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DELIVERABLE

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Technology**

D5.3: Evaluation Report on the 1st implementation circle of GreenNET

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Executive Summary

This document sums up the evaluation of the first phase of the implementation (The deliverable also includes comments and feedback for shaping the final version of the Implementation. The report submits evaluating the events, the e-learning modules, the impact on participants and the quality of the overall process. The evaluation report highlights any inconsistencies or weaknesses of the first phase.

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1 Introduction

1.1 *Scope*

This deliverable contains the most relevant reports, recognitions and recommendations of the 1st implementation circle of GreeNET, based on the feedback of the partners and users in programmes and practices within the process of the project GreeNET.

This deliverable covers both: the quantitative, also graphic visualized, results of the evaluation process within the 1st circle, as well as a qualitative interpretation in the way of general and specific recommendations.

The GreeNET network is on the way – so some results, recognitions and recommendations have an interim character, with the aim to support and improve the work within GreeNET, as well as for the sustainable process beyond the lifetime of the project.

All described aspects, issues, recognitions; recommendations are based, on the background of experiences of the evaluator, mainly on the feedback of the partners and actors within GreeNET.

1.2 *Audience*

This report is addressed to the public as well as to all partners of the GreeNET consortium and to the European Commission.

1.3 ***Structure***

Chapter 1 contains an overview of this document, providing its scope, audience, definitions and structure.

Chapter 2 gives an overview about the Best Practices of GreeNET and the status quo of implementation and evaluation of Best Practices

Chapter 3 gives an overview about the evaluation results of general events

Chapter 4 includes the recommendations for the 2nd phase of implementation circle of GreeNET.

Chapter 5 includes the Annexes for the evaluation in the 1st phase of implementation circle of GreeNET

2 Best Practices and Evaluation within the implementation circles

2.1 *Method of evaluation*

Within the network activities of GreeNET best practices were collected during the first phase of activities in the partner countries. They are summarized within the deliverable D 2.5 “Best Practices of Enquiry-based Environmental Education and Training Methods” collected by Mona Schönfelder and Prof. Franz X. Bogner both from the of Bayreuth, Department of Biology Education.

For the GreeNET project there are several events planned in work package 4 within the phases A and B of implementation regarding feedback of the practises and examples gathered within the focus groups and summed up in the State-of-the Art and Needs Analysis and in the above mentioned deliverable in order to merge good practises.

Each partner country has to create his own plan for the implementation phases A and B regarding the possibilities in his country for the regional and / or national events.

Within the Evaluation and QA plan and the Instruments for evaluation (Deliverable 5.1 and 5.2 in the project) there was the agreement on the following methods of evaluation for the quality of products and outcomes concerning the best practices:

Quality of products / outcomes of the GreeNET project

The quality aspect of the products and outcomes are crucial for phases of implementation phase. Therefore the voice of users was involved in a very intensive way.

To evaluate the practises by *teachers and trainers* different domains with indicators were used:

Domain: Target group orientated

Indicators:

- The structure is supporting to find easily themes and topics for teaching elements of EE as an opportunity to make EE accessible at lower and upper secondary school level.
- The writing style is accordingly to the target group: teachers / trainers
- Subject related vocabulary is used
- Didactic concepts and methods used are appropriate
- The structure of the practices is well explained and useable for the teachers to find out elements for daily work

Domain: Content

Indicators:

- The content is adequate for using it in the teaching unit
- The time practicability is described in a proper way

The questionnaire

Based on the criteria to collect the best practices a questionnaire was developed for the evaluation of the best practices (cf. Annex 1) which is a very detailed questionnaire which is aimed to find out if the best practices can be transferred to different target groups, age groups and countries.

2.2 List of Best practises collected and used for implementation

This section gives an overview about the best practises collected within GreeNET by the partners and within focus groups and which of the practices were already used within the implementation phase A in the countries.

2.3 School-based Effective Environmental Educational Activities through Enquiry-Based Learning¹

Table 1: Overview of the school-based Best Practices and Practices already used for implementation in circle 1

No.	Institution	Name of Best Practice	Already used for Implementation 1 st circle
1	BMUKK	Rio 92+	
2	EA	Agro Web	1 time
3	EUMENNA	Dikketruierendag (Thick sweaters day)	2 times
4	BMUKK	Energy Tutors	
5	AUA	Experimental educational lessons on the testing of the germination rate of a range of vegetable seeds	2 times
6	AUA	A small exemplary hydroponic school garden	1 time
7	UBT	Energy – today and tomorrow	2 times
8	ECOI	Educating for Sustainability: the Barcelona School Agenda 21	
9	ECOI	LESET: Let's save energy together!	
10	ECOI	Research Work	
11	AUA	Enhancement of biodiversity in school grounds	
12	EA	Students United for a Sustainable School	
13	UBT	The flying classroom	3 times

Green = already used

red = not used by now for implementation

¹ Based on D 2.5 “Best Practices of Enquiry-based Environmental Education and Training Methods”, page 12

2.4 Environmental Educational Activities connecting Formal and Informal Learning Settings²

Table 2: Overview of the Best Practices connecting formal and informal learning and Practices already used for implementation in circle 1

No.	Institution	Name of Best Practice	Already used for Implementation 1 st circle
1	GRNET	Natural Europe	
2	Agro-Know Technologies	Green Ideas	2 times
3	UBT	Waste	
4	UBT	Rainforest and Climate Change	
5	EA	The River of Life	
6	EA	My School Garden	3 times
7	BMUKK	Plastic bags – no thanks!	
8	BMUKK	ConsuManiac – Check your daily shopping!	2 times
9	BMUKK	Walking works!	

Green = already used

red = not used by now for implementation

2.5 Elaborated Best Practices for Schools

Table 3: Overview of the Best Practices elaborated during the Best Practice Exchange Forum and Practices already used for implementation³ in circle 1

No.	Green Topic	Name of Best Practice	Already used for Implementation 1 st circle
1	Bioenergy	The Chemistry of Biogas: from Cellulose to Methane	
2	Achievement of Honeybees	How communicate bees?	
3	Ecosystem of temperate forests	Plants as CO ₂ -repository	
4	Rainforest affected by climate change	Climate Change and Rainforests – the Future?	

Green = already used

red = not used by now for implementation

² Based on D 2.5 “Best Practices of Enquiry-based Environmental Education and Training Methods”, page 70

³ Ibid., page 111

2.6 Best practises implemented in the 2nd circle

No.	Institution	Name of Best Practice	Already used for Implementation 2 nd circle
1	EL	The ecosystem of lake Pamvotis through the information center of Lake Pamvotis Organization	1 time
2	EL	Green labs for schools' projects	1 time
3	bmbf (AT)	Schule des Essens	4 times

Within the second circle 3 additional best practises were implemented and evaluated. They are described in the database on the project website in all languages of the partner countries of the project.

Table 4: Overview about the implementation of Best Practices within the 1st Circle of GreeNET

No.	Country	Practise	date	no of participants	schools
1	DE	Schulversuche - "Energie - heute und morgen"	04.02.2014	7	1
2	DE	Energie - heute und morgen, Erneuerbare Energien im Unterricht	26.02.2014	10	10
3	DE	Lehrerfortbildung "HOBOS - Bienen live im Biologie unterricht mithilfe von e Learning	27.03.2014	10	9
4	DE	Digitale Medien im Biologie unterricht -"HOBOS" - Das fliegende Klassenzimmer"	29.01.2014	5	1
5	EL	"CARING FOR OUR SCHOOL GARDENS: FROM THEORY TO PRACTICE"	21.02.2014	30	29
6	EL	"CARING FOR OUR SCHOOL GARDENS: FROM THEORY TO PRACTICE"	30.04.2014	36	18
7	EL	Internal Training / Implementation	27.03.2014	10	2
8	ES	AgroWeb	26.02.2014	10	1
9	ES	Bee Not To Bee	26.02.2014	10	1
10	ES	Dikketruiendag	26.02.2014	10	1
11	ES	Dikketruiendag	31.03.2014	12	0
12	ES	Germination Rate	26.02.2014	10	1
13	ES	Germination Rate	31.03.2014	12	1
14	ES	Green Ideas	26.02.2014	10	1
15	ES	Green Ideas	31.03.2014	12	1
16	ES	Hidrophonic Garden	31.03.2014	12	1
17	ES	Konsumaniatic	26.02.2014	10	1
18	ES	Konsumaniatic	31.03.2014	12	1
Total			18	228	80

The Tables shows 18 activities for Implementation of best practices were held during the first circle within GreeNET with 80 schools and 228 participants.

Out of the 26 collected best practices 9 best practices were used for the first phase implementation.

3 Best Practices and Evaluation within the 1st implementation circle per Practice

3.1 Agro Web

Date of evaluation: 26.02.2014

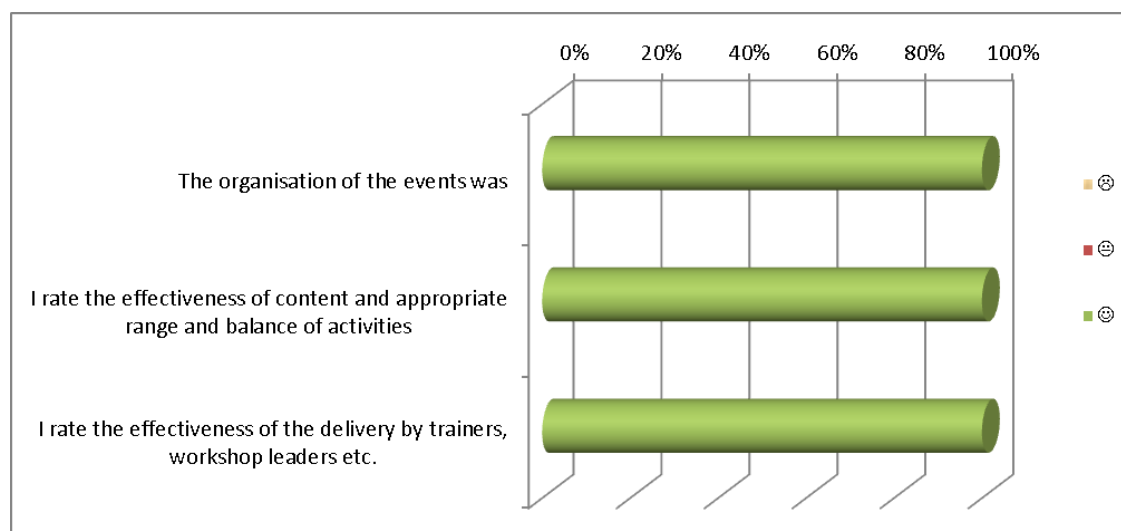
Country: Spain

Participants working with students in the age of: 16-19

Number of participants evaluated the best practice: 2

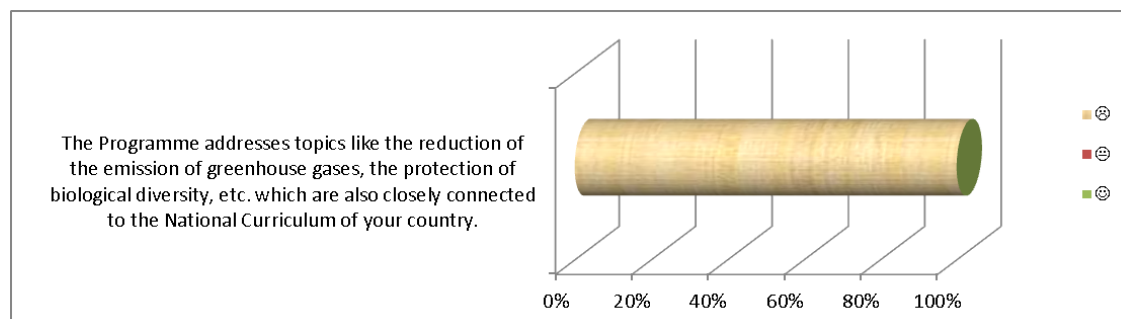
Based on the questionnaire (cf. Annex 1) the evaluation shows following results:

Section 1: Feedback for the event:



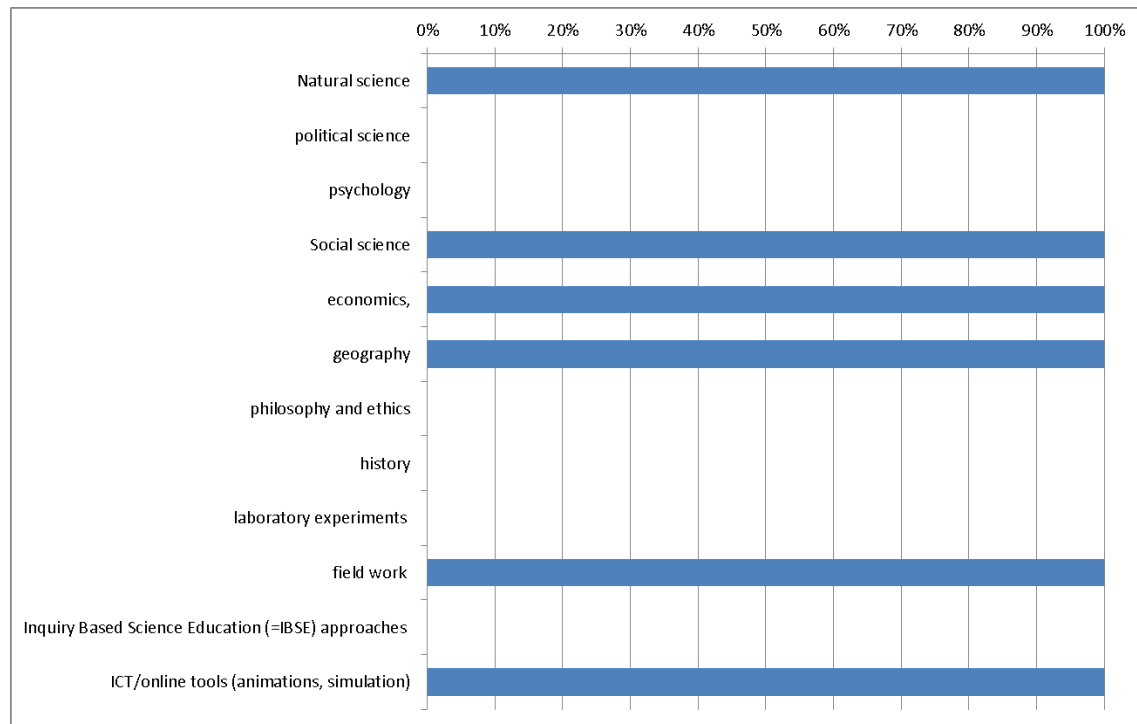
Section 2: "voice of user":

1 Relation to a green topic and to the National Curriculum

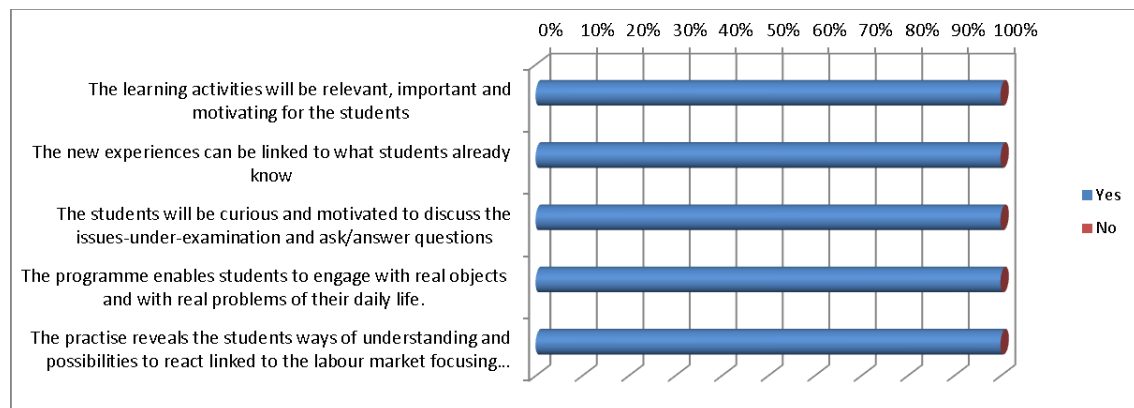


2. Being interdisciplinary: Drawing upon many academic disciplines and teaching methods, does the programme include following elements?

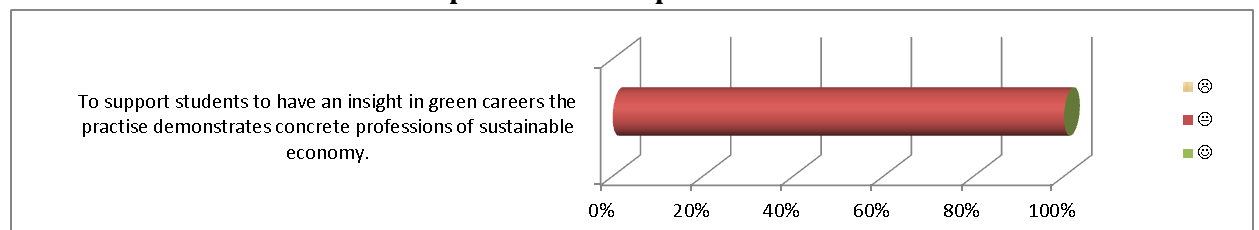
(The figures shows how many percentage t answered with yes)



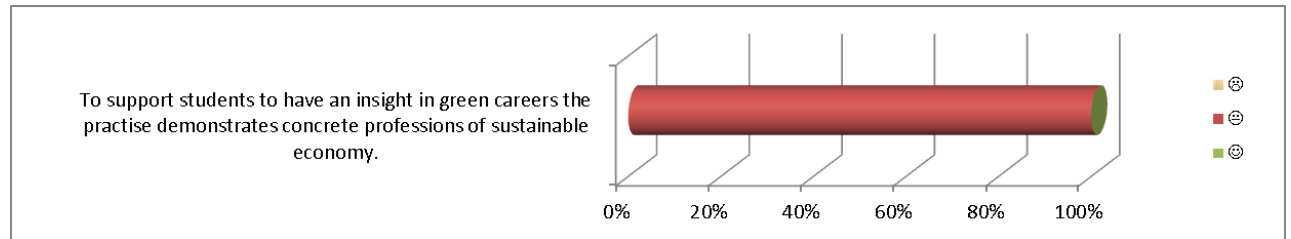
3. Relevance to the daily life of students



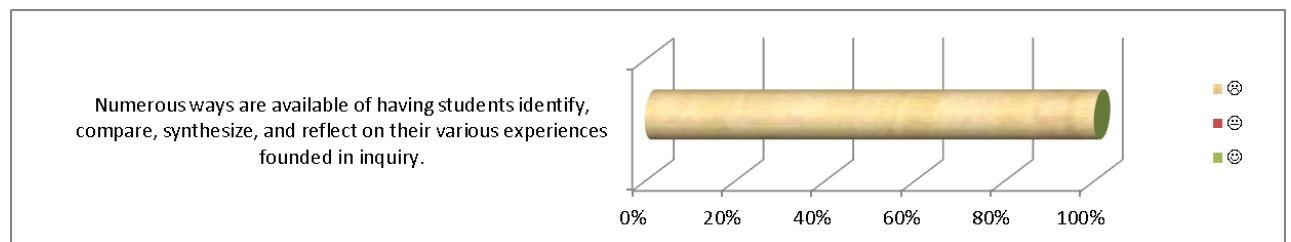
4. Based on accurate and factual professional expertise



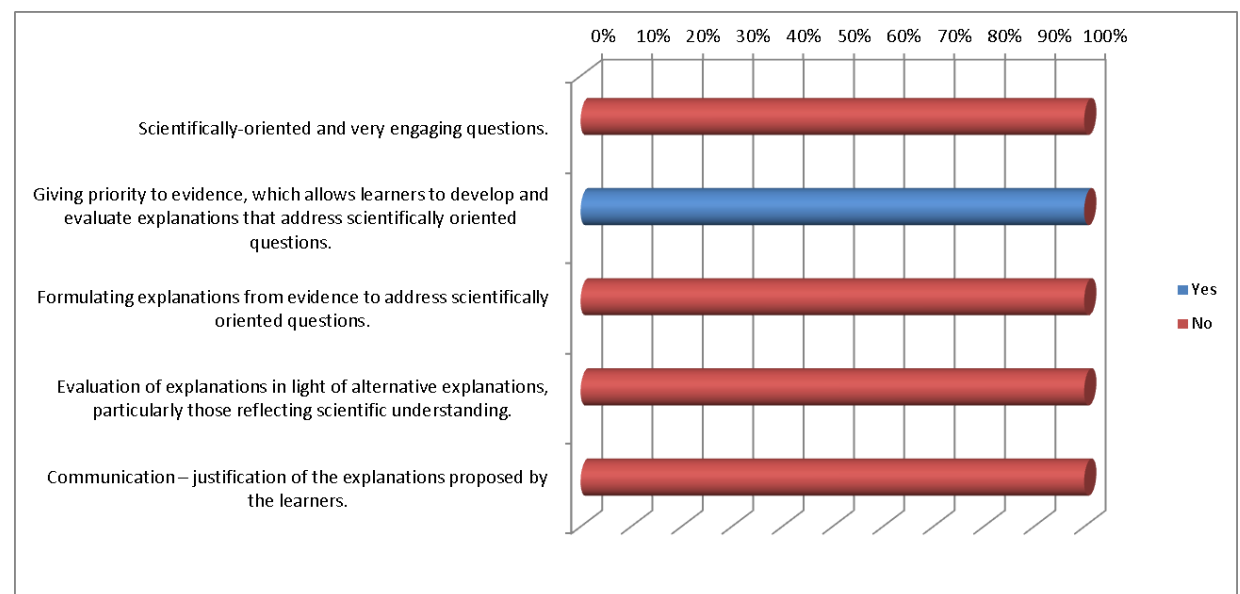
5. Connection to professions in the green labour market



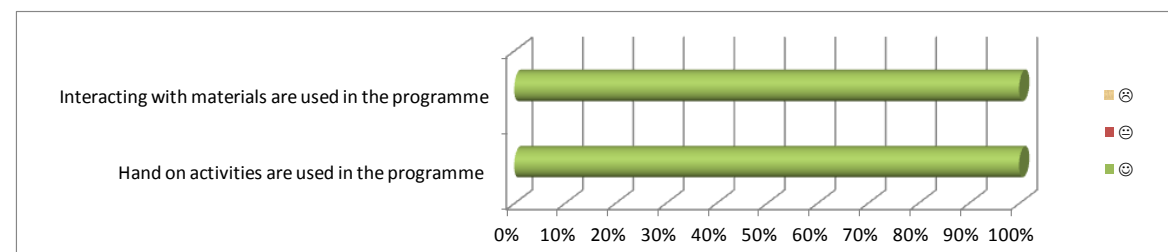
6. Learning by research and inquiry



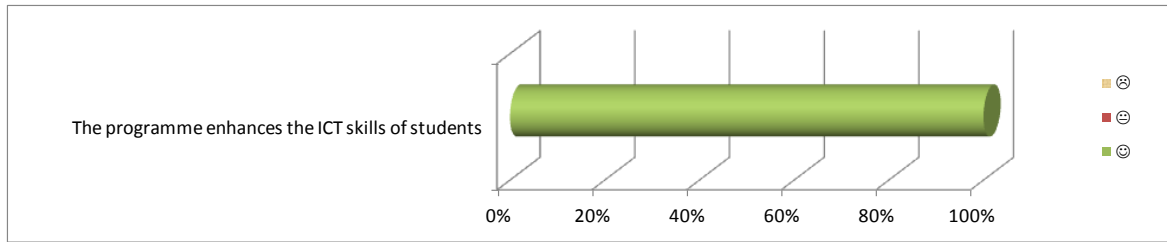
The learning activity supports following features:



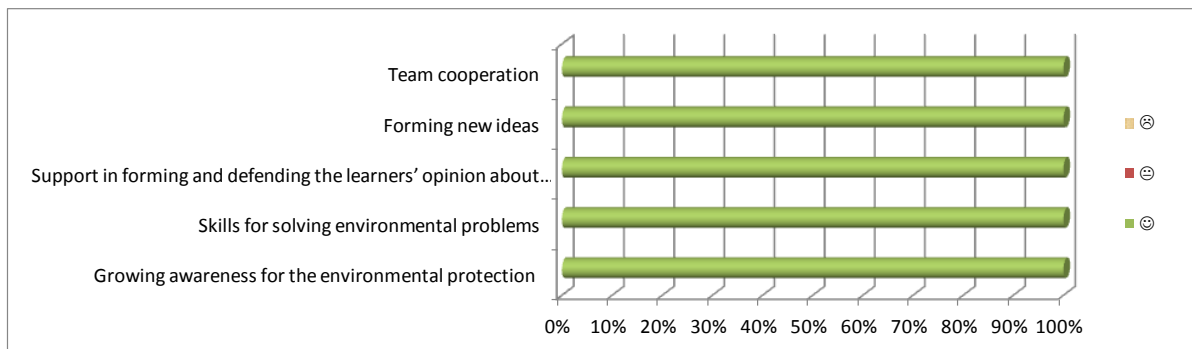
7. Activation of the students by hands-on



