

## ENVIRONMENTAL KNOWLEDGE, ATTITUDES AND BEHAVIOR OF ENGLISH AS FOREIGN LANGUAGE STUDENTS: A CASE STUDY IN FLSH, MEKNES, MOROCCO

Hicham Laabidi, Maryam Charafi

Moulay Ismail University-Morocco

[h.laabidi@umi.ac.ma](mailto:h.laabidi@umi.ac.ma), [maryam.charafi02@gmail.com](mailto:maryam.charafi02@gmail.com)

### ABSTRACT

Morocco's environmental issues are worsening; making it critical to gauge the environmental knowledge, attitudes, and actions of the demographic deemed to carry on their treatment as a means to enhance the conduct of future generations towards the environment. Despite the rising corpus of research in this area, very limited studies addressed students' environmental awareness, and some overlooked accounting for university students. This study intended to examine students' environmental awareness and how it influences their pro-environmental behavior. The study included 100 students from the School of Arts and Humanities, Meknes. Questionnaires were distributed online to collect data, which subsequently was analyzed using descriptive statistics. According to the study's findings, students' environmental awareness is positive and encouraging. The findings also revealed that a significant proportion of students were uninformed about environmental facts and did not engage in any environmental practices at all; indicating the need for a practical strategy to re-examine and reorient the approach of EE in the Moroccan context in order to ensure that it not only raises learners' environmental awareness but also fosters a sense of responsibility, which is critical in ensuring environmental sustainability.

**Keywords:** EE, environmental knowledge, attitude, behavior, EFL

### INTRODUCTION

With the industrialization and massive demographic boom that defined the 20th century, significant environmental issues have grown all around the world (Zerrouqi et al., 2016). As Earth's environmental problems have become more serious in the last couple of years, there is a growing consensus/understanding that the remedies required for environmental issues facing humanity should be upgraded. In this respect, The Stockholm Conference on the Human Environment, held in June 1972, declared that states should integrate

environmental concerns into education to lay the groundwork for guiding future generations toward the preservation and enhancement of the environment (United Nations, 1972, p.5). Similarly, Al-Sharaf (1986) argued that environmental education ought to be prioritized in the Arab world and regarded as a crucial component of the educational system; all the while exploring the different ways that environmental education may be put into practice, from including environmental issues in current school curricula to developing new courses and programs especially centered on

environmental education (Al-Sharaf, 1986, as cited in Larouz et al., 2021). In this light, a number of countries have adjusted their school curricula to cover a variety of themes and ideas pertaining to the environment and its protection. In fact, Morocco is no exception. According to Zerrouqi et al. (2016), the Moroccan Ministry of Education has made environmental education (EE) a top priority by offering a variety of curricula for elementary, middle, and high schools that aim at increasing students' awareness of environmental issues as well as their ability to appreciate and protect the natural world. During the 1980s, Morocco sought to incorporate EE into educational curricula. Yet, the most recent educational reform explicitly states that environmental issues must be covered in both scientific and literary curricula and at different school levels (Larouz et al., 2021). Despite a great deal of interest in EE programs and curricula, El Moussaouy et al. (2014) showed that secondary school students' behavior indicates that efforts are still modest and insufficient to have the essential influence on the development of environmental awareness; which probably denotes a discrepancy between the desired end result and the actual implementation of environmental education.

As far as the Moroccan educational system is concerned, the new reform focuses on pedagogical, and practical issues, aiming at preparing students and future generations to become environmentally knowledgeable and above all dedicated to working towards achieving a contended balance between 'the quality of life and the quality of the environment'.

However, the most important and problematic question is whether Environmental Education courses and programs are effective or not. EE as a problem-solving tool is intended to help students reach their full potential as responsible, critically thinking individuals. The current widespread upheaval in education mirrors the state of society, which is characterized by significant issues. Thus, investigating its effectiveness is strongly related to measuring learners' knowledge, attitudes, and behaviors vis a vis the environment. A great deal of research has been written about the evolution and growth of EE as a flourishing field in Moroccan institutions. Nonetheless, no study/publication to date has documented concrete data by which EFL students of the School of Arts and Humanities, Meknes' environmental awareness is investigated.

