of species   | 111 | 37% |
|   | None of the above  | 17  | 6%  |
| Environmental education is important only at                  | Primary school stage   | 84  | 28% |
|   | Secondary school stage   | 169 | 56% |
|   | College stage  | 7   | 2%  |
|   | All Stages   | 40  | 13% |

Table 2. (Cont.)

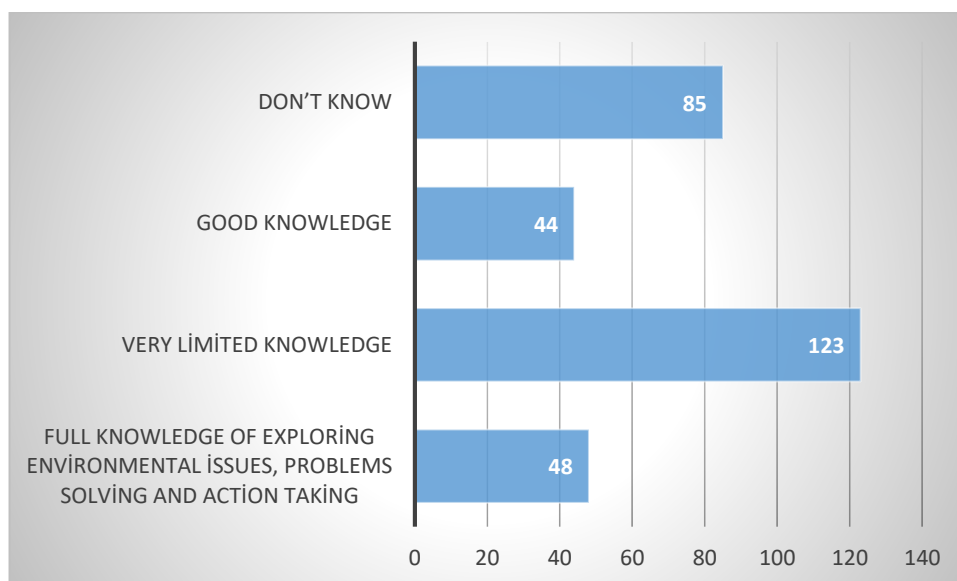
|   |  |     |     |
|---|--|-----|-----|
| The environment which has been modified by human activities is called   | Natural environment                              | 35  | 12% |
|   | Anthropogenic environment                        | 78  | 26% |
|   | Modern environment                               | 64  | 21% |
|   | Urban environment                                | 123 | 41% |
| Environmental education can promote environmental sustainability  | Strongly agree                                   | 136 | 45% |
|   | Agree  | 97  | 32% |
|   | Strongly disagree                                | 28  | 9%  |
|   | Disagree   | 39  | 13% |
| Which of these environmental issues causes more problems?   | Air emissions                                    | 93  | 31% |
|   | Air and noise pollution                          | 88  | 29% |
|   | Solid Waste                                      | 105 | 35% |
|   | Hazardous Waste                                  | 14  | 5%  |
| What action does not help to reduce green gas emissions?  | Burning more fossil fuel                         | 112 | 37% |
|   | Use more none eco-friendly cars                  | 43  | 14% |
|   | Use less renewable energy source                 | 54  | 18% |
|   | All of the above                                 | 91  | 30% |
| What action does not help sustainable development?  | Developing without a thought about the future    | 20  | 7%  |
|   | Using available resources for the future         | 39  | 13% |
|   | Cutting down forests without replanting          | 173 | 58% |
|   | Don't know                                       | 68  | 23% |
| How can greenhouse gas emissions be reduced?  | By using clean energy sources                    | 155 | 52% |
|   | Using transport mediums that rely on fossil fuel | 73  | 24% |
|   | Poorly manage waste                              | 63  | 21% |
|   | Don't know                                       | 9   | 3%  |
| Do you think that there is an association between environmental education and active and well-informed individuals? | Limited Association                              | 77  | 26% |
|   | Very limited Association                         | 34  | 11% |
|   | Good Association                                 | 107 | 36% |
|   | Excellent Association                            | 82  | 27% |

The respondents were asked about environmental education and it was analyzed that 41% of the people have very limited knowledge about environmental education. 16% of people have full knowledge, 15% of people have good knowledge, and 28% of people don't know about environmental education. Structuring these are important for understanding the awareness of the people regarding environmental education and shows relevance in the context of Liberia. The graphical representation is shown below that evaluates the classification of the respondents.



Figure 7

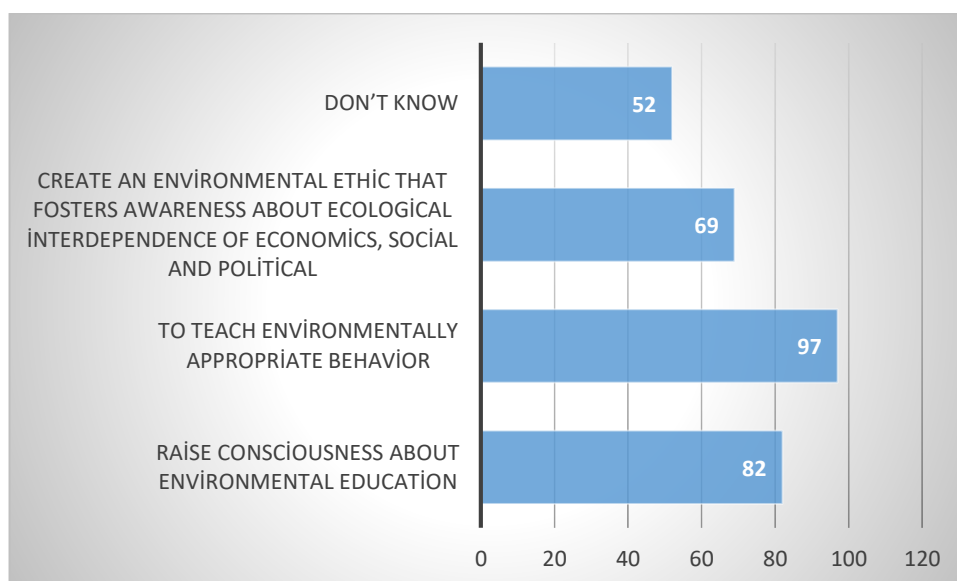
*What is environmental education?*



The respondents were asked about the objectives of environmental education. There were mixed responses recorded with 27% responding about raising consciousness about environmental education, 32% responding about teaching environmentally appropriate behavior, 23% responding about creating environmental ethics, and 17% saying they don't know.

Figure 8

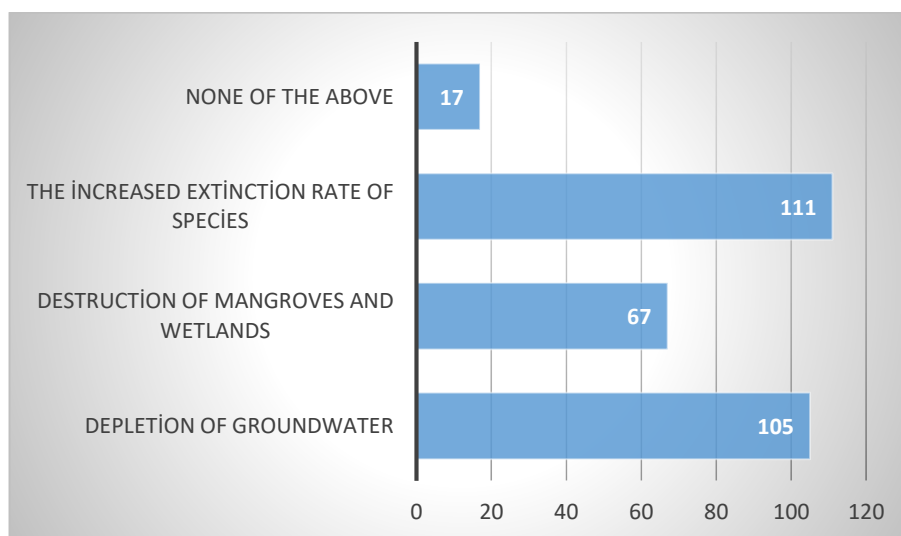
*What is the objective of environmental education?*



The respondents were asked which of the following is not influenced by human activities 35% responded to the depletion of groundwater, 22% to the destruction of mangroves and wetlands, 37% increased the extinction rate of species and 6% responded to none of the above.