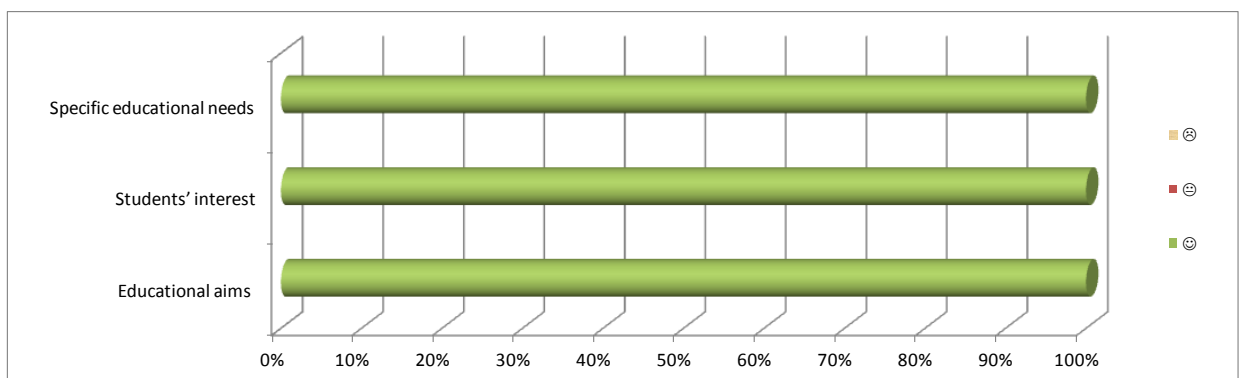
8. Enhancement of students' ICT skills



9. The learning activity supports the development of following social skills



10. The programme is easily adaptable for



3.2 Dikketruindag

Dates of evaluation: 26.02.2014 and 31.03.2014

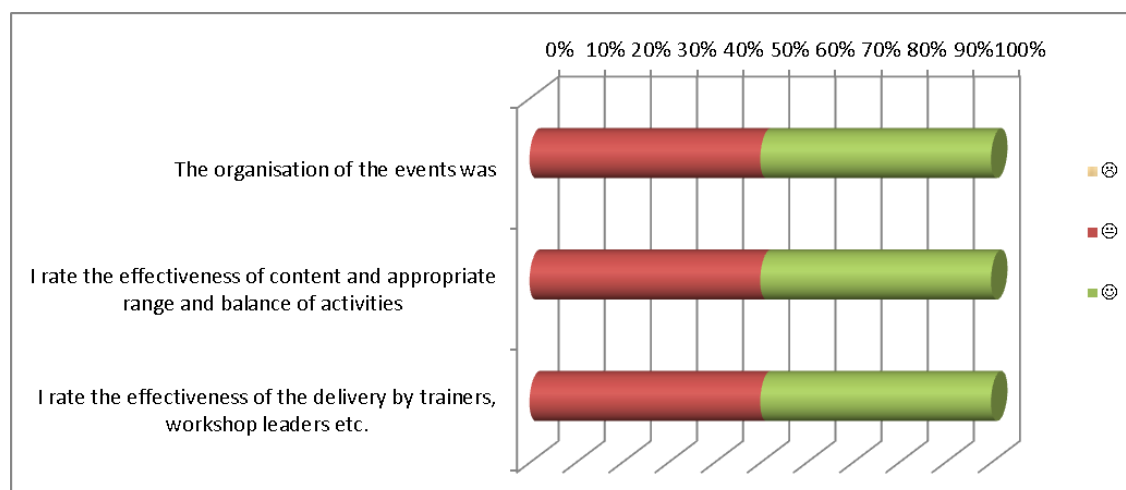
Country: Spain

Participants working with students in the age of: 16-19

Number of participants evaluated the best practice: 4

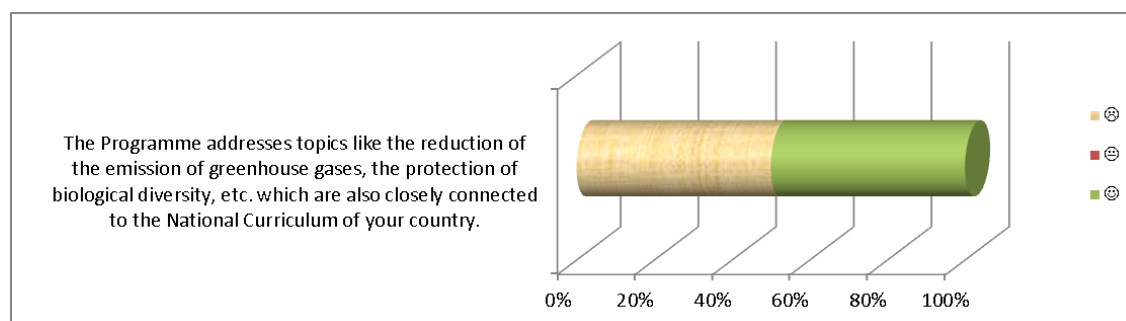
Based on the questionnaire (cf. Annex 1) the evaluation shows following results:

Section 1: Feedback for the event:



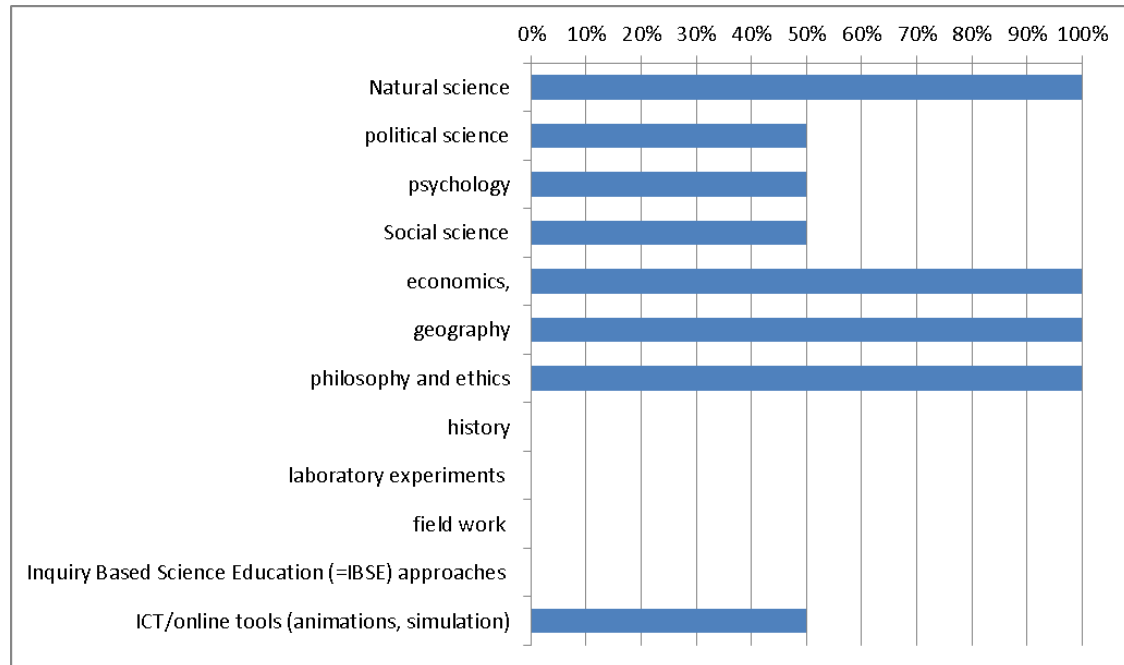
Section 2: “voice of user”:

1 Relation to a green topic and to the National Curriculum

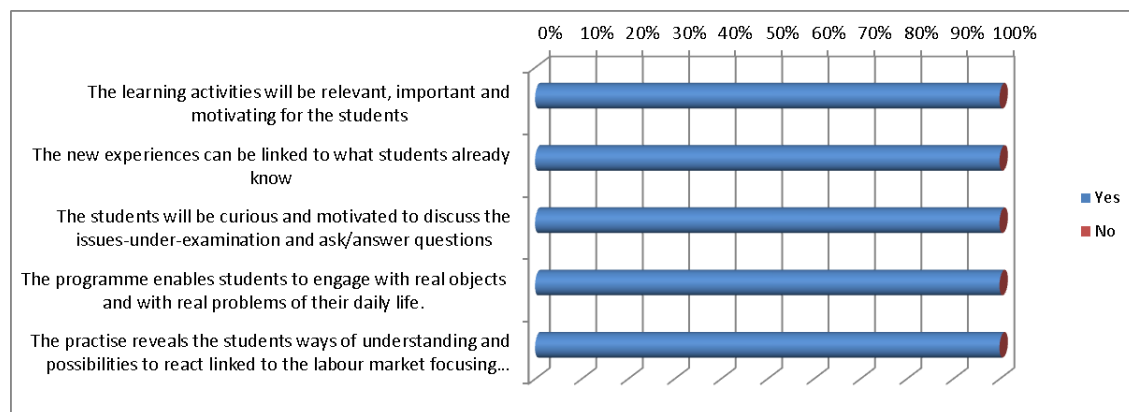


2. Being interdisciplinary: Drawing upon many academic disciplines and teaching methods, does the programme include following elements?

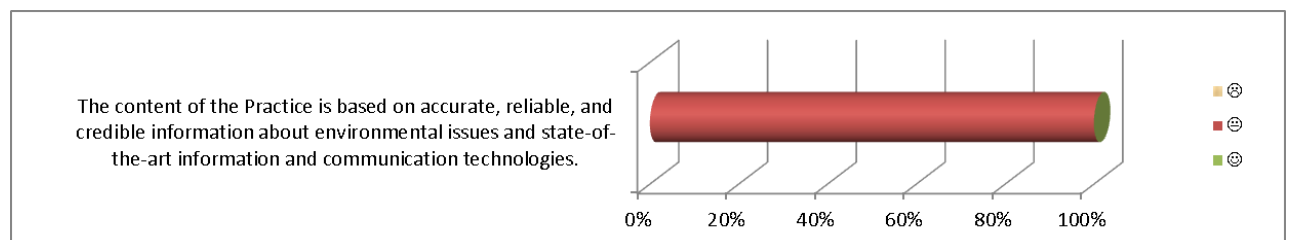
(The figures shows how many percentage t answered with yes)



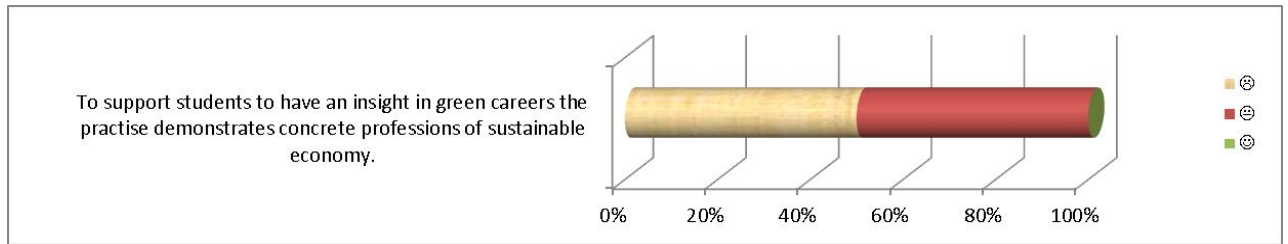
3. Relevance to the daily life of students



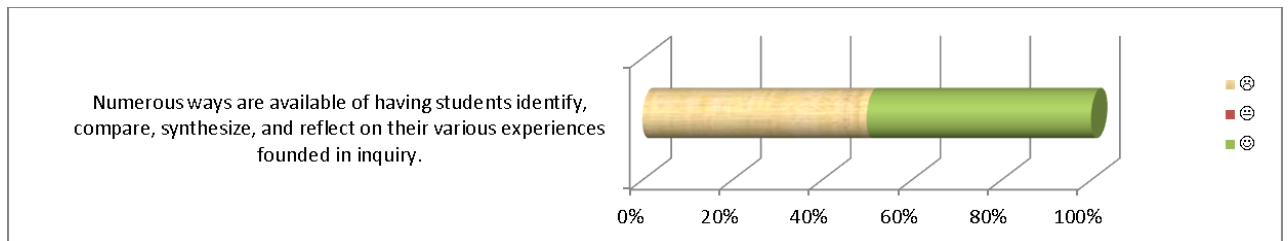
4. Based on accurate and factual professional expertise



