

5. Executive summary

This research revealed that Italian environmental education (EE) is a **cross-cutting and multidisciplinary area**, which is usually integrated into scientific subjects such as chemistry, biology, geography and architecture, but also sometimes into language and social education lessons. These findings also indicate that schools play a critical role in enhancing the environmental awareness of their students. **EE teachers regularly involve students in recycling activities and students seem fairly engaged** in this kind of project, mostly enjoying the practical nature of it. **Half of the students** involved in these projects have a keen interest in the environment and **are willing to become more active in environmental protection**. On the other hand, **the other half show very little or even no interest at all** in environmental issues. Teachers believe that **raising awareness of environmental issues among both students and their families is essential**. Students should also be stimulated and inspired through various non-traditional means.

Overall, the Italian teachers and students who participated in the online survey were **rather enthusiastic** about the *Environment for Young Europeans* (EYE) website, particularly since it was **clear, colourful, simple to navigate and available in Italian**. The students were slightly less enthusiastic than their teachers and were progressively less positive and more rigorous in their criticisms with age. Most, however, found the website **efficient, helpful and relevant for classwork and homework**, though some of them said it was **old-fashioned, targeted mostly at primary school students and too superficial**.

Most teachers who used the Internet as a teaching resource preferred to depend on EE websites they knew they could rely on, as opposed to searching the web randomly for Internet teaching resources. The research suggests that they were **particularly interested in and complementary about the projects** offered on the site. Most noted that they would also appreciate the creation of a forum to meet other teachers from across the EU and expressed interest in **regular environmental news updates, best practice examples of green schools and a download/upload area**.

Students tended to be motivated by **higher levels of interactivity, more content and better games**. While the different age groups had distinct aesthetic tastes, all were particularly **enthusiastic about features such as chat rooms, blogs, forums, videos, news, pictures, and areas where they could upload content and photos**. The older students particularly favoured the idea of creating different pages according to the age groups.

While the **vast majority of Italian teachers estimated that all sections** were useful or very useful for students in their **leisure time**, students were less positive about this aspect. Students, however, valued the **WASTE and WATER sections** as the most interesting ones on the site.

The data indicate that the **EYE website is considered clear, efficient and user-friendly by its Italian audience, though certain revisions in terms of attractiveness and contents would be appreciated by all parties**.

5.1. Introduction

This section gives an **overview** of the Italian educational system and approach to environmental education (EE). Furthermore, it introduces the National Coordinators who conducted the surveys in this country and presents several EE best practices at the local level. Finally, details about the schools and teachers taking part in the project are provided.

5.1.1. Educational system and environmental education

In Italy, children begin their education at the age of six, although enrolment can be anticipated at the age of five years and four months.¹ Primary education lasts for five years and is followed by a three-year *scuola media inferiore* (lower secondary school) which involves an exam at the end of the final year. Students can then enrol in different types of five-year upper secondary schools, such as *liceo classico* (classic lyceum), *liceo scientifico* (scientific lyceum), *liceo linguistico* (linguistic lyceum) and *liceo artistico* (artistic lyceum). Children can also enter vocational, technical and commercial schools, which generally last three or four years. Upper secondary education with a duration of five years grants pupils access to the final exam (*Esame di Stato*) which, upon completion, gives them the right to apply to any faculty at any University in Italy and in most European countries. The total number of years of primary and secondary education for students attending a lyceum is usually 13.

Environmental education is perceived as a cross-cutting and multidisciplinary subject. It is generally taught during scientific classes (e.g. chemistry, biology, geography, etc.) but is sometimes also used within language and social education. Teachers are encouraged to promote workshops, field trips and projects on environmental protection and education.

National indicators illustrate that Italian environmental education begins in pre-school education, where concepts such as "knowledge of world order, measures, space, time and nature" are introduced.

5.1.2. National Coordinators for the project

Linda Giannini and Carlo Nati are the National Coordinators for the evaluation of the EYE website project in Italy. They are both experts in multimedia and new technologies and have experience in using ICT, particularly the Internet, for teaching.

Linda Giannini is currently employed as a nursery school teacher. Since 2003, she has been a representative and coordinator of the *National Robotics Project*, which is aimed at involving students – from kindergarten to secondary school – in the world of robotics and cybernetics. She also worked as a training supervisor for the degree in 'Primary Education Science' at *Roma Tre* University and has published a large number of articles, particularly in the field of online education. Linda has a University Degree in Audiovisual and Multimedia Techniques of Communications from Ferrara University and is currently enrolled in a Masters programme in Legal and Statistical Public Administration at *La Sapienza* University in Rome.

Carlo Nati has been a teacher of geometry, architecture and interior design in a secondary school for 16 years. He is also a member of the cross-ministry National Committee on

¹ "The Education System in Italy", Eurybase - the Information Database on Education Systems in Europe
http://www.eurydice.org/ressources/Eurydice/pdf/eurybase/2006_DNIT_EN.pdf -

Science and Technology and is the Project Manager of the committee's website.² In 2007, he was in charge of a National survey on school laboratories.³ In addition, Carlo has University degrees in Architecture from *La Sapienza* University in Rome and Audiovisual and Multimedia Techniques of Communications from Ferrara University.

Furthermore, Linda and Carlo are both active members of the Xplora teachers group.

The market surveys of both teachers and students were carried out between 11 and 19 May 2008 inclusively.

5.1.3. Market overview

According to the National Coordinators, **levels of environmental awareness** among Italian students have significantly increased in recent months because of massive media coverage of the Campania region's waste problem. Pilot schools selected for this project, in fact, were all located in Latina, a town in southern Lazio and close to the borders of Campania.

Environmental education has nevertheless been taught for many years before the waste scandal and teachers from several Italian regions have been promoting environmental projects since the early 1980s.

The EYE website has immediately been welcomed by selected students and teachers. In fact, besides the problem of waste, children are very receptive to environmental problems such as groundwater pollution and smog. Many of them are also concerned that the presence of large factories and their proximity to highly populated areas might cause health problems in the short and long term.

Best practice example of EE website at national level

L'ambiente siamo noi (We are the environment) website was developed and launched by the Italian Ministry of Public Education to inform young people about key environmental issues. The website mainly targets secondary school students and provides visitors with information about events, news, competitions for 'Green Schools', case studies, and a selection of videos featuring successful projects, etc.

Best practice examples of environment-related initiatives at local level

Each Italian region has both public and private environmental education agencies. These are usually linked to the regional administration and to the national Ministry of Environment.⁵

In 1998, the Italian Ministry of Environment, together with the *Laboratorio Regionale di Educazione Ambientale del Friuli Venezia Giulia* (LaREA), launched an environmental education campaign, called *Eco-schools*.⁶ The campaign initially involved nine schools in the Friuli Venezia Giulia region but soon increased, by the year 2000, to 34 schools spread

² www.pubblica.instruzione.it/argomenti/gst/index.shtml

³ www.glst.caspur.it

⁴ www.benesserestudente.it/news/leggi_area.asp?ARE_ID=17&ART_ID=1766&MEC_ID=81&MEC_IDFiglie=0

⁵ "Environmental education in the educational systems of the European Union", DG Environment
http://ec.europa.eu/environment/youth/pdf/envedu_en.pdf

⁶ www.eco-schools.it/eco/index.asp

across different regions. The aim of the campaign was to promote environmental education in schools by producing teaching materials and several types of documentation on the subject.⁷

5.1.4. Schools and teachers involved in the project

Pilot School number one, the *Primaria IC Don Milani* primary school, is located in a suburban environment (on the outskirts of Latina), with its students – aged 5 to 11 – coming from the town and its suburbs.

Latina has 120 000 inhabitants and the school has a total of 400 students. The suburb where the school is located is densely populated and inhabited by middle to low income families. A large portion of this area is also populated by immigrant families of Moroccan, Chinese, Romanian, Polish and Peruvian origins.

The school is highly involved in environmental activities and promotes several recycling projects. Its 35 teachers are engaged in numerous environmental campaigns, which include educating children on the importance of sorting household waste.

Pilot School number two is the *Secondaria di Primo Grado IC Don Milani*, a lower secondary school, housed in the same building as the previous school, with its students – aged 11 to 14 – principally coming from the same suburban environment. The school has 300 students and is active, like the primary school, in the areas of recycling and waste sorting.

