



FINAL REPORT 3rd Questionnaire

Project YES – Young Energy Savers

My Friend Boo Energy Strand

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The views expressed in this document are purely those of the authors and may not be regarded as stating an official position of the European Commission

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INTRODUCTION

The energy-strand of the animation series *My Friend Boo* (MFB) consists of three energy-themed episodes which aim to help children understand energy issues and inspire them and their families to become more energy intelligent.

During the 3rd Focus Group of the project the series was screened to school classes in Belgium, Bulgaria, Ireland, Italy and Poland, following two previous focus groups (November 2008, April 2009).

The series was screened to two further target audiences in parallel:

- parents of the children of the schools participating in the Focus Groups, as well as
- adult visitors of the five museums involved in the project (minor visitors watched the animation but were not authorized to fill in the questionnaire).

Finally, the teachers of the participating school classes have been asked to give their feedback since a Teaching Pack was designed to accompany each of the episodes, providing pedagogical advice for teachers.

This report presents all data and feedback collected as explained above.

SUBMISSION METHODOLOGY

Project Organisation

This educational project consisted of the following steps:

- Identification of the topic and definition of the conceptual map made up of all aspects of the topic;

- 1st Focus Group

Verification of the children's knowledge about the topic to determine the basis for the project's didactical scope and creative brainstorming among children

- 2nd Focus Group

Test and evaluation of the content of the scripts and of the visual impact of the characters

- 3rd Focus Group

Introduction of the animation and the Teaching Pack and their evaluation. .

The Questionnaires of the 3rd Focus Group

The five museums received guidelines on how to organize all the activities of the 3rd Focus Group for the children and the other tasks linked to the final outputs of the project.

In addition to the original DVDs that were given to the pupils and the Teaching Pack for the teachers, each museum coordinator received six documents to be distributed and three files to report all the data, as indicated below:

1. **A FORM:**

for museum coordinators in charge of the Focus Group.

2. **B FORM:**

to be filled in by the children during the Focus Group, under the guidance of the museum coordinator with A Form. B forms have no questions, but offer blank spaces for answers and numbers matching the questions in A FORM.

B forms were submitted after children were reminded of the previous Focus Groups and after the screening of the three episodes of the *MFB-Energy* strand.

Note that B forms are anonymous: children were asked to write their age and gender only.

3. **C FORM:**

a questionnaire for the teachers, evaluating the Teaching Pack after testing it for fifteen days at school.

4. **D FORM:**

a questionnaire for the parents of the children involved in the Focus group, to be filled in after they watched the DVD with their children at home.

D forms were submitted by the children whose parents watched the DVD or, alternatively, by the teachers who collected the forms from the parents.

5. **E FORM:**

to report information on the Focus Group in each country.

6. **F FORM:**

to collect the answers of the children given in the B forms.

7. **G FORM:**

to collect the answers of the teachers on the Teaching Pack given in the C forms and the answers of the parents on the animation given in the D forms.

8. **H FORM:**

a questionnaire for the museum's adult visitors who watched the animation.

H forms were directly submitted by the adult visitors at the museums. Coordinators organized several screenings of the *MFB-Energy* strand episodes during weekends in April and May 2010 in order to reach more visitors than just those who came to participate in the development of the project.

9. **I FORM:**

to collect the answers of the museum's adult visitors given in the H forms.

The entire documentation is available upon request.

FOCUS GROUPS: SCHOOLS AND DATES

Belgium: Sint-Jozefsschool Eizer, Overijse – March 29th 2010

Bulgaria: 120 osnovno uchilishte Georgi Stoikov Rakovski, Sofia – April 6th 2010

Ireland: St Patrick's Girls National School, Dublin – April 14th 2010

Italy: Scuola Elementare Statale Antonio Gramsci, Rome – April 8th 2010

Poland: Primary School number 152, Łódz - April 7th-9th 2010

NUMBER OF PARTICIPANTS TO THE 3rd FOCUS GROUP

TECHNOPOLIS (Belgium): 104 (boys 45, girls 59)

ARTLAND (Bulgaria): 88 (boys 47, girls 41)

IMAGINOSITY (Ireland):90 (90 girls)

EXPLORA (Italy): 84 (boys 46, girls 38)

PARKMINIATUR (Poland): 82 (boys 39, girls 43)

TOTAL: 448

AVERAGE AGE OF FOCUS GROUP PARTICIPANTS

The average age of this Focus Group was 8,8.