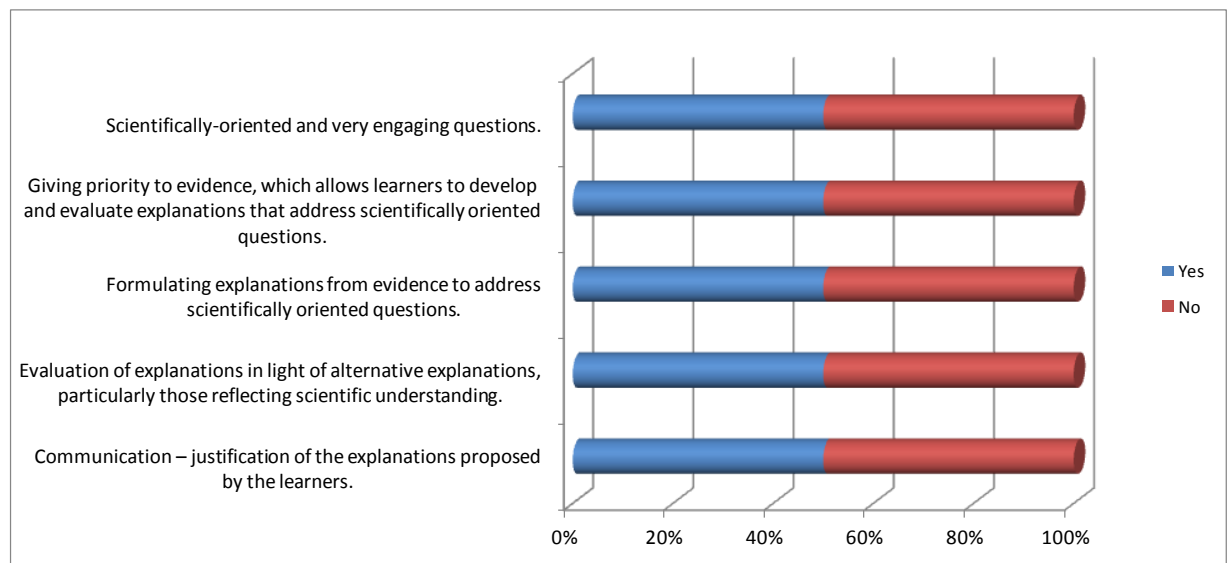
5. Connection to professions in the green labour market



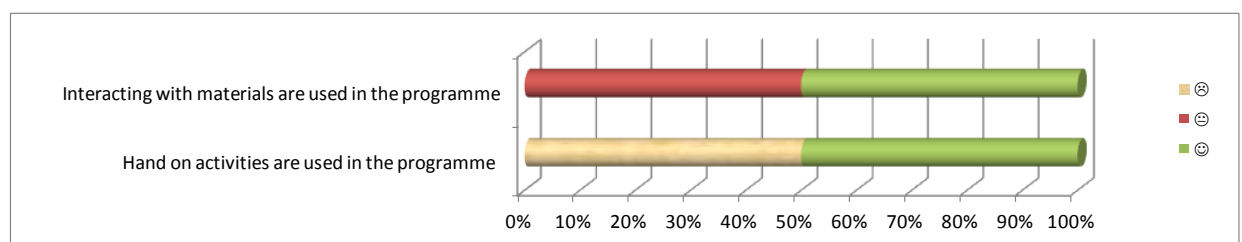
6. Learning by research and inquiry



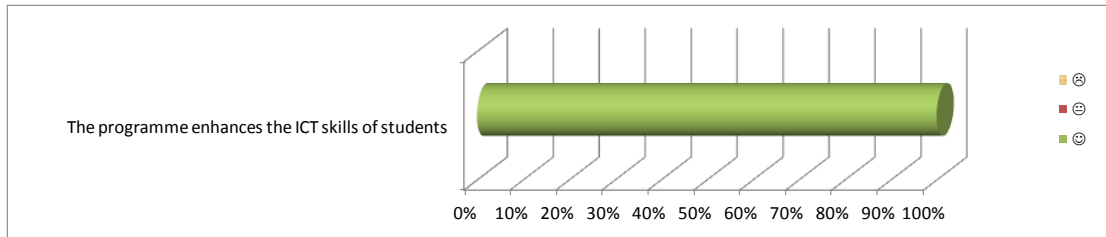
The learning activity supports following features:



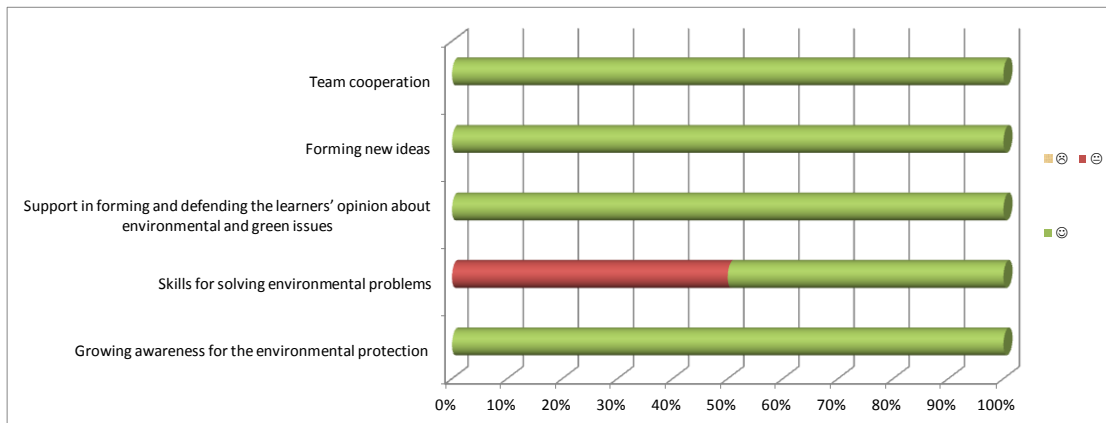
7. Activation of the students by hands-on



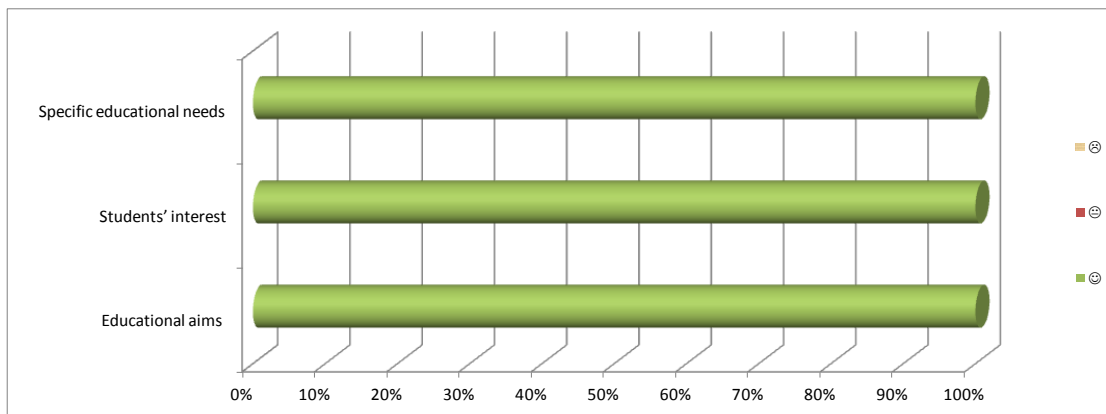
8. Enhancement of students' ICT skills



9. The learning activity supports the development of following social skills



10. The programme is easily adaptably for



3.3 Experimental educational lessons on the testing of the germination rate of a range of vegetable seeds

Dates of evaluation: 26.02.2014 and 31.03.2014

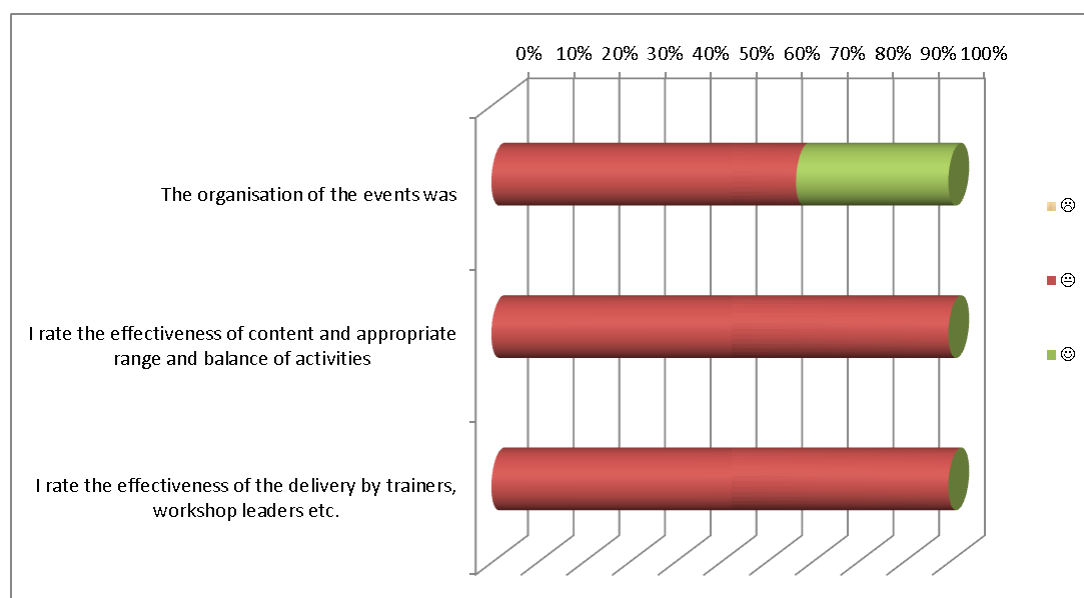
Country: Spain

Participants working with students in the age of: 16-19

Number of participants evaluated the best practice: 4

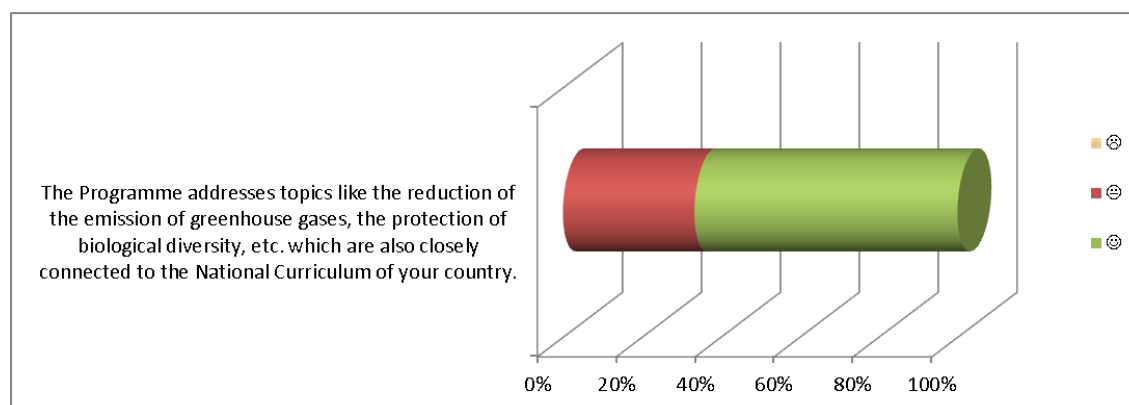
Based on the questionnaire (cf. Annex 1) the evaluation shows following results:

Section 1: Feedback for the event:



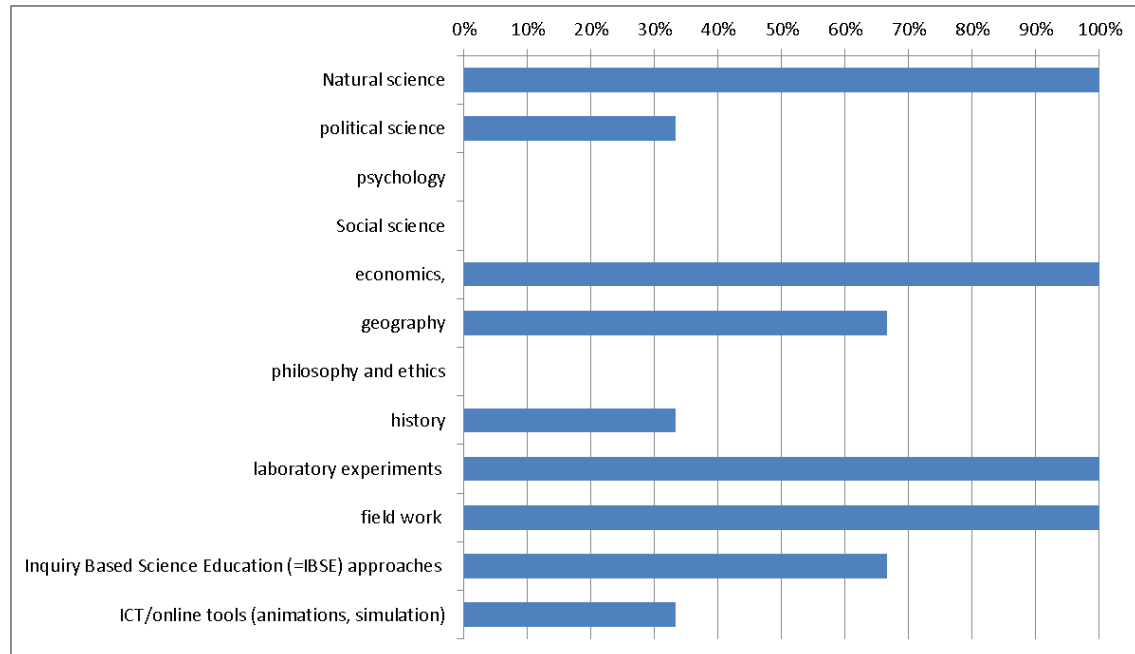
Section 2: “voice of user”:

1 Relation to a green topic and to the National Curriculum

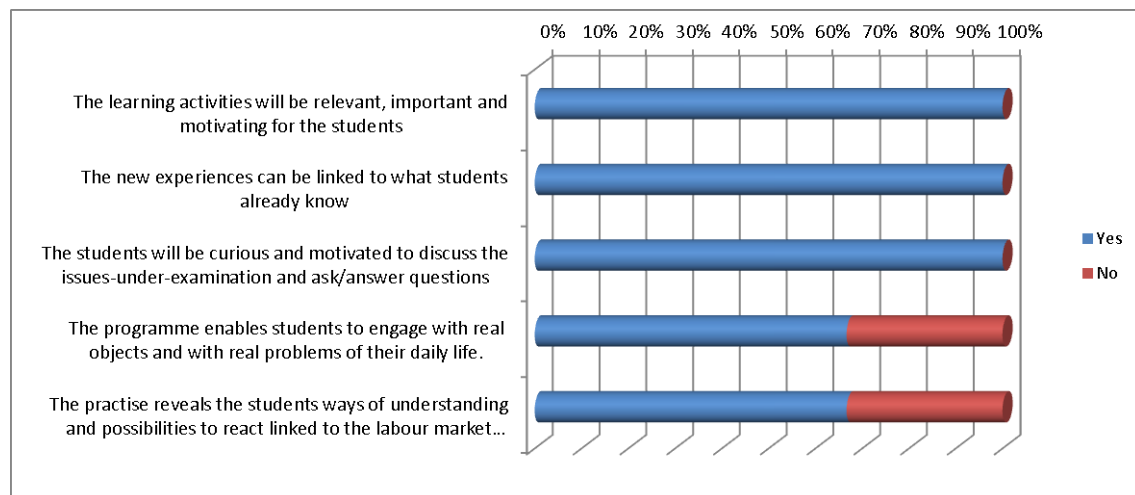


2. Being interdisciplinary: Drawing upon many academic disciplines and teaching methods, does the programme include following elements?

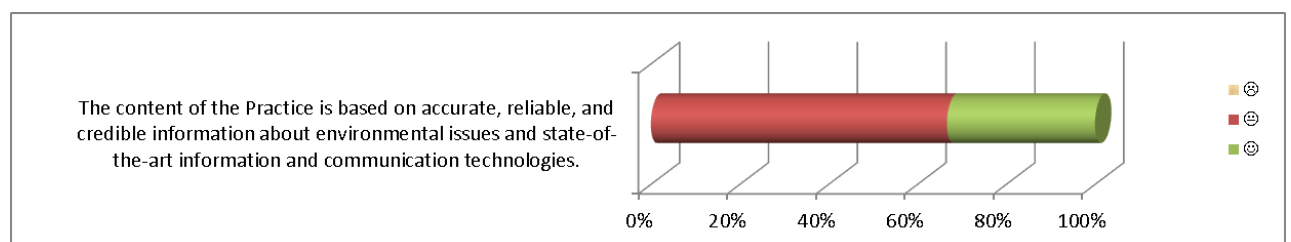
(The figures shows how many percentage t answered with yes)



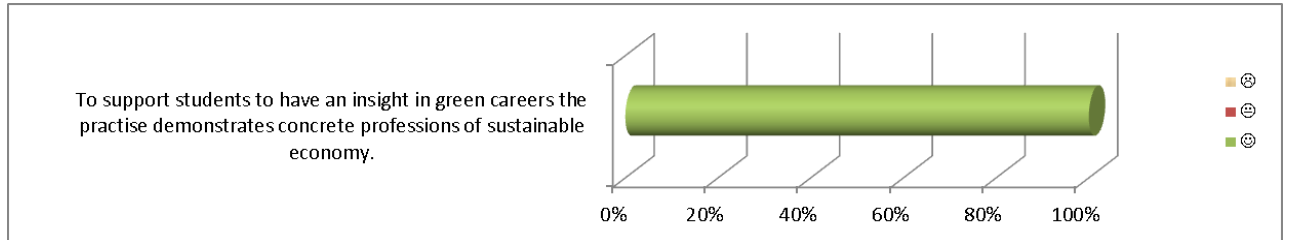
3. Relevance to the daily life of students



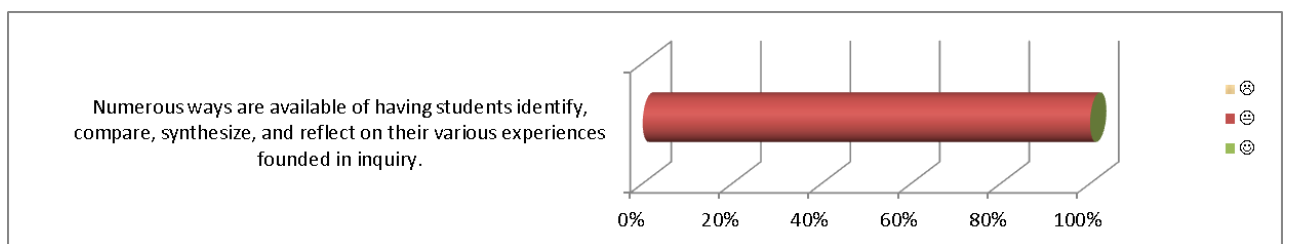
4. Based on accurate and factual professional expertise



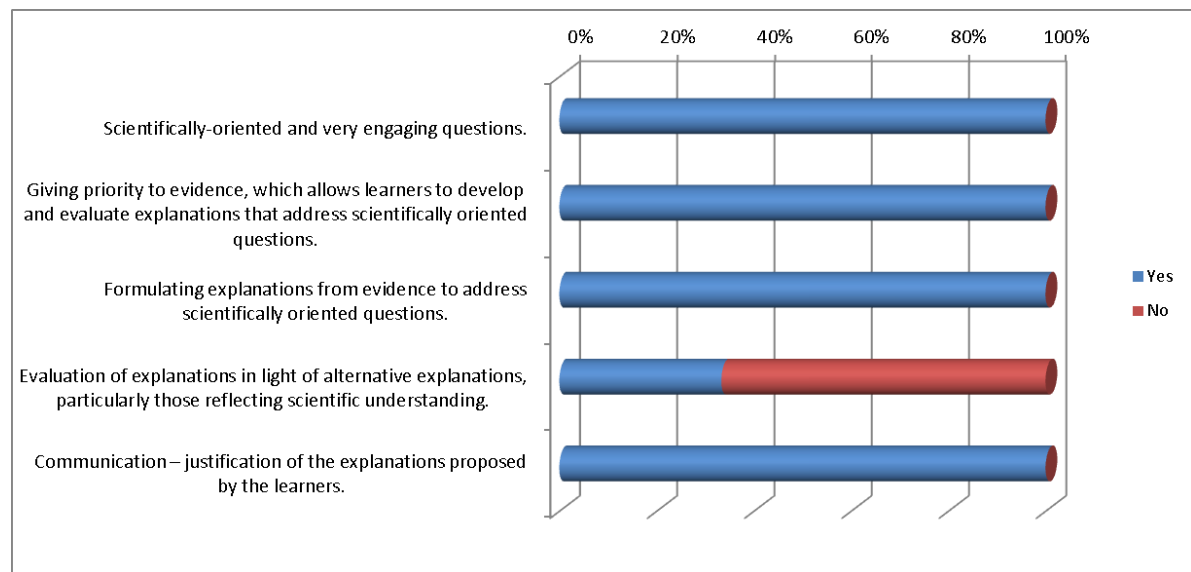
5. Connection to professions in the green labour market



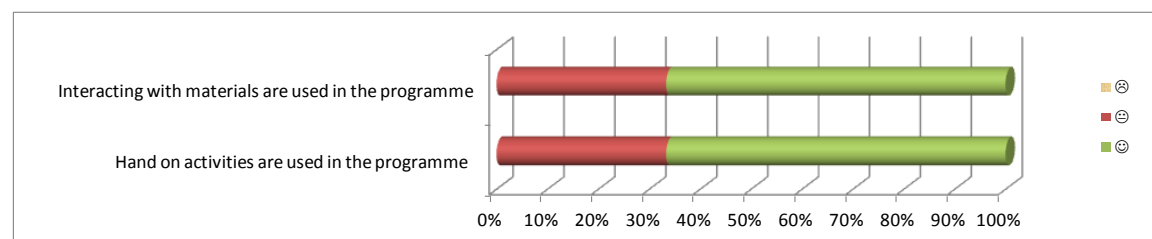
6. Learning by research and inquiry



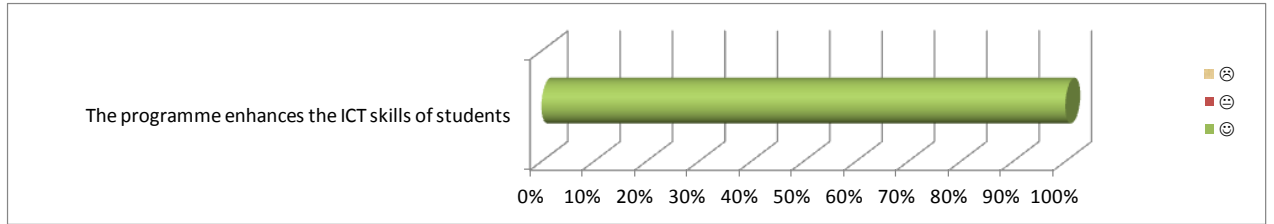
The learning activity supports following features:



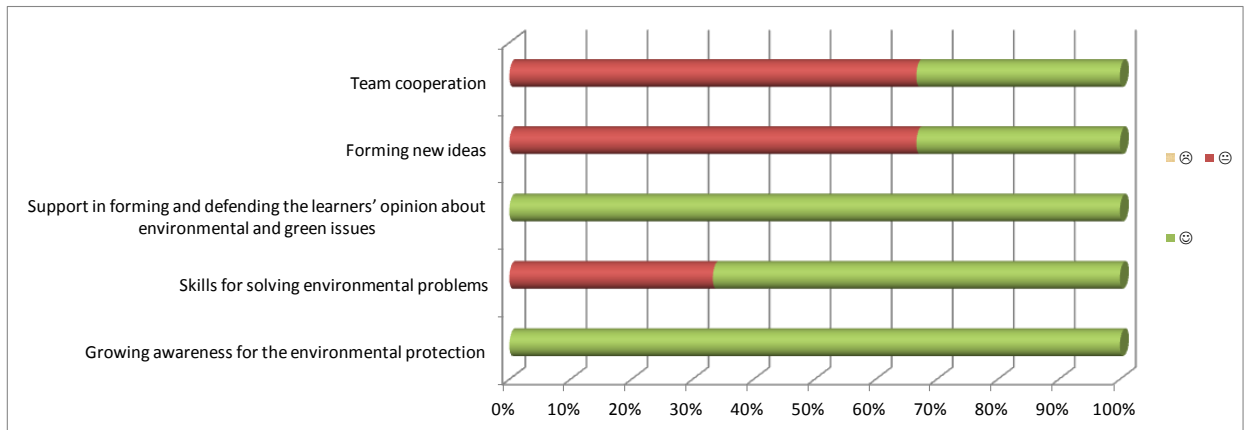
7. Activation of the students by hands-on



