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Greening the Curricula

A Comparison between Primary and Secondary
Eco-school Projects

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Greening the Curricula: A Comparison between Primary and Secondary Eco-school Projects

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Abstract: In this paper we analyze the analogies and differences of the Eco-school Programs (EP) between Primary and Secondary centers. We aim to determine the existence of elements which differentiate the planning, implementation, management models, content and the execution of different EP projects and their related activities. A sample of 20 eco-schools was selected and we analyzed the testimonials of the coordinators of the EP. Analysis of qualitative and quantitative data allows the determination, in a comparative way, of patterns towards the greening of the curricula.

Keywords: Environmental Education (EE), Primary Education, Secondary Education, Eco-school Programs (EP), Greening Curricula, Comparative Study.

1. Introduction

Environmental Education (EE) has gradually achieved great importance in many different aspects of our lives. Among them, the education field is a key factor for the development and application of EE of quality, as long as it is implemented in a satisfactory way.

There are different proposals to integrate environmental education inside the educational field, e.g. the Ecoschool Program (EP) (<http://www.eco-schools.org>) which aims to introduce and promote EE for Sustainability. By promoting methodologies centered in active participation, students, with the help of teachers and the rest of the educational community (family, authorities, environment, etc.) are encouraged to play an active role in the practical phases to decrease the environmental impact of the school.

Many works related to EE, and its application in different levels of education, have been published during the last years. Hart (1999) presents a complete review of the state of the art of research in EE and Hungerford (1990) presents ideas to change the behavior of learners using EE in a paper that has become a classic within EE researchers. An example of a comparative study can be found in Burgos-Peredo, Gutiérrez-Pérez & Perales-Palacios (2010, 2012) where they evaluate the quality and impact of implementing EE in schools located in Chile and Spain which are associated to the National Environment Certification System of Chile or Eco-school European Association of Spain, in comparison to those schools which do not have such certification. Conde (2004) studies in depth how the integration of EE is carried out in Preschool and Primary school by means of analyzing the proposal of specific intervention in EE. Other examples of comparative studies in EE are Cordano et al. (2010) and Tuncer et al. (2007), in which they compare pro-environmental behavior of business students from Chile and the United States and environmental attitudes of Turkish elementary school students and pre-service teachers, respectively. Both works are good examples of comparative studies determining differences between attitudes towards environmental problems and pro-environmental behaviors.

The EP is an international EE program that is being developed in Spanish Primary and Secondary School by the Association of Environmental Education and Consumers under the coordination of the Foundation for Environmental Education (FEE). The scope of application of the program is very wide and, therefore, it presents different contents, educational planning and learning strategies according to the educational stage where it is being applied.

This work aims to elaborate a preliminary inform of the analogies and differences derived from the application of the EP in schools of different educational stages, namely Primary and Secondary School. To that purpose, we have carried out a case study including 20 different eco-schools, that is, schools that have adapted the EP, within the Granada province in Spain.

2. Justification of the Problem

2.1 Environmental Education in Spain

Romero-Díaz (2010) and Gutiérrez-Pérez & Perales-Palacios (2012) state that the evident ecological, social and economic unsustainability of the capitalist and globalized model, as well as the so called environmental crisis, have originated many different social and political movements that struggle for an alternative paradigm based on values that allow humans to live in harmony with their environment.

The accelerated deterioration of our environment is a real and patent problem that humans have to face in these days. Therefore, EE is acquiring importance inside our society as we have started to develop policies and strategies that help us mitigate the problem. Its objectives aim to create a pro-environmental attitude based on the transmission of environmental values that promote a critical ethic and attitude and emphasizing in sustainable development of future societies.

If we take a look to the Spanish Education Law in Ministry of Education (2006), we can find some concepts related to EE such as personal freedom, responsibility, democratic citizenship, solidarity, tolerance, equality, respect, justice, development of the personality and affective capacities, social cohesion, cooperation and values that promote respect for the living beings, the environment and specially forest areas and sustainable development.

2.2 Ecoschool Program: A Sustainable School Model

The learning and action process makes the EP an ideal instrument for schools to involve in an effective process of environmental improvement of the school itself and surrounding communities. It can influence in the lifestyle of the students and the rest of the educational community. Its methodologies favor coexistence, global education to exercise citizenship, education of quality, educational research, interchange of experiences, gender equality and development of scientific culture.

The main goal of the program is to boost the EE in the daily life of schools by involving their environment, as well as to create a network of schools to cooperate and interchange experiences. Schools develop a process of environmental improvement by means of self analysis and subsequent correction of the detected deficiencies. Such an analysis should derive in an improvement of educational practice.

The participation of schools in the EP requires a series of common elements imposed by the FEE such as the establishment of an Environmental Committee (including a coordinator of the program, usually a teacher) and an environmental audit, the elaboration of an action plan, the instauration of a behavior code together with the development of a control and evaluation system, divulgation of achievements and the obtaining of the Green Flag award that distinguishes schools that correctly apply the program.