Pilot School number three, the *Liceo Artistico Statale*, is an upper secondary school, located in the centre of Latina, with its students – aged 15-19 – mostly drawn from the urban area. The school has a total of 400 students, coming Latina and its surrounding areas. It promotes several campaigns on social issues (e.g. eating disorders, drug and alcohol abuse, dangerous driving, etc.) but has a very low level of environmental involvement.

The National Coordinator led focus group discussions with [...] students and conducted online surveys with [...] of them, as well as interviewing 10 teachers from the abovementioned schools (more detailed information about their background can be found in Section 5.3. Interviews with teachers).

This Country Report for the evaluation of the '*Environment for Young Europeans*' (EYE) website in Italy includes:

- the analysis of the results of the **online questionnaire** filled out by the Italian students and teachers;
- the findings of the **interviews with teachers**; and,
- the findings of the **focus groups with children**.

⁷ "Environmental education in the educational systems of the European Union", DG Environment http://ec.europa.eu/environment/youth/pdf/envedu_en.pdf

5.2. Results of the online questionnaires

Introduction and methodology

The main objectives of the online survey are the following:

- to assess the level of relevance and user-friendliness of the *Environment for Young Europeans* (EYE) website in the view of teachers and students; and
- to provide information on how the site compares with other websites.

Data on the **background** and **ICT skills** of the respondents were also gathered through the questionnaire, which will enable the Consultant to carry out a correlation analysis of the entire European sample analysed during the MS surveys later in the Report (Please refer to Section XX: Summary of the Member States' survey findings).

The survey was filled in by 70^[G3] students aged 11^[G4] and 11^[G5] teachers.

5.2.1. Relevance analysis

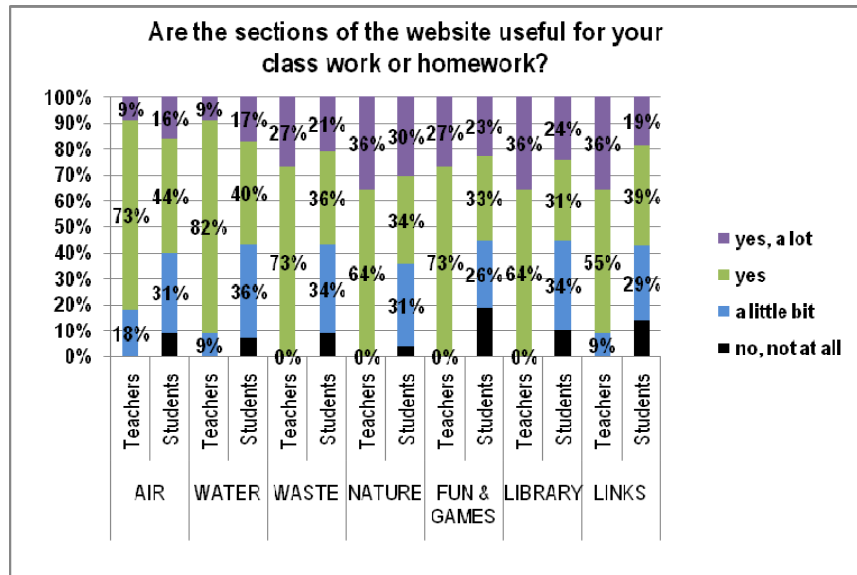
The level of relevance of the *Environment for Young Europeans* website was assessed by the Italian students and teachers, based on a variety of criteria such as classwork, school curriculum, leisure time and activities.

Main findings

Teachers	<ul style="list-style-type: none">• Very positive evaluation of site's relevance to classwork, leisure time and school curriculum• Teachers recognised FUN & GAMES section as most relevant to classwork, WASTE section to school curriculum, and AIR, WASTE, NATURE and LINKS sections to leisure time• AIR section: least popular section of site
Students	<ul style="list-style-type: none">• Positive evaluation of site for classwork and homework• FUN & GAMES, LINKS and LIBRARY sections: least relevant to classwork and leisure time• Overall less positive results compared to teachers

5.2.1.1. Relevance for classwork/homework

The following chart presents the main findings from the Italian survey regarding the estimated level of relevance of the EYE website to students when doing their classwork or homework:

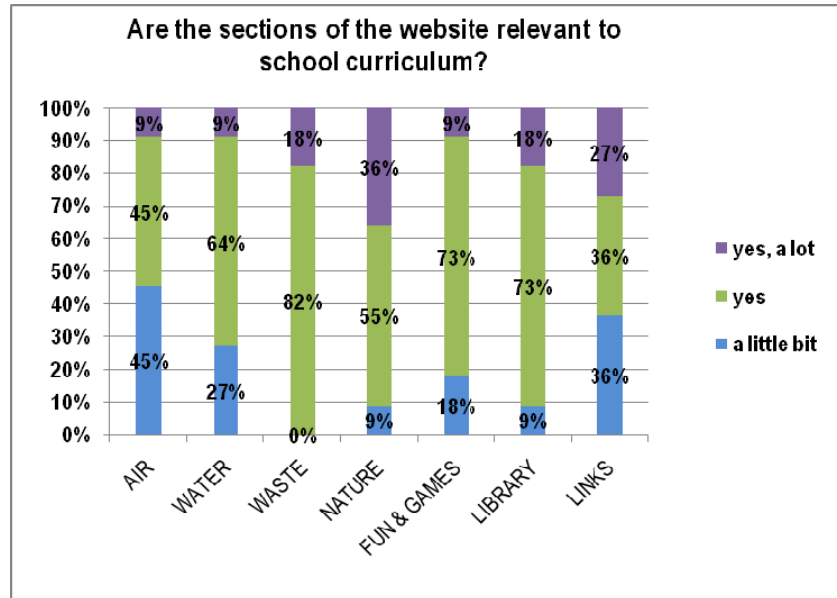


The majority of the Italian teachers rate the overall level of relevance of the website for classwork and homework rather **positively**. All sections gather **more than 50% very positive responses**. The students are, however, a little less positive in their answers. Some of them (about 9%) estimate that all sections are entirely **irrelevant for their classwork and homework**. Both students and teachers, however, are generally satisfied with the usefulness of the website for class or homework.

The **opinions of teachers and students on several sections diverge somewhat**. If **teachers** consider every section relevant for school and homework (**100% positive answers**), the **students** believe that the sections **FUN & GAMES, LINKS** and **LIBRARY** are only a little bit relevant or even **not relevant at all in such a context**. This may be due to the fact that teachers are generally better able to assess the educational value of games than students, or that perhaps students are simply not impressed by the quality of games, links and library, and therefore criticise these sections more easily.

5.2.1.2. Relevance to school curriculum

In the present survey, teachers were asked to indicate if they thought the content of the EYE website could enter the frame of their national school curriculum⁸. The following chart presents the results of this question:



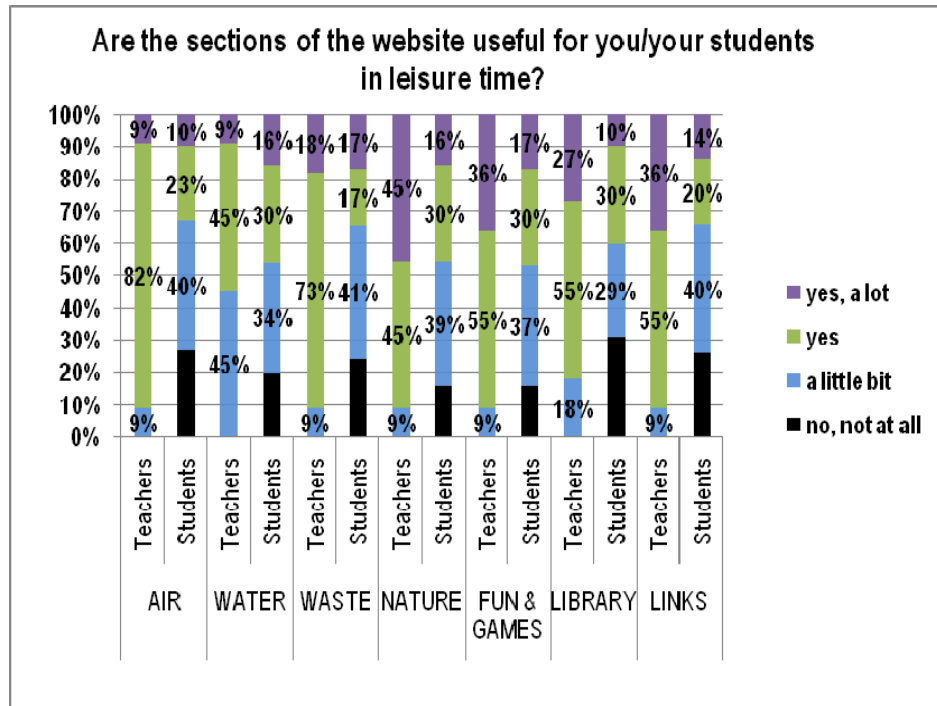
The Italian teachers rate the website's relevance for the school curriculum **very positively**. The **WASTE** section gets the highest score (100% fully positive answers, including 82% - **positive** and 18% - **very positive**), followed by **NATURE**, with 55% - **positive** and 36% - **very positive** answers).