It is quite believed that environmental education is a relatively new concept. In fact, it is assumed that EE educates students on how to be concerned about the protection of the environment and thus helps them preserve the environment by raising their environmental awareness of the complexity of environmental issues. However, in the Moroccan context and given the vitality of this awareness, much research, El Moussaouy et al. (2014) to put forth in illustration, confirms that EE courses and programs contain little information on the wider environment and rarely provide opportunities for environmental inquiry and little to no encouragement for developing critical environmental thinking skills. In response to this problem, this study proposes to measure students of the Department of English Studies, FLSH, UMI, Morocco's sensitivity to the total environment and its allied problems.

## **Review of the Literature**

### **1. Environmental Education (EE)**

Over the past couple of years, our natural environment has been abused by the irresponsible behavior of the public at large. Our surroundings have changed in unimaginable ways due to the exhaustion of natural resources, the burning of fossil fuels, pollution, deforestation, and the worldwide problem of climate change. As it

is widely believed, environmental education, a key concept in this study, should promote favorable action for a sustainable future.

Environmental education, unquestionably, equips students with environmental values that allow them to manage their behavior towards the preservation of the environment (Mliless & Larouz, 2018). Given how environmental education has intrigued interest ever since its beginnings, it is only to be expected that much inquiry interest is ascribed to it.

At the Intergovernmental Conference of Tbilisi in 1977 Environmental Education was first introduced as a concept that involves combining different disciplines to create a brand-new approach that primarily aims at helping individuals understand their environment and make informed decisions on behalf of society (UNESCO/PNUE, 1977).

*“Environmental education is a learning process that increases people’s knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action” (Tbilisi Declaration, 1977).*

In the second International Congress on Education and Training relating to the environment, held in

Moscow, in 1987, EE was reconceptualized as an ongoing procedure wherein “individuals and the community take awareness of their environment and acquire knowledge, values, skills, experience, and also the will which allows them to act, individually and collectively, to solve current and future problems of the environment” (UNESCO, 1987).

In light of this, it can be inferred that environmental education can be viewed as a means to generate and grow knowledge and awareness concerning environmental issues, eventually resulting in responsible behaviors from both individuals and groups.

## **2. EE in the Moroccan Educational System**

With its many domains, Morocco is incorporated into an environmental strategy. In education, for many years, EE has been a staple of the Moroccan educational system. Environmental education in Morocco is still in its early stages (UNESCO, 1987). Since the early 1980s, the Moroccan government has incorporated environmental education into the country's educational system in numerous disciplines, including life and earth sciences and geography... Various initiatives have been launched in recent years to introduce it in schools, focusing on providing education about the kind of

relationship between humans and nature, with key themes namely deforestation, desertification, pollution, and the dearth of water resources. Cleanliness practices are also at the core of environmental education.

## **3. EFL and Environmental Education**

First, why teach Environmental Education along with the English language? Another justification for integrating environmental education within the profession is to reconsider and broaden the scope of objectives of English language teaching. EE is essential for EFL instructors. A fact that Babcook (1993) as cited in Nkwetisama (2011) emphasizes is that effective language learning equally entails a proper merging of the micro and macro skills acquired into appropriate expressions of communication; and, environmental issues are a rich topic matter for communication. Discussing the urge to include environmental education in English language teaching, Brown (1990) as cited in Cates (2002) points that:

Environmental issues intrinsically affect every human being on earth... We, teachers, have a mission, a mission of helping everyone in this world communicate with each other to prevent the global disaster ahead. (p. 44)

Brown (1990) asserts that the task of English teachers is to facilitate global communication so that the world's

problems can be solved. He adds that the prevalence of English on a global scale is unquestionably to blame for this. Gürsoy (2010) on his part argues that when environmental education is incorporated into foreign language classes, students develop a deep comprehension of second and foreign languages as well as an awareness of environmental issues. Likewise, Nkwetisama (2011) asserts that EFL/ESL instruction should not only focus on helping students become more fluent in their target language but also be devoted to assisting students to acquire critical thinking skills that might be helpful in the teaching of environmental sustainability. Nkwetisama (2011) stated that:

*“Though the inclusion of environmental education in the English language classroom may seem difficult, it is worth trying if we actually look forward to the welfare of our environment which is becoming an imminent threat to humanity. (p.116)”*

In short, English language teaching is only successful if students, no matter how fluent they may be, are conscious of world problems, and environmental issues are no exception.

