ENVIRONMENTAL ANALYSIS IN THE CURRICULUM OF SECONDARY EDUCATION BIOLOGY

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Abstract

In this research we conducted an analysis of different themes about environmental education curriculum, in the Biology of Secondary Education Level. Environmental education includes knowledge of ecosystems, habitats, fauna, and flora. Recent developments, give importance to acquirement of deeper knowledge of environmental education, and the implementation of the teaching practices, excursions, or the use of interactive methodology teaching techniques. This study was conducted on a sample of 600 students distributed in four high schools in city of Tirana and three high schools in city of Vlora, during the academic year 2012-2013, through the use of scientific methodology and analyzing of the questionnaires SPSS, an experimental method that collects directly and without direct influence, answers from the student themselves. We have listed closed questions with alternative choices, in order to collect the quantitative data and an open response question, in order to collect qualitative data. By analyzing the questionnaire, it appears that 114 students, or 19% think that the more specific term, for the environmental protection is, "alternative energy/renewable"; 192 students, or 32%, think that the main source for finding specific materials related to environmental education are environmental websites; 221 students, or 35%, think that the lectures discussing to the nature topic are not enough; 438 students, or 73%, think that excursion' hours are not sufficient to acquire the knowledge, and 446 students, or 74%, think that they learn new knowledge during these biology hours in the class.

Keywords: *curriculum, environmental, biology.*

Introduction

Over recent years the school has been substantial efforts to achieve sustainable changes about environmental education, touching and structured teaching program today. Today occurring phenomena such as the reduction of forests, reduction of the ozone layer, pollution of air, soil, water, climate change, loss of species is significantly exert devastating impact on the environment. In this situation, environmental education has taken a great importance that its implementation should be done quickly and responsibly to avoid and solve many problems more visible environment [4].
Environmental education is not only to learn from the experience, but to develop such skills to people and especially to young children, in order to understand environmental problems and provide alternatives for solving environmental problems [5.7.8] . Environmental education aims to increase individual responsibility in making decisions and formulating a

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code of conduct, for questions related to the quality of the environment and its preservation. Environmental education must start from the initial level before continuing further education by making students awareness for all types of disasters and pollution occurring today on the planet and to all his creatures [10].

The Goal:

This scientific research intends to evaluate the theses of AML Biology , analising environmental thematic and helping students with the understanding of it according to the accomplishment of a questionary.

Material and Methods

Our tutorial refers to data of the study which was conducted in the 2012-2013 academic year. We carried out a detailed study of literature and the subject of biology curricula which is developed from grade 10 to grade 12 of the education in our pre-universitary system [1,2,6,11]. We have analyze the hours of the curriculum that speaks to environmental education. For each text Biology curriculum, we have carefully studied each subject, focusing on themes about environmental concepts, ecological, ethological, and we have select them from the rest of the curriculum [3.9]. To arrive at a conclusion as accurate and objective of our tutorial, is conducted also a questionnaire (Table 1) with high school students. This questionnaire intends to analyze their awareness and sensitization about environmental activities based on knowledge of the secondary education curriculum.

In base of Environmental Biology curriculum, listed questions in the questionnaire are closed type, with alternate choices, in order to collect quantitative data, and with open response type in order to collect qualitative data. Respondents completed their questionnaire, without the presence of the interviewer. Questions were standard, and anonymity of the interviewees was preserved.

The questionnaire was completed in two cities in Albania in schools "Harry Fuls", "Ismail Qemali", "Qemal Stafa", "Sami Frashëri", in Tirana, and "Ali Demi", "Mustafa Qemal Ataturk", "Halim Xhelo "in Vlora *(Fig. 1)*.
The duration of data collection across all schools lasted for about four weeks. The data was originally cast and processed in Microsoft Office Excel program and after were processed in SPSS program, to get more detailed information. The selection of classes was random type, even the selection of the students who we interviewed, dispersing the questionnaires during the biology class randomly along the lines with students, and collecting these questionnaires, at the end of class.