The EP is an environmental management, certification, and sustainable development education program for schools. A participatory approach and combination of learning and action make it an ideal way for schools to embark on a meaningful path to improve the environment in both the school and the local community. EP involves some steps that any school can adopt: establishing an Eco-schools Committee to encourage and manage the program; providing environmental curriculum to students which includes hands-on opportunities for students to improve and empower the school and community; and developing an eco-code which outlines

the school's values and objectives alongside student goals. The process involves a wide range of stakeholders, but it is the pupils who play the most important role. Schools are evaluated after a period of participation and successful activities.

As a democratic and participatory program, pupils and staff experience active citizenship in school which encourages them to take ongoing important roles in improving both their school and home environment. Additionally, the schools are given the opportunity to create links with other schools, nationally and internationally, creating a means for cultural exchange, language improvement and the sharing of environmental education ideas.

3. Aims of Research

As we said in the introduction, the general objective of our research is to evaluate the analogies and differences of the implementation of the EP in Primary and Secondary Schools. More specifically, we seek answers for the following questions: are there any elements that differentiate the content and the execution of the different EP projects and their related activities between different Schools? If existing, can we relate such differences to the context of the school where the EP is being applied? Are these differences independent to the context of the school and are they present even in schools of the same educational stage? Is the EP applied as originally stated?

By answering these questions we aim to elaborate a report that throws light on how homogeneous is the EP and how properly its principles and values are being adapted to the different stages of education by the coordinators of the program at every analyzed school.

4. Research procedure

4.1. Gathering Data

We have followed an interpretative approach of the case study methodology, therefore, first we will be theorizing about differences and analogies by means of explaining the nature and important components of the EP and, in second place, by means of analyzing qualitative data that we have gathered through a set of interviews. We have chosen a sample of 20 schools enrolled in the EP within the Granada province in southern Spain. The EP is currently being applied by a higher number of Primary Schools than Secondary Schools; therefore, the sample is composed by 15 Primary Schools and 5 Secondary Schools. The selection of the sample is non-probabilistic and of intentional character since we have chosen a series of schools that we estimate are representative of the population.

In order to gather data we have analyzed the testimonials of the coordinators of the EP in every school of the sample. These testimonials were obtained by means of personal interviews and are included in Burgos(2010). We have selected and extracted the most revealing testimonials from the transcriptions of the interview audios.

The interview follows a semi-structured model since it is derived from a previous script that specifies the relevant information to be found. Questions are asked in an open way in order to obtain non-bounded answers.

Table 1 shows the questions which were asked to the coordinators.

Table 1: Questions included in the interview.

- 1- What personal experiences relate you to Environmental Education? Do you have any background in Environmental Education?
2. What does the “Ecoschool” name given to the program inspires/suggests you?
3. Assess this program according to its environmental and pedagogical coherence and its transcendence in the school. Show some evidences.
4. Who takes part in the program? Who should take part in the program and what should we do to involve them?
5. Who decided to adopt the Ecoschool Program? Any comments/remarks about that?
6. Has the Educational Project of the school been modified to implement the program? What has been done? What should be done?
7. Is there any pedagogical innovation related to the program in the school? How is it manifested? How should it be manifested?
8. Is there any plan of action derived from the Ecoschool Program? How is it implemented? How is it improved? Is it revised annually?
9. What kind of financial support does the school receive to develop the program? What should be done in this area?
10. Name what environmental strategies have been implemented in the school since it joined the program.
11. Name different projects or activities that have been created after joining the program.
12. How do you define the work of the Environmental Committee? How would you improve it?
13. Is there any kind of educational support in Environmental Education for the educational community? Who has benefited from this support? How would you improve such support?
14. How are evaluation processes being applied in relation to the program? What should we do to evaluate the program?
15. Enunciate the main achievements and results of the Ecoschool Program highlighting those having the most impact to your school.
16. Assess and comment the institutional support to your school to develop the program.
17. What benefits does the program have for the environment of the school?
18. Suggest some innovation and change proposals for the program related to the curriculum as well as to management and interaction with the environment.
19. How would you define and characterize an Environmental Educator?

In addition to the interviews we have also analyzed a set of projects and activities developed by both Primary Eco-schools and a Secondary Eco-school which implement the EP. Data from Primary Schools have been extracted from Vargas (2010) and data from Secondary Schools were obtained from a school that has been awarded multiple times for their environmental initiatives and their efficiency developing the program. By doing this we aim to identify any possible differences and analogies in the principles and methodologies of the activities since they are thought for students of different age ranges.

We, therefore, have various datasets gathered from different sources: interviews conducted to coordinators of EP in Primary Schools, interviews conducted to coordinators of EP in Secondary Schools and the analysis of activities and activity programs from Primary and Secondary Schools. The inquiry is guided by key categories which have framed the research process and assisted in identifying relevant research questions. These categories have also assisted with structuring presentation of findings. This allows us to carry out a triangulation of sources that improves the robustness of the comparative study (Fig. 1).