Figure 9

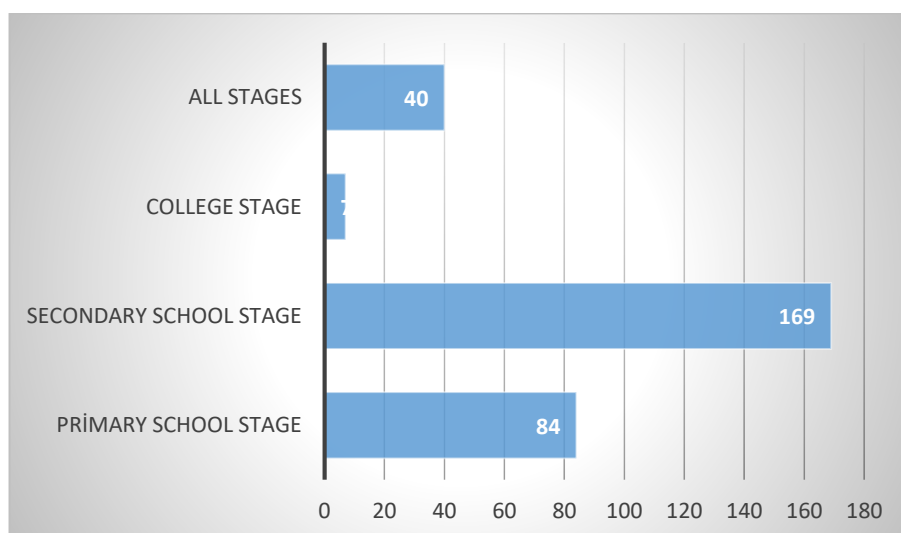
*Which of the following is not influenced by human activities?*



Environmental education needs to be taught at schools. The respondents were asked about the importance of environmental education of which 28% responded at the primary school stage, 56% responded at the secondary school stage 2% responded college stage and 13% responded at all stages.

Figure 10

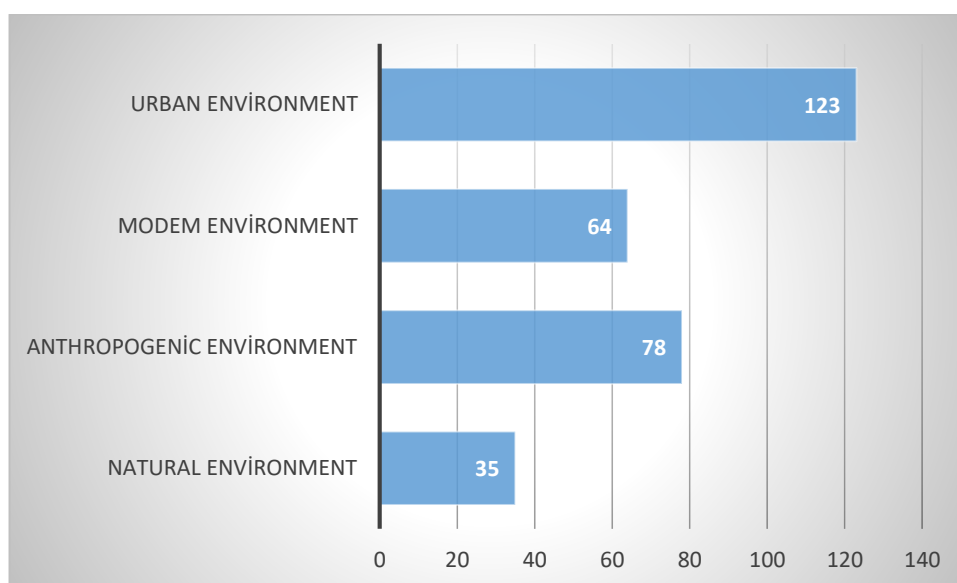
*Environmental education is important only at*



The respondents were asked about the environment which has been modified by human activities is referred to 12% responded a natural environment, 26% as responded anthropogenic environment, 21% responded modern environment and 41% responded urban environment. This shows a lack of awareness of the terminologies of the respondents.

Figure 11

*The environment which has been modified by human activities is called*

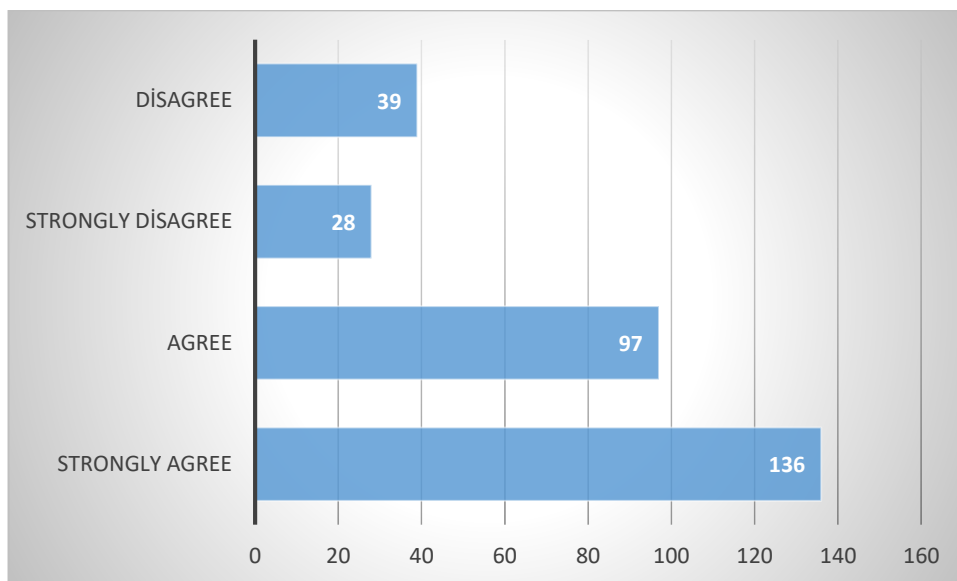


Environmental education can promote environmental sustainability for which 45% of respondents strongly agreed, 32% agreed, 9% strongly disagreed and 13% disagreed. This reflects that the respondents are aware that environmental education is important for promoting environmental sustainability.

Environmental issues cause problems for society. 31% of respondents said air emission, 29% of respondents said air and noise pollution 35% said solid waste, and 5% said hazardous waste. The clarity of the respondents regarding environmental issues that cause problems had gaps which are due to a lack of environmental education. The graphical representation is shown below that evaluates the classification of the respondents.

Figure 12

*Environmental education can promote environmental sustainability*



The actions of the people to reduce green gas emissions are integral for maintaining environmental sustainability. 37% responded to burning more fossil fuels, 14% responded to using more non-eco-friendly cars, 18% said using less renewable energy sources and 30% said all of the above. The understanding of the people regarding reducing green gas emissions is weak. The graphical representation is shown below that evaluates the classification of the respondents.

Figure 13

*Which of these environmental issues causes more problems?*

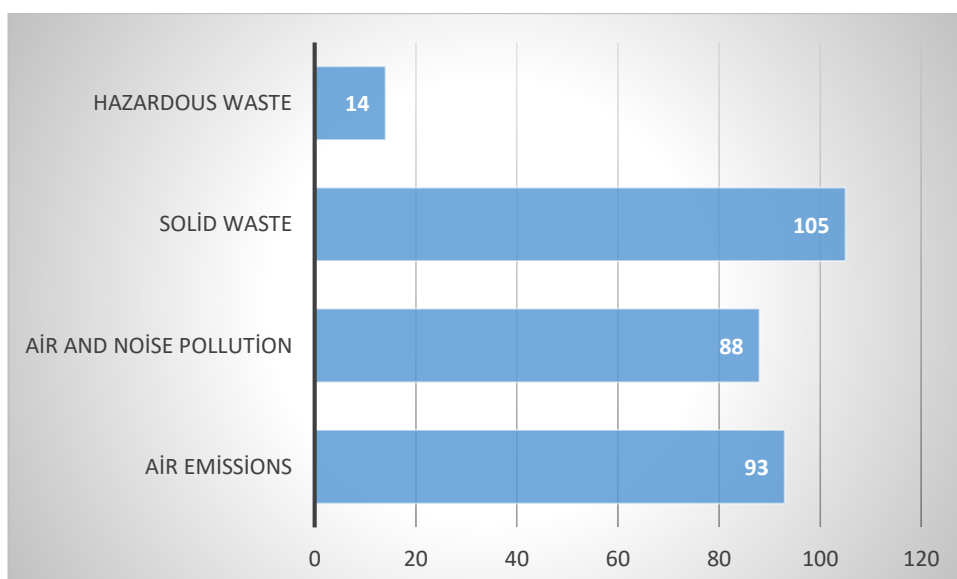
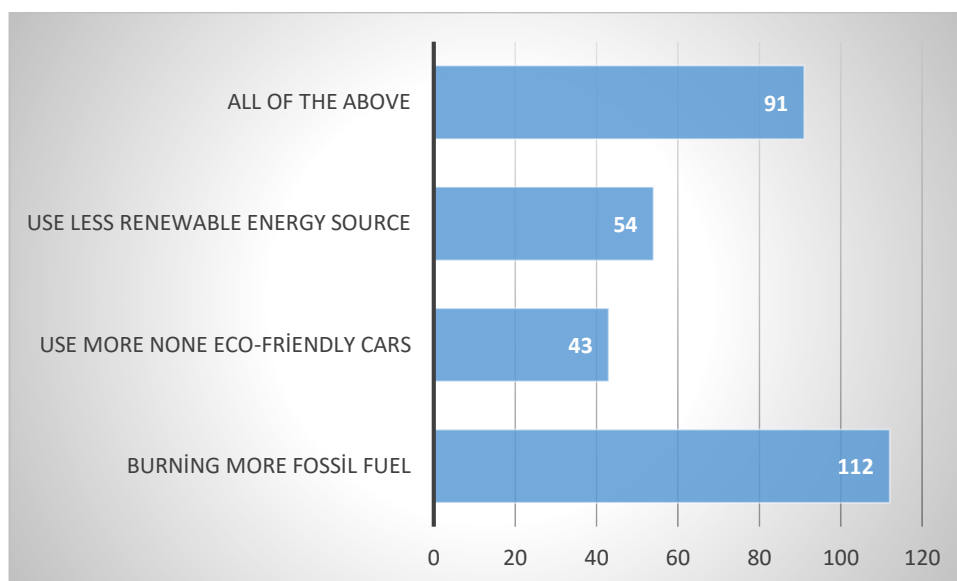


