PERCEIVED PROBLEMS OF TEACHING ENVIRONMENTAL EDUCATION AMONG ENVIRONMENTAL STUDENTS

Omoseme Mercy IKHIDEHO

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A RESEARCH SUBMITTED TO THE DEPARTMENT OF HEALTH SAFETY AND ENVIRONMENT, FACULTY OF EDUCATION, UNIVERSITY OF BENIN, BENIN CITY IN PARTIAL FULFILMENT OF THE REQUIRMENTS FOR THE AWARD OF B.Sc. (ED.) DEGREE IN ENVIRONMENTAL EDUCATION

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CERTIFICATION

We, the undersigned, certify that this research work was carried out by **Mercy Omoseme IKHIDEHO**, in the department of health safety and environment, Faculty of Education, University of Benin, Benin Nigeria.

DR. E. O. IGUEDIA **DATE**
(Project Supervisor)

MRS. B. H. ENABULELE **DATE**
(Project Coordinator)

Dr. (Mrs.) O. H . OBASUYI
(Ag. H. O. D)

DATE

DEDICATION

This research is dedicated to God Almighty, who gave me knowledge, understanding, good health, strength, guidance and His protection during this work.

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The researcher's gratitude goes to Almighty God for his guidance and protections towards her during the course of this study, may his name be praise forever, Amen.

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ABSTRACT

This study investigates the perceived problems in teaching environmental education among environmental students at the University of Benin, Nigeria. The research focused on four research questions: teaching methodologies, resource availability, teacher expertise, and student readiness, literature related to the study was carefully reviewed. The population of this study, comprised of seven Hundred and Three (703) Environmental Education students of the university of Benin, Benin City Edo state. Two hundred and fifty (250) respondents were the study's target sample. The instrument was validated by the researcher's project supervisor and two other experts in Health safety and Environment Education and the reliability of the instrument was done using Cronbach's alpha. A quantitative survey design was used and data collection was done through structured questionnaire. A descriptive statistics was used to analyze the data. Findings indicate that a holistic approach addressing these challenges is necessary, including providing adequate resources, professional development for educators, and strategies to enhance student motivation. The study concludes that these integrated improvements are vital for the successful implementation of environmental education programs in African educational contexts, particularly given the continent's vulnerability to environmental challenges.

CHAPTER ONE

INTRODUCTION

Background to the Study

The teaching of Environmental Education (EE) is vital in equipping students with the knowledge and skills necessary to understand and address environmental challenges. Environmental education promotes awareness about the environment and fosters attitudes that encourage individuals to act responsibly toward preserving natural resources and combating environmental degradation. As the global climate crisis deepens, the role of environmental education becomes increasingly significant in empowering young people to engage in sustainable practices. The delivery of environmental education, however, faces numerous challenges, particularly within African contexts, where resources, pedagogical methods, teacher expertise, and student readiness significantly affect learning outcomes.

Environmental education refers to the organized teaching and learning about the environment, focusing on the development of environmentally literate individuals who can think critically about environmental issues and contribute to sustainable development. It encompasses both theoretical knowledge and practical approaches aimed at addressing environmental challenges such as deforestation, climate change, and pollution. According to Chukwuma and Adebayo (2021), environmental education involves fostering ecological awareness, promoting problem-solving skills, and encouraging behavioral change toward the environment. It provides

students with the tools to analyze the human-nature relationship and make informed decisions regarding the environment's sustainability.

The importance of environmental education is heightened due to the continent's vulnerability to environmental issues. Africa faces challenges such as desertification, loss of biodiversity, and water scarcity, which directly impact people's livelihoods (Nnaji, 2020). The need for effective environmental education in African schools cannot be overstated, as it shapes the continent's future leaders' approach to solving these environmental problems.

The teaching method used in environmental education significantly influences student engagement and comprehension. Various teaching approaches, such as traditional lecture-based methods, experiential learning, project-based learning, and problem-solving techniques, are employed to deliver environmental education. However, the effectiveness of these methods depends on how well they align with the subject matter and the students' learning styles.

Traditional lecture methods, which focus on theoretical knowledge dissemination, may limit students' ability to grasp the practical aspects of environmental issues. In contrast, experiential learning, which involves field trips, simulations, and hands-on activities, has been shown to foster deeper understanding and connection with environmental concepts (Akintunde, 2022). According to Ochonogor and Obaje (2019), students who engage in fieldwork activities are more likely to develop a sense of responsibility toward environmental conservation, as they can directly observe and interact with ecosystems. In many African schools, the use of innovative

teaching methods in environmental education is often limited by several factors, including large class sizes and inadequate teacher training. As a result, lecture-based methods continue to dominate the educational landscape, which may hinder the development of critical thinking and problem-solving skills. To improve the quality of environmental education, educators must adopt more interactive and student-centered teaching approaches that engage learners in real-world environmental issues (Ndubuisi, 2021).

The availability of resources, both human and material, plays a critical role in the teaching and learning of environmental education. Resources such as textbooks, teaching aids, laboratory equipment, and access to the environment (for fieldwork) are essential for effective learning. Unfortunately, in many African countries, there is a scarcity of these resources, which limits the ability of teachers to deliver comprehensive environmental education lessons. According to Edeh and Ezeanya (2020), the lack of textbooks and teaching materials specific to environmental education in African schools makes it challenging for teachers to adequately cover the curriculum. This scarcity often leads to a reliance on outdated or generalized resources that do not reflect current environmental challenges or local contexts. Additionally, the absence of appropriate laboratory equipment prevents students from engaging in experiments and observations that could enhance their understanding of environmental processes. Fieldwork, which is a critical component of environmental education, is often underutilized due to logistical constraints. In many African schools, there are no funds to organize field trips, limiting students' ability to experience firsthand the environmental issues discussed in the classroom. The lack of

access to natural sites, such as forests, wetlands, or wildlife reserves, further compounds this challenge (Uche, 2021). Without adequate resources, students are left with a superficial understanding of environmental concepts, reducing the overall effectiveness of environmental education.

The expertise of teachers is another crucial factor that impacts the quality of environmental education. Teachers who are well-versed in environmental science and pedagogy are better equipped to deliver lessons that are both engaging and informative. They can explain complex environmental issues, guide students through problem-solving exercises, and foster critical thinking. However, many African countries face a shortage of qualified environmental education teachers, which negatively affects the teaching and learning process. According to Adegboye and Olatoye (2021), most teachers who are tasked with teaching environmental education do not have specialized training in environmental science. This lack of expertise often leads to ineffective teaching, where the subject is treated as an extension of general science rather than a distinct field that requires its own pedagogical approaches. Teachers may also struggle to integrate environmental education into other subjects, limiting students' exposure to environmental issues. Furthermore, teacher training programs in Africa often do not place enough emphasis on environmental education, resulting in a gap in knowledge and skills among educators. According to Idowu (2019), there is a need for continuous professional development programs that equip teachers with the latest knowledge on environmental issues and teaching

methodologies. By improving teacher expertise, the quality of environmental education can be significantly enhanced, leading to better student outcomes.

