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The Status of Environment in Educational Institutions: High Schools of the city of Fez, Morocco, as a case study

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Abstract

In the present work we have tried to analyze the current place of the environment in the Moroccan schools (Fez high schools as a case study), and to study the current situation of environment education in the Moroccan educational system, its difficulties and short comings. In this context, we have chosen to conduct a study supported by a questionnaire. Our investigation was addressed to students and teachers in some high schools in Fez (Morocco). For our study to be more significant, we conducted a pedagogical reflection taking into account the content and the quality of education while analyzing the mode of intervention teachers in secondary education qualifying by using a questionnaire addressed to them. The results obtained through the various investigations have revealed that the place of the environment in Moroccan high schools is not satisfactory enough. The different categories of the respondents expressed their desire to improve this situation and make the environment more suitable.

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1. Introduction

Nowadays the concern for the environment is increasingly growing because of environmental, climatic and energy threats. Morocco, having the same concern, aspires to make better management of its equality threatened environment. These aspirations require the existence of diversified environmental protection measures, among which we mention the administrative and educational framing (COSEF, 1999); (MEN, 1999). According this perspective, school is one of the places where education should take place according to this global environmental

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education. This approach environmental is developing an education in responsibility and citizenship, and this anchor perfectly and naturally in the missions of today's school. In the present work we are trying, on the one hand, to analyze the current state of the environment in Moroccan schools and, secondly, to analyze the current situation of the environmental education in the Moroccan educational system, its difficulties and shortcomings. In this study we will focus on the problem of environmental education in high schools in the city of Fez (Morocco). To alleviate and overcome problems related to the environment in senior high schools several issues were raised: To what extent the environmental problem in qualifying schools steps in the city of Fez? What is the role of environmental education extracurricular activities in school? What are the constraints and obstacles that impede environmental education?

2. Material and methods:

2.1. Field of study:

Our study aimed at students, teachers and some actors in the educational administration in six high schools in the city of Fez. These secondary education qualifying schools are located in different areas of the city. The qualifying schools where we conducted our research are: Ibn Hazm, Ibn Rouchd, Moulay Idriss, Ibn Al Haytham, Umm Ayman and Ibn Zaydoun.

To have a good representation in our approach we expanded interviews with different actors in education such as the Academy of Education and Formation of Fes-Boulemane region as well as other actors with the same concern.

2.2. Work instruments:

In order to diversify the techniques of data collection, we implemented two methodological tools, in this case the interview and the questionnaire. Indeed, we have used the interview which allowed us to investigate, deeply, the ideas of our respondents about environmental activity in schools. It is a technique which allowed us to access a number of topics. This tool has provided us with qualitative data. The second data collection instrument is the questionnaire, which allowed us to provide more objective information concerning the views of students and attach the results of talks. The questionnaire used during this work concerns several issues in relation with the topic under study. This questionnaire has been prepared in French and Arabic, to help students understand the questions and subsequently answer these questions. Our questionnaire is divided into three parts: The first part includes questions in relation with the target population, their specialty, their age in addition to their gender and their status (student or teacher). The second part contains five questions that reflect what students and their teachers know about environment in general, along with items concerning the same subject such as environmental legislation, national or international days and summits that are held in the world about the same topic suggestions for remedy this problem and improve the state of the environment in high schools, and finally the obstacles to the functioning of any process with regard to the environment. Our aim here is to know the place of the environment in schools in Fez and therefore search for the reasons behind this issue and try to overcome them.

3. Results and discussion

3.1. Results of the questionnaire destined to students and teachers in high school of the city of Fez:

We distributed directly 140 questionnaires to a sample of students and teachers from the senior high schools of the city of Fez; 125 respondents answered the questionnaire; that is 89% of the targeted population.

To analyze data collected, we proceeded to the content analysis by adopting a grid of analysis built along the lines discussed, which allowed us to gather and classify different responses and take results that we presented subsequently (Tab. 1):

Table 1: Characteristics of the sample.