TECHNOPOLIS (Belgium): 9,2

ARTLAND (Bulgaria): 8

IMAGINOSITY (Ireland):9

EXPLORA (Italy) 8,6

PARKMINIATUR (Poland): 9,5

MAIN ISSUES OF THE FOCUS GROUP

There have not been any major issues during the completion of this last Focus Group.

All tasks have been completed timely and correctly.

However, it is noteworthy that the overall experience in Ireland with the St Patrick's Girls National school was very positive. The subject was understood easily by the children, since this school has a special focus on energy and environmental issues. The school received a School National Energy Flag Award for two consecutive years and is very proud of this fact.

FOCUS GROUP ANALYSIS

Quantitative evaluation of B form answers

The following table presents the compiled data as filled in by the children in answer to the multiple choice questions in the B form during the Focus Group. Columns on the right show the percentage of answers for each country as well as the general results.

Questions	Response options	BELGIUM	BULGARIA	ITALY	IRELAND	POLAND	GENERAL
		Boys 43,2% Girls 56,8%	Boys 53,4% Girls 46,6%	Boys 54,7% Girls 45,3%	Girls 100%	Boys 47,5% Girls 52,5%	Boys 39,5% Girls 60,5%
1) Did you enjoy the animation?							
	Yes	89%	93%	94%	90%	95%	92%
	No	11%	7%	6%	10%	5%	8%
2) Do you think that the stories of the 3 episodes are interesting?							
	Yes	89%	93%	94%	88%	96%	92%
	No	11%	7%	6%	0%	4%	6%
	No answer	0%	0%	0%	12%	0%	2%
3) Would you like to watch more episodes of "My Friend Boo"?							
	Yes	90%	93%	89%	89%	98%	91,74%
	No	10%	7%	10%	11%	2%	8,03%
	No answer	0%	0%	1%	0%	0%	0,22%
5) Will you do something in order to save energy?							
	Yes	96%	93%	99%	98%	100%	97%
	No	4%	7%	1%	0%	0%	2%
	No answer	0%	0%	0%	2%	0%	1%
7) Will you suggest to your parents and family members to try to do the same?							
	Yes	98%	92%	98%	95%	99%	96%
	No	2%	8%	1%	3%	1%	3%
	No answer	0%	0%	1%	2%	0%	1%

Answers to the open questions B form

Question n. 4/a asked the children to write what they had learnt from the first episode entitled *Switch it off!*.

Answers	% of total 100% of 448 children asked
Children who have learnt that they have to turn off devices (videogames, tv, etc.) and lights when they do not use them anymore	48,21%
Children who think that using too much energy is bad for the environment and earth	42,85%
No answers, unreadable answers	6,25%
Children who think that they should use less the devices (by instance play less on computer or watch less tv)	1,33%
Children who think that one person can change the world	1,11%
Children who think that recycling energy is important	0,22%

Question n. 4/b asked the children to write what they had learnt from the second episode entitled *The three alternatives*.

Answers	% of total 100% of 448 children asked
Children who have learnt that there are eco-friendly and clean energy sources that can replace fossil fuel, such as solar and wind energy and that these energies are better than the not-renewable ones	55,58%
No answers, unreadable answers	15,84%
Children who know now that fossil fuel pollutes the earth, while there is a need to use clean energy	10,93%
Children who think that if everybody helps to keep the earth clean, it is good for all people, animals and plants. They think that if we do not look after the planet it wont be nice for the next people on earth.	6,69%
Children who think that we can save the electric current using solar batteries	5,13%
Children who have learn that it is possible to store energy and use it when we need	2%
Children who think that it is better to use the car less	0,66%
Children who noted that Boo brings the children to learn about electricity and sun	0,66%
Children who think that they can have fun without using electrical things (by instance they do not need to always play videogames DS is important	0,66%
Children who think that nowadays we are using things that are harmful for the world	0,66%
Children who want to recycle	0,44%
Children who think that we do not use as much electricity in the future	0,22%

Question n. 4/c asked the children to write what they had learnt from the third episode entitled *On your bike*.

Answers	% of total 100% of 448 children asked
Children who have learnt that they can use their bike (338) or go by bus (37) or use subway or walk (47) for short distances, instead of going by car that pollutes. In fact they think that the transports without fuel are good for the environment, that going by bike means a lot of fun and it is good for the health.	83,03%
Children who have learnt that cars and fuel pollute, that cars are really bad for the environment	4,68%
No answers, unreadable answers	4,68%
Children who think that it is better to take care of the environment and to not pollute the earth. We have to preserve nature	4,24%
Children who think that they have to save energy and not waste it	1,56%
Children who think that going by bike means going faster	1,11%
Children who think that if we must use a car, it is better to be with more people	0,22%
Children who think that it is good to turn the car off when it does not move	0,22%
Children who think that the fuel costs more money than walking	0,22%

Question n. 6 asked the children to write what they will do at home in order to save energy.