Figure 14

*What action does not help to reduce green gas emissions?*



The respondents were asked about the actions that don't help with sustainable development. 7% responded that developing without a thought about the feature, 13% responded that using available resources and keeping some for the future, 58% responded that cutting down forests without replanting and 23% said don't know. The practices of the people regarding sustainable development require adequate environmental education. The graphical representation is shown below that evaluates the classification of the respondents.

Figure 15

*What action does not help sustainable development?*

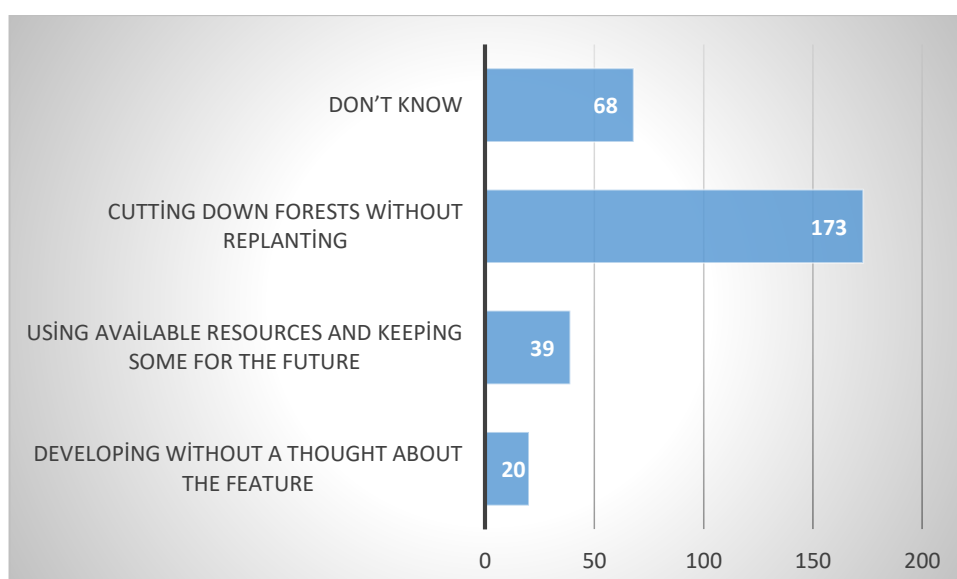
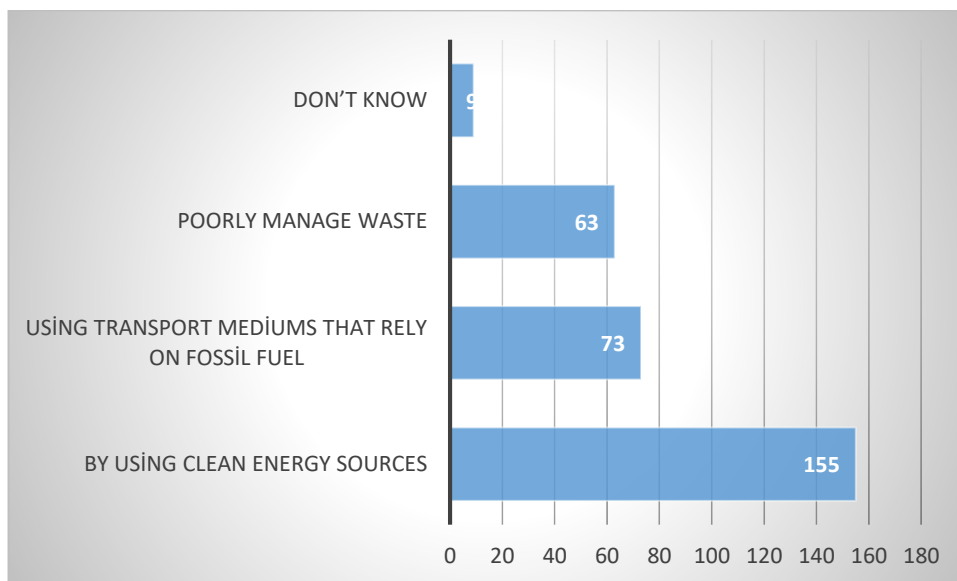


Figure 16

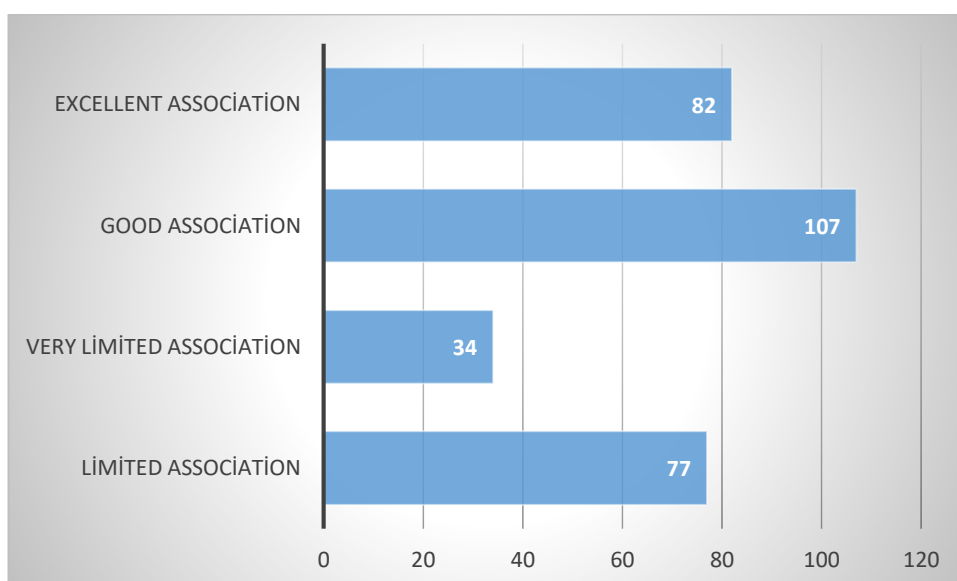
*How can greenhouse gas emissions be reduced?*



The inquiry about reducing greenhouse gas emissions showed that 52% of people agreed to use clean energy sources, 24% said using transport mediums that rely on fossil fuels, 21% responded poorly managing waste and 3% said don't know. The graphical representation is shown above that evaluates the classification of the respondents.

Figure 17

*Do you think that there is an association between environmental education and active and well-informed individuals?*



The respondents were asked whether there is an association between environmental education and active and well-informed individuals. 26% responded to the limited association, 11% responded to the very limited association, 36% responded to the good association, and 27% responded to the excellent association. The graphical representation is shown above that evaluates the classification of the respondents.