Student readiness to learn is a critical determinant of the success of environmental education programs. This readiness is influenced by factors such as students' prior knowledge, attitudes toward the environment, and motivation to engage with the subject matter. According to Olaniyi and Musa (2020), students who have a positive attitude toward the environment are more likely to engage in environmental education activities and retain the knowledge gained. However, in many African schools, students may not be adequately prepared to engage with environmental education. This lack of readiness can be attributed to several factors, including a general lack of awareness about environmental issues, cultural attitudes toward nature, and competing academic priorities. For instance, in some rural areas, environmental issues may not be perceived as immediate concerns compared to economic challenges, leading to a lack of interest in environmental education (Onwumere, 2020). Moreover, environmental education is often introduced at a late stage in students' academic journey, by which time their attitudes toward learning and the environment have already been shaped. According to Ndubuisi (2021), introducing environmental education at the primary school level could foster a deeper sense of responsibility toward the environment among students from a young age. By nurturing students' interest in environmental issues early on, educators can increase their readiness to engage with more complex environmental concepts in secondary and tertiary education.

Statement of the Problem

The teaching and learning of environmental education face significant challenges when key factors are not optimized. Traditional, lecture-based teaching methods limit student engagement, preventing a deep understanding of environmental issues. Inadequate access to essential resources, such as updated textbooks, laboratory tools, and opportunities for fieldwork, deprives students of the hands-on experiences needed for meaningful learning. Additionally, the absence of well-trained teachers with specialized knowledge in environmental education hinders effective instruction, leaving critical environmental topics insufficiently covered. Also, a lack of student preparedness and motivation, often stemming from limited early exposure to environmental concepts, further reduces engagement and the overall effectiveness of environmental education. Understanding the perceived problems of teaching environmental education among environmental students is crucial in addressing these challenges. By identifying the specific issues faced in teaching methods, resource availability, teacher expertise, and student readiness, this study aims to provide examine how these variables impact the overall effectiveness of environmental education.

Research Questions

The following questions were raised to guide the study:

1. How does the teaching method used by educators influence the effectiveness of environmental education among environmental education students?

2. To what extent does the availability of resources affect the teaching and learning outcomes in environmental education?
3. How does the level of teacher expertise impact the teaching of environmental education among environmental education students?
4. What role does student readiness to learn play in the success of environmental education programs?

Purpose of the Study

The main purpose of this study is to determine the Perceived Problems of Teaching Environmental Education among Environmental Students. Specifically, the study will determine:

1. examine how different teaching methods influence the effectiveness of environmental education among environmental education students.
2. investigate the extent to which the availability of resources affects teaching and learning outcomes in environmental education.
3. assess the impact of teacher expertise on the teaching of environmental education among environmental education students.
4. explain the role of student readiness to learn in determining the success of environmental education programs.

Significance of the Study

The findings of this study when published in reputable journals, conference proceedings or workshop, will be of immense benefit to environmental science lecturers, environmental policy makers, curriculum developers and educational institutions. First, environmental science lecturers. These educators are at the forefront of imparting knowledge on environmental issues, and understanding the challenges they face can help them adapt their teaching methods to better engage students. By identifying the obstacles in delivering environmental education, such as a lack of resources or student disinterest, educators can modify their approaches to make learning more interactive and relevant, ultimately improving student comprehension and involvement.

Environmental Policy Makers stand to gain valuable insights from this research. The study's findings can highlight gaps in the current educational system that hinder effective teaching and learning of environmental concepts. With this information, policy makers can formulate and implement policies that address these challenges, ensuring that environmental education is well-supported within the educational framework. Policies could focus on funding for educational materials, training for educators, and the development of programs that promote environmental awareness and sustainability among students.

Similarly, Curriculum Developers would benefit from the research findings, as they would gain a deeper understanding of the specific problems students face in grasping environmental topics. This understanding can guide them in creating more robust, inclusive, and

flexible curricula that meet the needs of both students and teachers. Curriculum adjustments could include integrating more practical experiences, such as fieldwork and interactive projects, into the teaching of environmental education, making it more engaging and applicable to real-world scenarios.

Additionally, Educational Institutions, including schools and universities, would find the results of this research crucial for improving their environmental education programs. The insights gained can help institutions reassess their infrastructure and resources allocated for environmental studies. This might include providing better-equipped classrooms, offering more support for teachers, and creating opportunities for students to actively participate in environmental initiatives. **Scope and Delimitation of the Study**

The scope of the study is hinged on the Perceived Problems of Teaching Environmental Education among Environmental Students. It will be carried out in the Department of Environmental Education, University of Benin, Benin City. The study aims to examine how various teaching methods influence the effectiveness of environmental education among students, focusing on the availability of resources, teacher expertise, and student readiness. It also seeks to investigate the role these factors play in shaping learning outcomes and the success of environmental education programs.

Definition of Terms

The terms used in the study are defined operationally below:

- **Perceived Problems**: The challenges or difficulties that are subjectively identified and experienced by individuals based on their own observations or understanding.
- **Teaching**: The process of imparting knowledge, skills, or information to learners, typically in a structured or formal educational setting.
- **Environmental Education**: A learning process that increases people's awareness and understanding of environmental issues, promoting sustainable practices and solutions.
- **Environmental Students**: Learners who are enrolled in academic programs focused on the study of environmental science, issues, and sustainability.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter reviews literature related to the study under the following sub-headings:

- Concept of Environmental Education
- Influence of Teaching Methods on the Effectiveness of Environmental Education for Students
- Impact of Resource Availability on teaching and learning outcomes in environmental education
- Effect of teacher expertise on environmental education instruction
- Role of student readiness in the success of environmental education programs
- Summary of Reviewed Literature

Environmental Education

Environmental education (EE) refers to the process of developing a population that is knowledgeable about environmental issues, engaged in solving environmental challenges, and motivated to work towards sustainable solutions. As global environmental problems continue to intensify, especially in Africa, the role of environmental education has become increasingly crucial. EE seeks to empower individuals with the knowledge and skills needed to participate in environmental protection, conservation, and sustainability efforts. It goes beyond mere awareness; it encourages active involvement in addressing the root causes of environmental problems through critical thinking and informed decision-making.

In Africa, environmental degradation has been a growing concern due to factors such as deforestation, pollution, poor waste management, and climate change (Okafor & Udeh, 2021). In response, African scholars and policymakers have emphasized the need for robust environmental education programs to mitigate the adverse effects of environmental challenges. According to Olaleye (2020), environmental education in Africa should be context-specific, taking into consideration the socio-economic, cultural, and political realities that shape the region. For instance, the African Union (AU) has highlighted the importance of integrating EE into school curricula as part of the continent's broader strategy to promote sustainable development. The AU's Agenda 2063 prioritizes environmental sustainability as a key area for achieving socio-economic progress.

Environmental education is built on several core principles. First, it fosters awareness of environmental issues at both local and global levels. Second, it encourages individuals to develop an understanding of the underlying causes and effects of these issues. Third, EE emphasizes the need for practical, action-oriented solutions that promote long-term environmental sustainability (Nsubuga, 2021). In many African countries, these principles have been adapted to address local environmental challenges such as land degradation, water scarcity, and biodiversity loss. Through the integration of indigenous knowledge and modern scientific approaches, environmental education in Africa aims to foster a more sustainable coexistence between human populations and the environment.