Even the **FUN & GAMES** section is rated by the teachers as being highly relevant for the school curriculum. The **AIR** section gets the least favourable results. Amongst the qualitative comments, several teachers explained that the contents of sections such as **AIR** and **WATER** are too superficial and therefore cannot be used extensively for the school curriculum.

⁸ This question was not part of the students' online questionnaire as the students were not able to assess exactly the sections' relevance to this criterion.

5.2.1.3. Relevance during leisure time

This question was asked in order to estimate the EYE website's capacity to **reach out to students in an informal learning context**. The following chart presents the findings regarding the level of relevance of the website for the Italian students in their leisure time, as perceived by the Italian teachers, as well as evaluated by the students themselves:

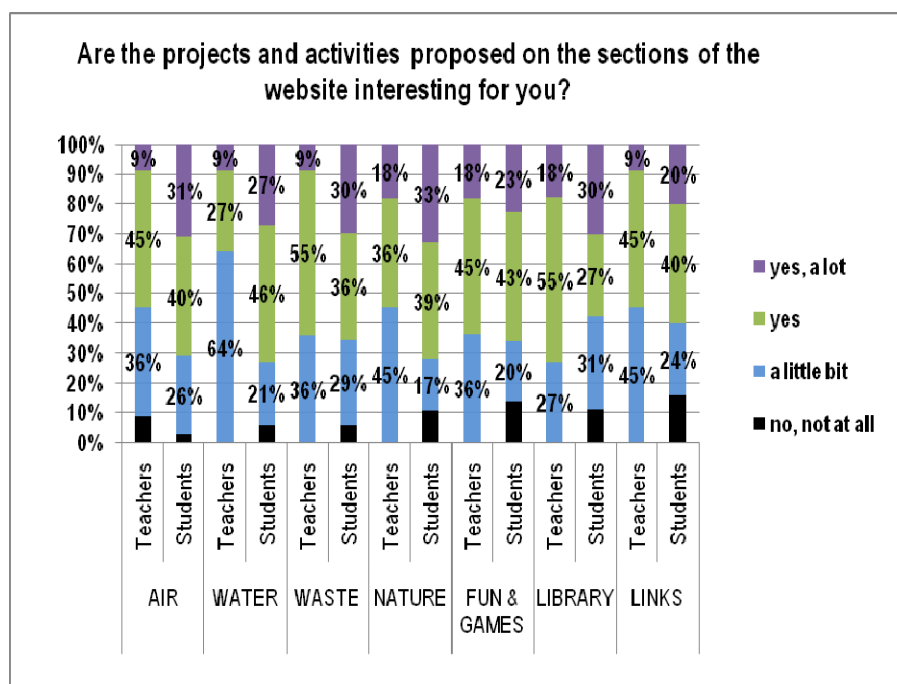


The majority of Italian **teachers** estimate that all **sections are useful or very useful for students in their leisure time**. The results of the thematic sections **AIR**, **WASTE**, **NATURE** and **LINKS** are all **very positive** (gathering between 80% and 90% positive responses), while the one on **WATER** is **less positive** (54% positive responses). Results for the other sections do not differ substantially, which means that all website sections are assessed by the teachers to be relevant for the students during their leisure time.

The Italian **students** are **less positive about this aspect of the website in their answers**. Between 15% and 30% of them **do not find any of the sections useful for their leisure time**. Even the **AIR**, **WASTE** and **NATURE** sections, which scored highly with the teachers, gather only between 30% and 40% positive answers. **LIBRARY** and **LINKS** get the **least favourable results**.

5.2.1.4. Quality of projects

The following chart presents the main findings from the survey regarding the quality of the projects and activities presented in each section of the website:



The evaluation of the level of relevance of the **projects and activities** by the Italian teachers is **very positive**. All the thematic sections are highly rated overall, with AIR and WATER scoring slightly less highly than the others. The **most highly rated** sections are **WASTE, FUN & GAMES** and **LIBRARY** (respectively 64%, 63% and 73% **very favourable** support). Once again, **the students are a little less positive in their responses**. Between 5% and 15% of them rate the level of relevance of the projects and activities proposed in each section very negatively. However, **the thematic sections**, obtain favourable results from the Italian students.

The second aspect of the EYE website that the respondents were asked to analyse is its level of user-friendliness.

5.2.2. User-friendliness analysis

The user-friendliness of the EYE website was tested in relation to the five following criteria:

1. attractiveness
2. notion of control
3. efficiency
4. helpfulness
5. 'learnability'

Each criterion was tested with at least three questions to ensure substantial results. Some of the questions were only addressed to teachers and some only to students, but overall the teachers' survey contained the most questions, many of those being either too complicated or too abstract for younger students to understand.

The questions relevant to each section, as well as the data, can be found in the following table⁹:

	Questions	I strongly agree		I agree		I disagree		I strongly disagree	
		Teachers	Students	Teachers	Students	Teachers	Students	Teachers	Students
Attractiveness	This website has much that is of interest to me	27%	21%	73%	67%	0%	11%	0%	0%
	The website is attractive	18%	7%	36%	36%	45%	51%	0%	6%
	The website does not have any annoying features*	0%	4%	64%	69%	36%	20%	0%	7%
	I like using this website*	18%	N/A	82%	N/A	0%	N/A	0%	N/A
Control	It is easy to move around this website*	18%	19%	64%	71%	18%	6%	0%	4%
	Remembering where I am on this website is easy*	18%	11%	82%	74%	0%	10%	0%	4%
	I get what I expect when I click on things on this website	9%	13%	64%	59%	18%	29%	9%	0%
	I feel in control when I'm using this website	9%	N/A	91%	N/A	0%	N/A	0%	N/A
Efficiency	I can quickly find what I want on this website	11%	9%	74%	91%	13%	0%	1%	0%
	The website is fast enough*	7%	18%	66%	73%	17%	0%	10%	9%
	I can easily contact the people I want to on this website	0%	7%	36%	51%	64%	27%	0%	14%
	I feel efficient when I'm using this website	0%	N/A	82%	N/A	18%	N/A	0%	N/A
Helpfulness	Everything on this website is easy to understand	18%	21%	82%	67%	0%	7%	0%	4%
	This website seems logical to me	9%	N/A	91%	N/A	0%	N/A	0%	N/A
	This website helps me find what I am looking for	9%	N/A	73%	N/A	18%	N/A	0%	N/A
Learnability	This website explains well what it is all about*	0%	7%	82%	50%	18%	37%	0%	6%
	It is easy to tell if this website has what I want*	0%	3%	91%	66%	9%	30%	0%	1%
	Using this website for the first time is easy	27%	29%	64%	60%	0%	9%	9%	3%
	Learning to find my way around this website is a not problem*	27%	N/A	73%	N/A	0%	N/A	0%	N/A
Usefulness	I think I will visit this website again	27%	14%	73%	53%	0%	24%	0%	9%
	I found what I was looking for	9%	13%	64%	64%	27%	21%	0%	1%
	I could use this website for doing my class or homework / assignments with my students	18%	10%	82%	67%	0%	17%	0%	6%
	Using the website is not a waste of time*	0%	N/A	100%	N/A	0%	N/A	0%	N/A

⁹ If a question was directed exclusively to teachers, it is marked in the students' table as N/A