#### **4. Environmental Awareness**

An increasing number of individuals of all ages are beginning to understand the importance of environmental awareness. Few is the

number of people who have not heard of the concept one way or another; be it through media, textbooks... Although most people understand what environmental awareness is, it is noteworthy to mention that there isn't a single definition that everyone agrees upon. Environmental awareness is generally referred to as the attitude toward the effects of human behavior on the environment (Ham et al., 2015) starting from this definition, environmental awareness is the tendency to respond to environmental problems in a particular way.

According to Sengupta & Maji (2010), the definition of environmental awareness is broad and wide-ranging. It implies not only environmental knowledge but also moral principles and the know-how required to address environmental issues. Moreover, environmental awareness is the first step that ultimately results in the willingness to engage in responsible civic behavior. An idea that Ramsey et al. (1992) share; trying to prove that the first move in equipping individuals to address and tackle environmental issues is environmental awareness. This latter, as stated in Sengupta & Maji (2010) signifies “the sensitivity to the total environment and its allied problems.” They state:

*“The development of environmental awareness means to understand the*

*environmental problems and to develop critical thinking and problem-solving skill in the people. (p. 5)”*

According to studies, namely a study conducted by Sudarmadi et al. (2001), maintaining a community's sustainability depends heavily on understanding what they know about the environment, how people feel about it, and what behaviors they perform that might benefit or negatively impact it. These elements are deemed correlative in the sense that a greater deal of knowledge of the environment may raise positive attitudes that could influence an individual's behavior. C. E. Ramsey & Rickson (1976) in this respect, pinpoint that "increased knowledge leads to favorable attitudes...which in turn lead to action promoting better environmental quality" an idea that was commonly adopted in early EE models.

For the purpose of the paper, we define environmental awareness as consisting of three components: environmental knowledge, attitude, and behavior.

Although environmental issues, whether natural or manmade, are exceedingly complex and diverse, they typically always have common characteristics (Scorse, 2010). There are several issues that the environment is

dealing with right now that are negatively affecting the Earth's climate and atmosphere namely climate change, deforestation, pollution, Ozone layer depletion, global warming. Humanity has long been concerned with the negative effects on the environment, but these issues have grown more serious and dire as industrialization and urbanization have increased (Dunlap & Jorgenson, 2012). However, the existence and effects of environmental problems have expanded in recent decades. In a broad sense, many human activities and some natural phenomena leave their mark on the environment.

Thus, developing a decent level of environmental awareness is a vital baby step towards tackling environmental issues. Environmental awareness is a key tool, for education specifically, that enables individuals to comprehend the value of protecting natural resources from different perspectives, as well as minimizing the unfavorable impacts brought about by human practice. In this respect, Altin et al. (2014) conducted a study in which they identified secondary school students' awareness of environmental issues. The findings highlighted the fact that the “Development of personal environmental awareness is an important feature for the protection of the environment” (p.1212).

Globally, there is an extensive concern for environmental issues. By raising awareness of these environmental issues, we can work to preserve the natural resources in our environment for future generations. Increased environmental awareness can also reduce some of the effects of our environmental footprint and that of climate change. This helps ensure that we and other living beings always have access to the resources that the environment has in its pocket to provide us with.

Humans have a drastic responsibility to protect the planet and guarantee its survival for future generations. Thereby, how can we cultivate environmentally conscious individuals who contribute to the well-being of their environment and are aware of how damaging environmental issues can be if we do not take the initiative to do so?

## **RESEARCH METHODS**

The research questions along with the sensitive nature and delicate scope of the issue under study inspired the researcher to opt for a quantitative approach to gather and analyze data. The study made use of Katz's three-component attitude model as the framework to investigate and measure EFL students' awareness of environmental issues and its impact on their actions vis-à-vis the protection of the

natural setting. The general aim is to equip educators, environmental specialists, and everyone who either affects or is affected by the matter with a complete understanding of how students at the tertiary level perceive the environment and environmental issues and its potential effects on Moroccan education and EFL instruction in particular. To delve more deeply into this subject for thorough comprehension and to fulfill the research objectives, the following research questions have been developed: (1) To what extent students are aware of potential issues affecting the environment?, (2) what are students' perceptions towards environmental concerns?