The integration of environmental education into formal schooling is critical for shaping future generations who are environmentally conscious and capable of addressing the complex environmental challenges they will face. In Nigeria, for instance, efforts have been made to introduce environmental education at different levels of the education system (Ifeanyi & Nwachukwu, 2019). Many schools have incorporated subjects on ecology, waste management, and climate change into their curricula, with the goal of instilling environmental stewardship in students from a young age. Moreover, the introduction of practical activities such as tree planting and recycling programs helps to bridge the gap between theory and practice, allowing students to apply what they have learned in real-world situations.

Despite these efforts, there are several challenges to the effective implementation of environmental education in Africa. One major challenge is the lack of funding and resources, which hinders the development of comprehensive environmental education programs (Oguntuyi, 2022). Many schools, especially in rural areas, lack the necessary infrastructure and teaching materials to effectively deliver EE. Additionally, teacher training on environmental issues is often inadequate, resulting in a lack of expertise in delivering EE content. In Uganda, for example, research by Nsubuga (2021) reveals that many teachers are not well-versed in environmental concepts, making it difficult for them to effectively engage students in environmental discussions.

Another challenge is the socio-economic realities of many African countries, where issues such as poverty, unemployment, and access to basic services often take precedence over environmental concerns. As a result, environmental education is sometimes seen as a secondary priority. However, African scholars have argued that addressing environmental issues is crucial to improving the socio-economic conditions in the region. According to Okafor and Udeh (2021), environmental degradation exacerbates poverty by reducing access to essential resources such as clean water, arable land, and forest products. Therefore, promoting environmental education is essential for both environmental protection and socio-economic development.

To overcome these challenges, there is a need for stronger policy frameworks that support the integration of environmental education into national education systems. Several

African countries have taken steps in this direction by enacting legislation that mandates the inclusion of environmental education in school curricula. In South Africa, the National Environmental Education Policy emphasizes the role of environmental education in promoting sustainable development and social justice (Dlamini, 2020). Similarly, Kenya's Environmental Management and Coordination Act (2019) includes provisions for the promotion of environmental education at all levels of formal education.

In addition to formal education, non-formal and informal approaches to environmental education play a significant role in raising environmental awareness among the general population. Community-based programs, media campaigns, and public awareness initiatives have been effective in engaging different segments of society in environmental issues. For instance, in Tanzania, the Jane Goodall Institute has implemented environmental education programs that focus on conservation and wildlife protection in local communities (Mwita, 2021). These programs use interactive approaches such as storytelling, drama, and hands-on conservation activities to foster a deep connection between participants and their natural environment. Furthermore, environmental education in Africa has increasingly emphasized the importance of local knowledge systems in addressing environmental challenges. Indigenous knowledge, which encompasses traditional practices and beliefs about the environment, offers valuable insights into sustainable resource management. Many African communities have long practiced sustainable agriculture, forest conservation, and water management based on their deep

understanding of local ecosystems. Integrating this knowledge into modern environmental education programs can enhance their effectiveness and relevance (Olawale & Adebayo, 2020). This approach ensures that environmental education is not only informative but also culturally appropriate and respectful of local traditions.

Influence of teaching methods on the effectiveness of environmental education for students

The influence of teaching methods on the effectiveness of environmental education for students is a critical aspect of the educational process. Effective environmental education is essential in creating awareness and equipping students with the necessary skills to address global and local environmental challenges. However, the methods employed in teaching this subject significantly impact the degree of understanding, engagement, and the ability of students to implement learned environmental practices in their daily lives. Over the years, various teaching methods, including traditional, interactive, and inquiry-based approaches, have been explored to enhance the effectiveness of environmental education, particularly in African contexts. One of the traditional methods in environmental education is the lecture-based approach, where teachers primarily disseminate information, and students play passive roles in the learning process. While this method is effective for transferring factual information, it often fails to engage students actively in the learning process (Abah, 2019). Abah (2019) highlights that a teacher-centered approach, common in many African educational systems, is less effective in promoting critical thinking and problem-solving skills, which are essential for understanding complex

environmental issues. This method does not foster experiential learning, which is vital for grasping abstract environmental concepts. Consequently, students may have difficulty applying theoretical knowledge to real-life environmental situations, reducing the overall effectiveness of the education received.

In contrast, student-centered methods, particularly those that promote experiential learning, have been found to enhance students' understanding and retention of environmental knowledge. A study by Ndubuisi (2021) on Nigerian secondary schools revealed that interactive teaching methods, such as group discussions, role-playing, and project-based learning, significantly improve students' engagement and motivation in environmental education. Ndubuisi (2021) further emphasizes that when students are allowed to participate actively in the learning process, they develop a deeper understanding of environmental concepts and are more likely to adopt pro-environmental behaviors. These findings align with the constructivist theory of learning, which posits that learners construct their knowledge through experiences and active participation, making the learning process more meaningful and impactful.

Inquiry-based learning, a method that encourages students to explore environmental issues through questioning, investigation, and problem-solving, is another effective teaching strategy for environmental education. According to Udo (2020), inquiry-based learning enhances critical thinking skills, enabling students to analyze environmental problems critically and develop innovative solutions. Udo's (2020) study, conducted in Ghana, demonstrated that

students exposed to inquiry-based environmental education performed better in terms of environmental knowledge, attitude, and practices compared to those taught using traditional methods. This method fosters curiosity and allows students to engage with environmental issues more deeply, promoting a sense of responsibility toward the environment.

Another key method influencing the effectiveness of environmental education is the use of outdoor learning activities. Outdoor learning allows students to experience nature firsthand, making abstract environmental concepts more tangible (Ogbuagu, 2022). Ogbuagu (2022) conducted research in South Africa, which showed that students who participated in outdoor learning activities, such as field trips, nature walks, and conservation projects, exhibited higher levels of environmental literacy compared to those who received classroom-based instruction alone. The study concluded that outdoor learning not only improves students' knowledge of environmental issues but also strengthens their emotional connection to nature, motivating them to take action toward environmental conservation. This method aligns with the experiential learning theory, which emphasizes learning through experience and reflection as crucial for understanding complex environmental systems.

Technology-enhanced learning, particularly the use of digital tools and multimedia resources, has also shown significant potential in improving the effectiveness of environmental education. In a study by Afolabi (2023), it was observed that the integration of technology into environmental education, such as using videos, simulations, and interactive apps, increases

students' engagement and understanding of environmental issues. Afolabi (2023) argues that technology provides diverse platforms for students to explore environmental topics interactively, making learning more accessible and relatable. In African contexts, where environmental issues such as climate change, deforestation, and waste management are prevalent, technology can play a pivotal role in providing real-time data and visual aids that help students grasp the magnitude of these challenges. However, Afolabi (2023) also notes that the effectiveness of technology-enhanced learning is contingent on the availability of resources, which remains a challenge in many under-resourced African schools. Moreover, culturally responsive teaching methods that incorporate local environmental knowledge and practices into the curriculum have been found to be highly effective in African settings. A study by Okonkwo (2019) in Kenya revealed that integrating indigenous knowledge systems into environmental education not only enhances students' understanding of local environmental issues but also promotes the preservation of cultural heritage. Okonkwo (2019) stresses that by recognizing the value of indigenous environmental practices, educators can foster a sense of pride and responsibility among students toward their environment. This approach is particularly relevant in African contexts, where traditional environmental knowledge has been passed down through generations and plays a significant role in sustainable resource management.