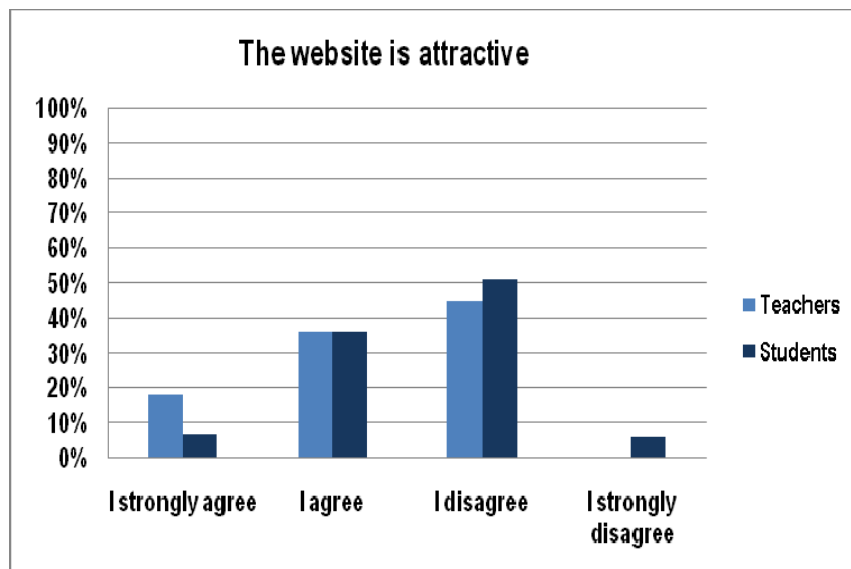
Main findings

Teachers	<ul style="list-style-type: none"> • Most teachers rated EYE site useful and user-friendly • Most teachers didn't find website attractive because of several annoying features • Most found it clear, easy to navigate and with a good notion of control
Students	<ul style="list-style-type: none"> • Most students didn't find website attractive because of old fashioned graphics, lack of chat rooms and an insufficient number of videos and interactive material • WASTE and WATER: most attractive sections
Points of convergence	<ul style="list-style-type: none"> • Both teachers and students agreed that it is easy to remember where they are on the website • They both agreed that everything on the website is easy to understand and predictable
Points of divergence	<ul style="list-style-type: none"> • Most teachers had problems finding the contact form, while the majority of students did not • FUN & GAMES section: most attractive according to teachers but students highly disagreed • Most students thought the EYE website is of better quality than the Italian EE websites while the majority of teachers disagreed

5.2.2.1. Attractiveness

The majority of students (51%) and teachers (45%) **do not find the website attractive**, but 36% of teachers disagree, as do another 36% of students.

A criterion that might have had an influence on this finding is the reported presence of 'annoying features' on the site. Indeed, **36% of the teachers and 20% of the students surveyed agree that the website has some annoying features**. The following chart represents these findings:

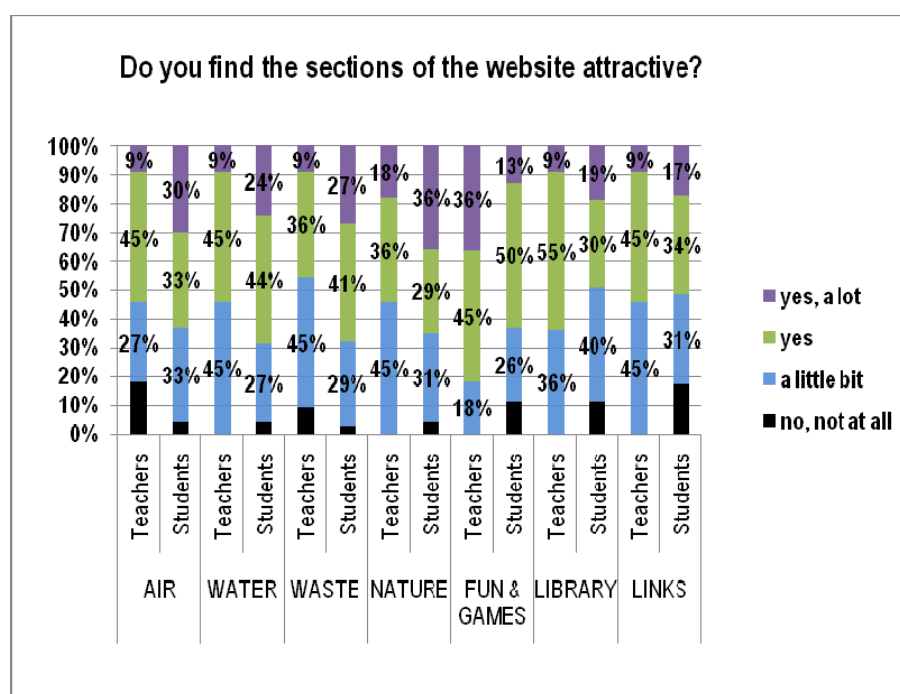


The reasons for these assessments regarding the lack of attractiveness of the site and/or the presence of annoying features are:

- non-functional **animations** and games,
- some of the **games** are available in English only,
- superficial **content**,
- outdated **information**,
- unattractive **graphics**,
- **very slow** website,
- the lack of originality of the **layout**, and
- a complex **structure** which demands a lot of clicks to reach the content sought.

The individual level of attractiveness of the sections of the website was also assessed during the online survey, in order to gather more specific responses to this question.

The following chart presents these findings:



According to the teachers, **the most attractive section of the site is FUN & GAMES, with 81% fully positive evaluations.** The remaining sections also score rather highly, gathering on average 60% positive answers. The only two sections that registered **less favourable** results are **AIR** and **WASTE** with respectively 18% and 9% negative answers. **The opinions of the students are not as favourable, but remain largely positive.** Although more than half of them found the **WATER** and **WASTE** sections to be **attractive** (both gathering 68% positive answers), the other sections were rated a little less positively. **Between 10% and 20% of students did not appreciate the LINKS, LIBRARY and FUN & GAMES sections.** The difference in results among teachers and students can be attributed to the fact that students tend to associate the notion of attractiveness mainly with graphic elements. Indeed, their comments reveal that they often find the **graphics to be too old fashioned**, and that they view the **lack of chat rooms**, along with an **insufficient number of videos and interactive material**, as being notable drawbacks of the site.

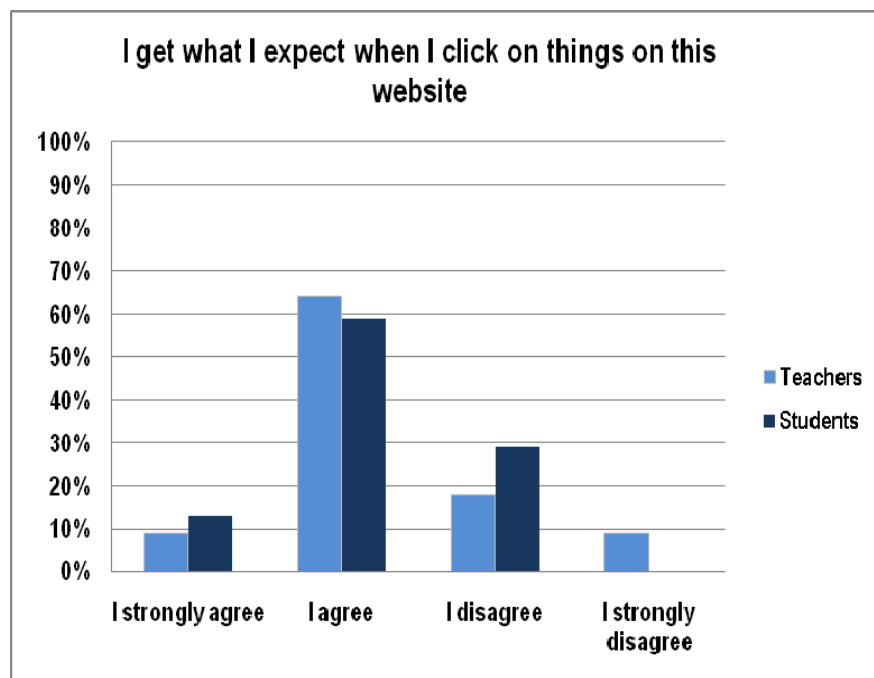
5.2.2.2. Notion of control

Questions regarding the so-called 'notion of control' seek to assess the level of **intuitiveness** of the website structure, as well as the level of comfort of the user while using the website.