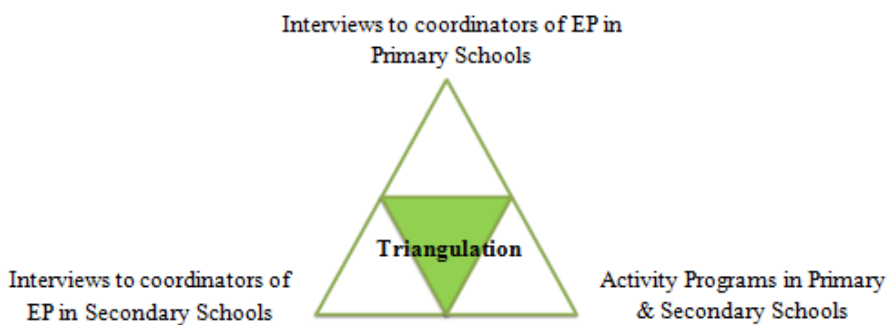


Figure 1: Triangulation process between sources.

4.2. Classifying Data

Prior to analyzing the gathered data we need to build a system of categories to order and classify them. The system of categories aims to classify the answers of the coordinators in different clusters according to their subject. By doing this we can analyze data following a logical order that eases us the extraction of conclusions. Among all the questions of the interview, we have selected those where the answer, a priori, should be bounded in a specific subject. Therefore, we have followed an inductive process to define the general categories by starting from specific answers and then fitting them into different clusters.

Fig. 2 shows the process of elaboration of the eleven categories and table 2 describes them.

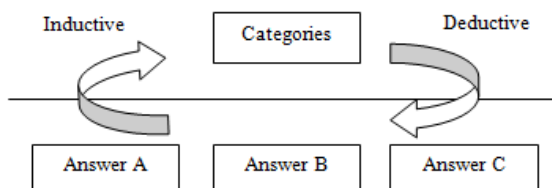


Figure 2: Diagram of the inductive/deductive process to connect answers and categories.

Table 2: Name and description of categories defined from questions.

<i>Category Name</i>	<i>Category Description</i>
1.Experience-Background of the coordinator in EE.	This category includes answers to question number 1. Through the analysis of this category we aim to study if coordinators have an EE background or they are new to the subject.
2.Environmental Coherence.	This category includes answers to question number 3. Through the analysis of this category we aim to check the degree of environmental coherence between taught environmental values and the behavior of the community of the school (students, teachers, staff, etc.).
3.Pedagogical Coherence.	This category includes answers to question number 3. Through the analysis of this category we aim to check the degree of environmental coherence between the contents taught in the subjects and the values of the EP.
4.Participation.	This category includes answers to question number 4. Through the analysis of this category we aim to check the degree of participation of all the EE agents (students, teachers, school staff, families, local companies and institutions) in the program.
5. Modification of the Educational Project.	This category includes answers to question number 6. Through the analysis of this category we aim to check to what degree the EP has influenced in the planning of the whole Educational Project of the school.
6. Pedagogical Innovation.	This category includes answers to question number 7. Through the analysis of this category we aim to check if the adoption of the program has originated new pedagogical strategies to transmit its values.
7. Plan of Action.	This category includes answers to question number 8. Through the analysis of this category we will be able to check if there is a detailed plan of action that includes all the activities that are related to the program.
8. Financial Support.	This category includes answers to question number 9. Through the analysis of this category we will be able to check if the school receives any kind of financial support to properly develop the program.
9.Environmental Committee.	This category includes answers to question number 12. Through the analysis of this category we aim to check if the Environmental Committee is formed and operational and what work is being done in it.
10.Evaluation of the Program.	This category includes answers to question number 14. Through the analysis of this category we aim to check if the Program is being evaluated internally and/or externally and the nature of that evaluation.
11. Institutional Support.	This category includes answers to question number 16. Through the analysis of this category we aim to check if schools are being supported by the institutions and what coordinators think about the received support.

5. Analysis of Data

Once the data are fitted into different categories we can proceed to analyze them. We will perform both a qualitative and a quantitative analysis over the gathered data. First, we will seek different revealing testimonials that may help us to extract conclusions by means of a qualitative study. Then we will carry out a frequency analysis of the answers of those questions which answers can be quantified. After that, we will compute some basic statistics to help us make a more visual and direct comparison between categories and Schools.

5.1. Qualitative Analysis

Through the qualitative analysis we aim to carry out a content analysis by selecting the most relevant information present in the answers given by the coordinators. As we said before, the testimonials were synthesized and then classified into different categories so the analysis of content is very straight forward. The testimonials of each category have been fitted into tables so the information can be inspected at a glance. Table 3 is an example of the testimonials that were fitted into category number 9 (Environmental Committee). The rest of tables are omitted in the present paper due to their excessive length.

Table 3: Relevant information obtained from the answers given by the coordinators to question number 12: *How do you define the work of the Environmental Committee? How would you improve it?* Schools #1 to #15 are Primary Schools. Schools #16 to #20 are Secondary Schools.