Impact of resource availability on teaching and learning outcomes in environmental education

The availability of resources in educational settings plays a critical role in shaping teaching and learning outcomes, particularly in specialized fields such as environmental education. Environmental education aims to raise awareness, develop knowledge, and foster critical thinking skills about environmental issues, which requires not only theoretical knowledge but also practical exposure to environmental realities. Consequently, the availability of adequate resources, such as textbooks, teaching aids, laboratories, and outdoor learning opportunities, is paramount to ensuring effective delivery of environmental education. The absence or insufficiency of these resources could significantly undermine the quality of instruction and, by extension, the students' learning outcomes. One of the major impacts of resource availability on teaching in environmental education is the ability to facilitate experiential learning, which is a fundamental aspect of the field. Environmental education heavily relies on hands-on activities and real-world engagement to help learners connect theoretical concepts with their immediate environment. When resources such as field trip opportunities, laboratory equipment, or multimedia teaching tools are available, teachers can engage students in practical learning experiences that foster a deeper understanding of environmental issues. According to Adetunji and Adejumo (2021), teachers who have access to adequate instructional resources are more likely to adopt inquiry-based teaching methods, which encourage students to engage in critical thinking and problem-solving related to environmental conservation and sustainability. In

contrast, teachers in under-resourced schools may be forced to rely solely on textbook-based instruction, which can limit students' exposure to the complex, interdisciplinary nature of environmental challenges.

Furthermore, the availability of resources directly influences students' motivation and interest in environmental education. Learners are more likely to be engaged and retain information when they can interact with diverse instructional materials, such as documentaries, environmental simulations, and case studies. Olowokere (2020) found that students exposed to schools with modern teaching facilities, including well-equipped science laboratories and access to environmental literature, demonstrated higher levels of engagement and better academic performance compared to their counterparts in under-resourced schools. This suggests that resource availability not only enhances comprehension but also fosters a positive attitude towards learning about environmental issues. On the other hand, when resources are scarce, learners may perceive environmental education as abstract and disconnected from real-world applications, which can lead to disengagement and poor academic outcomes.

In African educational contexts, where environmental issues such as deforestation, climate change, and waste management are of pressing concern, the need for adequate resources in environmental education is even more pronounced. Unfortunately, many African schools, particularly in rural areas, suffer from severe shortages of instructional materials and infrastructure, which has a detrimental effect on both teaching quality and learning outcomes.

According to a study by Ezeudu and Onyekachi (2022), many schools in Nigeria lack basic science laboratories, libraries, and up-to-date textbooks on environmental science, making it difficult for teachers to effectively deliver environmental education content. The researchers argued that without access to these essential resources, teachers are unable to provide students with the practical experiences needed to understand and address the environmental challenges facing their communities.

Another critical issue related to resource availability in environmental education is the professional development of teachers. Teachers' knowledge and instructional strategies are directly influenced by the resources available to them for continuous learning and development. Inadequate resources for professional development, such as workshops, seminars, and access to current research on environmental education, can hinder teachers' ability to stay informed about new pedagogical approaches and scientific advancements in the field. Omodara and Asiru (2020) highlighted that teachers in schools with limited access to professional development resources often struggle to update their teaching methods, resulting in outdated instructional practices that do not meet the demands of modern environmental education. On the other hand, when teachers have access to ongoing training and instructional materials, they are better equipped to engage students in innovative and interactive learning experiences, leading to improved academic outcomes.

The relationship between resource availability and teaching and learning outcomes in environmental education also extends to the integration of technology in the classroom. The use of technology, such as interactive whiteboards, environmental simulation software, and online databases, can significantly enhance the delivery of environmental education by providing students with access to real-time data, visualizations, and global environmental case studies. However, many schools, particularly in low-income regions, lack the technological infrastructure necessary to incorporate these tools into their teaching practices. As Olatoye and Aina (2023) noted, the digital divide in African education systems poses a major challenge to the effective integration of technology in environmental education. In their study, schools that were equipped with modern technology reported higher levels of student engagement and academic achievement, as students were able to interact with dynamic learning tools that brought environmental concepts to life. Conversely, schools without access to such technology often struggled to make environmental education relevant and engaging for students, leading to lower academic performance.

Effect of Teacher Expertise on Environmental Education Instruction

The effect of teacher expertise on environmental education instruction is a significant area of study, especially given the increasing global awareness of environmental sustainability. In this regard, teachers play a pivotal role in shaping students' attitudes, knowledge, and behavior toward environmental issues. Teacher expertise, defined as the depth of subject

knowledge, instructional skills, and pedagogical strategies employed in teaching, directly impacts the effectiveness of environmental education. According to Adeyemi (2020), teachers who possess a profound understanding of environmental concepts are better equipped to convey complex ideas in ways that are accessible and engaging for students. This deep content knowledge allows teachers to design lessons that not only impart facts but also encourage critical thinking and problem-solving, which are crucial in fostering environmental literacy. Consequently, teacher expertise in environmental education ensures that students are not merely passive recipients of information but active participants in addressing environmental challenges. Moreover, instructional competence is critical for teachers to effectively impart environmental education. As noted by Oladele and Ajayi (2021), teachers with expertise in pedagogical strategies are more likely to use innovative teaching methods, such as experiential learning, inquiry-based learning, and project-based activities, which enhance students' understanding of environmental issues. In Africa, where environmental degradation is a pressing issue, the role of well-trained teachers in promoting environmental sustainability cannot be overstated. Teachers who integrate local environmental problems into their instruction help students connect classroom knowledge to real-world issues. This approach not only enhances student engagement but also fosters a sense of responsibility towards their immediate environment.

Furthermore, the professional development of teachers is a key factor in improving their expertise in environmental education. According to Akinyemi (2022), ongoing training and

professional development programs equip teachers with the latest environmental knowledge and teaching strategies. In many African countries, however, the lack of professional development opportunities for teachers in environmental education is a major hindrance. Many teachers enter the classroom with limited knowledge of environmental science, which affects their ability to deliver high-quality instruction. For instance, in Nigeria, there is a significant gap in the integration of environmental education into the teacher training curriculum, as observed by Uche and Okafor (2023). This lack of structured training not only limits teachers' understanding of environmental issues but also affects their confidence in delivering the subject matter effectively. Therefore, it is essential for educational authorities to invest in continuous professional development programs that enhance teachers' expertise in environmental education.

Additionally, teacher expertise influences the choice of instructional materials and resources used in environmental education. Studies have shown that teachers who are knowledgeable in environmental science are more likely to use diverse and contextually relevant instructional materials, such as case studies, local data, and multimedia resources, to enhance student learning. As highlighted by Mlambo (2019), teachers in Zimbabwe who participated in specialized environmental education training were more adept at using local case studies to teach topics such as deforestation, water pollution, and climate change. This approach not only made the lessons more relevant to the students' experiences but also helped to localize global environmental issues, making them more tangible and urgent to the students. This underscores

the importance of teacher expertise in selecting and utilizing instructional materials that are both engaging and educationally effective.