Results are somewhat contrasting. **18% of teachers and 19% of students strongly agree that is easy to navigate through the website.** Another **18% of teachers and 6% of students** however disagree with this statement. A significant portion of them (64% of teachers and 71% of students) nevertheless agree that is easy to move around the website. **Both teachers and students largely agree (respectively 82% and 74%) that it is easy to remember where they are on the website.** **A significant number of them, however, experienced some kind of 'control related' problem on the website (18% of teachers and 29% of students).**

In addition, 91% of teachers feel **'in control' of the website.** When asked about the level of **predictability of the website** (i.e. if they get what they expect while browsing the website), 64% of the teachers and 59% of the students answered positively but 18% of teachers and 29% of students disagreed. Indeed, some of the respondents mention that **some parts of the website, such as the links, games and animations, tend to give unexpected results or were impossible to open.**

Survey findings related to the level of predictability of the website:



5.2.2.3. Efficiency

The questions from this part of the survey explore **how quickly users can locate what is of interest to them** on the website and whether the website responds to their requests at a reasonable speed.

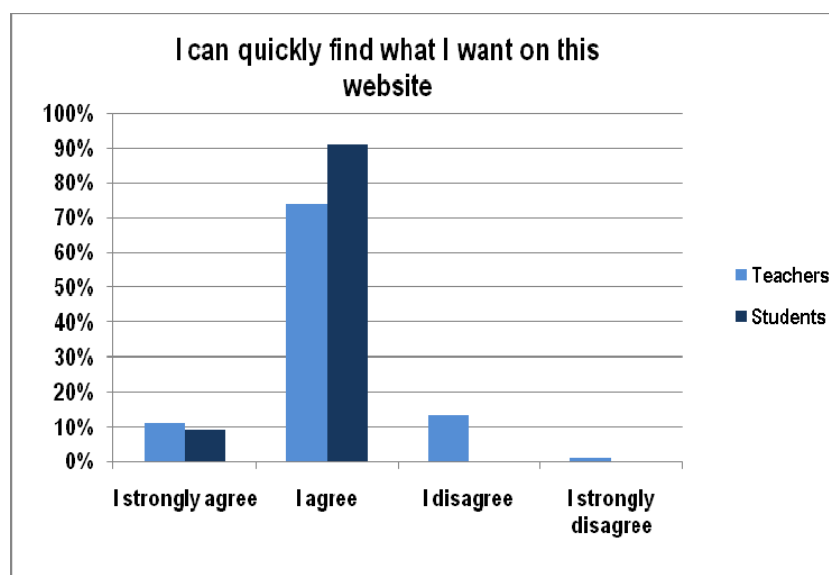
When asked the general question about their perception of efficiency on the website, 82% of Italian teachers answered that they feel **efficient when using it**¹⁰. This means that they have the feeling of being able to find the information they are interested in rapidly and easily.

However, **27% of teachers found the website too slow**. This finding must be analysed with caution, however, as the speed of the website relies heavily on the Internet connection present. Nevertheless, the Consultant's assumption is that since this could mean that the speed of Internet connections in some of the Italian pilot schools is low, **the future website should not be overly dependent on features which require a fast Internet connection**.

The second question concerns the **ability of the users to locate contact information** on the site. The majority of teachers (64%) have problems finding the contact form, while the majority of students (51%) do not. It is possible that the teachers were looking for precise contact details and not an online form to answer this question, which could explain the reasons behind these discrepancies.

The final question in this section also refers to the speed in which information can be found. **74% of teachers and 91% of students confirm that they can find everything they want** on the website in a short space of time. However, **13% of teachers state the opposite**. The reasons they give are mainly linked to slow browsing speeds.

The following chart presents the survey findings for this question:



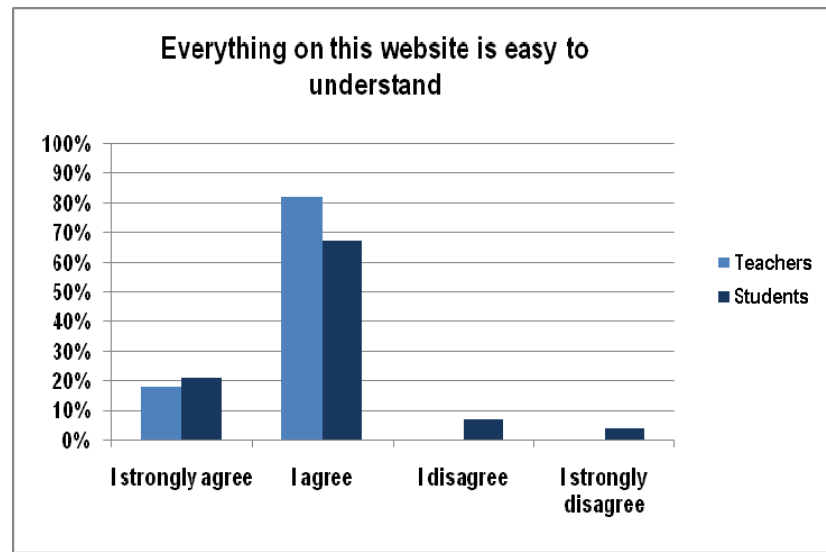
¹⁰ The question was exclusively asked to teachers.

5.2.2.4. Helpfulness

The overall helpfulness of the website is inferred from the level of logic, 'understandability' and clarity of its structure and instructions.

All the Italian teachers (100%) and the majority of students (88%) consent that **everything on the website is easy to understand**. 82% of teachers also concur that the website helps them find what they were looking for¹¹ and all of them think that the **website is logical**¹².

The results of the latter question are presented in the following chart:



5.2.2.5. 'Learnability'

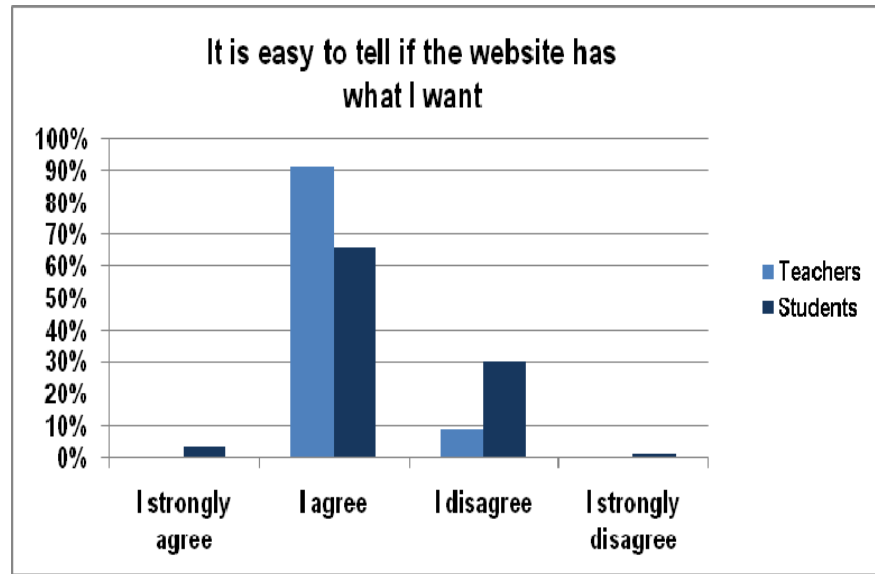
The questions on the website's level of 'learnability' assess whether the website is easy to understand and to use by first-time users, i.e. whether website's structure and tools are intuitive.

82% of teachers believe that the **website explains its objectives, purpose and mission well**. The majority (57%) of **students agree with this statement**. The results between the teachers' and students' answers differ, however, when the respondents are asked if it is easy to tell whether the website has 'what they want', i.e. whether they can predict the content of the website from the outset. 31% of students, in fact, do not agree with this statement, while almost all the teachers do.

¹¹ The question was exclusively asked to teachers.

¹² The question was exclusively asked to teachers.

The following chart presents one of these findings:



Results regarding the estimated level of intuitiveness of the website for first-time users are very positive for both teachers and students. Additionally, the teachers were asked whether the learning process to understand the overall navigation system of the site caused them any problems, to which the majority gave a negative answer.