### **Environmental Behavior**

The assessment of the behavior of the respondents and their actions that bring a change in the environment were analyzed through the following questions. The behavior of the people and the actions that they take for supporting the environmental change are critically important. In this study, the respondents were asked about the approaches to environmental behaviors by the Environmental Behavior Form. The form was analyzed and the tabular representation is shown below (Table 3). In the analysis of the form, the items used in the form were shown with figures one by one and explained in detail.

Table 3.

#### *Analysis of Environmental Behavior Form*

|   |            |     |     |
|---|------------|-----|-----|
| Does Environmental behavior influence human attitude?                 | Yes        | 96  | 32% |
|   | No         | 108 | 36% |
|   | Not at All | 41  | 14% |
|   | Don't know | 55  | 18% |
| Does Environmental behavior directly respond to environmental issues? | Yes        | 189 | 63% |
|   | No         | 71  | 24% |
|   | Not at All | 26  | 9%  |
|   | Don't know | 14  | 5%  |
| Does Environmental behavior have a psychological impact on a person?  | Yes        | 127 | 42% |
|   | No         | 95  | 32% |
|   | Not at All | 43  | 14% |
|   | Don't know | 35  | 12% |
| Does Environmental Behavior Impact human existence?                   | Yes        | 221 | 74% |
|   | No         | 57  | 19% |
|   | Not at All | 19  | 6%  |
|   | Don't Know | 3   | 1%  |
| Does Climate Change affect environmental behavior?                    | Yes        | 97  | 32% |
|   | No         | 169 | 56% |
|   | Not at All | 12  | 4%  |
|   | Don't know | 22  | 7%  |

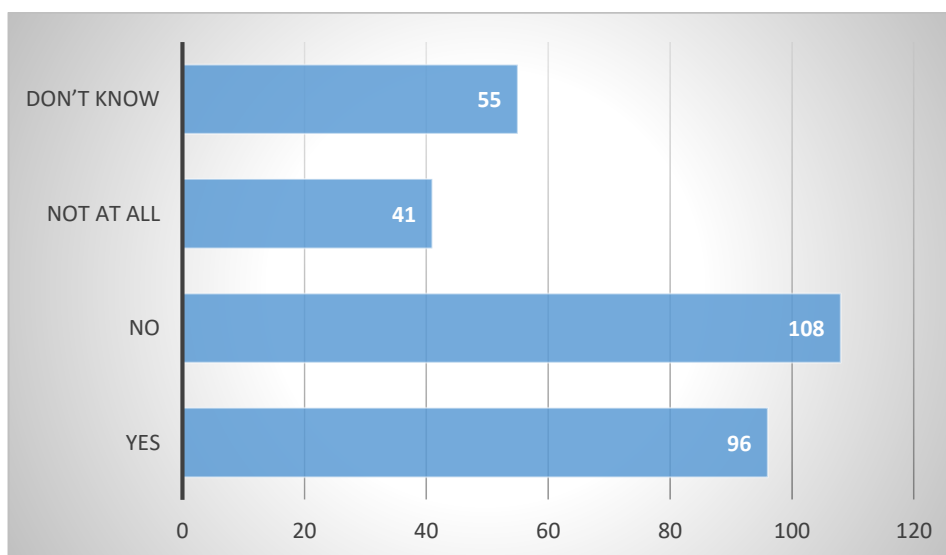
Table 3. (Cont.)

|   |            |     |     |
|---|------------|-----|-----|
| Does Environmental behavior affect environmental choices?   | Yes        | 216 | 72% |
|   | No         | 43  | 14% |
|   | Not at All | 32  | 11% |
|   | Don't know | 9   | 3%  |
| Do you know what is responsible for Environmental behavior? | Yes        | 127 | 42% |
|   | No         | 98  | 33% |
|   | Not at All | 67  | 22% |
|   | Don't know | 8   | 3%  |

The respondents were asked about their understanding of environmental behavior. 21% said they had limited knowledge, 47% said they had very limited knowledge, 16% said they had good knowledge and 15% said they had excellent knowledge. The respondents were asked whether environmental behavior influences human attitudes. 32% said yes, 36% said no, 14% said not at all and 18% said don't know. The graphical representation is shown below that evaluates the classification of the respondents.

Figure 18

*Does environmental behavior influence human attitude?*

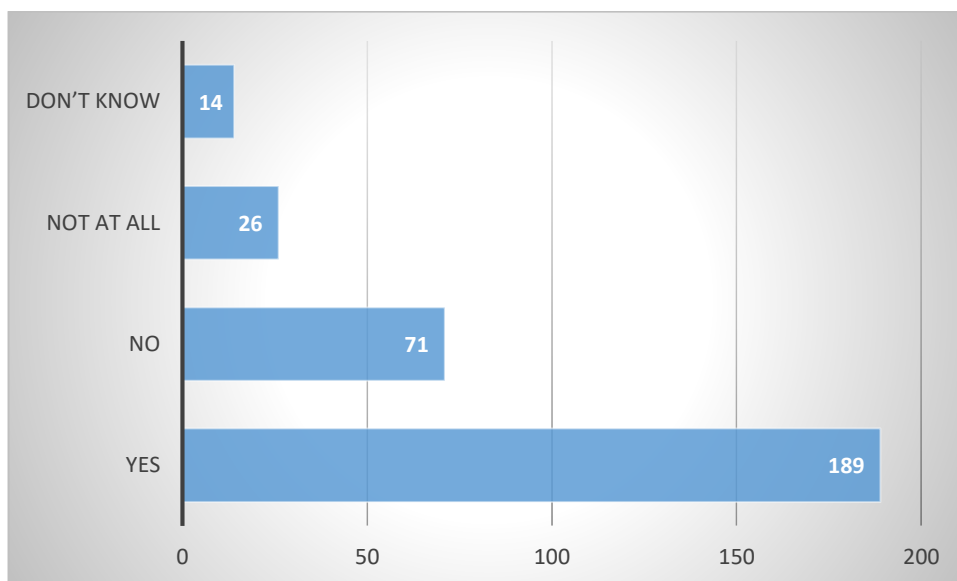


The respondents were asked about environmental behavior that directly responds to environmental issues. 63% said yes, 24% said no, 9% said not at all and 5% said don't know. The graphical representation is shown below that evaluates the classification of the respondents.



Figure 19

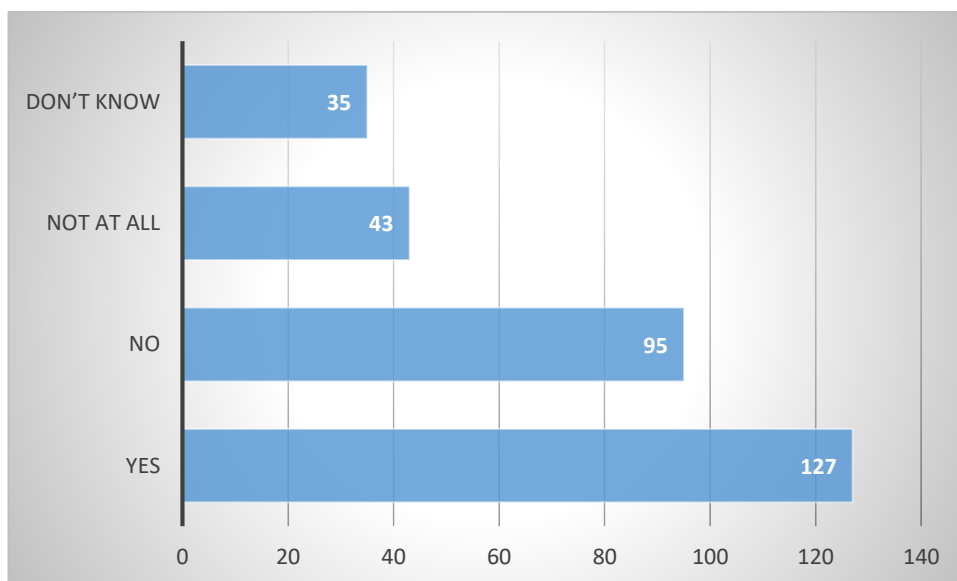
*Does environmental behavior directly respond to environmental issues?*



The respondents were asked whether environmental behavior has a psychological impact on a person. 42% said yes, 32% said no, 14% said not at all and 12% said don't know. The graphical representation is shown below that evaluates the classification of the respondents.

Figure 20

*Does Environmental behavior have a psychological impact on a person?*



The respondents were asked whether environmental behavior impacts human existence. 74% said yes, 19% said no, 6% said not at all and 1% said don't know. The graphical representation is shown below that evaluates the classification of the respondents.