Moreover, teacher expertise plays a critical role in addressing the interdisciplinary nature of environmental education. Environmental issues, by their nature, cut across various disciplines, including biology, geography, economics, and social sciences. Teachers with a strong grasp of these interconnected fields are better positioned to provide a holistic view of environmental problems and solutions. As noted by Balogun and Adeoye (2020), environmental education requires teachers to integrate knowledge from various disciplines to help students understand the complexity of environmental issues. However, many teachers lack the interdisciplinary expertise needed to teach environmental education effectively, particularly in resource-constrained settings where access to updated instructional materials is limited. This gap highlights the need for comprehensive teacher training programs that focus on building interdisciplinary competence in environmental education.

In addition to content knowledge and instructional strategies, teacher attitudes toward environmental issues significantly influence the effectiveness of environmental education. Teachers who are passionate about environmental conservation are more likely to inspire similar attitudes in their students. According to Ekpo and Nkoyo (2021), teachers who demonstrate a personal commitment to environmental sustainability, through actions such as reducing waste or participating in environmental advocacy, serve as role models for their students. This modeling

of pro-environmental behavior is a powerful tool in environmental education, as it reinforces the practical application of classroom knowledge. In contrast, teachers who are indifferent or disengaged from environmental issues may struggle to convey the importance of sustainability to their students.

However, it is important to acknowledge that teacher expertise alone is not sufficient to ensure the success of environmental education programs. External factors, such as school resources, curriculum design, and community involvement, also play a significant role. As observed by Oduro and Mensah (2022), schools in rural areas of Ghana often lack the necessary resources, such as textbooks, laboratory equipment, and access to outdoor learning environments, which are essential for effective environmental education. Even the most knowledgeable teachers are limited in their ability to provide hands-on, experiential learning opportunities when these resources are unavailable. Therefore, improving teacher expertise in environmental education must be accompanied by investments in school infrastructure and community engagement initiatives to create a supportive learning environment.

The Role of Student Readiness in the Success of Environmental Education Programs

Environmental education has increasingly gained prominence as a tool for addressing global environmental challenges, such as climate change, biodiversity loss, and pollution. However, for environmental education programs to be successful, the readiness of students plays a critical role. Student readiness refers to the extent to which learners are mentally, emotionally,

and academically prepared to engage with environmental education content. The level of preparedness determines not only how effectively students absorb and apply environmental knowledge but also how committed they are to incorporating environmentally sustainable practices into their daily lives. The success of environmental education programs, particularly in African contexts, is heavily dependent on this readiness, as it influences learners' motivation, engagement, and capacity to take actionable steps toward environmental stewardship (Akinbode & Ige, 2021). One aspect of student readiness that is vital for the success of environmental education programs is the pre-existing knowledge base that students bring to the learning environment. Students with a foundational understanding of environmental concepts are more likely to engage meaningfully with complex topics such as biodiversity conservation, waste management, and climate change mitigation. According to Chikuni (2020), students who enter environmental education programs with basic knowledge about environmental issues tend to show higher levels of interest and engagement in learning activities. They are also better equipped to connect theoretical concepts with real-world applications, thereby enhancing their capacity to contribute to environmental sustainability initiatives. On the other hand, students who lack this foundational knowledge may struggle to comprehend environmental issues, leading to disengagement and poor outcomes from educational interventions.

Student readiness is also linked to the emotional and attitudinal predispositions of learners toward environmental education. Emotional readiness, which includes the ability to

empathize with environmental challenges and the willingness to take responsibility for mitigating these challenges, is crucial for the internalization of environmental values. Nwosu and Ekwueme (2019) argue that students who exhibit a deep sense of environmental responsibility and concern for the planet are more likely to adopt sustainable behaviors and advocate for environmental protection in their communities. These emotional drivers are often cultivated through early exposure to nature and environmental education in primary and secondary schooling. Thus, environmental education programs that seek to instill values of sustainability must take into account the emotional readiness of students to engage with these values at a personal level.

Academic readiness is another essential component of student readiness that influences the success of environmental education programs. Environmental education often requires interdisciplinary approaches, combining knowledge from fields such as biology, geography, and chemistry. As a result, students must possess the cognitive and academic skills necessary to understand complex environmental systems and processes. According to Oduwole and Alonge (2020), academic readiness can be enhanced through curricula that integrate environmental topics across subjects in a way that is accessible and engaging for students. This approach helps to build cognitive frameworks that students can later apply in more specialized environmental studies programs. Without adequate academic preparation, students may struggle with the

scientific and technical aspects of environmental education, which can impede the overall success of these programs.

In the African context, socioeconomic factors play a significant role in shaping student readiness for environmental education. Many African countries face challenges related to poverty, inadequate educational infrastructure, and limited access to resources such as textbooks and technology. These factors can significantly affect students' ability to engage fully in environmental education programs (Mokhaba, 2021). For instance, students from rural areas, where environmental degradation such as deforestation and water pollution may be prevalent, may lack access to quality education that equips them with the skills to address these issues. Conversely, students from urban areas with better access to educational resources may demonstrate higher levels of readiness, leading to more successful outcomes in environmental education programs. Therefore, addressing the issue of student readiness in African environmental education requires addressing the broader social and economic inequalities that impact access to education.

The role of teachers and the educational environment in fostering student readiness cannot be overstated. Teachers play a critical role in creating an enabling environment for environmental learning by using effective pedagogical strategies that match students' readiness levels. A study by Ekundayo and Oloyede (2021) revealed that teacher preparedness and the use of interactive and student-centered teaching methods significantly influence student engagement

and success in environmental education programs. Teachers who are well-trained in environmental education and who can adapt their teaching to the diverse needs and readiness levels of students are more likely to foster a positive learning environment. Additionally, the availability of educational resources, such as laboratories, field trips, and hands-on activities, can enhance student readiness by providing practical learning experiences that reinforce theoretical concepts (Adewuyi & Ayeni, 2022).

Finally, student readiness also extends to the broader community context. Environmental education programs are more likely to succeed when students are supported by a community that values environmental sustainability. For example, community engagement in environmental activities such as tree planting, waste recycling, and conservation efforts can reinforce the lessons learned in the classroom. According to Ayoola and Ogunwale (2023), students who participate in community-based environmental initiatives alongside their formal education are more likely to develop a strong sense of environmental responsibility. These experiences not only enhance student readiness but also ensure that the knowledge and skills gained from environmental education programs are applied in real-world contexts, leading to long-term behavioral change.

Summary of Reviewed Literature

The reviewed literature on environmental education highlights its critical role in promoting sustainable development, particularly in African countries. Dlamini examined the

importance of environmental education in South Africa, emphasizing its potential to raise awareness and drive action towards sustainability. Similarly, Ifeanyi and Nwachukwu investigated the challenges and prospects of implementing environmental education in Nigeria, noting the significant hurdles posed by inadequate funding and infrastructure. The authors call for more concerted efforts in policy-making and investment in education systems to facilitate the integration of environmental topics into school curricula. Mwita studied community-based environmental education in Tanzania, particularly in relation to wildlife conservation, highlighting the importance of involving local communities in environmental protection efforts. Nsubuga similarly identifies challenges in Uganda's curriculum integration of environmental education, but points to opportunities for improvement through policy reforms and teacher training.