Actors	Students			108
	Teachers			17
School level (students)	Common core	1st year Baccalaureate	2nd year Baccalaureate	
	37 (34.25%)	6 (5.55%)	65 (60,18%)	
Specialty (students)	SVT (Sciences of Life & Earth)	PC (Physics& chemistry)	Mathematics	other (literary sections)
	82 (75.92%)	10 (9.25%)	9 (8.33%)	7 (6.48%)
Age	10-20	20-40		40-60
	Students	102 (94.44%)	6 (5.55%)	0 (0.0%)
Sex	Teachers	0 (0.0%)	5 (29.41)	12 (70.58%)
	Female			Male
	Students	62 (57.40%)	46 (42.60%)	
	Teachers	5 (29.41%)	12 (70.58%)	

The above table summarizes the characteristics of the sample that responded to our questionnaire. As it appears in table 1, our samples are formed by: -108 students and 17 teachers -62 (57.40%) students are female, and 46 students (42.60%) are male. -102 (94.44%) students are less than 20 and 6 (5.55%) are more than 20. The majority of students have a level of the second year Baccalaureate, i.e. 65 students (60,18%). Students belong to the following specialties: mathematics section 9 (9.25%), Life and Earth Sciences section (SVT) 82 (75.92%) and physics/chemistry section (PC) 10 (9.25%) -12 male teachers (70.58%) and 5 female women teachers (29.41%). -12 teachers have an experience of at least 20 years; i.e. 70.58%.

3.1.1. General information:

According to the statistics we have done, we find that most individuals link the ‘environment’ word to the word ‘nature’ and they are represented by 39% (Fig. 1).

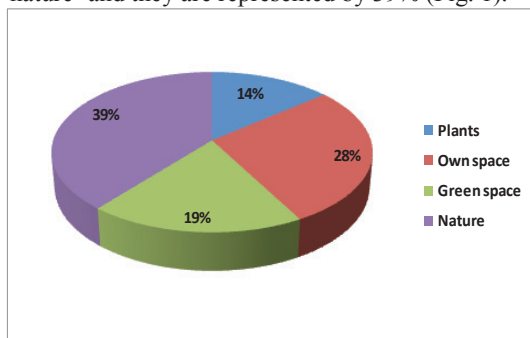


Fig.1. Meaning of the word environment

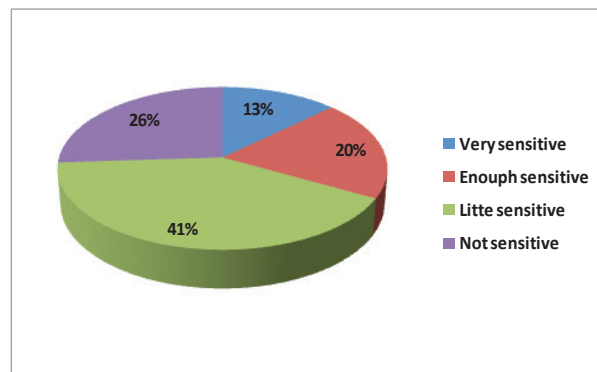


Fig.2. Knowledge of target public on the national or international environment days.

Furthermore, this study has shown that most of the targeted population is not aware of the days of the environment; this represents 41% (Fig. 2). With regard to individuals who are aware of the environment days we found that 25% responded with the international day of the environment; then 5% responded by other days like the day of the Earth, the day tree or the day of water; and 70% have not answered. Figure 3 indicates the meaning of the word 'bio product' by the different responses of students. It follows that the majority of them consider it as a 'natural product', other respondents rename it easily degradable (12%); 11% as a ‘chemical product’ and for the minority, or 4%, is considered as ‘non-degradable’.

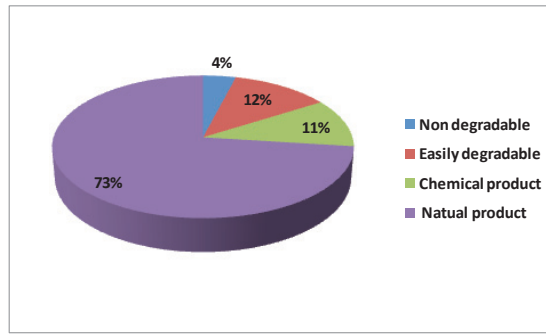


Fig. 3. Meaning of Bio product among target public

We find that most of the targeted population is not aware of environmental legislation (Fig. 4).