Answers	% of total 100% of 448 children asked
Children who want to turn devices and lights off when they do not really use them anymore	49,10%
Children who do not want to waste energy because it is precious	17,18%
Children who want to use more eco-friendly means of transportation, like the bike, bus or carpooling	14,06%
Children who do not want to pollute the earth	5,80%
No answers, unreadable answers	5,80%
Children who want to use less the devices (by instance watch less television, play less computer games/ use one tv at a time)	3,79%
Children who think that it is good to use solar panels	1,33%
Children who do not want to use the car for small journeys or use the car just when they really need it	0,89%
Children who want to do the thing that they watched in the cartoon	0,89%
Children who want to play outside more often	0,66%
Children who want to use water energy	0,22%
Children who want to recycle	0,22%

EVALUATION OF THE FEEDBACK GIVEN BY PARENTS

The table below summarizes the answers given by the parents of the children who received a DVD to watch the animation at home. These parents were asked to fill in the D form.

Questions	Response options	BELGIUM	BULGARIA	ITALY	IRELAND	POLAND	GENERAL
		65 parents	45 parents	57 parents	56 parents	71 parents	294 parents

1) Did you already know about the animation that you have just watched? Did your child ever mentioned it at home?							
	Yes	48%	33%	16%	64%	61%	46%
	No	46%	67%	84%	36%	39%	53%
	No answer	6%	0%	0%	0%	0%	1%
2) Did you enjoy the animation?							
	Yes	78%	97%	91%	82%	97%	88%
	No	14%	7%	7%	18%	3%	10%
	No answer	8%	0%	2%	0%	0%	2%
3) Do you think the animation can help your child learn about energy?							
	Yes	61%	96%	98%	91%	90%	86%
	No	31%	4%	0%	9%	10%	12%
	No answer	8%	0%	2%	0%	0%	2%
4) Do you think that more educational tools like this one would be useful to positively influence your child/children behaviour towards important issues, such as energy?							
	Yes	86%	94%	93%	86%	94%	91%
	No	6%	4%	5%	14%	6%	7%
	No answer	8%	2%	2%	0%	0%	2%
5) And what about you? Do you think this kind of tool can have a positive influence on your behaviour?							
	Yes	59%	94%	86%	86%	86%	81%
	No	32%	4%	12%	14%	14%	16%
	No answer	9%	2%	2%	0%	0%	3%
6) Would you encourage other adults and parents to watch this animation with their children / grand-children?							
	Yes	67%	87%	94%	86%	94%	85%
	No	25%	9%	4%	14%	6%	12%
	No answer	8%	4%	2%	0%	0%	3%

EVALUATION OF THE FEEDBACK GIVEN BY ADULT VISITORS OF THE MUSEUM

The table below presents the answers given by adult visitors of the museums who watched the animation during their visit and filled in the H form.

Please note:

Poland: Following the crash of Polish Air Force Tu-154 on April 10th, 2010 in Russia, a week of national mourning was declared and museums, theatres, cinemas and other public buildings were closed. Consequently, the number of collected questionnaires in Poland decreased.

Bulgaria: There is no museum that can be visited by families. Consequently, the number of collected questionnaires is not high.

Questions	Response options	BELGIUM M 104 Adults	BULGARIA A 18 Adults	ITALY 92 Adults	IRELAND 97 Adults	POLAND 94 Adults	GENERAL 405 Adults
1) Did you enjoy the animation that you have just watched?							
	Yes	70%	78%	79%	95%	96%	84%
	No	27%	22%	20%	5%	6%	15%
	No answer	3%	0%	1%	0%	0%	1%
2) Did you learn something about energy?							
	Yes	53%	72%	60%	93%	82%	72%
	No	45%	28%	40%	4%	18%	27%
	No answer	2%	0%	0%	3%	0%	1%
3) Do you think that more educational tools like this one would be useful to positively influence your child/children behaviour towards important issues, such as energy?							
	Yes	88%	94%	98%	93%	97%	94%
	No	9%	6%	2%	2%	3%	4%
	No answer	3%	0%	0%	5%	0%	2%
4) And what about you? Do you think this kind of tool can have a positive influence on your behaviour?							
	Yes	55%	83%	88%	94%	88%	81%
	No	43%	11%	11%	4%	12%	18%
	No answer	2%	6%	1%	2%	0%	1%

FINAL PEDAGOGIC EVALUATION OF ANSWERS

Introduction

The pedagogic evaluation is based on the data from all the forms, both from the multiple choice questions and the open questions. It considers the answers given by the children participating in the 3rd Focus Group, by their parents and by the adult visitors of the five museums in Belgium, Bulgaria, Ireland, Italy and Poland.