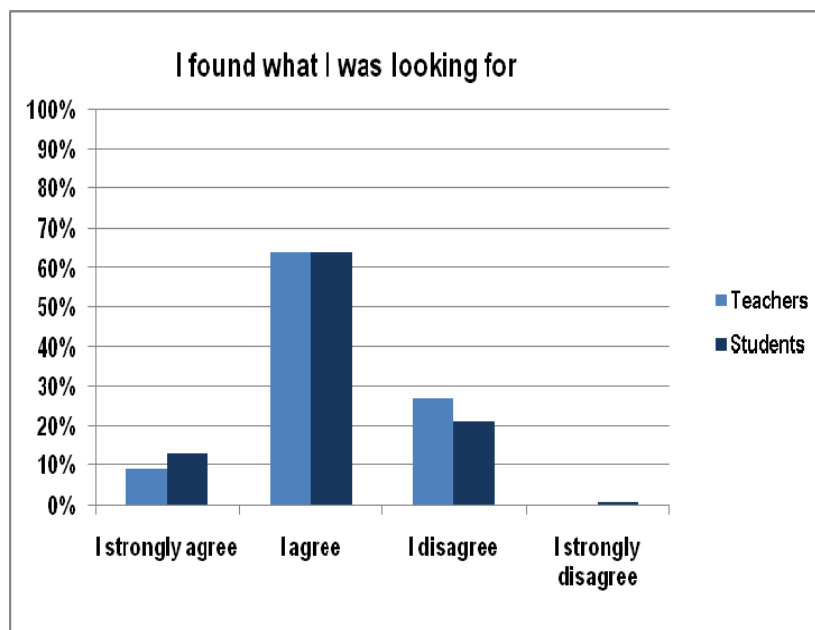
5.2.2.6. Usefulness

The final set of questions testing the user-friendliness of the website was asked in order to assess its perceived usefulness for students and teachers.

It appears from the findings that the website is **useful for school work for all the Italian teachers and 77% of the students**. Although the majority of respondents say they **plan to visit the website again**, there are still **33% of students who answer negatively** to that question. Furthermore, it appears that **generally the respondents affirm that they find what they were looking for** (73% of the teachers and 77% of the students), although a rather significant portion of teachers and students admit not to have found what they were looking for. In the final answer, however, **all teachers state that using this website is not a waste of time (100% of the teachers¹³)**.

¹³ The question was exclusively asked to teachers.

The findings concerning the former are presented in the following chart:



These results lead to the conclusion that the EYE website is **generally appreciated by both Italian students and teachers** in terms of usefulness. However, **several respondents** feel that **the information presented on the website is redundant** when compared to other EE websites **and too superficial** to drive repeat traffic.

5.2.3. Profile and preferences of the respondents

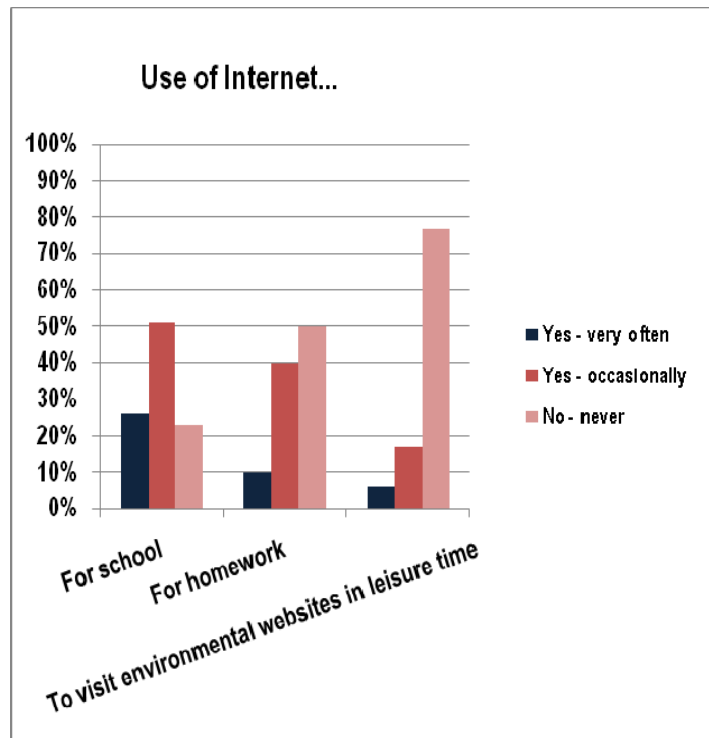
In order to complete these findings and establish some possible correlations, the teachers and students were also asked to respond to some questions related to **environmental education**, their level of **ICT competency** and some of their **preferences**.

5.2.3.1. Students

51% of Italian students expressed little interest in environmental issues, while **41% are very interested** and **7% are not at all interested**.

Some additional questions were asked to obtain more precise knowledge about the young respondents' Internet activity. The **majority of Italian students use the Internet on a daily basis (59%)**, followed by **17% who use it two or three times a week** and **7% who use it once a week**. However, a **significant percentage of students (13%) stated that they never use the Internet neither at school or during leisure time**.

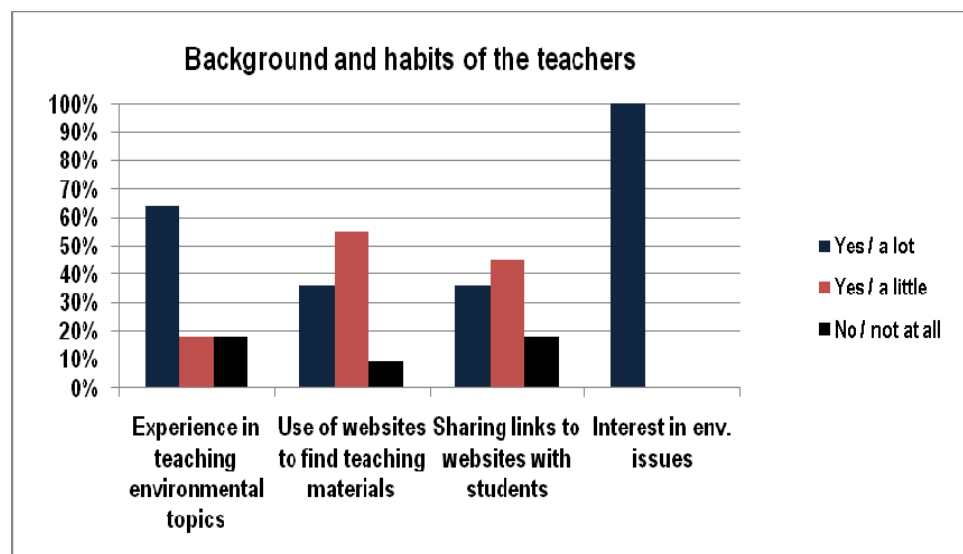
The following chart presents the findings of the online survey in relation to student internet habits:



Italian students use the Internet most often for classwork and occasionally for homework. 77% of the respondents, however, never visit environmental websites in their leisure time.

5.2.3.2. Teachers

The following chart presents the findings of the online survey in relation to the EE background, use of Internet resources and teaching methods of the teachers:



All the teachers expressed having a **strong interest in environmental issues**. The majority of them even have extensive experience in teaching environmental topics (64%) and the rest have had at least some experience in EE.

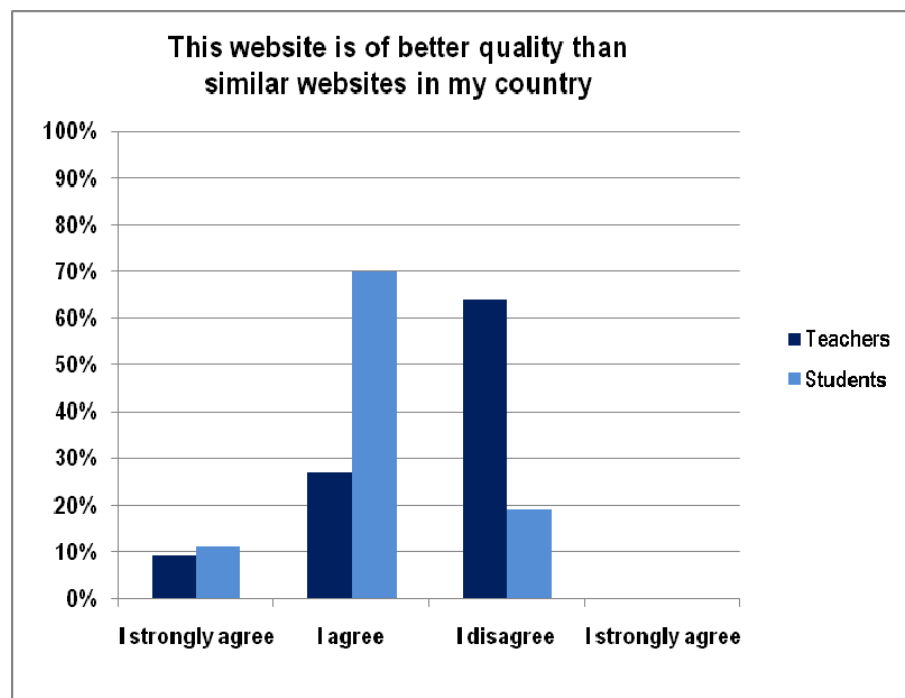
A **large majority of respondents asserted that they make use of the Internet to find new teaching material**. 36% of them make extensive use of it and 55% occasionally go online. Only 9% of the respondents do not use educational websites at all.