Table 1. Questionnaire

	A .ENVIRONMENT AND THE NEW CURRICULA
A1	**In what year we take acquaintances for environmental education?** 01 class 10 02 class 11 03 class 12
A2	**From those who by these terms is specific to environmental protection?**

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University of Shkodra "Luigj Gurakuqi", Shkodra, Albania

	01 air quality 02 alternative energy/renewable and fuels(hydropower stations, solar panels, wind, biodiesel, hybrid vehicles, etc 03 biodiversity (ex. flora / fauna) 04 climatic changes / global warming 05 environmental health 06 population growth 07 the quality of life and econimic indicators
A3	**Which are the primary sources that you find specific materials about environmental education?** 01 texts and other, materials (ex. questionnaires, books, magazines) 02 videos / movies 03 websites 04 community sources(ex.: specialists, public agencies, non-profit organizations, businesses, individuals)
A4	**You think that are enough the lessons about nature, environment, and ecosystem?** 01 yes 02 no 03 sufficient
A5	**You think that are enough the practice lessons or exscurisions** 01 yes 02 no 03 sufficient

Fig.1 The selected cities for the questionnarie

Results and Discussions

We interviewed a total of 600 students, where about 38% or 227 students have expressed that

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University of Shkodra "Luigj Gurakuqi", Shkodra, Albania

environmental knowledge is taken in the 10th grade, about 32% or 193 students have expressed that environmental knowledge is taken in the 11th grade, about 30% or 180 students expressed that environmental knowledge is taken in the 12th grade. From the results is obvious, a high percentage of students who think that environmental education acquaintances are taken in the 10th grade, with about 38% or 227 students, and a similar percentage are students who think that the knowledge of environmental education is taken in classes 11th and 12th with about 32% or 193 students and 30% or 180 students. This results, shows that students need more knowledge regarding environmental education and they have required that this knowledge is right to be spread over the three years of high school and not only in grade 10 *(Fig. 2)*
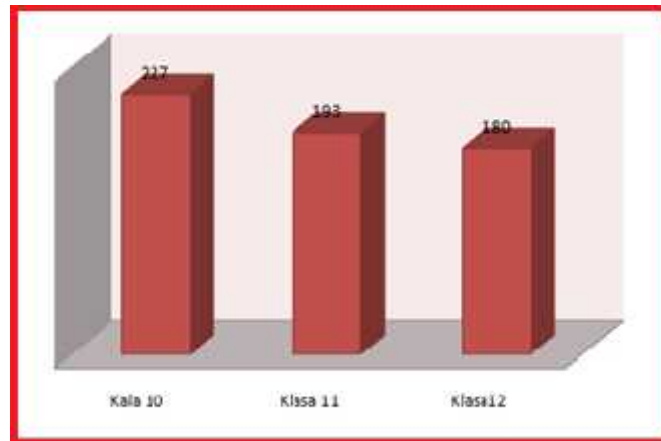

Figure 2. Distribution of students which knows in what year are taken the classes about environmental education.

The number of students who think that the more specific term for environmental protection is air quality, is 84 or 14%, for alternative energy / renewable and fuels is 114 or 19%, for biodiversity is 96 or 16%, for the climate change / global warming are 90 or 15%, environmental health is 66 or 11%, for the population growth is 78 or 13%, for quality of life and economic indicators are 72 or 12% *(Fig. 3)*.

We noticed that, as a more specific term for environmental protection is alternative energy / renewable and fuels. The use of alternative energy, called 'solar energy' deserves attention, stimulation and strong support for the fact that it does not 'produce' any contamination.

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University of Shkodra "Luigj Gurakuqi", Shkodra, Albania

Figure 3. Distribution of students that thinks, which are more specific terms for environmental protection.

The number of students who as the primary source for locating specific materials related to environmental education have chosen, texts, books, other printed materials comprise about 174 or 29%, to videos / movies, comprise about 114 or 19%, to website is about192 or 32 %, to community resources (ex. specialists, public agencies, NGOs, businesses, individuals) is about 120 or 20%, for other printed material with 174 or 29%, to community resources with 120 or 20% and videos / movies with ose19 114% (Fig. 4).
As we can notice, we have an uneven distribution of the sources where students can find specific material for environmental education ,.and that students are more available to find those materials in different websites.