Figure 21

*Does environmental behavior impact human existence?*

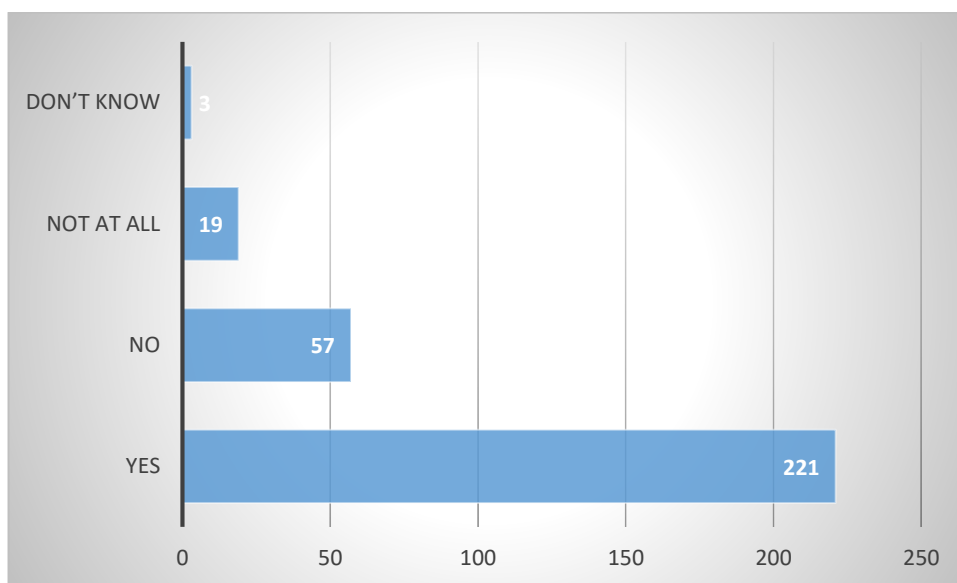
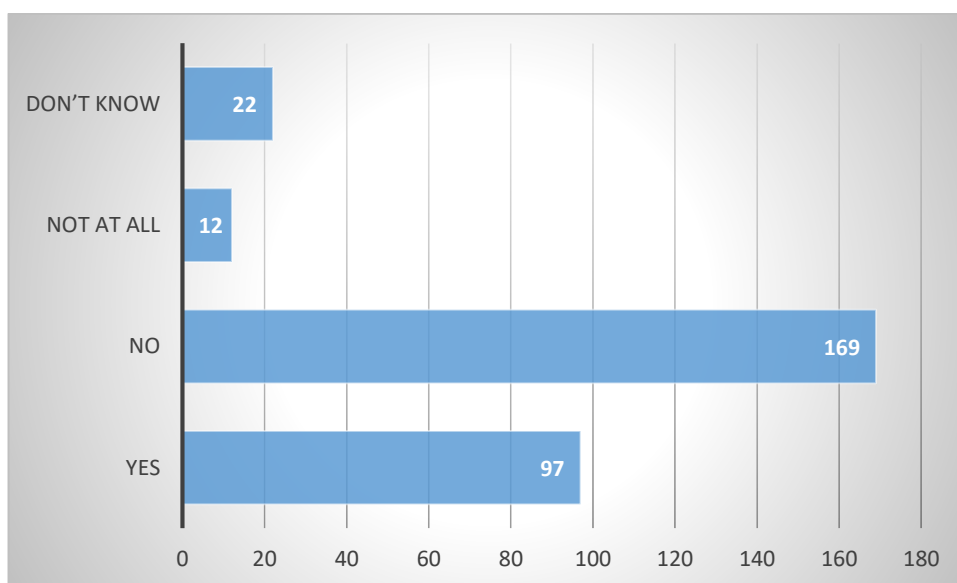


Figure 22

*Does climate change affect environmental behavior?*

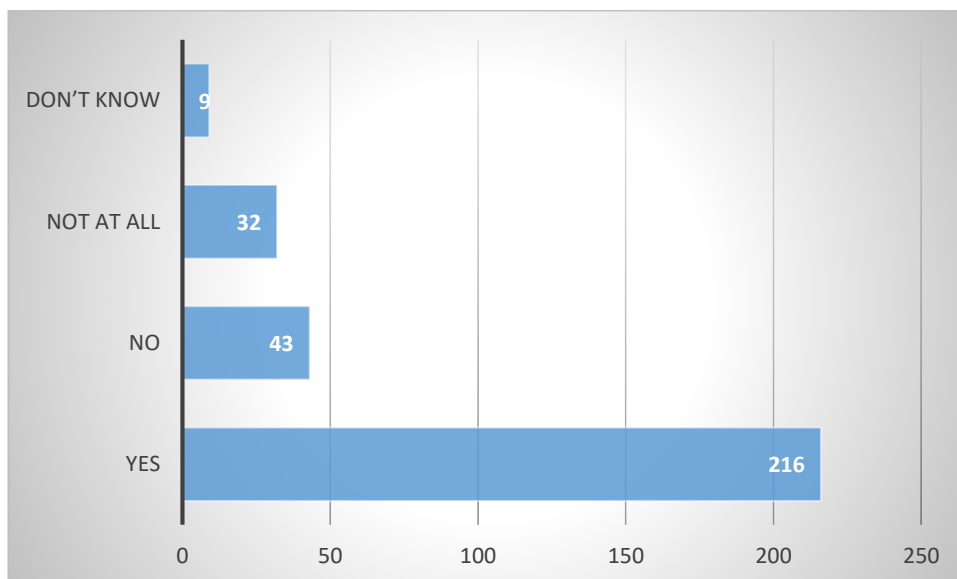


The respondents were asked whether climate change affects environmental behavior. 32% said yes, 56% said no, 4% said not at all and 7% said don't know. The graphical representation is shown above that evaluates the classification of the respondents.

The respondents were asked whether environmental behavior affects environmental choices. 72% said yes, 14% said no, 11% said not at all and 3% said don't know. The graphical representation is shown below that evaluates the classification of the respondents.

Figure 23

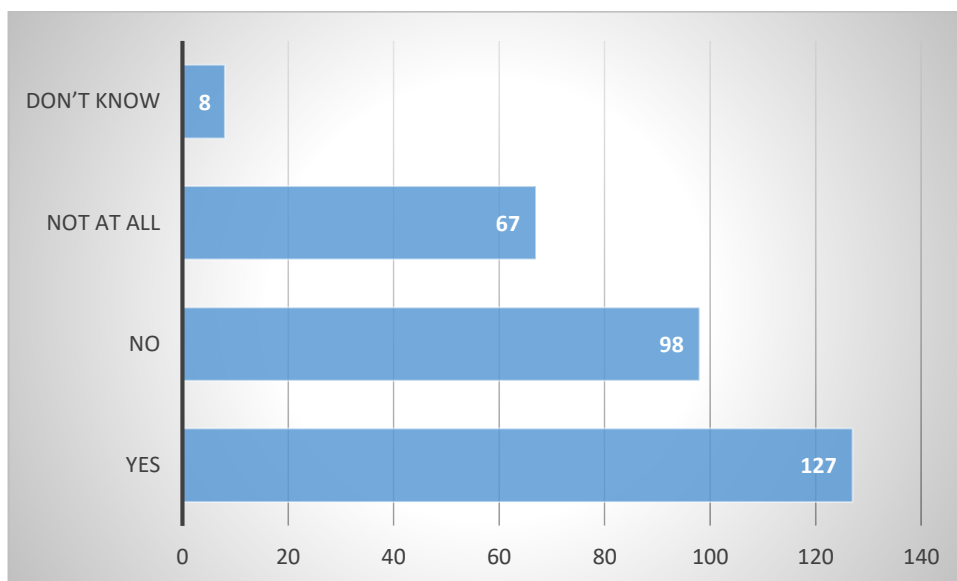
*Does environmental behavior affect environmental choices?*



The respondents were asked whether they knew about things that are responsible for environmental behavior. 42% said yes, 33% said no, 22% said not at all and 3% said don't know. The graphical representation is shown below that evaluates the classification of the respondents.

Figure 24

*Do you know what is responsible for environmental behavior?*



Analyzing the behavior patterns of the respondents is critically important and requires the assessment of environmental behavioral changes. The education and knowledge of the respondents dominate their patterns of environmental behavior which is essential for increasing the sustainability of society. It is crucial that the actions of the people are monitored and behaviors have developed that benefit the environment in the long run. The consideration of the people about the environment increases with environmental sustainability initiatives that are raised through environmental education.