This report presents the feedback of the different target groups, as well as an overview over the general impact of this project.

Objectives of the questionnaires of the 3rd Focus Group

The questionnaires' main objective was to evaluate two aspects of the cartoon animation:

- Visual impact of the animation: questions investigating whether children liked the animation or not, whether they found the stories funny, interesting or engaging.
- Content of the animation: questions investigating whether the children understood the messages of the episodes and how they plan to change their daily behaviour to use energy correctly.

At the same time, the children's parents and the adult visitors of the museums were asked as well about the visuals of the animation, about its content, effectiveness and utility.

Children's perception of the animation

The results of the 3rd Focus Group prove that the funny elements of the animation are well received (92%). There is also high interest in the topics of the episodes (92%) that coincides with the children's strong wish (96%) to suggest a change of behaviour to their parents and other relatives.

The messages in the episodes are clear and effective as the answers to the open questions indicate: the children have started to question their own behaviour. They were made aware of ecologically unfriendly actions and have indicated by themselves solutions to save energy:

- to turn of the lights when they are not necessary
- to turn off electrical devices (in particular videogames and pc games) when not used,
- to turn off the TV-set when not watched.

The children found concrete solutions to the problems, proving that they can be taught to change their behaviour which will lead to big changes in the energy consumption of future generations.

Parents' perception and adult visitors' perception

MFB was conceived as an educational tool which can be used both at school and at home. For this reason, the parents of the children which participated in the Focus Groups have also been involved in the feedback mechanism. The children received the three episodes on DVD at school and watched them at home; whereupon parents were asked to grade the effectiveness of the animation as a pedagogical tool. In addition and in order to reach more adults, all the museums involved in the project offered free screenings for visiting families on the weekends and asked the adult visitors to give their feedback on the animation.

Generally, people considered the animations to be addressed to children only and demanded child-friendly linguistic and content standards. This assumption was fueled by animations on TV being perceived and used as recreational tools rather than as pedagogical instruments.

However, learning was modernized in recent years: the number of didactic cartoons is increasing as are animations for adults only. As a result, more adults showed an interest in the animation in general. *MFB* won the hearts of the parents of the children involved in the project thanks to it being both a recreational and pedagogical animation. In fact, 88% of parents declared that they enjoyed watching the animations at home (84% at the museums).

Animations have turned into educational tools for entire families, informing about complex global issues like energy in an enjoyable way. They are especially appropriate to help parents explain these issues to their children.

86% of the parents stated that the animation would help their children to understand how energy is relevant to their daily lives and 91% considered animations as good tools to make the children learn.

72% of the adult visitors at the museums stated that they had learned new facts themselves.

94% of them thought that the animation could encourage children to change their behavior and energy consumption for the better; 91% of the parents and 81% of the adult visitors' even stated that the animations could change the behavior of adults.

By making *MFB* an animation that can be watched by parents and children together, this learning experience has the added value of complicity. Consequently the information is better retained in the child's mind; the information is not only a collection of notions but a memory bound to an emotion (the answers to the questions n. 2,3, 4 and 5 confirm this fact).

Note that, while most parents answered question n. 1 saying that they did not know the *MFB* project and animation yet, this does not depend from the project itself but is simply a sign of lacking communication within the families. It can also be seen as a positive sign that 85% of parents answered positively to question n. 6, stating their will to disseminate this animation to other adults.

MFB will benefit strongly from word of mouth recommendation amongst parents and will make its way to being a renowned pedagogical tool, finally changing energy consumption throughout Europe.

EVALUATION OF THE TEACHING PACK

Quantitative analysis of C form answers

The table below presents the answers given by the teachers after testing the Teaching Pack at school for fifteen days after the Focus Group (C Form). Columns on the right show the percentage of answers for each country as well as the general results.