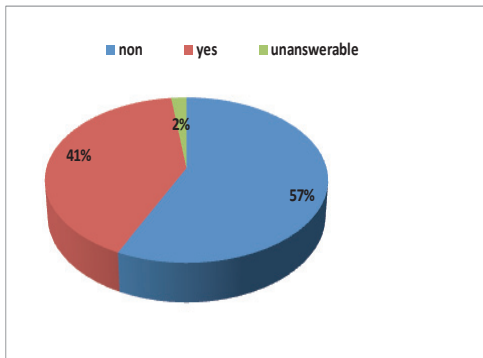


Fig. 4. Knowledge of environmental legislation

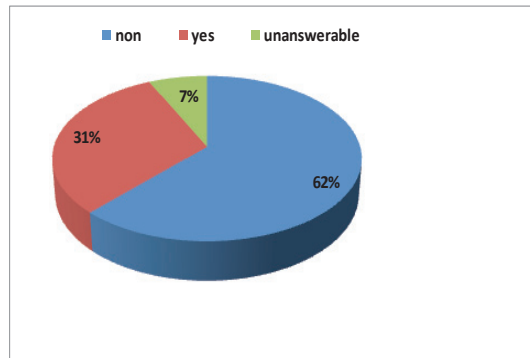


Fig. 5. Knowledge of the target population of associations concern for the environment

With regard to associations, some individuals know them well (Fig. 5). They cited as an example the Association of Teachers of Life and Earth Sciences; Mohammed VI Association for the protection of the environment.

3.1.2. The environment in high schools:

There are different ways to represent the results obtained in this part; each graph represents a question with the percentages of each choice.