## CHAPTER V

### Discussion

The convenience sampling method is used for the study where responses of random three hundred respondents have been evaluated. The demographics of the respondents, their knowledge about the environment, and their behavior in the environment have been evaluated through the research. The critical goal is to assess the situation of the knowledge and behavior of the environmentally educated people. An adequate understanding of environmental education for assessing the knowledge and behavior of the people is important. The findings provide an overview of the awareness of the people that dominates their behaviors. A structured close-ended question form was used for the survey that was analyzed using the worksheet analysis method. The responses of the respondents have been categorized and structured using graphical representation providing an assessment of all the relevant responses.

When looking at the distribution of the scores that the participants received on the environmental knowledge test, it is possible to demonstrate that 41% of the respondents had just a fundamental comprehension of environmental education. 15% of respondents have outstanding knowledge on environmental education, while 16% of respondents have complete knowledge on environmental education. Both of these percentages are based on the total number of respondents. 28% of all respondents have either never heard of environmental education or are ignorant that such education or information even exists.

The distribution of the environmental behavior scale indicates that 21% of the respondents had minimal knowledge of environmental behavior, according to the study's findings. In comparison, 16% and 15% of respondents, respectively, had either excellent knowledge or outstanding knowledge, whereas 47% of respondents had either no information or only a limited comprehension of environmental behavior.

In Nigeria, environmental education that encourages such change will enable these youths to have a greater voice on environmental issues (Robertson, 2003). As a result, the purpose of this study was to determine the students' environmental attitudes and knowledge levels. 130 full-time environmental education students at a federal university in Nigeria's Edo state participated in the survey. The outcome

revealed that the students had a positive outlook on the environment and a high level of knowledge. Additionally, a negative, weak, or nonexistent relationship was observed between their environmental awareness and mentality.

According to Shimaoka, Kuba, Nakayama, Fujita, & Horii (2016), comprehensive environmental knowledge can aid in comprehending the relationship between human activities and ecological issues. However, people's levels of expertise in these areas vary based on their experiences and educational backgrounds. This knowledge can be formally acquired by students at school, which means that it can be incorporated into subjects to make the information relevant and simpler to comprehend in daily activities.

According to Ozer (2004), nature education should be conducted in the natural environment to foster an appreciation for and interest in nature. According to a few studies (Erten, 2004; Farmer et al, 2007; Palmberg and Kuru, 2001), it is easier for environmental education to turn into behavior and cultivate positive attitudes toward the environment when conducted in the natural environment through fieldwork.

## CHAPTER VI

### Conclusion and Recommendations

Environmental education allows establishing knowledge in the people that changes their behavior. The evaluation is done from the perspective of University of Liberia students specifically undergrads from General Agriculture, Forestry and Environmental Science which helps in understanding the environmental education and environmental behavior of the people. The knowledge of environmental issues is enhanced through environmental education and awareness. The pro-environmental behavior is a key component of environmental education programs. The term education that is associated with environmental education relates to the knowledge and awareness of the people. The change in the behavior of the people towards the environment is critical to evolve the practices and sustaining the environment.

Environmental education is being promoted within the education system to enhance the knowledge and awareness of the people. The public must be educated using print material, websites, and media campaigns to improve their attitudes toward the environment. The conserving practice of nature is crucial for managing the resources of the planet and making it sustainable for other living creatures. The protection of natural reserves and conserving the environment are critical to sustaining the challenges of the environment. The behavior of the people can be reformed by slowly changing the practices that are depleting the environment. The practices of the people can change with the awareness that allows implementing change standards that are critical for society.

The focus of environmental education is linked with engaging citizens of all demographics and making them consider society. Critical thinking is important for adapting sustainable practices in the environment. Environmental issues are crucial for society that requires implementing actions of creativity and resolving all the issues that prevail due to human practices. The assessment of demographics in this research shows an emphasis on the practices of the people of Liberia. Liberia is an underdeveloped country where environmental education holds the least consideration. The judgment of the people is impaired from an environmental perspective as the locals are not educated about environmental conservation and climate change. The environment is depleting but the people are least aware of their practices and actions.

## **Recommendations**

The judgments that must be made must be informed decisions and environmental concerns. Enhancing people's abilities is necessary to encourage dedication to environmental preservation. To preserve the environment, individuals and groups of people must work together and independently. To understand how the planet's resources are running out, individuals need to modify the way they behave. The natural habitat is harmed by the environmental deterioration, which has an irreversible effect on it. People's behaviors can be changed and collective sustainability can be ensured by changing their habits. Environmental appreciation can safeguard forward progress and lessen negative effects on the environment. Individuals' behavior changes are subjective.

### ***Recommendations According to Findings***

The study's main objective is to assess the population's demographics, including age, gender, and educational attainment. An evaluation of Liberian citizens' awareness of environmental education is possible based on their occupation, household size, and income. This aids in assessing both the acts that are crucial for governing practices to preserve the environment as well as the people's practices. Environmental education is crucial for raising public awareness and establishing the real purpose of the movement. The environment is influenced by human behavior. Understanding the state of environmental education and popularizing it among the public are the goals.

Every high school should make Environmental Education an obligatory subject for students to take so that they can grasp the importance of safeguarding the environment and keeping it green at all times. The development of environmental knowledge can aid in the achievement of sustainable development goals.

It is crucial to understand the environment and its significance. Environmental awareness activities should be conducted periodically so that students and community people may better understand what it means to have environmental knowledge. The results of our study show that the students at our school do not have enough environmental awareness.

Government financing for the Environmental Protection Agency (EPA) and other environmental groups should be sufficient to enable them to carry out their duties effectively and efficiently.



### ***Recommendations for Further Research***

The prospects for future research necessitate focusing on society's sustainable development. Sustainable development measures make it possible to monitor people's actions and make them aware of the harm they are doing to society. To control the outcomes that ultimately harm the planet, it is necessary to halt the actions that impede sustainable development. Sustainable development initiatives safeguard the environment and educate individuals on how to make educated choices regarding environmental protection. Environmental education empowers individuals to make well-informed decisions, which in turn benefits society. The improvement of people's knowledge and behavior is essential for finding solutions to environmental issues that aid in climate change management and mitigation.

## References

- Abiolu, O. A. (2019). Environmental knowledge and behavior of Nigerian youth: An assessment. *Applied Environmental Education & Communication, 18*(1), 53-67.
- Ahmed, Z., Ahmad, M., Rjoub, H., Kalugina, O. A., & Hussain, N. (2022). Economic growth, renewable energy consumption, and ecological footprint: Exploring the role of environmental regulations and democracy in sustainable development. *Sustainable Development, 30*(4), 595-605.
- Aliman, M., & Astina, I. K. (2019). Improving Environmental Awareness of High School Students' in Malang City through Earthcomm Learning in the Geography Class. *International Journal of Instruction, 12*(4), 79-94.
- Al-Rabaani, A., & Al-Shuili, A. (2020). Environmental Knowledge, Attitudes, and Behavior among Omani Post-Basic Education Students. *European Journal of Social Sciences, 60*(1), 29-38.
- Apuke, O. D. (2017). Quantitative research methods: A synopsis approach. *Kuwait Chapter of Arabian Journal of Business and Management Review, 33*(5471), 1-8.
- Beery, T. (2020). What we can learn from environmental and outdoor education during COVID-19: A lesson in participatory risk management. *Sustainability, 12*(21), 9096.
- Chen, M. F. (2018). Impact of fear appeals on pro-environmental behavior and crucial determinants. In *Social and Environmental Issues in Advertising* (pp. 84-102). Routledge.
- Choe, J. H., Kim, C. H., & Ri, G. H. (2020). An investigation on the environmental knowledge and attitudes of senior middle school students in the Democratic People's Republic of Korea. *International Research in Geographical and Environmental Education, 29*(2), 146-162.
- Cr, K. (2020). Research methodology methods and techniques.
- De Sá, L. C., Oliveira, M., Ribeiro, F., Rocha, T. L., & Futter, M. N. (2018). Studies of the effects of microplastics on aquatic organisms: what do we know and where should we focus our efforts in the future?. *Science of the total environment, 645*, 1029-1039.