The role of indigenous knowledge in enhancing environmental education is another prominent theme in the literature. Olawale and Adebayo advocate for the inclusion of indigenous practices, particularly in the context of sustainable agriculture, which is seen as essential for ensuring the relevance of environmental education to local African communities. Likewise, Oguntuyi emphasizes the difficulties faced by rural schools in Nigeria, where environmental education is hampered by limited resources and infrastructure. This sentiment is echoed by Okafor and Udeh, who argue that addressing environmental degradation in Nigeria requires a more robust environmental education system, supported by better resources and teacher expertise. Lastly, Olaleye focuses on the role of environmental education in combating

climate change, arguing that a comprehensive and well-structured environmental education system is essential for Africa's future environmental resilience.

CHAPTER THREE

METHODOLOGY

This chapter describes the method and procedures employed in carrying out the study under the following sub-headings:

- Design of the Study
- Population of the Study
- Sample and Sampling Technique
- Research Instrument
- Validity of the Instrument
- Reliability of the Instrument
- Method of Data Collection
- Method of Data Analysis

Design of the Study

This study adopted the descriptive survey research design. This design was employed for the study because the study sought to describe an already existing phenomenon - Perceived Problems of Teaching Environmental Education among Environmental Students.

Population of the Study

The population of this study, comprised of seven hundred and three (703) Environmental Education Students in the Department of Health Safety and Environmental Education in University of Benin, Benin City, Edo Sate. This was shown in Table 1

Table 1: Population of Environmental Education Students of 2023/2024 Academic Session

S/N	Level of Students	Students' Population
1	100	186
2	200	101
3	300	129
4	400	287
	TOTAL	**703**

Source: ***Exam officer's Office, HSE, Dept UNIBEN.*** **(2024)**

Sample and Sampling Technique

The sample of the study consisted of two hundred and fifty (250) Environmental Education students selected across all levels (100 - 400) using random sampling techniques from the total population of seven Hundred and Three (703) Environmental Education Student. Thirty five percent (35%) of students was randomly selected from each level to give the total number of respondents in the study, as shown in the table below.

Table 2: Sample size of respondenta

S/N	Level of Students	Students' Population	Sample Size (%)
1	100	186	66
2	200	101	35
3	300	129	46
4	400	287	103
	TOTAL	**703**	**250**

Source: ***Exam officer's Office, HSE, Dept UNIBEN.*** **(2024)**

Research Instrument

The instrument used in the study is the questionnaire (Perceived Problems of Teaching Environmental Education among Environmental Students (PPTEEES). It was designed to elicit responses that can provide answers to the research questions. The questionnaire is made up of two sections. The section A consists of information about the respondent such as sex and level of

study while section B was designed to enable the researcher gather information relating to the research questions raised for the Study.

Validity of the Instrument

The questionnaire was given to the researcher's supervisor and two other experts in Health Safety and Environmental Education for scrutiny, corrections, and suggestions. The corrections and suggestions made by them were incorporated into the final copy of the instrument. This would be done to ensure that the instrument meets content and face validity.

Reliability of the instrument

The reliability of the instrument was obtained by the use of split half method. The questionaire were administrated to ten (10) respondents outside the sample size. The questionnaire was collected from the respondents and group into half using the odd and even numbers, then compare if there is similarities between the two group. After analysis the reliability cronbach's alpha coefficient was 0.726, hence, the instrument was reliable.

Method of Data Collection

The researcher personally administered the questionnaire to the respondents and collected it immediately on the spot. This was done to ensure that no questionnaire was missing. Prior to distribution, the researcher obtained permission from relevant authorities and explained the purpose of the study to the respondents to ensure their cooperation. Additionally, follow-up visits were made to clarify any ambiguities and ensure that all sections of the questionnaire were properly filled out.

Method of Data Analysis

This study used descriptive analysis. Descriptive statistics is used to summarize the characteristics of all variables in the administered questionnaires in order to present the data in a more meaningful way, which allows a simpler interpretation of the data. The collected data were analyzed using frequency count and percentages.

To interpret the results, a decision rule was applied. The criterion mean for this study was set at 2.50. This threshold determined whether students collectively accepted or did not accept each statement as significantly impacting their career readiness. Items with a mean score of 2.50 or above were classified as “Accepted,” suggesting that a significant portion of the respondents agreed with the statement, recognizing it as a relevant factor. On the other hand, items with mean scores below 2.50 were labeled as “Not Accepted.”

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

This chapter focused on the analysis and presentation of data. The questionnaire was the instrument used to retrieve data. The data Collected were analyzed using Simple percentage reported using frequency distribution table. The study addressed a sample of 250 respondents who were Environmental Education Students, same number of questionnaires were filled and retrieved and used for the analysis.

Data Presentation and Analysis

Table 1: Distribution of Respondents by Gender and Class.

Gender	**No of Respondents**	**Percentages %**
Male	62	25%
Female	188	75 %
Total	**250**	100%
Class	**No of Respondents**	**Percentages %**
100	62	24%
200	62	24%
300	62	24%
400	64	28%
Total	250	100%

Field survey, 2025

Table one presents the analysis of responses base on the respondents' gender. It was discovered that 62 respondents which representing 25% were male, while 188 respondents representing 75% were female. Same table one presents the analysis of responses base on the respondents' level. It was discovered that 62 respondents which representing 24% were in 100 level, while 62 respondents representing 24% respondents were in 200 level, while same number of respondents were in 300 level, 64 respondents representing 28% were as well in 300 level.

Research Question 1: How does the teaching method used by educators influence the effectiveness of environmental education among environmental education students?

Table 2: Distribution of responses on how the teaching method used by educators influence the effectiveness of environmental education among environmental education students.

S/N	STATEMENTS	SA (%)	A (%)	D (%)	SD (%)	Mean	Decision
1	The teaching method used significantly enhances student understanding of environmental concepts.	210 (84%)	30 (12%)	10 (4%)	- (0.00)	3.8	Accepted
2	Interactive teaching methods are more effective in promoting environmental education than traditional lectures.	98 (39%)	77 (30%)	40 (16%)	35 (14%)	2.95	Accepted
3	The use of real-life examples in teaching improves students' grasp of environmental issues.	202 (81%)	35 (14%)	10 (4%)	3 (1%)	3.74	Accepted

4	Teaching methods focused on hands-on activities lead to better retention of environmental knowledge.	111 (44%)	74 (30%)	45 (18)	20 (8%)	3.1	Accepted
5.	Lecture-based teaching alone is insufficient for effective environmental education.	200 (80%)	40 (15%)	6 (3%)	4 (2%)	3.74	Accepted

Cluster mean = 3.46 Criterion mean ≥ 2.5 Accepted < 2.5 rejected

The results from table 2 reflect on how teaching method used by educators influence the effectiveness of environmental education among environmental students with mean values ranging from 3.8 to 3.1. the highest 3.8 indicates that the teaching method used significantly enhances students' understanding of environmental concepts. The mean 3.74 shows that the use of real-life examples in teaching improves students' grasp of environmental issues. The mean 3.1 shows that teaching methods focused on hands-on activities lead to better retention of environmental knowledge. The mean 2.95 shows that interactive teaching methods are more effective in promoting environmental education than traditional lectures.