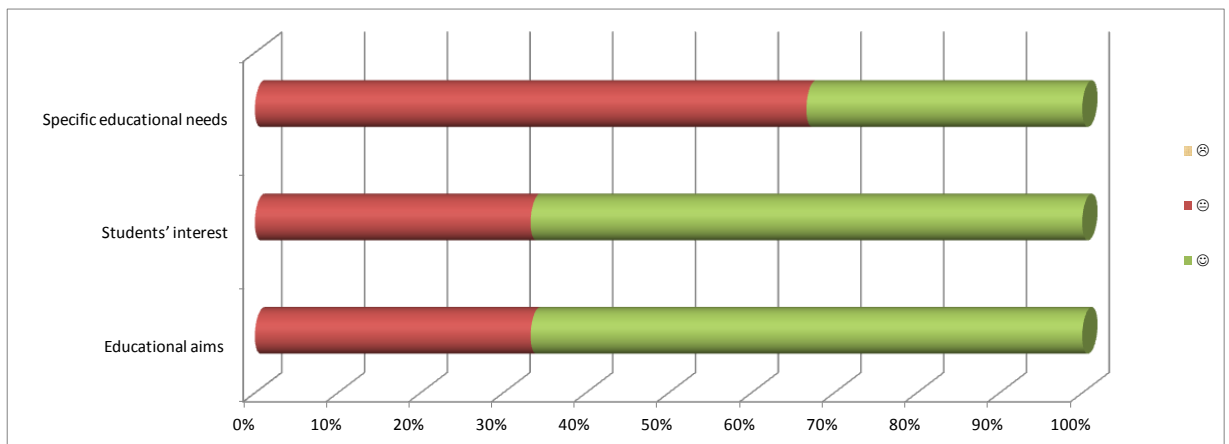
8. Enhancement of students' ICT skills



9. The learning activity supports the development of following social skills



10. The programme is easily adaptably for



3.4 A small exemplary hydroponic school garden

Date of evaluation: 31.03.2014

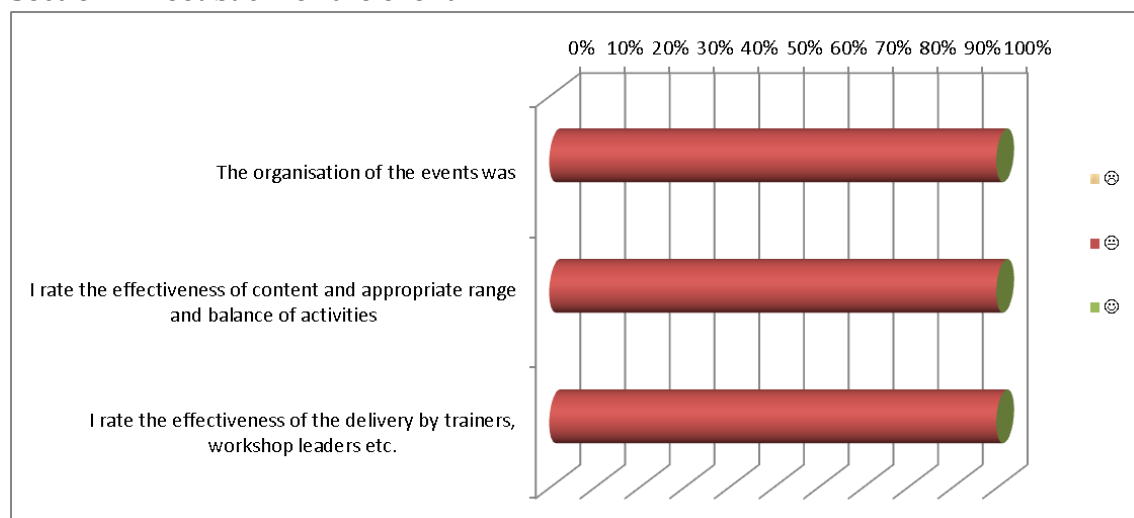
Country: Spain

Participants working with students in the age of: 16-19

Number of participants evaluated the best practice: 2

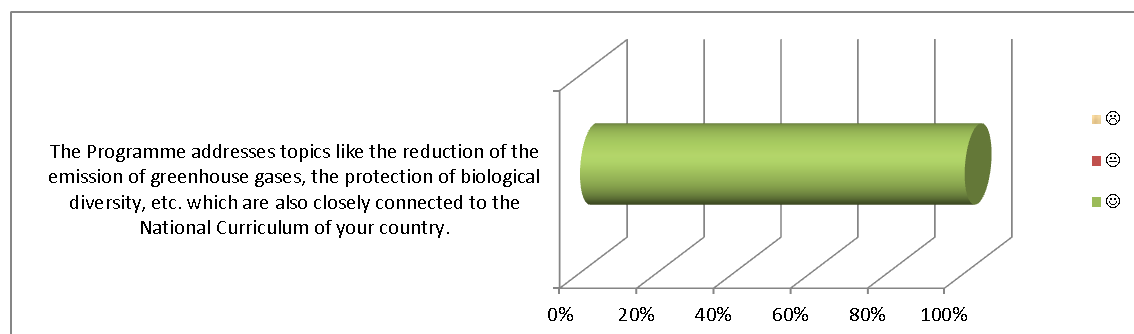
Based on the questionnaire (cf. Annex 1) the evaluation shows following results:

Section 1: Feedback for the event:



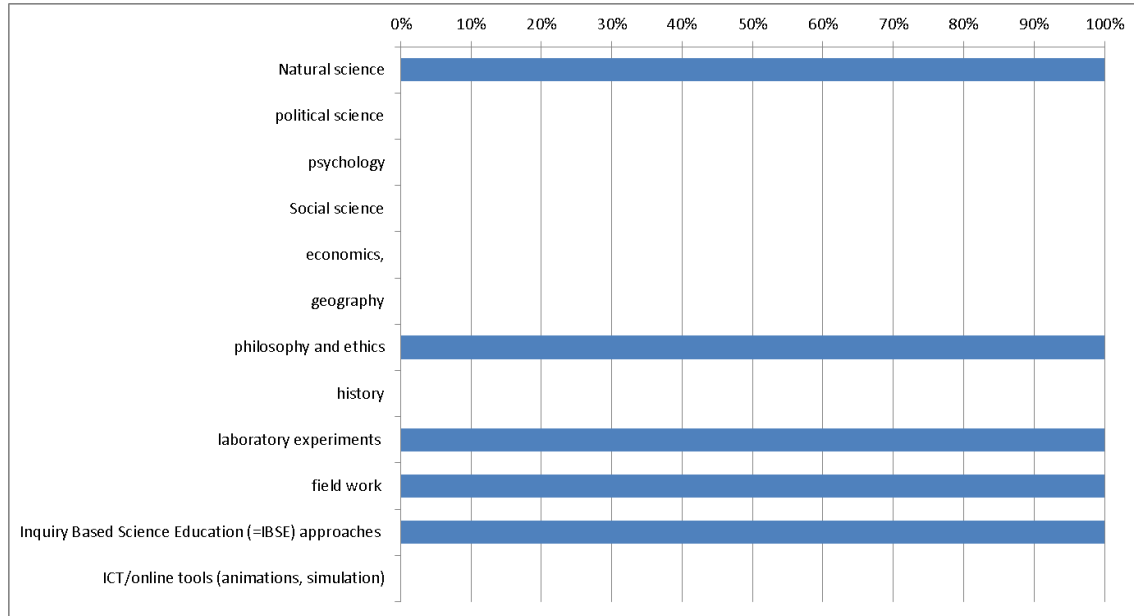
Section 2: “voice of user”:

1 Relation to a green topic and to the National Curriculum

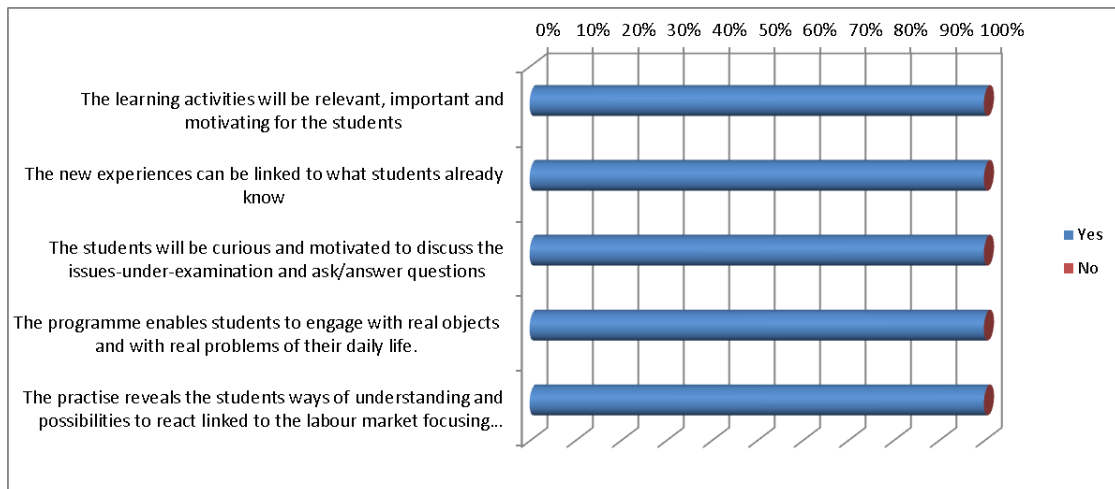


2. Being interdisciplinary: Drawing upon many academic disciplines and teaching methods, does the programme include following elements?

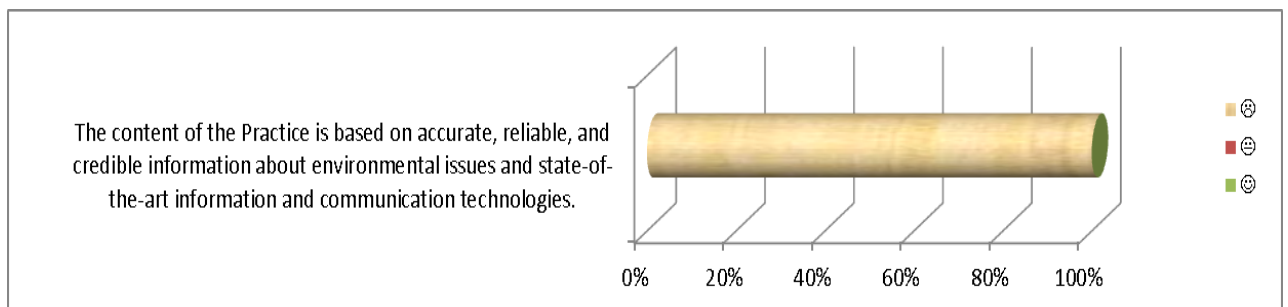
(The figures shows how many percentage t answered with yes)



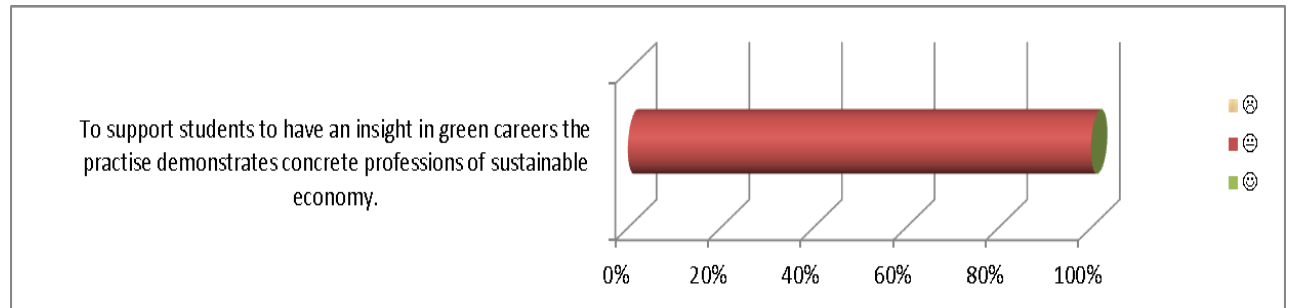
3. Relevance to the daily life of students



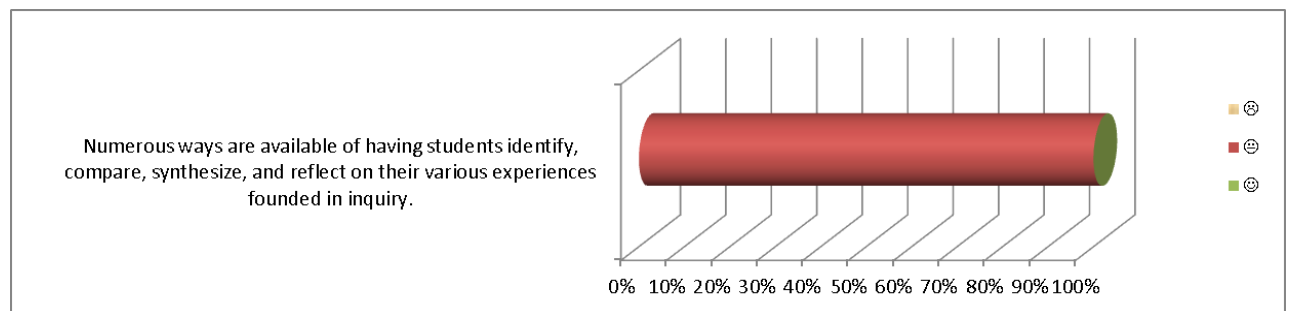
4. Based on accurate and factual professional expertise