- Dolenc Orbanic, N., & Kovac, N. (2021). Environmental Awareness, Attitudes, and Behaviour of Preservice Preschool and Primary School Teachers. *Journal of Baltic Science Education*, 20(3), 373-388.
- Dźwigoł, H., & Dźwigoł-Barosz, M. (2018). Scientific research methodology in management sciences. *Financial and credit activity problems of theory and practice*, 2(25), 424-437.
- Edsand, H. E., & Broich, T. (2020). The impact of environmental education on environmental and renewable energy technology awareness: Empirical evidence from Colombia. *International Journal of Science and Mathematics Education*, 18(4), 611-634.
- Esteban Ibanez, M., Musitu Ferrer, D., Amador Munoz, L. V., Claros, F. M., & Olmedo Ruiz, F. J. (2020). University as change manager of attitudes towards environment (The importance of environmental education). *Sustainability*, 12(11), 4568.
- Faize, F. A., & Akhtar, M. (2020). Addressing environmental knowledge and environmental attitude in undergraduate students through scientific argumentation. *Journal of Cleaner Production*, 252, 119928.
- Fırat, A., Sepetçioğlu, H., & Kiraz, A. (2012). Analysis of The Attitudes of Teacher Candidates About Renewable Energies. *H. U. Journal of Education*, 1, 216-224.
- Gao, Y. (2018). To study the relationship between environmental education and environmental behavior based on environmental attitude. *Ekoloji*, 27(106), 627-634.
- Gilbertson, K., Ewert, A., Siklander, P., & Bates, T. (2022). *Outdoor education: Methods and strategies*. Human Kinetics.
- Gkargkavouzi, A., Halkos, G., & Matsiori, S. (2019). Environmental behavior in a private-sphere context: Integrating theories of planned behavior and value belief norm, self-identity and habit. *Resources, Conservation and Recycling*, 148, 145-156.
- Gules Bal, H. S., & Karakas, G. (2018). Environmental education at faculty of agriculture and changing awareness, attitude and behavior towards environment in Turkey. *Journal of Agricultural Science and Technology*, 20(5), 869-882.

- Heidbreder, L. M., Bablok, I., Drews, S., & Menzel, C. (2019). Tackling the plastic problem: A review on perceptions, behaviors, and interventions. *Science of the total environment*, 668, 1077-1093.
- Helvaci, S. C., & Helvaci, İ. (2019). An Interdisciplinary Environmental Education Approach: Determining the Effects of E-STEM Activity on Environmental Awareness. *Universal Journal of Educational Research*, 7(2), 337-346.
- Hsu, J. L., & Feng, C. H. (2019). Evaluating environmental behaviour of the general public in Taiwan: Implications for environmental education. *International Journal of Comparative Education and Development*.
- Huang, S. P. (2018). Effects of using artificial intelligence teaching system for environmental education on environmental knowledge and attitude. *Eurasia Journal of Mathematics, Science and Technology Education*, 14(7), 3277-3284.
- Indriani, I. A. D., Rahayu, M., & Hadiwidjojo, D. (2019). The influence of environmental knowledge on green purchase intention the role of attitude as mediating variable. *International Journal of Multicultural and Multireligious Understanding*, 6(2), 627-635.
- Jaiswal, D., & Kant, R. (2018). Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers. *Journal of Retailing and Consumer Services*, 41, 60-69.
- Khan, F., Ahmed, W., & Najmi, A. (2019). Understanding consumers' behavior intentions towards dealing with the plastic waste: Perspective of a developing country. *Resources, Conservation and Recycling*, 142, 49-58.
- Kim, Y. J., Kim, W. G., Choi, H. M., & Phetvaroon, K. (2019). The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance. *International Journal of Hospitality Management*, 76, 83-93.
- Kiraz, A., & Aytaç, P. (2020). Practices Supporting Family Involvement in Preschool: Family Education through Science Activities. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, (50), 226-246.
- Kiraz, A., & Siddık, H. (2018). An Analysis of Science Activities in Pre-School Education Programmes in Northern Cyprus and Turkey. *Journal of History Culture and Art Research*, 7(3), 18-34.

- Kovács, J., Medvés, D., & Pántya, J. (2020). To shine or not to shine?—The relationship between environmental knowledge of preteens and their choice among plastic and non-plastic materials for a manual task. *Environmental Education Research, 26*(6), 849-863.
- Lange, F., & Dewitte, S. (2019). Measuring pro-environmental behavior: Review and recommendations. *Journal of Environmental Psychology, 63*, 92-100.
- Lee, J. C. K. (2019). Teacher receptivity to curriculum change in the implementation stage: The case of environmental education in Hong Kong. In *Curriculum and Environmental Education* (pp. 350-370). Routledge.
- Li, D., Zhao, L., Ma, S., Shao, S., & Zhang, L. (2019). What influences an individual's pro-environmental behavior? A literature review. *Resources, Conservation and Recycling, 146*, 28-34.
- Li, Y. (2018). 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 Journal of Mathematics, Science and Technology Education, 14*(6), 2277-2285.
- Liao, C., & Li, H. (2019). Environmental education, knowledge, and high school students' intention toward separation of solid waste on campus. *International journal of environmental research and public health, 16*(9), 1659.
- Liobikienė, G., & Poškus, M. S. (2019). The importance of environmental knowledge for private and public sphere pro-environmental behavior: modifying the value-belief-norm theory. *Sustainability, 11*(12), 3324.
- Liu, P., Teng, M., & Han, C. (2020). How does environmental knowledge translate into pro-environmental behaviors?: The mediating role of environmental attitudes and behavioral intentions. *Science of the total environment, 728*, 138126.
- Liu, P., Zhan, X., Wu, X., Li, J., Wang, H., & Gao, S. (2020). Effect of weathering on environmental behavior of microplastics: Properties, sorption and potential risks. *Chemosphere, 242*, 125193.
- Liu, S., & Guo, L. (2018). Based on environmental education to study the correlation between environmental knowledge and environmental value. *Eurasia Journal of Mathematics, Science and Technology Education, 14*(7), 3311-3319.
- Mahlia, T. M. I., Syazmi, Z. A. H. S., Mofijur, M., Abas, A. P., Bilad, M. R., Ong, H. C., & Silitonga, A. S. (2020). Patent landscape review on biodiesel production:

- Technology updates. *Renewable and Sustainable Energy Reviews*, 118, 109526.
- Marpa, E. P. (2020). Navigating Environmental Education Practices to Promote Environmental Awareness and Education. *Online Submission*, 2(1), 45-57.
- Maurer, M., & Bogner, F. X. (2020). Modelling environmental literacy with environmental knowledge, values and (reported) behaviour. *Studies in Educational Evaluation*, 65, 100863.
- Mishra, S. B., & Alok, S. (2022). Handbook of research methodology.
- Mohajan, H. K. (2018). Qualitative research methodology in social sciences and related subjects. *Journal of economic development, environment and people*, 7(1), 23-48.
- Newman, M., & Gough, D. (2020). Systematic reviews in educational research: Methodology, perspectives and application. *Systematic reviews in educational research*, 3-22.
- Ongon, S., Wongchantra, P., & Bunnaen, W. (2021). The Effect of Integrated Instructional Activities of Environmental Education by Using Community-Based Learning and Active Learning. *Journal of Curriculum and Teaching*, 10(2), 42-57.
- Pandey, P., & Pandey, M. M. (2021). *Research methodology tools and techniques*. Bridge Center.
- Qi, R., Jones, D. L., Li, Z., Liu, Q., & Yan, C. (2020). Behavior of microplastics and plastic film residues in the soil environment: A critical review. *Science of the Total Environment*, 703, 134722.
- Ramadhan, S., Sukma, E., & Indriyani, V. (2019, August). Environmental education and disaster mitigation through language learning. In *IOP conference series: Earth and environmental science* (Vol. 314, No. 1, p. 012054). IOP Publishing.
- Rinjit, K. (2020). Research methodology.
- Saeed, B. B., Afsar, B., Hafeez, S., Khan, I., Tahir, M., & Afridi, M. A. (2019). Promoting employee's proenvironmental behavior through green human resource management practices. *Corporate Social Responsibility and Environmental Management*, 26(2), 424-438.
- Siegel, L., Cutter-Mackenzie-Knowles, A., & Bellert, A. (2018). Still 'minding the gap' sixteen years later:(re) storying pro-environmental behaviour. *Australian Journal of Environmental Education*, 34(2), 189-203.