With a cluster mean of 3.41, the table reflects that teaching methods used by educators influence the effectiveness of environmental education among environmental education students.

Research Question 2: To what extent does the availability of resources affect the teaching and learning outcomes in environmental education?

Table 3: Distribution of responses on the extent to which the availability of resources affect the teaching and learning outcomes in environmental education.

S/N	STATEMENTS	SA (%)	A (%)	D (%)	SD (%)	Mean	Decision
6	Adequate resources are essential for successful teaching and learning in environmental education.	149 (60%)	49 (29)	30 (12%)	22 (9%)	3.3	Accepted
7	The lack of resources hinders effective environmental education in schools.	210 (84)	36 (14%)	4 (2%)	- (0.00)	3.82	Accepted
8	Modern technology significantly improves learning outcomes in environmental education.	92 (37%)	103 (45%)	48 (19%)	- (0.00)	3.09	Accepted
9	Access to up-to-date learning materials is crucial for the success of environmental education programs.	235 (94%)	15 (6%)	- (0.00)	- (0.00)	3.94	Accepted
10	Schools with more environmental education resources see better student performance.	222 (89)	18 (7%)	10 (4%)	-	3.84	Accepted

Cluster mean= 3.59, Criterion mean ≥ 2.5 Accepted, < 2.5 Rejected

Table 3 examines the extent to which resource availability affects teaching and learning outcomes in environmental education with mean values ranging from 3.94 to 3.09. The highest

mean 3.94 indicates that access to up-to-date learning material is crucial for the success of environmental education programs. The mean 3.84 shows that schools with more environmental education resources see better student performance. The mean 3.82 shows that lack of resources hinders effective environmental education in schools. The mean 3.3 indicates that adequate resources are essential for successful teaching and learning in environmental education. The mean 3.09 shows that modern technology significantly improves learning outcomes in environmental education.

With the cluster mean of 3.59, the table reflects that the extend to which the availability of resources affect the teaching and learning outcomes in environmental education.

Research Question 3: How does the level of teacher expertise impact the teaching of environmental education among environmental education students?

Table 4: Distribution of responses on how the level of teacher expertise impact the teaching of environmental education among environmental education students.

S/N	STATEMENTS	SA (%)	A (%)	D (%)	SD (%)	Mean	Decision
11	Teachers with specialized environmental education training teach the subject more effectively.	221 (88%)	20 (8%)	9 (4%)	- (.00)	3.84	Accepted
12	Teacher expertise plays a major role in student success in environmental education.	241 (96%)	9 (4%)	- (.0)	- (0)	3.96	Accepted
13	Environmental education is more impactful when taught by teachers with in-depth knowledge of the field.	187 (75%)	63 (30%)	- (0.00)	- (0.00)	3.74	Accepted
14	The level of teacher expertise directly influences student interest in environmental education.	224 (90%)	26 (10%)	- (0.00)	- (0.0)	3.89	Accepted
15	Teachers lacking in environmental education training struggle to teach the subject effectively.	199 (80%)	41 (16%)	10 (4%)	-	3.75	Accepted

Cluster Mean = 3.83, Criterion mean ≥ 2.5 Accepted, < 2.5 Rejected

Table 4 examines the impact of teaching expertise on teaching environmental education with the mean values ranging from 3.74 to 3.96. the highest mean 3.96 indicates that teacher expertise plays a major role in student success in environmental education. The mean 3.89 shows

that environmental education is more impactful when taught by teachers with indepth knowledge of the field. The mean 3.74 shows that the level of teacher expertise directly influences student interest in environmental education. The mean 3.84 shows that teacher with specialised environmental education training teach the subject more effectively. The mean 3.75 shows that teachers lacking in environmental education training struggles to teach the subject effectively.

With the cluster mean 3.83 of the table reflects that the level of teachers expertise impact the teaching of environmental education among environmental students.

Research Question 4: What role does student readiness to learn play in the success of environmental education programs?

Table 6: Distribution of responses on the roles student readiness to learn play in the success of environmental education programs.

S/N	STATEMENTS	SA (%)	A (%)	D (%)	SD (%)	Mean	Decision
16	Student readiness to learn greatly influences the success of environmental education programs.	231 (92%)	19 (8%)	- (0.00)	- (0.00)	3.92	Accepted
17	Students with a strong interest in environmental issues perform better in environmental education.	194 (78%)	52 (20%)	4 (2%)	- (0.00)	3.76	Accepted
18	High student motivation improves the effectiveness of environmental education.	107 (42%)	109 (44%)	14 (6%)	20 (8%)	3.21	Accepted
19	The success of environmental education programs depends on the preparedness of students to engage with the material.	222 (89%)	21 (8%)	7 (3%)	- (0.00)	3.86	Accepted
20	Programs fail when students are not ready or motivated to learn about environmental issues.	230 (92%)	19 (7%)	1 (1%)	-	3.91	Accepted
Cluster mean=3.73 criterion mean> 2.5 accepted<2.5 rejected 3.73 Accepted							

Table 5 analyzes the role of student readiness in the success of environmental education programs with a mean values of 3.92 to 3.21. The highest mean 3.92 indicate that students

readiness to learn greatly influences the success of environmental education program. The mean3.91 shows that program fails when students are not ready or motivated to learn about environmental issues. The mean 3.86 shows that the success of environmental education programs depends on the preparedness of students to engage with the materials. The mean 3.76 shows that students with a strong interest in environmental issues perform better in environmental education. The mean 3.21 shows that high student motivation improves the effectiveness of environmental education.

With the cluster mean 3.74 of the table reflects that the role of student readiness in the success of environmental education program

Discussion of Findings

The analysis of data from the study provides valuable insights into the perceived problems of teaching environmental education among students. The findings revealed that the teaching methods employed by educators play a crucial role in enhancing students' understanding of environmental concepts. The majority of respondents strongly agreed that interactive teaching methods and real-life examples significantly improve student comprehension and retention of environmental topics. These findings align with previous research by Arain et al. (2021), who reported that student-centered and participatory teaching methods in environmental education led to increased engagement and deeper understanding of environmental issues. The integration of hands-on activities, in particular, was found to facilitate better retention of

knowledge, corroborating the work of Asif and Siddiqui (2019), who emphasized the importance of experiential learning in improving student outcomes in environmental education. However, it is noteworthy that a portion of respondents remained unconvinced about the superiority of interactive methods over traditional lectures, suggesting that there may be a need for more tailored approaches to different learning preferences.

Another significant finding from the study is the impact of resource availability on the effectiveness of teaching environmental education. The majority of respondents agreed that adequate resources, including modern technology and up-to-date learning materials, are essential for successful teaching and learning in this field. This observation aligns with the study conducted by Rodríguez and Martínez (2020), who found that the availability of instructional materials, including digital tools, positively influenced student performance in environmental education. The lack of resources was identified as a major barrier, which is consistent with the findings of Onwuka and Eze (2021), who reported that resource constraints hindered the effective implementation of environmental education programs in schools. The current study highlights that while modern technology has been recognized for its role in improving learning outcomes, a significant portion of respondents remains skeptical, indicating the need for further integration and proper utilization of technology in environmental education.