	<i>Category 9: Environmental Committee (EC). Testimonials given by Coordinators</i>
<i>School #1</i>	"The EC is not currently formed since the coordinator argues that it is not really an operational structure of the organization. The teachers have too much work to participate in more structures".
<i>School #2</i>	"The EC Works cooperatively dealing with subjects presented by teachers and parents. Such a cooperative work generates better results".
<i>School #3</i>	"The EC, as it is conceived, is not viable since it is an amalgam of people and institutions that can hardly ever assist to the meetings. We have only been able to involve students and teachers."
<i>School #4</i>	"The EC was created under the supervision of the coordinator. It is formed by the Head of the School, the Director of Studies and the President of the Parents Association. The Councilor of Environment of the town also takes part in it and offers activities partially founded by the Town Hall. The EC has currently two meetings per year.
<i>School #5</i>	"The EC is only formed by teachers. We have not incorporated the community".
<i>School #6</i>	"There is no EC as such. The Board of the Parents Association treats the issues related with the program. We have 8 to 10 meetings per year. Its local structure eases the functionality".
<i>School #7</i>	"The EC was initially formed by local companies, teachers, the Town Hall and parents. Nowadays the EC is only formed by the School Board since there was little implication by the rest of the agents".
<i>School #8</i>	"The EC is not constituted. It is not a necessary structure. The participation processes take place outside this committee".
<i>School #9</i>	"There is no EC. The activities related to the program are proposed by the Coordinator and approved by the Head of the School".

<i>School #10</i>	“We have never had an EC”.
<i>School #11</i>	“The EC is not currently formed. We have programmed meetings several times but there has never been a representation from all different sectors. Teachers have decided to coordinate their activities outside this committee”.
<i>School #12</i>	“The EC is not currently formed”.
<i>School #13</i>	“The EC is not currently formed”.
<i>School #14</i>	“The EC is constituted but it is not operational”.
<i>School #15</i>	“We have never had an EC”.
<i>School #16</i>	“The EC is not operational anymore”.
<i>School #17</i>	“The Program issues are discussed in a work group. The work group is formed by teachers, students, parents, other staff and a representative from the Town Hall”.
<i>School #18</i>	“We have not implemented it yet. It is one of our current goals”.
<i>School #19</i>	“We have merged the EC with the School Board. We do not include the community”.
<i>School #20</i>	“The EC is not currently formed”.

The previous procedure was repeated for each one of the eleven categories. As we mentioned before, the third source of information is an analysis of two sets of activities related to the EP which are carried out in Primary Schools and Secondary Schools. The EP is ultimately expressed by the activities that are performed in schools, so by analyzing them we aim to extract information about differences and analogies in some of the categories such as experience of the coordinators of the activities, participation, pedagogical coherence and innovation, environmental coherence, financial and institutional support, level of participation and agents participating. Some examples of the studied activities are:

-Primary School

The Environmental Corner: One of the walls at the hall of the School is dedicated to show different environment-related posters made by the students. The objective is to raise community awareness through artistic expression and to promote the adoption of sound environmental practices inside and outside school.

Plantation of trees in the environment: Students and teachers took part in the repopulation of trees of an area close to the school. The objective was to promote the respect for the environment letting them know the advantages of having forest areas close to the town.

Workshop in Waste Management and Recycling: During the previous weeks to the workshop the teachers informed the students about the benefits of recycling. Special emphasis was made in the importance of recycling glass and plastic. Four different games were played under the supervision of monitors provided by the Regional Government.

-Secondary School

Point of Environmental Information: The Point of Environmental Information is a big bulletin board that is placed at the entrance of the school. It displays information about activities, courses and seminaries related to the environment which are taking place in the town and within the region.

The Science Corner: The Science Corner is also a bulletin board that displays information, which is periodically renewed, about different science subjects. Improving the science knowledge of the students is a key factor to make them understand the environment.

Workshop in Renewable Energies: During a complete day different devices working with renewable energies were presented to the students. The day ended with a meal that was entirely cooked using sun powered devices.

By inspecting the previous activities, we see that most of them are similar in their objectives and employed methodologies. All activities make special emphasis in being entertaining and attractive to the students to improve their motivation and attitude towards the contents that are being taught. As expected, the main differences come from the age of the students the activities were thought for. In addition, we have found that some of the activities followed at Primary Schools involved active participation of families and local administrations, whereas none of the activities analyzed at Secondary Schools included any presence of these agents. It is also significant that activities were conditioned to a high degree by the environment of the school, and the possibility to integrate external resources. In this aspect, we have observed that Primary Schools are more successful at carrying out outdoor activities located in the environment, whereas those organized by Secondary Schools always take place in enclosed areas.

5.2 Quantitative Analysis

The process of quantification of data is based on a descriptive statistical analysis of the answers given to the questions representing each category. We only quantified those questions which answers were of the yes/no, never/sometimes, some/none, internal/external, complete/incomplete kind. Figure 3 shows a diagram depicting the steps followed to quantify the qualitative data.