Because the study is equally focused on capturing and exploring EFL students' behaviors in what concerns yielding favorable modifications to the environment as a whole, students at the Department of English Studies at Moulay Ismail University, Meknes were the study's target population. 100 university students who are members of the English Studies Department represented the population. Male and female participants were both voluntarily involved.

The questionnaire was used in this mixed-methods study to gather quantitative data from students; This study adopted and adapted a questionnaire from Sousa et al.

(2021) to address the research questions. The bunch of researchers with the lead of Sousa suggested measuring the environmental awareness of students in higher education by exploring their environmental knowledge, attitudes, and behavior; which goes hand in hand with Katz's three-component attitude model previously presented in this paper. It is without question and quite evident that the validity of the findings of this study will be reinforced by the use of a questionnaire that was previously employed in another inquiry. At long last, the questionnaire was sent out online, mostly via Facebook and WhatsApp groups, created by members enrolled in the study's setting—the Department of English Studies at Moulay Ismail University. The researcher administered the survey at different points in time, ensuring a significant participation rate. Overall, in the time frame of three days, 100 responses were collected.

To depict the students' responses to each questionnaire item, the data gathered from the questionnaire was inputted and computed using SPSS (Statistical Package for the Social Sciences). In the case at hand,

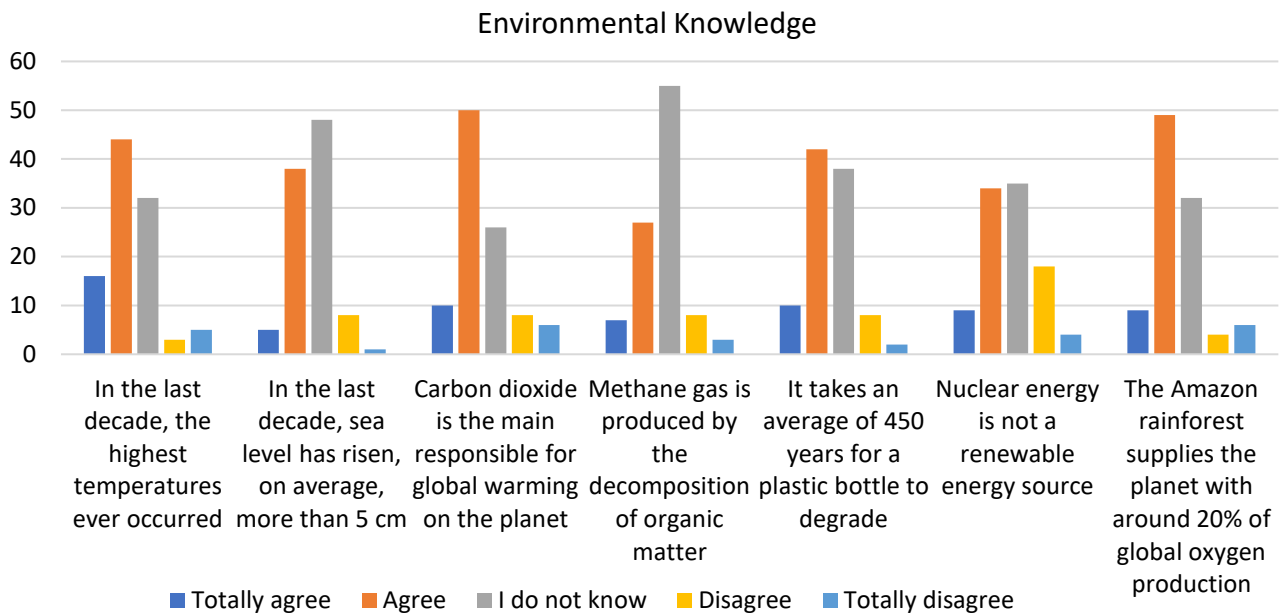
data analysis was descriptive. Discussions about students' environmental awareness and views of students vis-a-vis the natural resources began with an examination of the percentages of students who agreed or disagreed with the statements supplied.