Questions	Response options	BELGIUM M	BULGARIA A	ITALY 6 teachers	IRELAND 4 teachers	POLAND 4 teachers	GENERAL 20 teachers
1) Did you make all the proposed activities with your class?							
	Yes	0%	100%	100%	0%	100%	65%
	No	100%	0%	0%	100%	0%	35%
2) Do you think the Teaching Pack is a useful tool to teach children about energy?							
	Yes	100%	100%	100%	100%	100%	100%
	No	0%	0%	0%	0%	0%	0%
3) Do you find the background information useful for teachers?							
	Yes	100%	100%	100%	100%	100%	100%
	No	0%	0%	0%	0%	0%	0%
4) Do you think the Teaching Pack properly complements the animation?							
	Yes	100%	100%	100%	100%	100%	100%
	No	0%	0%	0%	0%	0%	0%
5) Do you think the activities proposed are relevant and age-appropriate?							
	Yes	67%	100%	100%	100%	100%	95%
	No	0%	0%	0%	0%	0%	0%
	No answer	33%	0%	0%	0%	0%	5%
6) Does the Teaching Pack fit with your school programme?							
	Yes	100%	100%	100%	100%	75%	95%
	No	0%	0%	0%	0%	25%	5%
7) Did your pupils like the activities of the Teaching Pack?							
	Yes	33%	100%	100%	100%	100%	90%

	No	0%	0%	0%	0%	0%	0%
	No answer	67%	0%	0%	0%	0%	10%
9) Will you use the Teaching Pack in the future also with other pupils who were not involved in the project?							
	Yes	100%	100%	100%	100%	100%	100%
	No	0%	0%	0%	0%	0%	0%
10) Will you promote the Teaching Pack among other colleagues?							
	Yes	100%	100%	100%	100%	100%	100%
	No	0%	0%	0%	0%	0%	0%
11) In your opinion, which is the best channel to inform teachers about the existence of the Teaching Pack and the fact that it is downloadable for free from the website? Please list some channels.	See below – answers to open questions						

Answers to open questions about the Teaching Pack

The teachers of the classes involved in the project have been asked to test the Teaching Pack (TP) for three weeks with their pupils at school and to fill in a questionnaire. Teachers were asked to explain negative feedback.

Question n. 1:

The teachers from Belgium (3) and Ireland (4) indicated that they did not carry out all the activities suggested by the TP. This was mostly due to a lack of time and in one case only a Belgian teacher considered the pupils too old for the assignment since they were 11 years old (i.e. older than our target group).

Question n. 5:

One Belgian teacher indicated that there is too much text.

Question n.6:

An Irish teacher criticised the Teaching Pack, saying that it did not fit with the overall school programme. However, this comment was not explained.

Question n. 8:

One teacher stated that there was too much text on some of the sheets, especially for children of the age of 6-7 years who do not have proper reading abilities yet.

Question n.11:

Teachers indicated the following as suitable channels to inform other teachers about the existence of the TP:

- Information on teachers' websites (including teachers' trade unions websites)
- Information on schools' websites
- Letters to schools
- Emails to teachers
- Posters

All these suggestions will be investigated in the framework of the TP distribution strategy.

Teaching Pack examination

The Teaching Pack (TP) was conceived as a tool for teachers of 5-8 years-old pupils; it provides the teachers with ideas for interactive lessons and the necessary information on energy-related issues.

The TP helps teachers in developing an educational path consisting in a comprehensive approach:

- activities dedicated to single pupils,
- activities for entire classes, and
- activities for families.

The TP turns teachers into the main players of the project, both for their role in the didactic process and for their role as family-collaborator in the educational process.

Teachers' confirmed that the approach and suggested lessons of the TP are innovative methodological tools, introducing animation and recreational activities to the curriculum (see the answers at question n.4).

Based upon the data from the questionnaires filled in by teachers involved in the project, and in particular the question n. 3, there is a demand from teachers for training tools dealing with energy issues in general and more particularly with renewable energy sources for them to include in the educational activities at school.

Teachers indicated that they found the TP an interesting and engaging instrument for children (see the answers to questions n. 5, 7 and 9) and a useful tool for themselves and their colleagues (see the answers at questions n. 2-3-10).

The TP has not been used to its full capacity during the Focus Group, since the project started at the end of the school-year. Belgian and Irish schools have not had the time to use it (see the answer at question n.1). The Italian teachers as well would have liked to take their time and introduce activities properly and not at the end of the school year; however they still used the TP for the science week that the school organizes every year.

This lack of time has played an important role. It is a safe assumption that, had been more time, the classes would have done all the TP activities, especially considering that all teachers (except for the 25% in Poland) think that the TP fits well with the school programmes (see question n. 6).