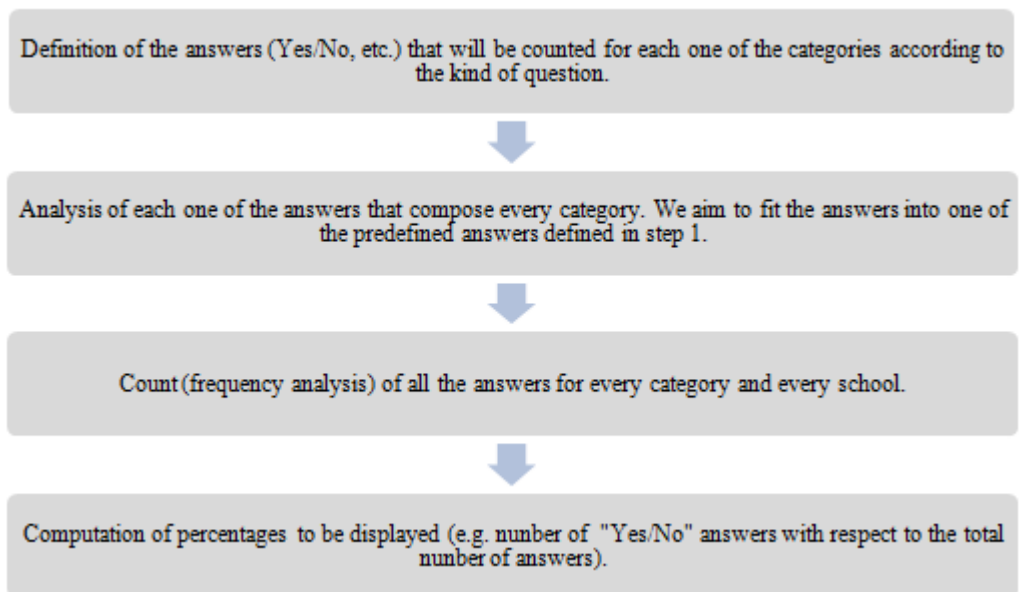


Figure 3: Steps followed to quantify qualitative data obtained from the answers.

With this quantification, we want to reflect the global situation of the EP in the studied schools and ease the construction of mind schemes of the current situation of the program so the qualitative information is better understood. Table 4 and complementary representations included

in annex 1 reflect the quantification of the answers of each category for Primary and Secondary Schools.

Table 4: Frequency analysis of answers given to questions related to each category.

		<i>Primary Schools</i>		<i>Secondary Schools</i>		<i>Chi Squared Test</i>
<i>Category</i>	<i>Answer</i>	<i>Freq.</i>	<i>%</i>	<i>Freq.</i>	<i>%</i>	<i>Sig. < 0,05</i>
1-Experience- Background of the Coordinator in EE	Yes	8	53.33	3	60	Diff.
	Some	2	13.33	0	0	
	No	5	33.33	2	40	
2-Environmental and Pedagogical Coherence	Yes	5	33.33	2	40	Diff.
	Some	2	13.33	2	40	
	No	8	53.33	1	20	
3-Participation	High	3	20	0	0	No diff.
	Medium	4	26.66	3	60	
	Low	6	40	0	0	
	None	13	13.32	0	0	
4-Modification of the Educational Project	Yes	7	46.66	1	20	Diff.
	Slight	0	0	2	40	
	No	8	53.33	2	40	
5-Pedagogical Innovation	Yes	4	26.66	2	40	Diff.
	Some	7	46.66	2	40	
	No	4	26.66	1	20	
6-Plan of Action	Yes	4	26.66	1	20	No diff.
	Partial	3	20	2	40	
	No	8	53.32	2	40	
7-Financial Support	Yes	0	0	0	0	No diff.
	Some	1	6.66	2	40	
	No	14	93.32	3	60	
8-Environmental Committee	Complete	3	20	0	0	Diff.
	Incomplete	2	13.33	2	40	
	Inexistent	10	66.66	3	60	
9-Evaluation	Internal	6	40	1	20	Diff.
	External	0	0	0	0	
	None	9	5.99	4	80	
10-Institutional Support	Yes	0	0	0	0	Diff.
	Some	6	40	1	20	
	No	9	59.99	4	80	

By comparing a selection of quantitative curricula greening dimensions, we can explore more differences between Primary and Secondary eco-schools. Statistical contrast Effect Size test shows differences between Primary and Secondary schools focused on: actions of environmental committee and availability of materials/resources of the centers. There are not significant differences between Primary and Secondary schools in any of the seven curricular greening dimensions analyzed (Table 5).

Table 5: Analysis of curricular greening dimensions.