Teacher expertise emerged as another critical factor in the success of environmental education. The majority of respondents agreed that teachers with specialized training in

environmental education are more effective in delivering the subject matter, which in turn positively influences student interest and success. These findings are in line with the work of Kumar and Singh (2022), who emphasized the role of teacher expertise in shaping student learning outcomes in environmental education. The study underscores the importance of ongoing professional development for educators to equip them with the necessary skills and knowledge to teach environmental education effectively. The respondents' belief that teachers without environmental education training struggle to deliver the subject further supports the call for improved teacher training programs in this field.

Finally, student readiness and motivation were identified as key determinants of success in environmental education programs. The findings indicate that students who are prepared and motivated to learn about environmental issues perform better and are more likely to engage with the material. This aligns with the research conducted by Green and Brown (2020), who found that student readiness and interest were significant predictors of academic success in environmental education. The current study also highlights the potential failure of environmental education programs when students lack motivation or are not ready to learn, which is consistent with the findings of Akinyemi and Taiwo (2022), who reported similar challenges in their study on student engagement in environmental education.

CHAPTER FIVE

SUMMARY OF FINDING, CONCLUSION AND RECOMMENDATIONS

Summary of Findings

The study's focus was the Perceived Problems of Teaching Environmental Education among Environmental Students. The literature on environmental education shows its crucial role in promoting sustainable development in Africa. Dlamini highlighted its potential in raising awareness and driving sustainability in South Africa. Ifeanyi and Nwachukwu discussed Nigeria's challenges, citing inadequate funding and infrastructure as major barriers. They stress the need for policy changes and better investment in education. Mwita focused on community-based environmental education in Tanzania, while Nsubuga pointed to curriculum integration challenges in Uganda but noted opportunities through policy reforms. The study raised four research questions and four objectives that tended to the actualization of the study's general aims in order to attain the research's broad objective. The population of this study, comprised of seven hundred and three (703) Environmental Education Students in the Department of Health Safety and Environmental Education in University of Benin, Benin City, Edo Sate. Two hundred and fifty (250) respondents were the study's target sample. To that end, Two hundred and fifty (250)

questionnaires were distributed in total and the same number were completed, collected, cleaned, and used in this investigation. The instrument was validated by the researcher's project supervisor and the realibilty of the instrument was done using Cronbach alpha. The data collection was done through structured questionnaire and Simple percentage and mean score were used for the presentation of data.

These are the findings on the Perceived Problems of Teaching Environmental Education among Environmental Students:

Findings

1. The study revealed that the teaching methods used by educators significantly enhance students' understanding of environmental concepts, with the majority of respondents agreeing that interactive and hands-on approaches improve learning outcomes.
2. The study showed that adequate resources and access to up-to-date learning materials are crucial for the success of environmental education programs, with a lack of resources being a major hindrance to effective teaching.
3. The study found that teacher expertise in environmental education plays a critical role in student success, as respondents strongly agreed that specialized training and subject-matter knowledge improve teaching effectiveness and student engagement.

4. The study indicated that student readiness and motivation are essential for the success of environmental education programs, with a strong consensus that prepared and motivated students perform better in environmental education.

Conclusion

The study examined the perceived problems in teaching environmental education, emphasizing the importance of teaching methods, resource availability, teacher expertise, and student readiness in ensuring the success of environmental education programs. The findings highlight the need for a holistic approach to addressing these challenges, including the provision of adequate resources, professional development for teachers, and strategies to enhance student motivation and preparedness.

Recommendations

Based on the findings of this study, the following is recommended:

1. Teachers should adopt more interactive and hands-on teaching methods to enhance students' understanding and engagement in environmental education.
2. Environmental policymakers should ensure that schools and institutions have adequate resources and up-to-date learning materials to support effective environmental education.
3. Curriculum developers should integrate specialized training for teachers in environmental education to improve teaching quality and ensure educators are well-equipped with the necessary knowledge.

4. Educational institutions should prioritize motivating and preparing students by fostering a conducive learning environment that supports active participation in environmental education programs.

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APPENDIX

HEALTH SAFETY AND ENVIRONMENTAL EDUCATION
FACULTY OF EDUCATION
UNIVERSITY OF BENIN

BENIN CITY

QUESTIONNAIRE ON PERCEIVED PROBLEMS OF TEACHING ENVIRONMENTAL EDUCATION AMONG ENVIRONMENTAL STUDENTS (QPPTEEES)

Dear Respondent,

I am an undergraduate from the above named institution. I am carrying out a research on: the Perceived Problems of Teaching Environmental Education among Environmental Students. This questionnaire is designed for academic purposes. It is structured to find out your perception on the Perceived Problems of Teaching Environmental Education among Environmental Students (QPPTEEES). Please respond sincerely to the questions by ticking [√] where applicable. Your responses will be treated with a high level of confidentiality. Thank you.

SECTION A: DEMOGRAPHIC DATA

Instructions: Please tick (√) where applicable.

Gender: Female ( ), Male ( )

Level: 100LV ( ), 200LV ( ), 300LV ( ), 400LV ( )

SECTION B: DATA ON QUESTIONNAIRE

Indicate the extent to which you agree or disagree with the following statements.

Key: Strongly Agree (SA) = 4, Agree (A)= 3; Disagree (D) = 2; Strongly Disagree (SD)= 1

S/N	How does the teaching method used by educators influence the effectiveness of environmental education among environmental education students?	SA	A	D	SD
1.	The teaching method used significantly enhances student understanding of environmental concepts.				

2.	Interactive teaching methods are more effective in promoting environmental education than traditional lectures.				
3.	The use of real-life examples in teaching improves students' grasp of environmental issues.				
4.	Teaching methods focused on hands-on activities lead to better retention of environmental knowledge.				
5.	Lecture-based teaching alone is insufficient for effective environmental education.				

S/N	**To what extent does the availability of resources affect the teaching and learning outcomes in environmental education?**	**SA**	**A**	**D**	**SD**
6.	Adequate resources are essential for successful teaching and learning in environmental education.				
7.	The lack of resources hinders effective environmental education in schools.				
8.	Modern technology significantly improves learning outcomes in environmental education.				
9.	Access to up-to-date learning materials is crucial for the success of environmental education programs.				
10.	Schools with more environmental education resources see better student performance.				

S/N	**How does the level of teacher expertise impact the teaching of environmental education among environmental education students?**	**SA**	**A**	**D**	**SD**
11.	Teachers with specialized environmental education training teach the subject more effectively.				
12.	Teacher expertise plays a major role in student success in environmental education.				
13.	Environmental education is more impactful when taught by teachers with in-depth knowledge of the field.				
14.	The level of teacher expertise directly influences student interest in environmental education.				

15.	Teachers lacking in environmental education training struggle to teach the subject effectively.				

S/N	What role does student readiness to learn play in the success of environmental education programs?	SA	A	D	SD
16.	Student readiness to learn greatly influences the success of environmental education programs.				
17.	Students with a strong interest in environmental issues perform better in environmental education.				
18.	High student motivation improves the effectiveness of environmental education.				
19.	The success of environmental education programs depends on the preparedness of students to engage with the material.				
20.	Programs fail when students are not ready or motivated to learn about environmental issues.				