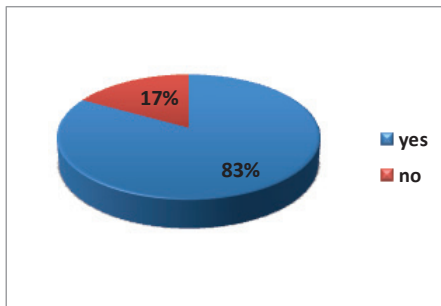


Fig. 6: Interest in protecting Environment in high schools

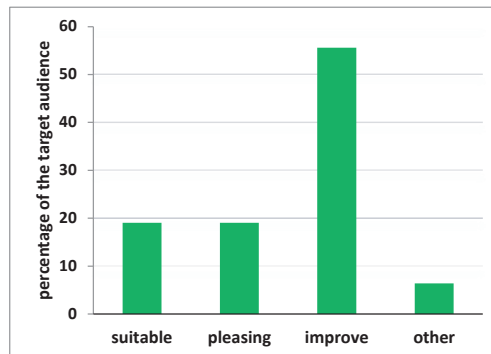


Fig. 7. Environment state in high schools

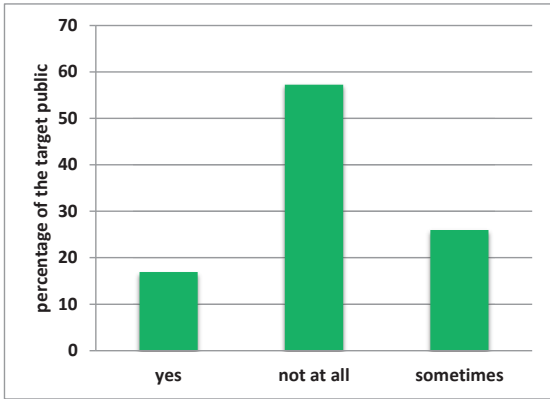


Fig. 8. Implementation of the activities

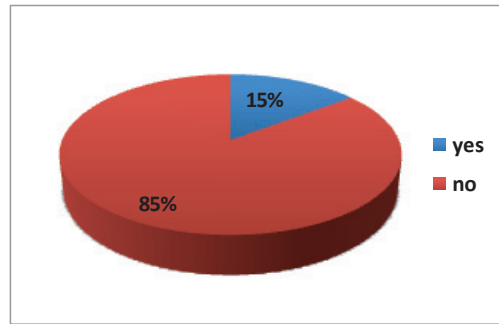


Fig. 9. Membership of clubs and environmental associations

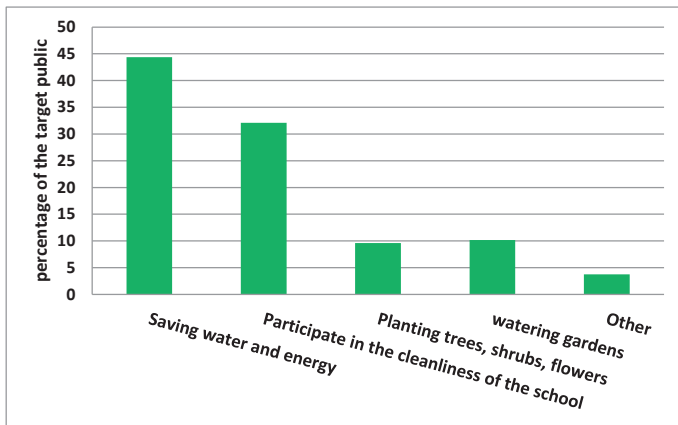


Fig. 10. Eco-gesture towards the environment in high schools

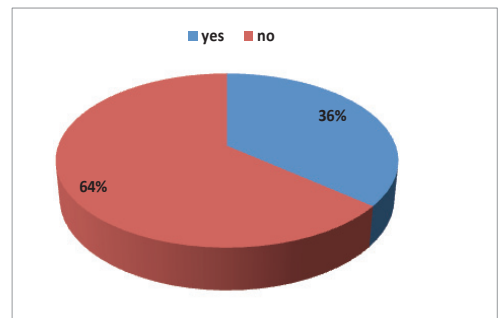


Fig. 11. Environmental papers in the library

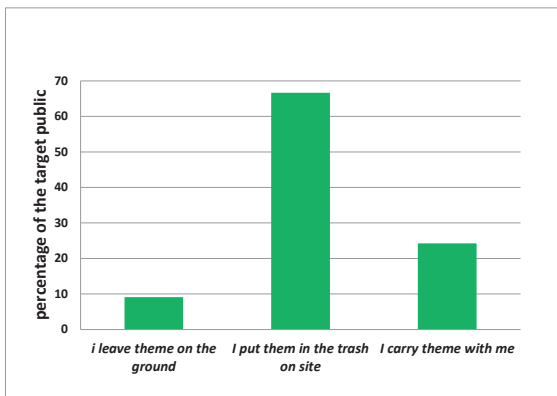


Fig. 12. Waste in schools

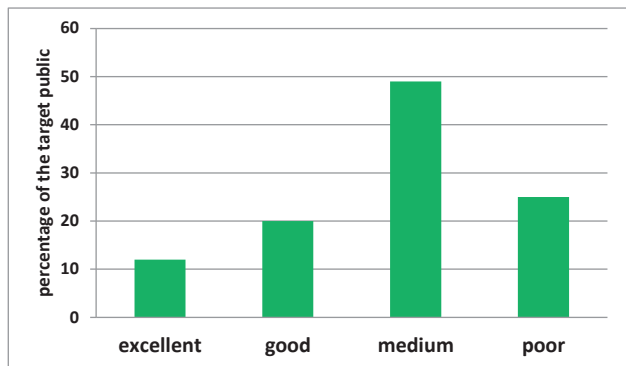


Fig. 13. School programs touching the topic of the environment

Responses concerning the environment in high schools allowed us to put the hand on several points that were neglected for a long time. Indeed, after processing these data, we see that the state of the environment in high schools is unsatisfactory. Thereby 55,6% of the targeted public expressed their desire to improve this situation and

make the environment more suitable (Fig. 7). This is confirmed by the results obtained for the question concerning the protection of the environment. The majority of the targeted population is interested in the protection of the environment and its components (83% of its targeted public, fig. 6). In addition, the analysis of the answers to the questions concerning some eco-gestures towards the environment (Fig. 10) has shown that generally the results were satisfactory since most of the population did not hesitate to make small gestures for the preservation of their environments. For example 66.7% of students put their waste in the bins and, subsequently, decrease pollution (Fig. 12). With respect to environmental activities, we noticed that 57.25% of the target population have no activity in favor of the environment, whether in high school or elsewhere (Fig. 8), and 85, 4% have no relationship with the clubs and associations of the environment (Fig. 9), this can be explained by the neglect of this domain in school curricula that are qualified as medium by 46.22% of its targeted public and poor by 23.58% of the students (Fig. 13), and also by the lack of motivation of the students by the administration and the staff who must encourage their students to do this kind of activity. Add to this the family environment and the entourage of each student who lack environmental culture, since 64% of students do not read books in relation with this subject (Fig. 11).