<i>Dimensions of Curricular Greening</i>	<i>EcoSchools Educational Level</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Effect Size (sign. $d>0,8$)</i>
Environmental Committee	Primary EcoSchools	3.85	1.06	.98 Sig.
	Secondary EcoSchools	3.46	.84	
Commitment	Primary EcoSchools	3.36	.60	.33
	Secondary EcoSchools	3.23	.50	
Environmental Policy	Primary EcoSchools	3.27	.75	.43
	Secondary EcoSchools	3.44	.56	
Management	Primary EcoSchools	3.24	.50	.38
	Secondary EcoSchools	3.39	.41	
Training	Primary EcoSchools	3.19	.60	.53
	Secondary EcoSchools	3.40	.48	
Leadership	Primary EcoSchools	3.08	.86	.13
	Secondary EcoSchools	3.13	.54	
Materials & Resources	Primary EcoSchools	2.45	.67	2.18 Sig.
	Secondary EcoSchools	3.32	1.14	

A representation of the results above is shown in the following boxplot diagram (Fig. 4), the environmental committee and material variables and resources are the only ones that show differences between primary and secondary.

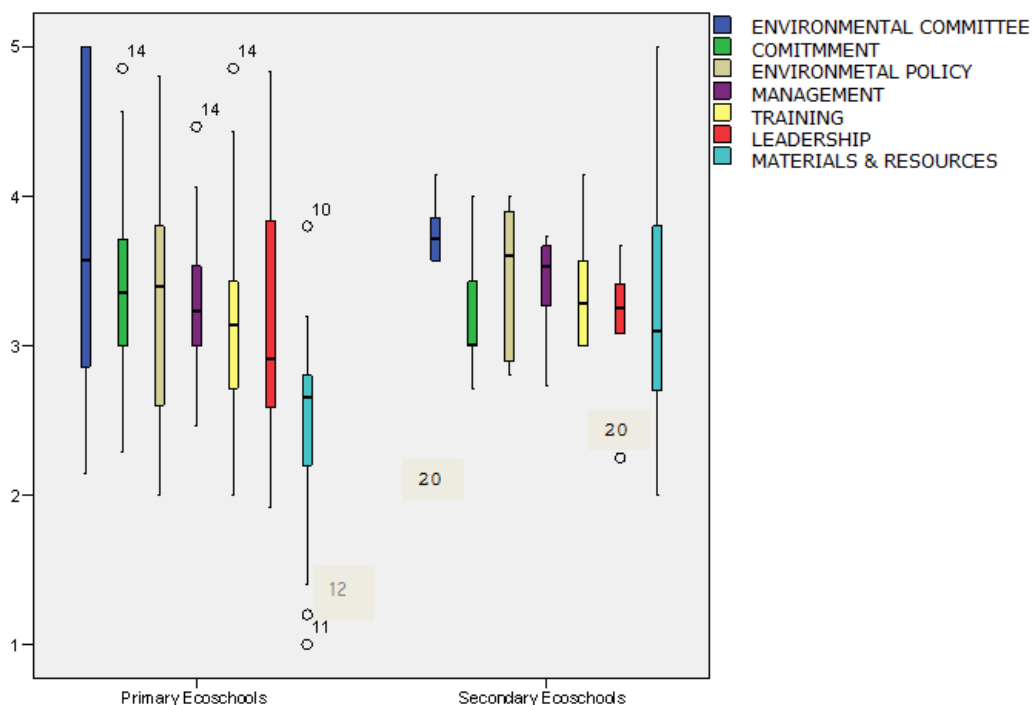


Figure 4: Box Plot comparison of Primary Echo-schools vs. Secondary Echo-schools.

6. Conclusions

After analyzing the qualitative and quantitative data we can conclude that there are no significant differences in the application of the EP between Primary and Secondary Schools. Found differences are more related to the management of every school, the motivation of the teachers, the attitude of the students, and the implication of the community than with the stage of education of the school where it is being developed.

We have not found either any pronounced differences in the background nor in the transmitted values of the analyzed activities in different schools. The only found differences are related to their adaption to the age range of the students taking part.

Based on many testimonials we have observed that the EP works better in those centers where there is continuity in the educational staff and a continuous internal evaluation. Some of the analyzed schools were located in small towns in rural areas where there is a high level of rotation of the educational staff. This situation together with the lack of communication between incoming and outgoing professors is a very limiting factor in the efficient development of the program. The lack of continuity is observed more in Primary Schools as Secondary Schools are usually located in more populated towns where the educational staff is usually settled. However, we also observed that some small Primary Schools have been very successful in the application of the Program even when there is still a continuous rotation of teachers. These centers have carefully documented all their action plans and activities so new staff coming every year can continue with the already existing plans.

Finally, we proceed to draw some conclusions for each one of the categories that have been analyzed during the study.