- Sima, V., Gheorghe, I. G., Subić, J., & Nancu, D. (2020). Influences of the industry 4.0 revolution on the human capital development and consumer behavior: A systematic review. *Sustainability*, *12*(10), 4035.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of business research*, *104*, 333-339.
- Sogari, G., Velez-Argumedo, C., Gómez, M. I., & Mora, C. (2018). College students and eating habits: A study using an ecological model for healthy behavior. *Nutrients*, *10*(12), 1823.
- Sousa, S., Correia, E., Leite, J., & Viseu, C. (2021). Environmental knowledge, attitudes and behavior of higher education students: a case study in Portugal. *International Research in Geographical and Environmental Education*, *30*(4), 348-365.
- Sukma, E., Ramadhan, S., & Indriyani, V. (2020, March). Integration of environmental education in elementary schools. In *Journal of Physics: Conference Series* (Vol. 1481, No. 1, p. 012136). IOP Publishing.
- Sun, H., Teh, P. L., & Linton, J. D. (2018). Impact of environmental knowledge and product quality on student attitude toward products with recycled/remanufactured content: Implications for environmental education and green manufacturing. *Business Strategy and the Environment*, *27*(7), 935-945.
- Taufique, K. M. R., & Vaithianathan, S. (2018). A fresh look at understanding Green consumer behavior among young urban Indian consumers through the lens of Theory of Planned Behavior. *Journal of cleaner production*, *183*, 46-55.
- Thomas, K., Hardy, R. D., Lazrus, H., Mendez, M., Orlove, B., Rivera-Collazo, I., ... & Winthrop, R. (2019). Explaining differential vulnerability to climate change: A social science review. *Wiley Interdisciplinary Reviews: Climate Change*, *10*(2), e565.
- Thor, D., & Karlsudd, P. (2020). Teaching and fostering an active environmental awareness design, validation and planning for action-oriented environmental education. *Sustainability*, *12*(8), 3209.
- Türkoğlu, B. (2019). Opinions of preschool teachers and pre-service teachers on environmental education and environmental awareness for sustainable development in the preschool period. *Sustainability*, *11*(18), 4925.

- Ulu, E., & Kiraz, A. (2014). Science education and cognitive development in updated 2012 pre-school curriculum. *Procedia-Social and Behavioral Sciences*, 136, 438-451.
- Wang, R., Jia, T., Qi, R., Cheng, J., Zhang, K., Wang, E., & Wang, X. (2021). Differentiated impact of politics-and science-oriented education on pro-environmental behavior: A case study of Chinese university students. *Sustainability*, 13(2), 616.
- Yang, H., & Chen, W. (2018). Retailer-driven carbon emission abatement with consumer environmental awareness and carbon tax: Revenue-sharing versus cost-sharing. *Omega*, 78, 179-191.
- Yeşilyurt, M., Balakoğlu, M. O., & Erol, M. (2020). The impact of environmental education activities on primary school students' environmental awareness and visual expressions. *Qualitative Research in Education*, 9(2), 188-216.
- Yildiz, Y., & Budur, T. (2019). Introducing environmental awareness to college students with curricular and extracurricular activities. *International Journal of Academic Research in business and Social Sciences*, 9(3), 667-675.
- Yu, F., Yang, C., Zhu, Z., Bai, X., & Ma, J. (2019). Adsorption behavior of organic pollutants and metals on micro/nanoplastics in the aquatic environment. *Science of the Total Environment*, 694, 133643.
- Yuriev, A., Dahmen, M., Paillé, P., Boiral, O., & Guillaumie, L. (2020). Pro-environmental behaviors through the lens of the theory of planned behavior: A scoping review. *Resources, Conservation and Recycling*, 155, 104660.
- Zangirolami-Raimundo, J., Echeimberg, J. D. O., & Leone, C. (2018). Research methodology topics: Cross-sectional studies. *Journal of Human Growth and Development*, 28(3), 356-360.
- Zelenika, I., Moreau, T., Lane, O., & Zhao, J. (2018). Sustainability education in a botanical garden promotes environmental knowledge, attitudes and willingness to act. *Environmental education research*, 24(11), 1581-1596.
- Zhang, W., Li, G., Uddin, M. K., & Guo, S. (2020). Environmental regulation, foreign investment behavior, and carbon emissions for 30 provinces in China. *Journal of Cleaner Production*, 248, 119208.
- Zhang, Y. (2022). Research methodology. In *Assessing Literacy in a Digital World* (pp. 51-71). Springer, Singapore.



## Appendices

### Appendix A

#### Ethical Approval



NAER EAST UNIVERSITY

SCIENTIFIC RESEARCH ETHICS COMMITTEE

04.11.2022

Dear Catherine Kuku Dolo

Your application titled "**Environmental Knowledge and Environmental Behavior of Students Receiving Environmental Education: Liberia Case**" with the application number NEU/ES/2022/899 has been evaluated by the Scientific Research Ethics Committee and granted approval. You can start your research on the condition that you will abide by the information provided in your application form.

A handwritten signature in blue ink, appearing to read 'Aşkın KIRAZ'.

Prof. Dr. Aşkın KIRAZ

The Coordinator of the Scientific Research Ethics Committee

## **Appendix B**

### **Consent Form**

Informed Consent Form

Dear Ms. / Mr. /Mrs.

My name is Catherine Kuku Dolo; I am a Master's student at the Near East University in the Turkish Republic of Northern Cyprus. As part of my (final) Master's study in Environmental Education and Management, I am required to conduct a research project (THESIS), about the Environmental Education, Environmental Knowledge and Environmental Behavior. As one of my research tools, this document contains Twenty-Four (24) closed-ended questions that were specifically formulated to contribute to my master's thesis. Even further, your responses to these questions are very important for my research.

Please note however that all the information provided during this survey will be kept confidential as no part of it will be traced back to you. The research is strictly academic! If you agreed to be part of this study, please check "Yes" or "No" if you choose to decline.

## **Appendix C**

### **Question Forms (Samples)**

#### **Section I. Demographic Information**

Q1. Gender

Q2. Age

Q3. Education

Q4. Occupation

Q5. Household size

Q6. Household income

#### **Section II. Environmental Knowledge Form**

Q7. What is environmental education?

Q8. What is the objective of environmental education?

Q13. Which of these environmental issues causes more problems?

#### **Section III. Environmental Behaviour Form**

Q19. Does Environmental behavior directly respond to environmental issues?

Q21. Does Environmental Behavior Impact human existence?

Q24. Do you know what is responsible for Environmental behavior?

## Appendix D

### Turnitin Similarity Report

| 14.02.2023         |   |              |                |
|--------------------|---|--------------|----------------|
| ORIGINALITY REPORT |   |              |                |
| 3%                 | 3%  | 1%           | %              |
| SIMILARITY INDEX   | INTERNET SOURCES  | PUBLICATIONS | STUDENT PAPERS |
| PRIMARY SOURCES    |   |              |                |
| 1                  | dergipark.org.tr<br>Internet Source   |              | 1%             |
| 2                  | byjus.com<br>Internet Source  |              | <1%            |
| 3                  | Vasiliki Brinia, Vasiliki Thomaidi, Athanasios Androutsos, Paraskevi Psoni. "Is there a relationship between environmental knowledge and pro-environmental behaviour The case of a Greek island", International Journal of Teaching and Case Studies, 2020<br>Publication |              | <1%            |
| 4                  | Judith van de Wetering, Patty Leijten, Jenna Spitzer, Sander Thomaes. "Does environmental education benefit environmental outcomes in children and adolescents? A meta-analysis", Journal of Environmental Psychology, 2022<br>Publication                                |              | <1%            |
| 5                  | docs.neu.edu.tr<br>Internet Source  |              | <1%            |

## Curriculum Vitae

### CATHERINE K. DOLO

Pynesville, Duport Road, Liberia

Email: [catherinekukudolo@gmail.com](mailto:catherinekukudolo@gmail.com) . Contact: +231776801310/+231886165229

---

**OBJECTIVE:** I anticipate an opportunity to express my ardent passion for nature and the conservation of natural resources and widen my experience in an organization with the right values, mission, and prospects.

### EDUCATIONAL ATTAINMENT

- 2021 - present      MA Candidate (Environmental Education and Management)  
Near East University  
Turkish Republic of Northern Cyprus
- 2022                      Certificate of Participation  
Hybrid workshop on Sustainable Development Goals  
(SDGs). Faculty of Civil and Environmental Engineering/  
Energy, Environment and Water Research Center  
Near East University
- 2019:                      Graduate (Bachelor of Science degree in Natural Resource  
Management)  
Cuttington University  
Suakoko District, Bong County
- 2019:                      Vice President  
Cuttington Youth Mappers
- 2018:                      Certificate of Participation  
International Youth Diplomacy Conference (ACCRA – 2018)
- 2018:                      Certificate of Participation  
Young African Women Congress (YAWC – 2018)  
Accra, Ghana
- 2017:                      Certificate of Participation  
Local Empowerment for Government Inclusion and  
Transparency (LEGIT), Geographic Information Systems  
(GIS) Workshop. USAID, DAI & HOT
- 2016                      Extension Agent at Liberia Entrepreneurial and Asset  
Development Inc.
- 2015:                      Graduate (Associate degree in Forestry)  
Nimba County Community College (NCCC)  
Sanniquellie City, Nimba County