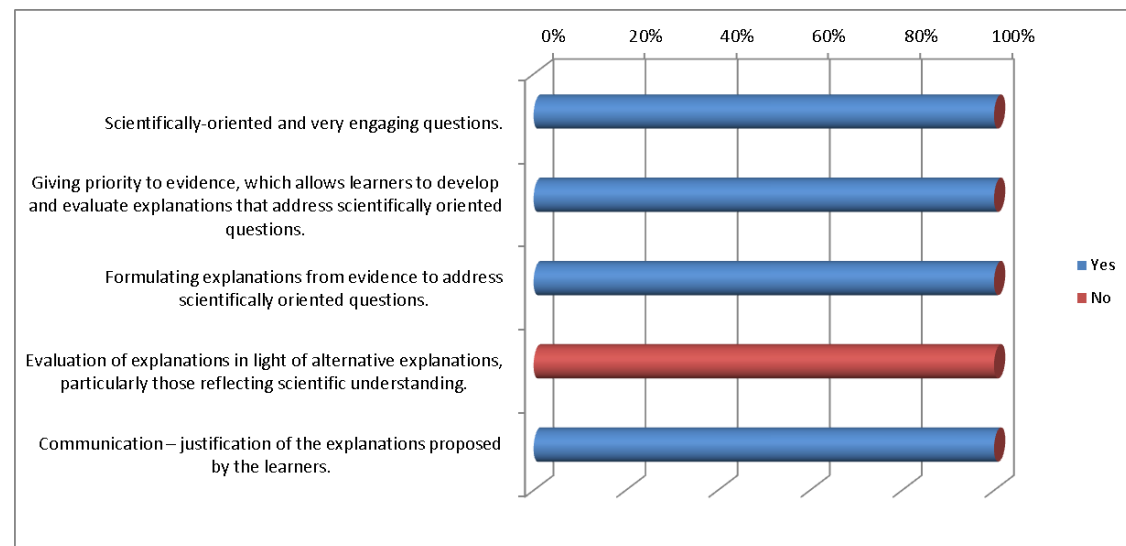
5. Connection to professions in the green labour market



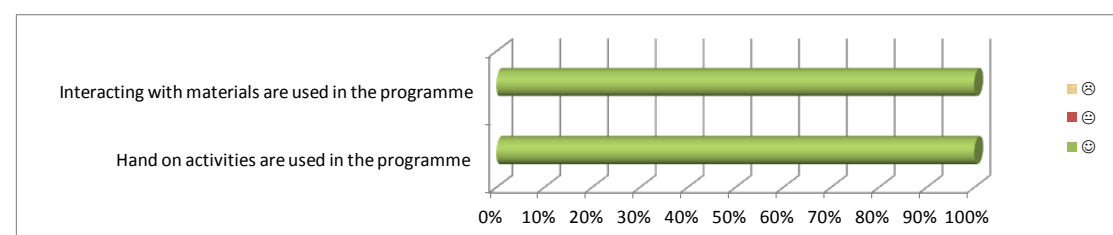
6. Learning by research and inquiry



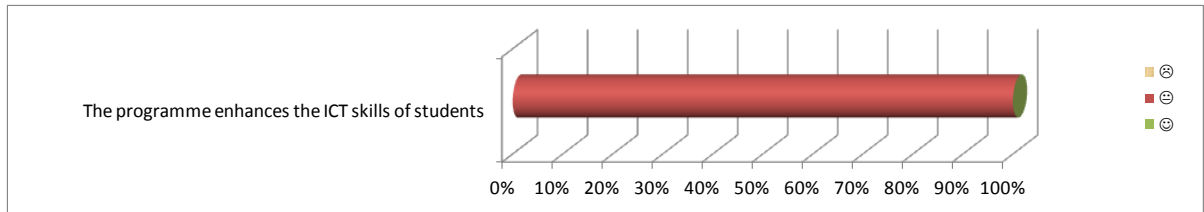
The learning activity supports following features:



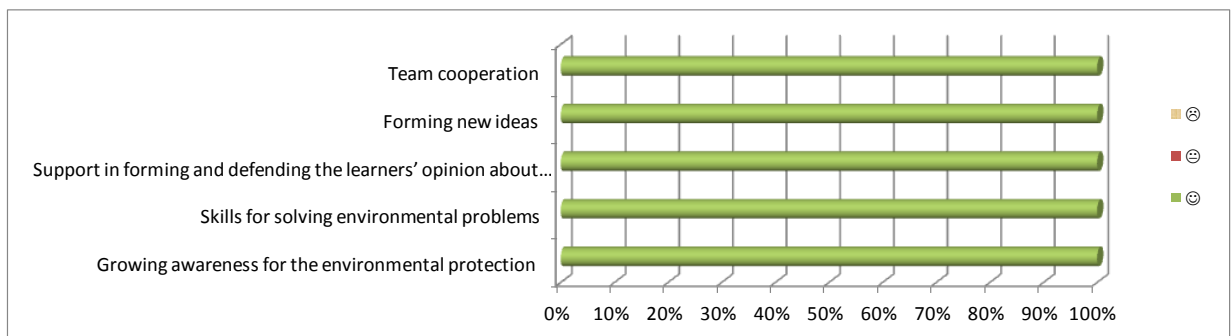
7. Activation of the students by hands-on



8. Enhancement of students' ICT skills



9. The learning activity supports the development of following social skills



10. The programme is easily adaptably for

No data available

3.5 Energy – today and tomorrow

Dates of evaluation: 04.02.2014 and 26.02. 2014

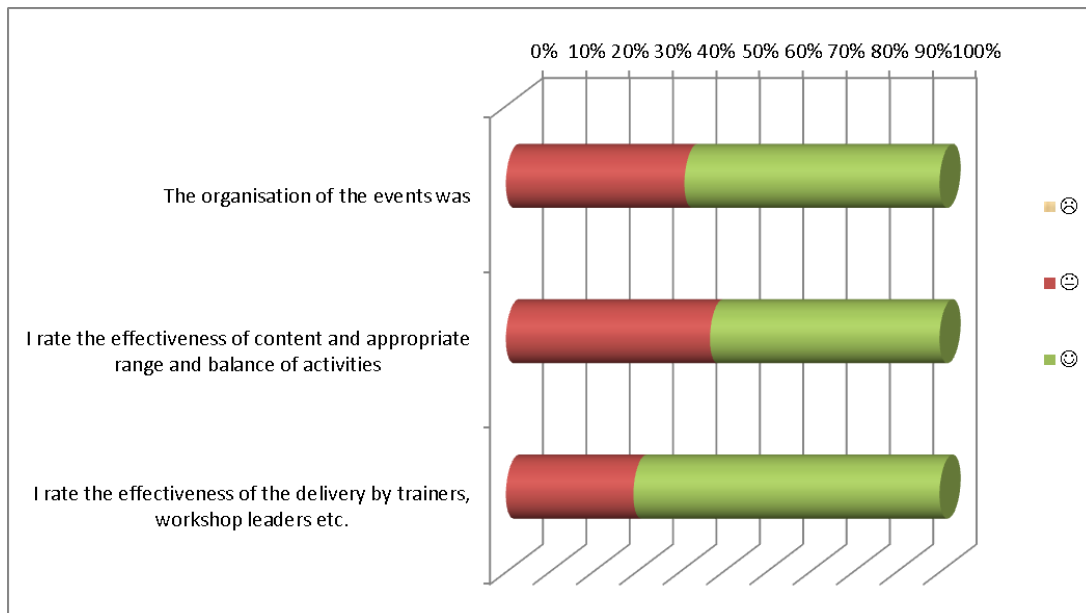
Country: Germany

Participants working with students in the age of: 6- 12, 13 -15 and 16-19

Number of participants evaluated the best practice: 17

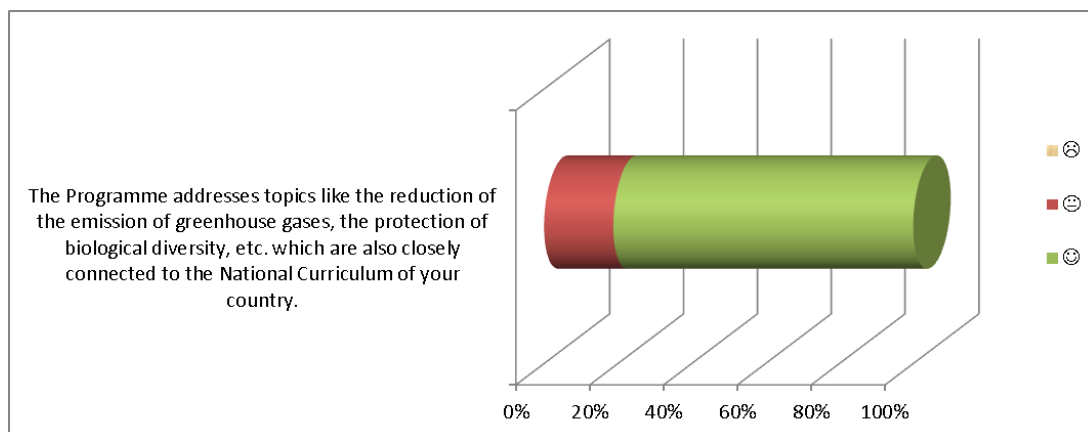
Based on the questionnaire (cf. Annex 1) the evaluation shows following results:

Section 1: Feedback for the event:



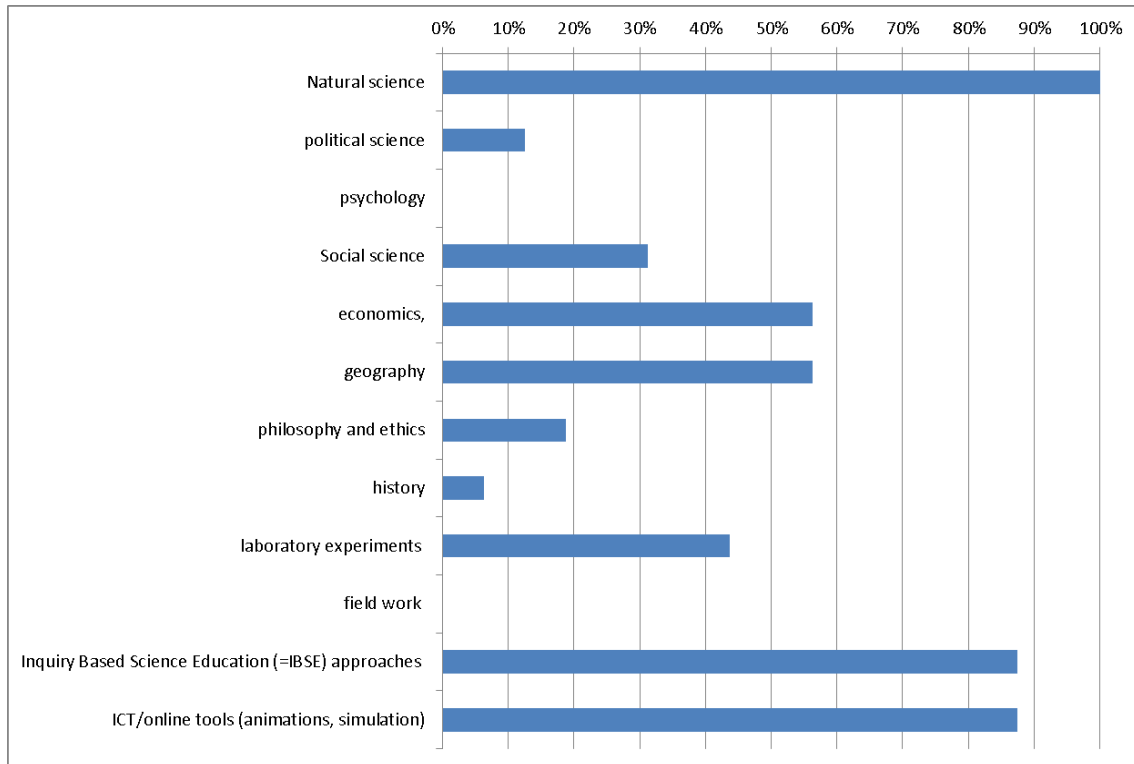
Section 2: “voice of user”:

1 Relation to a green topic and to the National Curriculum

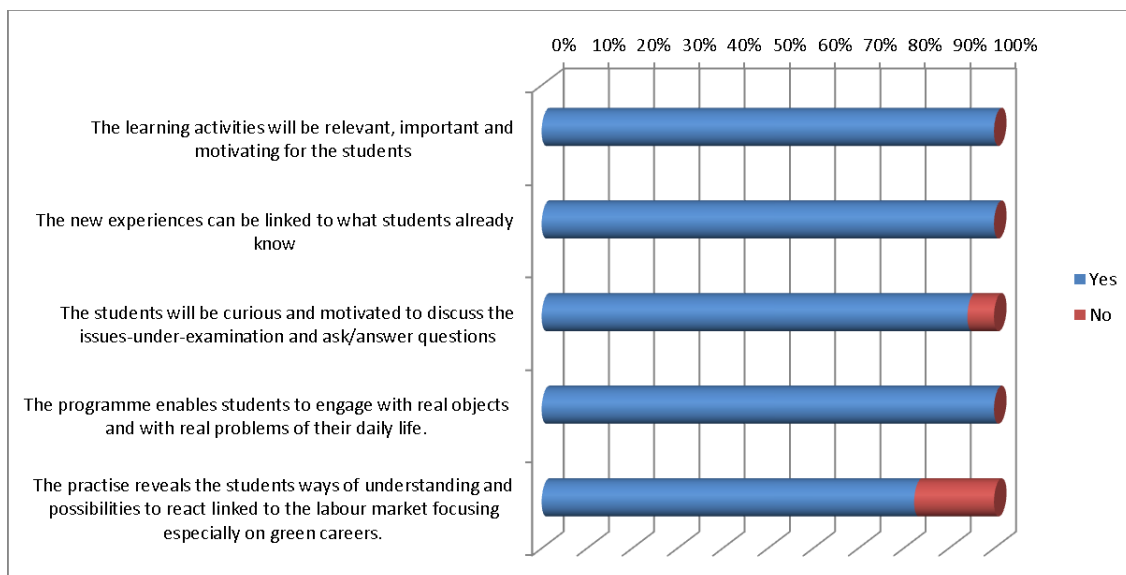


2. Being interdisciplinary: Drawing upon many academic disciplines and teaching methods, does the programme include following elements?

