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ENVIRONMENTAL KNOWLEDGE IN HIGHER LEVEL STUDENTS

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Abstract: Mexico faces environmental deterioration due to the excessive use of natural resources and economic growth due to anthropogenic activities, leading to an ecological imbalance on the planet, finding the possible solution in changing attitudes, behaviors and increasing knowledge based in Environmental Education. The objective of this research is to know the level of environmental knowledge of higher education students. The applied Instrument was designed at the Center for Environmental Education in Wisconsin, USA, finding as a result 70% of acceptable environmental knowledge, but nevertheless, it is suggested to implement workshops, conferences and courses on environmental topics to train students capable of proposing strategies. for the care of the environment.

Keywords: Environmental education, Environmental problems, Environmental Knowledge

INTRODUCTION:

Today, Mexico faces environmental deterioration due to the excessive use of natural resources and economic growth due to anthropogenic activities (Cuartas- Gómez, Palacio – Duque, Ríos- Osorio, Cardona- Arias and Salas-Zapata, 2019), leading to an ecological imbalance on the planet, so one of the solutions is to achieve changes in behavior through knowledge of environmental issues and it has been found that the solution to this is Environmental Education (Vargas, Medellín, Vázquez & Gutiérrez, 2011).

Environmental Education begins in:

-In 1968, Club Roma

- A group of scientists and experts met to address environmental risks, due to the destruction of ecosystems (Vargas, et. al, 2011).

-In 1972, in Stockholm

- The United Nations Conference on the Environment (UNEP) was held, where

the term environmental education was used for the first time (Bautista-Cerro, Murga-Menoyo and Novo, 2019).

-In 1974, in Cocoyoc, Mexico

- The symposium of experts on Development and Environment is held, the lack of confidence in the solution of environmental problems is mentioned, where they were willing to mention poverty, but not talk about a need for growth (Bautista- Cerro, Murga- Menoyo and Novo, 2019).

-In 1975, in Belgrade

- The International Seminar on Environmental Education was held, the definition of Sustainable Development was reconsidered with a process where the needs of the entire population are met and that has a balance between humanity, harmony and the environment (Bautista-Cerro, Murga- Menoyo and Novo, 2019).

-In 1977, in Tbilisi

- The Intergovernmental Conference on Environmental Education was held, being one of the most important because the theoretical pillars of environmental education were approved, where it focuses on individuals knowing environmental problems, providing information about what is happening., paying attention mainly to ethical values and the union of human beings and the environment (Bautista-Cerro, Murga-Menoyo and Novo, 2019).

-In 1985, the ANUIES (National Association of Universities and Higher Education Institutions)

- Incorporates the Environmental dimension into the University curriculum

-In 1987, Our Common Future Report

- Bruntland Report, the definition of Sustainable Development is disseminated.

-In 1992, Rio de Janeiro

- The United Nations Conference

on Environment and Development (UNCED) was held, with two forums; The Earth Summit and the Global Forum, generating a document of the “Treaty on Environmental Education for Sustainable Societies and Global Responsibility”, indicating that the main causes of poverty, hunger, violence and human degradation are due to the economic model and that Environmental Education is based on values (Bautista-Cerro, Murga-Menoyo and Novo, 2019).

-In 1997, Thessaloniki

- The International Conference on Environment and Society: Education and Public Awareness for Sustainability was held, where UNESCO affirms that Environmental Education is considered Education for sustainability (Bautista-Cerro, Murga-Menoyo and Novo, 2019).

-Starting in 2002

- Environmental education is formalized in the study plans in Higher Level Institutions (Santana and Ortega, 2008)

-December 2002, United Nations General Assembly

- The period of “The Decade for Education for Sustainable Development” was proclaimed (Calixto, 2015).

-In 2012, in Rio de Janeiro

- Representatives meet to demonstrate the unfulfilled points that occurred at the Earth Summit (Bautista-Cerro, Murga-Menoyo and Novo, 2019).

Consequently, education was considered only as something ecological and not something integral to the lives of citizens, which is why it began to spread that environmental education could be an alternative to environmental problems, suggesting new pedagogical strategies that lead to individuals to change towards something more positive for the planet (Calixto, 2015).

Environmental education is responsible

for generating changes through knowledge, behaviors, values and attitudes that are used to care for the environment and that help minimize environmental problems, which is why it is used by two main currents: practical and decisive.