Figure 4. Distribution of students who considers that which is the main source for finding specific materials for environmental education.

The percentage of the students who think they are enough lessons talking about nature, environment, ecosystem make up about 32%, or 192, 35% or 212 students think that there are sufficient and 33% or 196 students think they are somehow sufficient *(Fig. 5)*. Stands that we have nearly equal percentage about the sufficiency of lectures about nature.
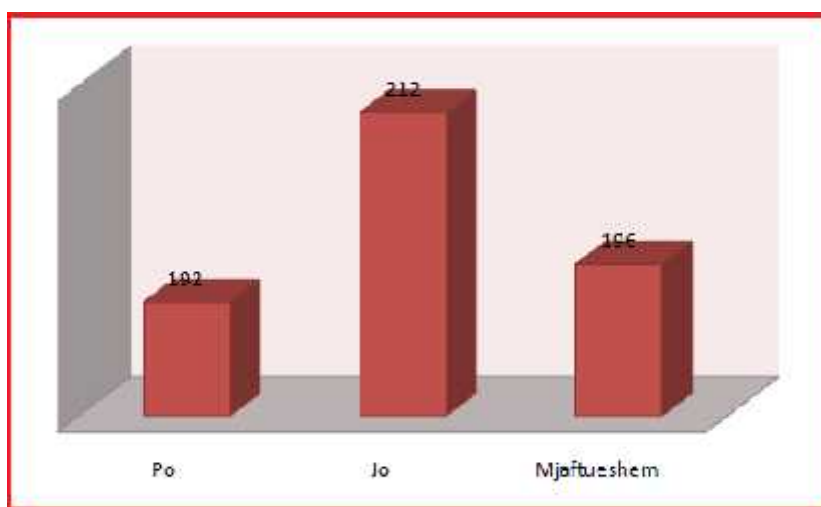

Figure 5. Distribution of students that think ,they are enough lessons where talking about nature, the environment and the ecosystem.

Students who think positively about the sufficiency of hours of practice / excursions is about 4% or 27 students, 73% or 438 are students who think they are insufficient and 23% or 135, of them thinks that they are somehow sufficient (Fig. 6). This, indicates that is needed more work who engages theory and practice together, including excursions ,because it helps them a lot in strengthening of the knowledge they receive in theory.
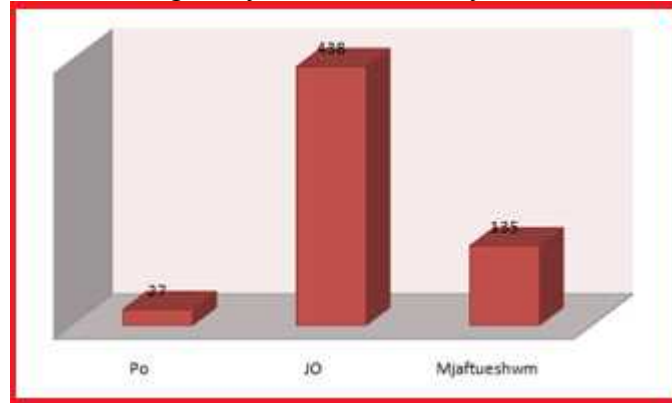

Figure 6. Distribution of students who think if there are enough hours of practice, hours of excursions

Conclusions

By processing of data of the questionnaire, we took these results and recommendations: The design of a program, which introduce the new environmental classes in which are determined the directions that how school must learn to the students, how to become "friends" with the environment. The education process must transcend theory and come out of school, because only in this way affect the individual and collective action and improves the mentality abut a healthy environment.

In this way students can think clearly and they can have a deep concern for human inappropriate influence on the environment, thinking that ,he, is one of the main causes of degradation of habitats and the environment and it is important to do something personally to improve and protect the environment.

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