3.1.3. Barriers which handicap environmental school activities:

We have tried, by this study of our sample, to dress a table in which we list barriers environmental school activities at all levels listed below (Tab. 2).

Table 2: Characteristics of barriers to educational environment activities according to high school teachers (Fez).

levels	barriers to environmental school activities
-didactic and educational matters related to the teacher.	-insufficient training. -lack of involvement, motivation and interest. -lack of clear pedagogical techniques. -classical methods of teaching.
-related to the hourly load of modules.	-busy schedule -syllabus loaded -little importance to the environment. -too high number of students. (class overloaded, > 40 students)
-scientific content	-poor in mathematical and literary sections. -absence of true environmental content in programs. -the contents are emptied of their value, and have become very theoretical (texts).
-related to the lack of practical activities.	-no environmental awareness days. -absence of field trips and technical visits.
-Use of time of the discipline.	-There is no concordance between the time of studies and extra-curricular environmental activities.
- Technical, scientific equipment and papers.	-deficiency in infrastructure and equipment.

At the end of this questionnaire, we asked individuals to bring forward the proposals and suggestions on the environmental activities. We can summarize them in the following points:

- give much more interest to the topic dealing with the environment;
- awareness about the environment;
- Enrich the school libraries with magazines, books and documents related to the environment;
- Teachers wish that laboratories are provided with material resources, and educational tools;

3.2. Results of our interview with the regional environmental responsible in the Regional Academy of Education and Training Fez-Boulemane region

To complete our research we chose to interview the regional responsible of the environment.

Our goal was to find out how the Moroccan State, through the regional Academy, contributes to the support of the schools in this area., we discussed several points, namely, the progress of the environmental education in Moroccan schools (primary, junior high school, and senior high school), obstacles and difficulties facing the sector; and partnerships that contribute to the promotion of environmental education.

The axes of the interview focused on the following points;

- Who are the partners who support you?

-What does the Academy do to promote the environmental education in schools?

-How to qualify a school as ecological?

-To encourage creativity and innovation of schools in the domain of the ecological environment, are there any incentives to motivate them?

The information we got is:

-The partners are:

·The Mohammed VI Foundation for the Environment Protection, which has signed an agreement with the Ministry of National Education in 2010, on the occasion of the earth day.

·The High Commissioner for Water and Forests and the Fight against Desertification (HCEFLCD).

·The National Office of Potable water (ONEP).

- Programs of the Ministry of National Education.

- To encourage the environmental education in schools, the Academy allocates an amount of MAD 30000 per year for all clubs (health clubs, clubs of environment...). The Ministry also organizes national competitions like the competition of young journalists, as well as others.

-Ecological schools which educate students on environment and invites them to become aware of the consequences of their actions, to ask questions about their daily habits, and if necessary, to the pragmatic alternatives for an eco-responsible operation. To do this the State chooses each year one of the topics related to the environment and subsequently organizes competitions between these schools in relation to the chosen theme.

-To encourage the creativity of young students and the eco-schools, the Foundation Mohammed VI for the Protection of the Environment organized the labels 'Green flag' awards ceremonies at several schools across the Kingdom.

4. General conclusion

At the end of this study, we found that most of the students are not aware enough about the importance of the environment. A large part of the target population exercises practically no activity in relation to the environment, whether in high school or elsewhere. This can be explained by the fact that the school, which is one of the main ways of transmission of knowledge, devotes a small portion of these academic and extra-curricular environmental activities and does not sufficiently support the interventions of students in this topic, although the Ministry has always taken a special interest in environmental issues in the programs it offers to the students of both junior and senior high schools (Agorram, Khzami, Selmaoui, Abrougui & Elaboudi, 2010; Ben Brahim, 2002).

Finally we would like to mention that for a better implementation of environmental education, it is essential to develop and use continuity tools and teaching materials in the environment.

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