The **number of respondents who share links** to educational websites with their students follows a similar pattern. 36% of the teachers who took part in the survey do this often and 45% do it from time to time.

The data concerning the **ICT skills** of the teachers reveal that the majority of teachers (36%) have several years of Internet experience, while 18% of the teachers have more than five years of intensive use. However, 27% declared they do not use the Internet very often and another 18% use it on a very limited basis.

5.2.3.3. Benchmark

Further to the questions assessing the attractiveness and perceived relevance of the EYE website, additional questions were asked in order to compare this website with its competitive environment, i.e. national resources which the Italian students and the Italian teachers know and use.



64% of the teachers did not find the website of better quality than the Italian EE websites. The majority of students, however, do not share the opinion of the teachers and believe that they EYE website is of better quality compared to the Italian EE websites (81%).

In addition, **several teachers mention that the website has similar content to the other websites** they know. Additional questions regarding the choice of domain address for the website and the use of mobile devices were also asked to the teachers during the online questionnaire. The results will be merged and analysed with those gathered in other sample countries and will be presented later on in the report (Please refer to Section **XX** Summary of the Member States' survey findings).

5.3. Interviews with teachers

Ten teachers participated in this series of interviews; two primary school teachers, four lower secondary school teachers and four upper secondary school teachers.¹⁴ Two interviewees teach at 'Pilot School One' (PS1), *Primaria IC Don Milani*, four at 'Pilot School Two' (PS2), *Secondaria di Primo Grado IC Don Milani*, and four are employees of 'Pilot School Three' (PS3), *Liceo Artistico Statale*. All teachers were interviewed face-to-face and no deviation from the requested methodology was reported.

5.3.1. Level of involvement in environmental education

Curricular EE activities	Extracurricular EE activities	Methods of teaching EE
<ul style="list-style-type: none"> EE is a cross-cutting and multidisciplinary area, which is usually integrated into scientific subjects such as chemistry, biology, geography and architecture, but sometimes also into language and social education. 	<ul style="list-style-type: none"> Paper and plastic recycling in schools Field trips to national parks and workshops on renewable energy 	<ul style="list-style-type: none"> Engage students in practical rather than theoretical environmental protection Organise excursions <p><i>The teaching of EE is not problematic with students of primary and upper secondary schools. The exception is with lower secondary school students.</i></p>

Environmental education in Italy usually takes place during scientific classes (e.g. chemistry, biology, geography, architecture, etc.) but is sometimes also integrated into language and social education classes.

The specific environmental issues covered by the school curriculum mainly consist of recycling, waste sorting, smog, renewable energy, groundwater pollution, the impact of pollution on public health, urban environment, protection of parks and landscapes, and the loss of biodiversity.

EE teachers regularly involve students in paper and plastic recycling activities. Students seem fairly engaged in this kind of project and mostly enjoy the practical side of it. In addition, EE teachers occasionally organise field trips to national parks, as well as workshops on renewable energy. On the one hand, half of the students involved in these projects have a natural interest in the environment and are willing to become more active in environmental protection. On the other hand, the other half show very little or even no interest at all in environmental issues. This is largely due to the fact that many parents do not stimulate their children to undertake environmental initiatives and do not provide them with examples in a domestic context. Moreover, primary and upper secondary

¹⁴ More information about the respondents can be found in [Annex XX](#).

school students appear to be more interested in environmental protection, as compared with lower secondary school students, who rarely show any enthusiasm for it.

Overall, the opinions of the interviewees converge regarding the objectives of EE. Teachers believe that **raising awareness of environmental issues among both students and their families is essential**. Students should also be stimulated and inspired through various non-traditional means – i.e. taking photos, producing videos, using teenage slang, avoiding slogans, organising more field trips, increasing practical activities, decreasing the amount of reading on the discipline, using best practice examples, and educating students on environmentally friendly activities that can be incorporated into their everyday lives.

5.3.2. Opinions on the EYE website, benchmarking and recommendations

Advantages of the website	Disadvantages of the website	Benchmarking	Recommendations
<ul style="list-style-type: none"> • Basic info about every section • Italian language option • Thematic sections • News and events section • Green colour • Clear, easy and fast to look for information • Internal search engine • International point of view 	<ul style="list-style-type: none"> • Too superficial • Few sections • Few images • Many technical problems with animations • Targeted mostly at primary school students • "Hello and Welcome" message • Text too small • Low interactivity • Old-fashioned 	<ul style="list-style-type: none"> • For most teachers, site is inferior to international sites • For most teachers, site is of the same standard as similar national sites 	<p>For teachers:</p> <ul style="list-style-type: none"> • Add material about national problems • More teaching material • Create a forum to meet other teachers from across the EU • Download/upload area • Mailing list • RSS • Best practice examples of green schools <p>For students:</p> <ul style="list-style-type: none"> • Newsletter, forum, mobile access • More levels • Better games and images • More contents and interactivity • Different pages

			<p>according to age group</p> <ul style="list-style-type: none">• Create an "ask the expert" section and European map of animals and plants• More homework material• No slogans• Use teenage slang• Section with simulation of natural phenomena and disasters• Section on health problems deriving from pollution
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5.3.3. Internet habits

The Internet habits of teachers	The Internet habits of students (as perceived by their teachers)
<ul style="list-style-type: none">▪ All in favour of using online material to complement lessons▪ Internet is considered a great way to find teaching material▪ Most of them like to revisit websites they can rely on▪ Most of them use Italian websites for teachers and those specialised in environmental protection	<ul style="list-style-type: none">▪ Students are able to choose what they need autonomously▪ Children prefer to search online rather than use books▪ Children enjoy learning using different languages▪ Students use the net to acquire more knowledge on a wide range of topics▪ Students prefer to study in an informal way▪ Web language style is closer to children's jargon and therefore easier for students to understand

All teachers indicated that they were in favour of using online material to complement lessons. They like to use the Internet as an information source with which to prepare their lessons.

In the context of environmental education, although certain teachers preferred to find resources via search engines such as Google and Yahoo, the majority liked to use websites they knew and felt they could trust.¹⁵

¹⁵ <http://www.pubblica.istruzione.it/gst/index.shtml>
<http://www.greatbuildings.com>
<http://www.wga.hu>
<http://www.eniscuola.net>
<http://www.pubblicaistruzione.it>
<http://enea.it>
<http://www.trinity.it>
<http://www.energiaingiochi.it>

5.4. Focus groups with students

The Italian National Coordinators moderated the groups' discussions on a series of environmental topics, the EYE website and the students' Internet habits.¹⁶ Overall, it was noticeable that the **main criticism of the EYE site was generated by upper secondary school students and that generally students of all ages showed significant interest in and knowledge of environmental issues.**

The basic demographic data on the student focus groups is summarised below.

Age group		8-10 years	11-14 years	15-16 years
Total number of participants		30	35	35
Number of focus groups ¹⁷		4	4	3
Ratio boys / girls		47% / 53% (14 / 16)	43% / 57% (15 / 20)	31% / 69% (11 / 24)
Socio-economic origin	Urban	2	2	2
	Suburban	2	2	2
	Rural	0	0	0

The participants in all Pilot Schools browsed the website in the computer laboratories or in normal classrooms and then answered the questions in small group discussions.

¹⁶ The questions asked during the Focus Groups in each age group can be found in [Annex XX](#).

¹⁷ More details about the composition of each group can be found in [Annex XX](#).