## **FINDINGS AND DISCUSSION**

Students responded to a set of twenty statements on a 5-point Likert scale in the assigned survey, which may be further segmented down into three primary strands: (1) Environmental knowledge among students, (2) Students' environmental attitudes and perceptions regarding natural resources, and (3) students' environmental commitment and individual efforts to address and minimize environmental issues. Regarding their knowledge, the participating students appear to be allegedly knowledgeable about the major environmental challenges and have a sense of strong development in their knowledge of environmental facts and issues. However, a significant share was unsure of the accuracy of different environmental premises.



Chart 01. Students’ Responses on Environmental Knowledge



By and large, students exhibit a favorable ultimate level of environmental knowledge as far as various environmental facts regarding the venture and the drastic change that the ecosystem is undergoing are concerned. These results align with those in earlier literature as in Sousa et al. (2021) who measured the environmental awareness of higher education students and the results obtained allowed to conclude that most students have strong environmental knowledge. For example, 60% (60 students) seemed to concur and/or be totally in agreement with the statement ‘carbon dioxide is the main responsible for global warming on the planet’. Yet, it should be highlighted that 55% of respondents admitted being unaware of the statement 'methane gas is produced by the

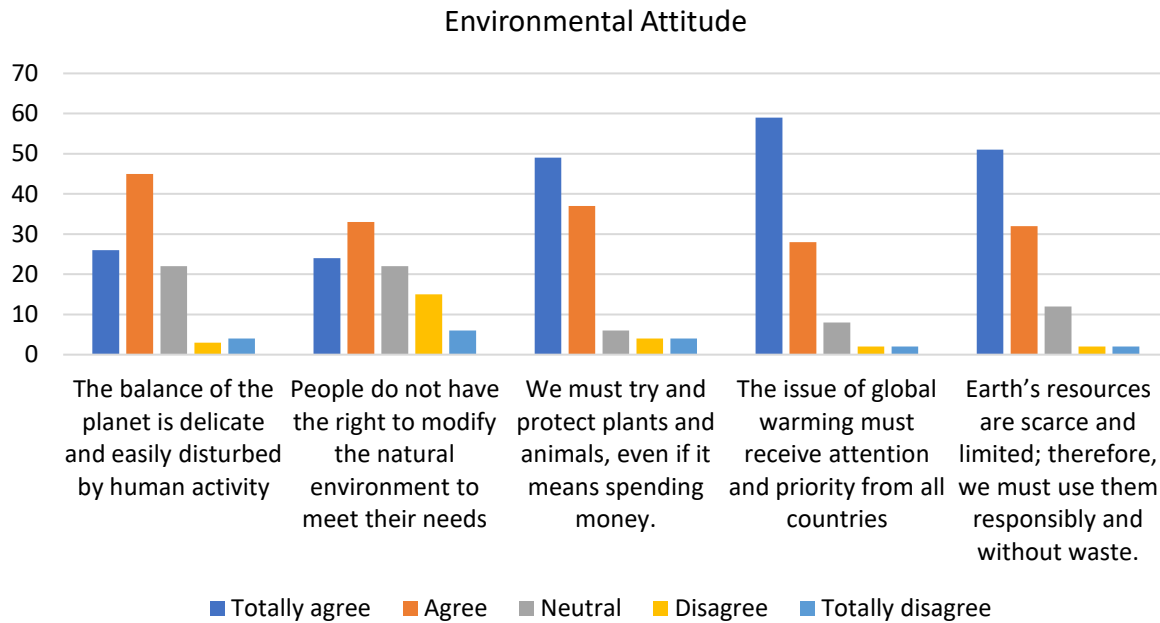
decomposition of organic matter.' Which implies a serious lack of knowledge about this fact.

Additionally, students' perceptions regarding the critical importance of protecting the environment were remarkably varied. A fact that demonstrates how crucial it is for individuals (in our case students) to establish and maintain favorable attitudes about the ecosystem in order to preserve and sustain it. Their 'emotional judgment' (Ham et al., 2015) indicates that they are aware of the impact of their behavior on the biophysical environment. For instance, based on their feedback, students' responses to the statement ‘We must try and protect plants and animals, even if it means spending money’ revealed that an overwhelming

majority of students concurred that maintaining the environment is essential to sustaining life on Earth. 37% (37 students)

agreed, and 49% (49 students) totally agreed, thus totaling 86 (86 out of 100 informants).