- 1- Experience/Background of the coordinator in EE: The experience and background in EE of the interviewed coordinators is very heterogeneous. Some coordinators have chosen to manage the program as they have a good background in science and/or have participated in pro-environment movements. On the other hand, other coordinators have been put in charge by the School Board and have neither previous experience nor motivation to properly develop the EP. The institutions offer courses in EE for the educational staff many times during the year but most teachers are not interested in them as they are imparted during weekends or out of their scheduled hours.
- 2- Environmental Coherence: The environmental coherence is achieved only when the School Board is involved in the program and they start environment friendly policies to manage supplies. We have observed that some of the centers have coordinators that are very interested in the Program but lack from support from the Board and, therefore, school has poor environmental policies (open windows while central heating is on, water leaks, no recycling, etc.) and low coherence with taught values.
- 3- Pedagogical Coherence: Some schools show a high degree of pedagogical coherence as all the programs of the subjects are very transversal and turn around EE values. This has been observed in small Primary Schools where the same teacher imparts many different subjects. If the teacher is interested in the EP, then he will include EE activities in all his subjects. On the other hand, Secondary Schools have a larger number of teachers that only teach one specific subject and use books provided by publishers as the core of their courses. If those books do not include EE related content, then, even if the school is in the EP, there will not be any pedagogical coherence.
- 4- Participation: The participation in the program depends highly on the degree of motivation of the teachers. Since participating in the program does not entail any benefits to their careers (financial support, merits for promotion, etc.), most teachers decide to take part in other programs that do have some benefits. We have also

- observed that the community was more active in small towns. As a conclusion, most coordinators complain about the difficulties they have to motivate the families and specially the institutions as well as local companies.
- 5- Modification of the Educational Project: Most studied schools do not modify their projects as they feel the institutions do not recognize the amount of work needed to do it. Implication of the Board is again critical since the coordinators usually do not have enough power to force the modification.
 - 6- Pedagogical Innovation: All the studied schools present pedagogical innovation at some degree, however most coordinators complain about the lack of resources they have to put it into practice. This leads to a poor innovation in the activities since most schools usually repeat the same activities every year.
 - 7- Plan of Action: As in previous categories, the motivation of the coordinator and the Board is of key importance to develop a consistent plan of action. As we said before, continuity of the educational staff is also very important to be able to give robustness to the developed plan. Most Primary Schools fail to develop consistent plans while Secondary Schools are usually more successful mainly because of the lower rotation of teachers.
 - 8- Financial Support: In our opinion, this is the weakest link of the EP. Unlike other programs, the EP is not funded at all by the institutions. This causes most schools to refuse to implement it and those doing it never do it in an efficient way. Financial support is essential to establish an EE of quality.
 - 9- Environmental Committee: Despite of being a basic pillar of the EP, there are a large number of schools where it is not formed (60% of Primary Schools and 40% of Secondary Schools) and others where it is incomplete (13.13% of Primary Schools and 40% of Secondary Schools).
 - 10- Evaluation: None of the schools have external evaluation of the EP. There are no audits of the program carried out by the institutions as they do not provide any financial support. The lack of external and internal (in some cases) evaluation contributes to the poor efficiency of the application of the EP.
 - 11- Institutional support: As expected, coordinators do not feel supported by the institutions at all (not just financially). Some local companies offer small amounts of money and materials for some activities. As a general conclusion, we can affirm that the Regional and National governments discriminate the EP in favor to other programs and that discrimination is a huge burden to the correct application of the principles of the Eco-school Program.

Acknowledgement

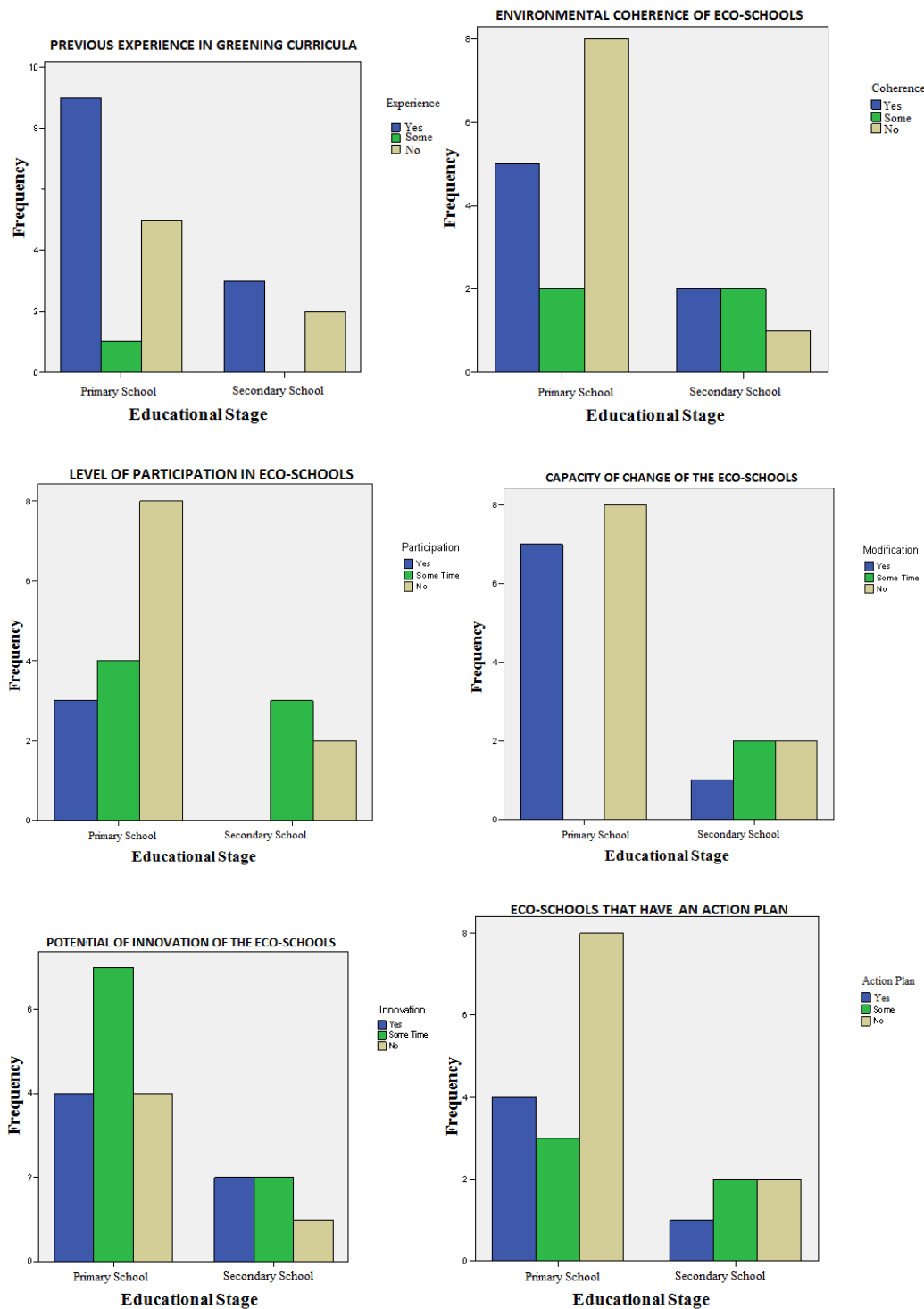
This work has been granted by the EDU2008-03898 and EDU2008-02059 Projects from the 2008 National R&D Plan of the Spanish Ministry of Innovation and Science, entitled "Education for environmental citizenship in educational contexts: definition of quality standards for the evaluation and improvement of educational programs related with environmental problems".