5.4.1. Level of awareness of environmental issues

Age group	8-10	11-14	15-16
General level of awareness	Moderate	Moderate	Extensive
Sources of environmental education	<ul style="list-style-type: none"> ▪ Books ▪ School ▪ TV ▪ Films 	<ul style="list-style-type: none"> ▪ Books ▪ School ▪ Newspapers ▪ TV ▪ Parents ▪ Peers 	<ul style="list-style-type: none"> ▪ TV ▪ Family ▪ School
Engagement in environmental activities	N/A	Yes, some of them. Mainly inside, but also outside school (recycling).	<ul style="list-style-type: none"> ▪ Yes, but not as much as they would like ▪ Some have a strong desire to participate in international campaigns
International environmental campaigns/activities?	N/A	Very enthusiastic	Very Enthusiastic

5.4.1.1. Age group 8-10

The majority of 8-10 year olds participating in the survey perceived the environment from their personal perspective – i.e. their “local, home environment”, and the **natural world of plants and animals** that surround them. They **recognised the need to protect the environment and to fight against pollution**. They are very concerned about problems related to the waste scandal in Naples and also worry about the presence of numerous factories in the suburbs.

5.4.1.2. Age group 11-14

This group's environmental awareness was surprisingly not much more sophisticated than their younger colleagues. They too defined the environment as "nature" and in terms of their own immediate surroundings.

Although **very familiar with traffic pollution and generally active in recycling activities**, most students in this age group **did not seem aware of other key environmental concerns** such as global warming, climate change, low levels of underground water and water conservation.

Overall, they were **very enthusiastic** about the idea of working with children from other countries to address environmental challenges.

5.4.1.3. Age group 15-16

Students in this **older** group generally defined the environment in **more sophisticated terms**. They mentioned climate change, GMOs, the loss of biodiversity and the need for renewable energy. Students also pointed out local environmental problems such as sea and river pollution, waste sorting difficulties, excessive use of plastic bottles, etc.

In addition, some of them were concerned about potential health problems deriving from an old nuclear power plant (closed in the mid-1980s) situated in Latina's suburbs.

5.4.2. Opinions on the EYE website

Age group	8-10	11-14	15-16
Advantages of the website	<ul style="list-style-type: none"> ▪ Contents ▪ Graphics ▪ Games ▪ Easy to navigate ▪ Simple 	<ul style="list-style-type: none"> ▪ Graphics ▪ Colours ▪ Contents 	<ul style="list-style-type: none"> ▪ Mission ▪ Multilingual ▪ Clear ▪ Synthetic language
Disadvantages of the website	<ul style="list-style-type: none"> ▪ Sounds ▪ Menu ▪ Fonts ▪ Non-working animations 	<ul style="list-style-type: none"> ▪ Few photos of natural disasters, nature and animals ▪ Games for younger children ▪ Non-working animations 	<ul style="list-style-type: none"> ▪ 'Old-fashioned' ▪ Sounds and animations ▪ Some content too general ▪ Only for younger pupils ▪ "Hello and Welcome" box ▪ EYE Logo and top banner
Recommendations for the website	<ul style="list-style-type: none"> ▪ Introducing an "ask the expert" section 	<ul style="list-style-type: none"> ▪ Chat room ▪ Better games ▪ More pictures 	<ul style="list-style-type: none"> ▪ More content and interactivity ▪ Create two levels (one for primary and the other one for secondary school students)

5.4.2.1. Age group 8-10

Most children in this age group found the EYE website very interesting. They particularly **liked the contents, graphics and games**. Most of them also found the site **easy to navigate, as well as simple and clear in its contents**.

5.4.2.2. Age group 11-14

Graphics, colours and contents of the EYE site were particularly appreciated by this group, though they would have liked **more pictures of natural disasters, nature and animals**. Indeed, the main requests were for **more visuals**, better games and a chat room.

5.4.2.3. Age group 15-16

Overall, this group was **less interested** in the website than the others, some finding it **'old-fashioned' and designed to appeal to younger age groups**. Many students also thought the site was too general in its content and particularly disliked the "Hello and Welcome" box, as well as the EYE logo and banner at the top of the homepage. However, several of them claimed that the site was of **some interest** and appreciated the fact that it was **multilingual and clear**. Many students also recommended including more specific contents, increasing interactivity and creating two levels of the website (one for primary and the other one for secondary school students).

5.4.3. Internet habits

Most **primary school students use the Internet for their class work**. Several of them also use Internet at home with parents or older brothers and sisters.

Students in the 11-14 age group, instead prefer to use Wikipedia, search engines or books found in the school library for their homework. Moreover, they often visit peer-to-peer audiovisual websites, chat rooms and blogs.

The majority of students aged 15 to 16 do not use educational websites at school or for class work because teachers do not usually introduce them to new topics through the Internet. In fact, few teachers take their laptops into the classroom and students do not often go to the multimedia lab.

They use educational websites for homework, however, in addition to support material such as books and newspapers.

Age group	8-10	11-14	15-16
Internet use for school work	<ul style="list-style-type: none"> Mainly visit websites suggested by teachers 	<ul style="list-style-type: none"> Do not play/know of educational games 	<ul style="list-style-type: none"> Majority doesn't use educational websites at school Some uses them for homework
Internet use during leisure time	<ul style="list-style-type: none"> Games (e.g. Winx Club for girls) 	<ul style="list-style-type: none"> Games (e.g. first-person roleplay) Music and videos 	<ul style="list-style-type: none"> Games¹⁸
Preferred online features	Graphics/Cartoons	<ul style="list-style-type: none"> Chat, peer-to-peer services and emails 	<ul style="list-style-type: none"> Everyday life info (e.g. maps, events, sports news, etc.)

5.4.3.1. Age group 8-10

For this age group the Internet largely serves to provide **recreational games**, which they like to play when they are at **home**. On occasion, they do use visuals or information from websites for their **classwork** but mainly visit websites suggested by teachers.

5.4.3.2. Age group 11-14

These students **do not play educational games online**, but only **first-person roleplay games in their free time**.

Overall, the group had a preference for **chatting, peer-to-peer services and emails**.

¹⁸ Students have included PC based or console games (e.g. Playstation) in their Internet habits.

5.4.3.3. Age group 15-16

Students in this age group **do not use educational websites at school** but sometimes use them for homework, although they believe that **educational websites are not very entertaining**.

Students in this age group tend to **prefer violent and action games** and included PC based or console games¹⁹ amongst their internet habits. They also believe that the **most fun and useful features on the Internet** are the ones that **help to solve everyday problems and that provide practical information** (e.g. maps, events, sports news, etc.).

¹⁹ Total War series, Worms, Grand Theft Auto, Manhunt, Assassins Creed, Need for Speed Carbon and the Sims

5.5. Conclusions

Main Points of Convergence and Divergence between teachers and students

All survey participants shared some opinions on certain characteristics of the EYE website and on EE in general. From the opinions they expressed, we can draw a number of overall conclusions:

- Those surveyed consider the site to be **user-friendly, clear, easy to navigate, predictable, with a good notion of control and useful for class work or homework**. They also agree that the website is not very attractive, too old-fashioned and has some inherent annoying features;
- Another common opinion is that they can **quickly find what they are looking for on the website**;
- Both teachers and students agree that the **website seems largely targeted towards younger students** and that it should have **distinct sections for older students and younger ones** – their requirements are indeed very different.

At the same time, there are **distinctions** to be made between Italian teachers and students in terms of their views on the EYE website:

- Most students believe the EYE website is of better quality than the Italian EE websites they know and use, while the majority of teachers disagree;
- The FUN&GAMES section is the most attractive one according to teachers but students strongly disagree and consider the WASTE and WATER sections the most attractive ones.

Students – Key Conclusions

Overall, feedback from the Italian students leads to the following conclusions:

- Most students seem **fairly engaged in EE activities** proposed by teachers and **enjoy the practical side** of these activities more than the theoretical one. **Half of the students** involved in these projects have a **natural interest in the environment** and are **willing to become more active in environmental protection**. On the other hand, **the other half show very little or even no interest at all in environmental issues**;
- **Primary and upper secondary** school students appear to be **more interested in environmental protection**, as compared with **lower secondary school students**;
- The students particularly **like websites to be interactive, with a number of audiovisual features**;

- Students would like to see **more pictures**, an **'ask the expert'** section, a **chat room**, **better games**, **more content** and **two website levels according to age** (one for primary and the other one for secondary school students).

Teachers – Key Conclusions

- Teachers express a **rather positive opinion on the site** but, for most of them, the **site is inferior to international ones** and of the same standard as similar national sites they know and use;
- They would like to see **contents about national problems**, **more teaching material**, a **forum to meet other teachers from across the EU**, a **download/upload area** and **best practice examples of green schools**.