Chart 02. Students' Responses on Environmental Attitude



The results revealed that generally speaking, students have a favorable attitude toward the protection of the environment and exhibited an acceptable understanding of the depletion of natural resources. The overall impression of EFL students' environmental attitudes was highly promising; which is great news because research shows that students with good environmental attitudes are likely to have more environmentally conscious intentions and actions than those with unfavorable attitudes (He et al., 2011). The relationship between knowledge and attitudes is cyclic particularly because one does not only result from the other; more like, certain

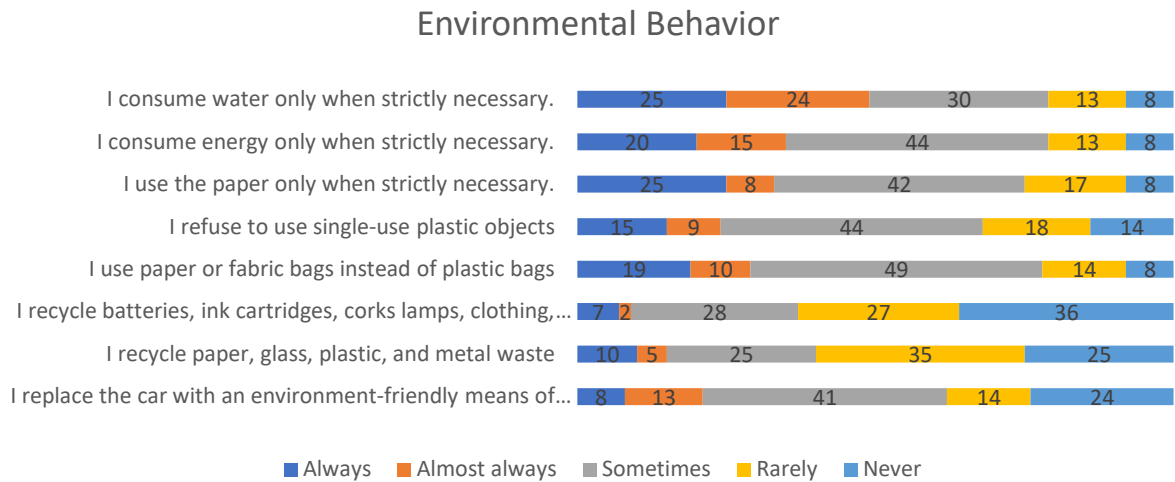
knowledge may drive the initially established set of attitudes, which in turn causes more knowledge advancements, and so it goes. A large number of students signify an encouraging attitudinal response by acknowledging the value of protecting the environment and the importance of sustaining its resources.

Students' behavior wise, results showcased that students have shown a certain degree of commitment vis-à-vis the preservation of the environment and natural resources. As can be noticed from the figure below, the frequency of students' personal contributions is remarkably positive as it mostly ranges between sometimes/

always/almost always. Yet certain figures call for a particular kind of contemplation. There are still 36 students (36%), for example, who say they never recycle batteries, ink cartridges, cork lamps,

clothing, or oils, and 24 students (24%) who say they never alternate from driving a car to a more environment-friendly mode of transportation.

Chart 03. Students' Responses on Environmental Behavior



Regardless of the discrepancies that are found in the literature between attitudes and behaviors, the participating students showcased an acceptable sense of commitment toward the environment. Put differently, according to the findings of the study, a large number of students display an adequate level of commitment to environmental preservation. Their participation in sustainable practices and proactive participation in environmental projects demonstrates a favorable pattern towards environmental stewardship. Such dedication among students is encouraging, implying that a sizable proportion of the youth population is actively contributing to

environmental preservation initiatives. The high level of environmental attitudes that they channeled is translated into active participation as far as a general understanding of the scarcity of natural resources is concerned. This is in sync with the generalization made by Tarfaoui & Zkim (2017), that a person who adopts an environmental attitude act in ways that are consistent with that attitude.

Responsible preservation of the environment takes commitment and a strong driving force. In this vein, diverse instances of behavior suggested in the survey's statements were approved of (Savings, wise consumption) Yet, there is

still a considerable percentage of students (61%) who declare they never recycle {low-cost individual behavior} (Kokkinen, 2013), which may be due to other factors like lack of motivation or perhaps the failure to recognize the negative effects of not engaging in pro-environmental conduct. However, devoting more efforts to enhancing students' environmental knowledge gains and education nonetheless remains quite essential.