Practicality refers to putting effort into actions and improvements and resolution to proposing solutions for environmental problems, where it is carried out by informing and leading citizens to develop skills to be able to solve these problems (Severiche – Sierra, Gómez – Bustamante and Jaimes – Morales, (2016).

Consequently, it is up to the higher level to give due importance to social interests, which help formulate the curriculum of the educational program, reorienting teaching techniques to build a sustainable future (Ariza and Rueda, 2016) and thus students can acquire the knowledge necessary to care for the environment.

METHODOLOGY:

The research carried out is an applied research, at a descriptive level and with a quantitative method. It was applied to a sample of 150 high school students, from the first, third, seventh and eighth semesters.

The instrument was designed at the Center for Environmental Education in Wisconsin, USA, which consists of 45 items and three types of variables (Attitudes, Behavior and environmental knowledge), in which we will only measure Environmental Knowledge. It has a Likert-type response, ranging from completely agree to completely disagree, with values of 1 to 5 points respectively. Table 1 shows the range of values for Environmental Knowledge. And the database will be analyzed with a statistical package SPSS, version 2.0

| Value range | Score |
|-----------------------|-------|
| Excellent level | 60-50 |
| Very Acceptable level | 49-39 |
| Acceptable level | 38-28 |
| Acceptable level | 27-16 |
| Low level | 15-0 |

Table 1: Range of Environmental Knowledge values

RESULTS

The results found in this research regarding gender were that 51% were female and 49% were male. (See table 2)

GENDER

| Gender | <i>f</i> | % |
|--------|----------|----|
| Woman | 77 | 51 |
| Man | 73 | 49 |

Table 2: Gender of higher level students.

And regarding the semesters, the largest population was found in the 7th semester, with 37% (See table 3).

SEMESTER

| Semester | <i>f</i> | % |
|----------|----------|----|
| 1° | 31 | 21 |
| 3° | 44 | 29 |
| 7° | 49 | 37 |
| 8° | 26 | 13 |

Table 3: Higher level students per semester

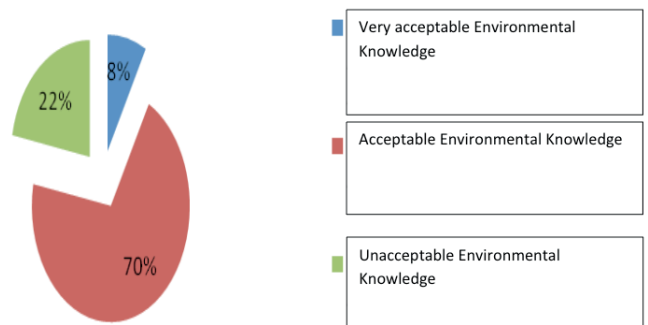
The results found regarding the level of environmental knowledge of the higher level students show that the highest percentage with 70% has an acceptable level: (See table 4)

| Level of knowledge | <i>f</i> | % |
|-----------------------|----------|----|
| Excellent level | 0 | 0 |
| Very acceptable level | 12 | 8 |
| Acceptable level | 105 | 70 |
| Acceptable level | 33 | 22 |
| Low level | 0 | 0 |

Table 4.- Level of environmental knowledge of higher education students.

And represented in a graph we have:
(Graph 1)

(See Chart 1)



Graph 1.- Environmental Knowledge in Higher Level students.

Of the 70% of students with an acceptable level of environmental knowledge, the largest percentage is female.

CONCLUSIONS

Fernández, Varela, Sánchez, Galiano and Fernández (2016), that increasing knowledge will depend on the education that is being carried out on campus, since different skills must be taught to students to be able to carry out positive actions with the environment., like Saza, Sierra and Gómez (2021), say that knowledge is very important to be effective in caring for the environment, because due to lack of knowledge, the way to act is unknown, such as exhaustion. of natural resources, they do not take importance because they do not know the consequences that may be arising, ignoring the actions taken. However, in this

research it was found that 70% of higher level students have acceptable environmental knowledge, with the highest percentage being female, but there is 22% at the unacceptable level.

At the same time, it was observed that the semester of the students did not matter

to increase the level of knowledge, so it is suggested to implement workshops, conferences, courses, environmental practices, to increase this knowledge, but at the same time make a change of attitudes, behaviors and values in students.

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