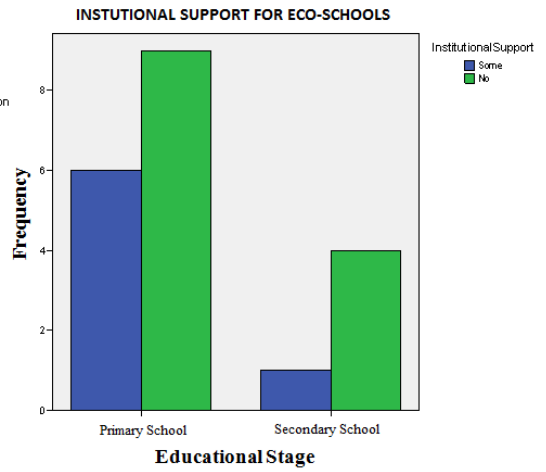
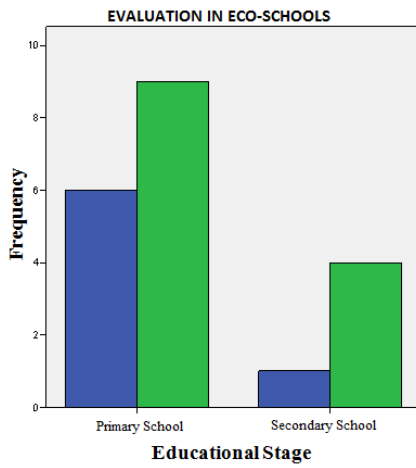
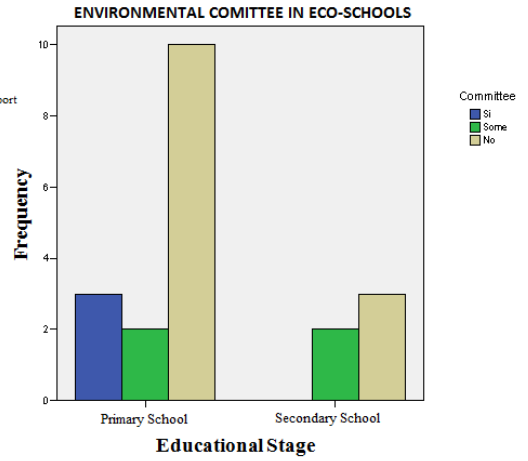
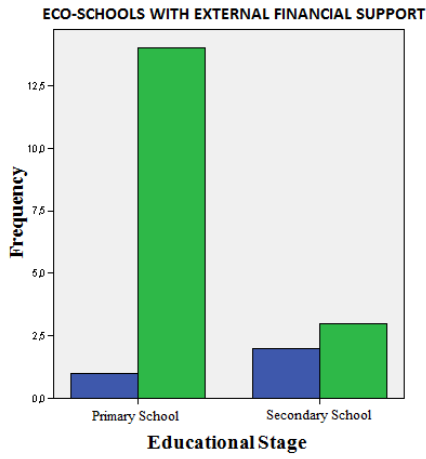
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Appendix 1: A Comparison between Primary and Secondary Eco-School by Different Dimensions of Curricula Greening.





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