## **CONCLUSION**

In the long run, this research study tried to measure students' environmental awareness in a tertiary EFL context, as well as its repercussions on the student's commitment to and concern vis-a-vis ecosystem protection. This paper specifically looked into students' environmental knowledge, attitudes, and behaviors as well as their willingness to maintain environmentally friendly practices. It further looked at how students perceived environmental issues and the impacts they thought they had on their immediate and total surroundings, or, to put it differently, how it affected the overall quality of the environment.

The results and discussion lead to a verdict that students exhibit promising levels of environmental knowledge, attitudes, and behavior, enjoying

considerable ratings among participating students. Nevertheless, there are still notable percentages of students who claim to be ignorant of environmental facts and issues, unconcerned with environmental sustainability, or possibly both at once; which is an unfortunate fact that cannot be disregarded.

The mutually reinforcing relationship between humans and the environment was acknowledged by the students, who showed empathy for the natural world and stressed encouraging others to participate in moves to address environmental concerns.

A further important contribution of this study is the recommendations it provided environmental education specialists with. These involve investing in further research in the area and, especially, guiding teachers to incorporate more environmental themes and considerations into syllabi.

On the whole, the strategy that has generally been adopted in Morocco to incorporate environmental education into school curricula is to integrate it into the already taught school subject. With that in mind, this study revealed that, given the high levels of environmental awareness among the participating students, environmental education has been shown to be acceptingly advantageous. Yet, as other

variables may have contributed to students' encouraging environmental concern that this study's findings have yielded, more environmental education will always be required and is never enough.

An inquiry into students' environmental awareness has major implications. Bearing in mind the scope of this study, these implications should be considered first within the Moroccan setting. However, they can similarly be utilized in other contexts with comparable scenarios, especially in EFL teaching and learning.

Through the identification of efficient linguistic approaches that motivate students to learn about environmental issues, the findings can help readjust curricula. Understanding how language reflects students' level of environmental awareness might help improve strategies for communication across environmental education programs. Such data can be used to create interesting materials and encourage interdisciplinary methods that integrate environmental themes across a variety of courses, especially in the Moroccan EFL context.

By deepening their comprehension of the relationship between themselves, language, and the environment, the study's findings can equally help students become more mindful of their environment. They

could discover more about how language affects people's environmental knowledge, perceptions, and actions. Students who are aware of the seriousness of environmental issues may be better equipped to make wise choices and take initiative for the cause of environmental sustainability.

The study's results may additionally provide syllabus designers and environmental education specialists with practical recommendations for emphasizing the value of language-sensitive approaches while promoting changes that assign a greater priority to environmental education.

By establishing data about the environmental knowledge, attitudes, and behaviors of students, environmental education specialists can use this information to reexamine and redefine curriculum materials that are pertinent, and appealing for students. It can direct the choice of subjects, pedagogical techniques, and educational approaches that properly address the unique requirements and help shrink the gaps found in students' environmental awareness.

In sum, by providing data to curriculum developers, students, teacher training programs, syllabus designers, and environmental education specialists, this Ecolinguistic inquiry can support the integration of environmental education by

cultivating environmentally conscious individuals who have ‘action skills’ to address environmental problems. Environmental education “can therefore be said to be highly relevant to both the needs of society and to the pupil’s present needs. As a consequence, the inclusion of environmental concern adds relevance to the curriculum” (Gayford, 1991, as cited in Tilbury, 1995). These implications may help inform the setting up of effective plans for raising a generation of environmentally aware individuals who both ‘think and act green’.

With environmental awareness being an under-researched topic in the educational field in general, and Moroccan EFL one in particular, future research could tackle:

- A study measuring students at primary/secondary schools’ environmental awareness
- An investigation of environmental education effectiveness across content courses
- A study exploring university professors’ readiness to include environmental features in their courses.
- A study exploring the role of cultural and socio-economic factors in shaping EFL students’ environmental awareness.

- An investigation of the role of technology in promoting environmental awareness among EFL students.
- A longitudinal study to track the development of students’ environmental awareness over an extended period.

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