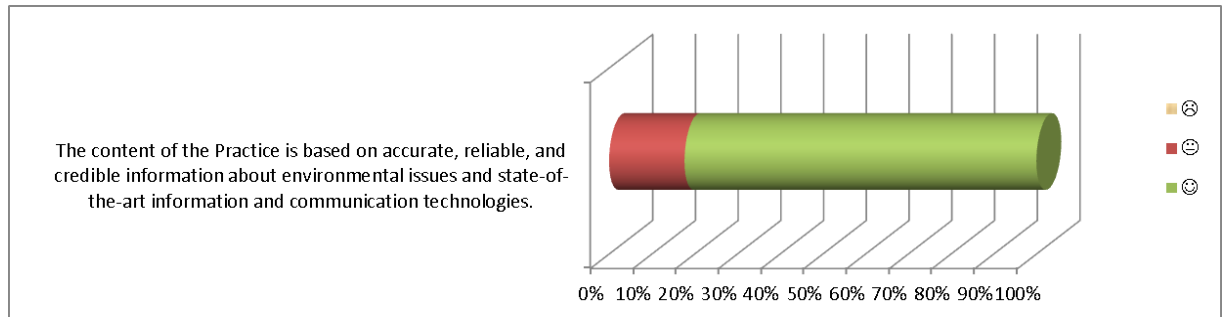
(The figures shows how many percentage t answered with yes)



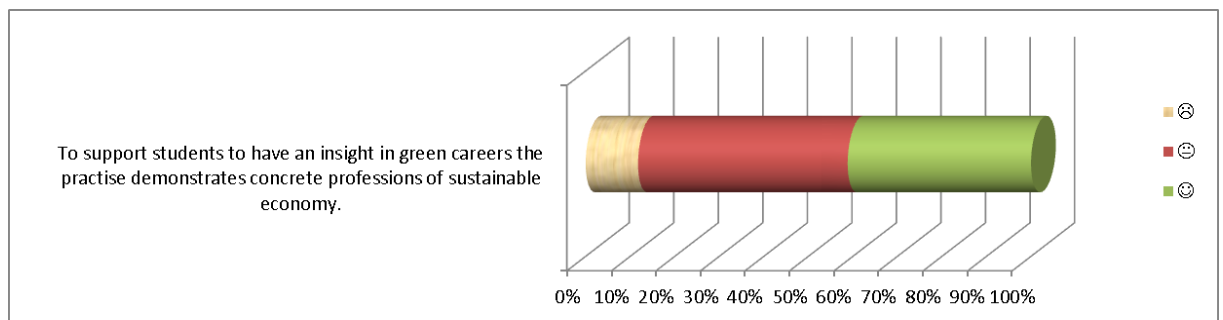
3. Relevance to the daily life of students



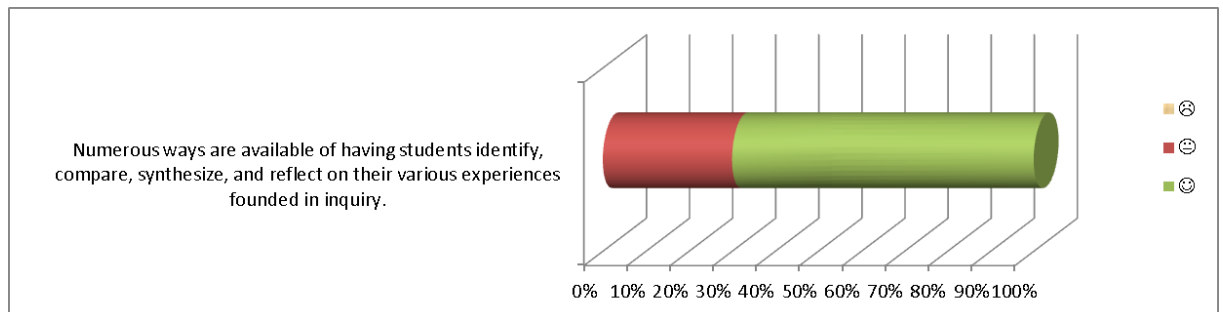
4. Based on accurate and factual professional expertise



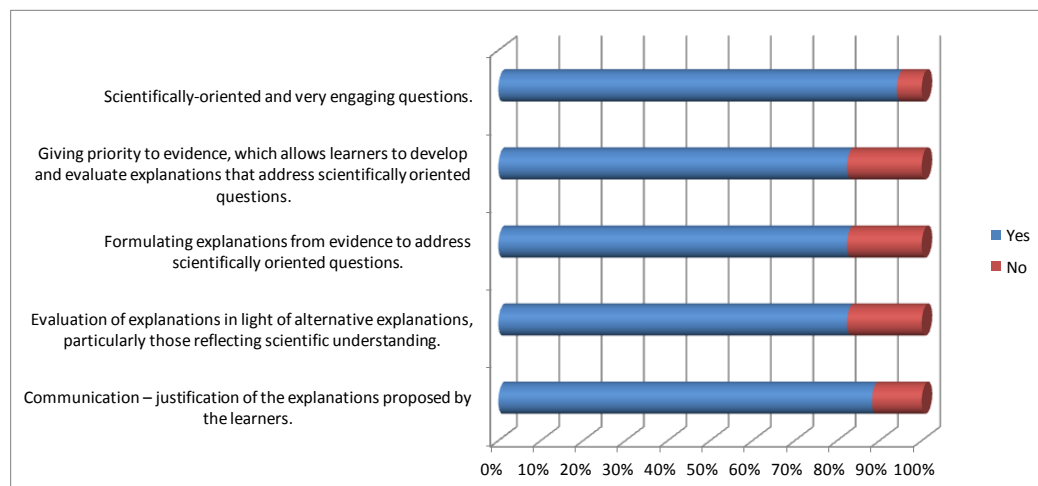
5. Connection to professions in the green labour market



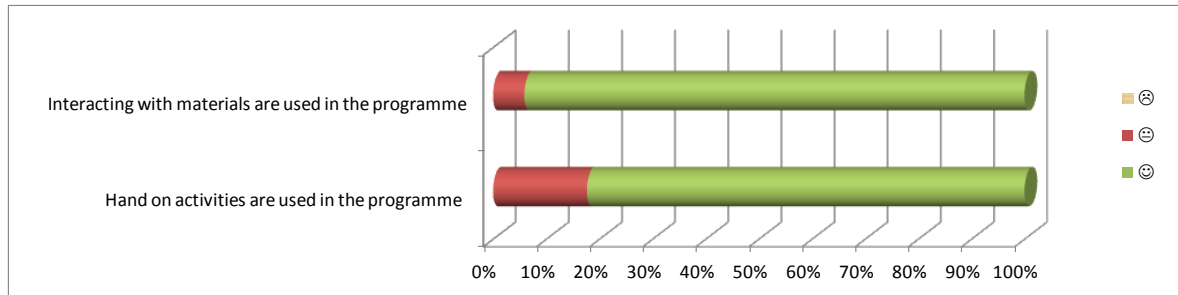
6. Learning by research and inquiry



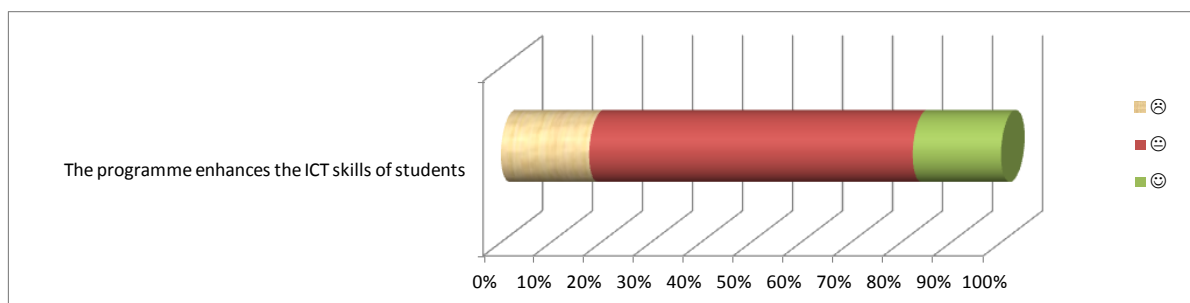
The learning activity supports following features:



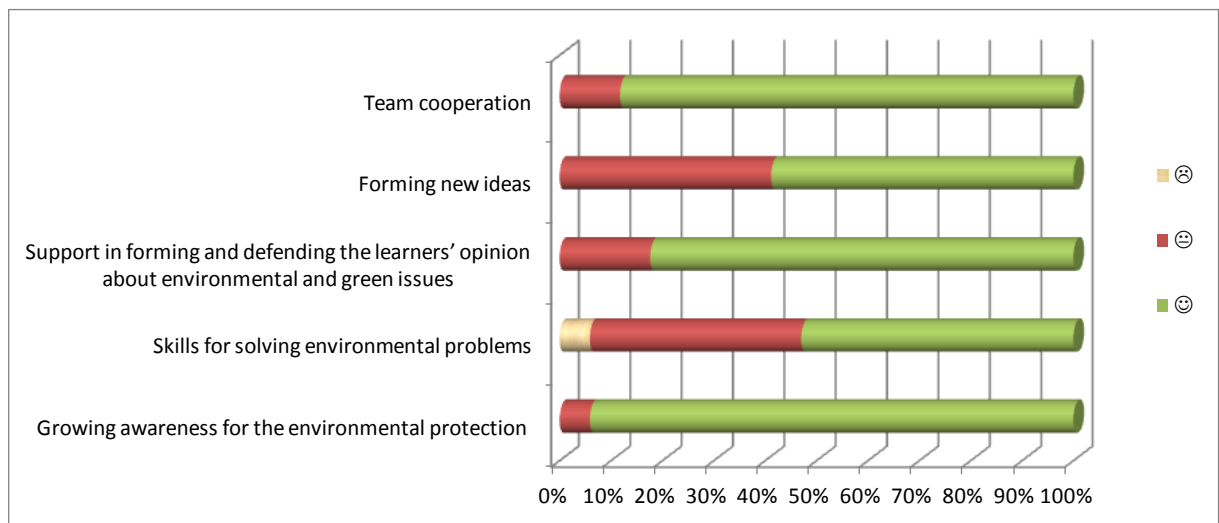
7. Activation of the students by hands-on



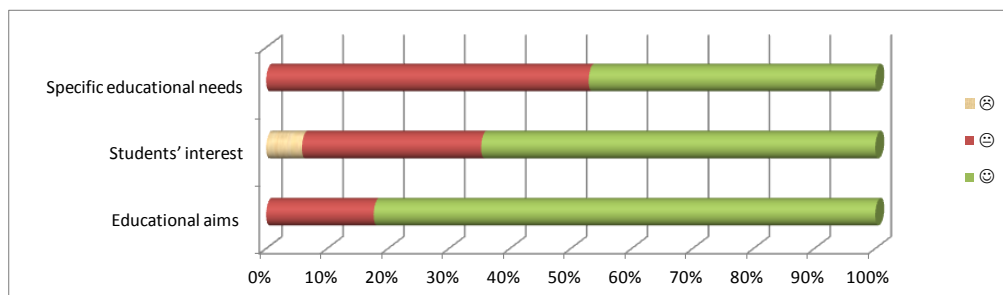
8. Enhancement of students' ICT skills



9. The learning activity supports the development of following social skills



10. The programme is easily adaptably for



3.6 The flying classroom

Dates of evaluation: 29.01.2014 and 27.03.2014 in Germany

Dates of evaluation: 26.02.2014 and 31.03.2014 in Spain

Participants working with students in the age of: 6- 12, 13 -15 and 16-19

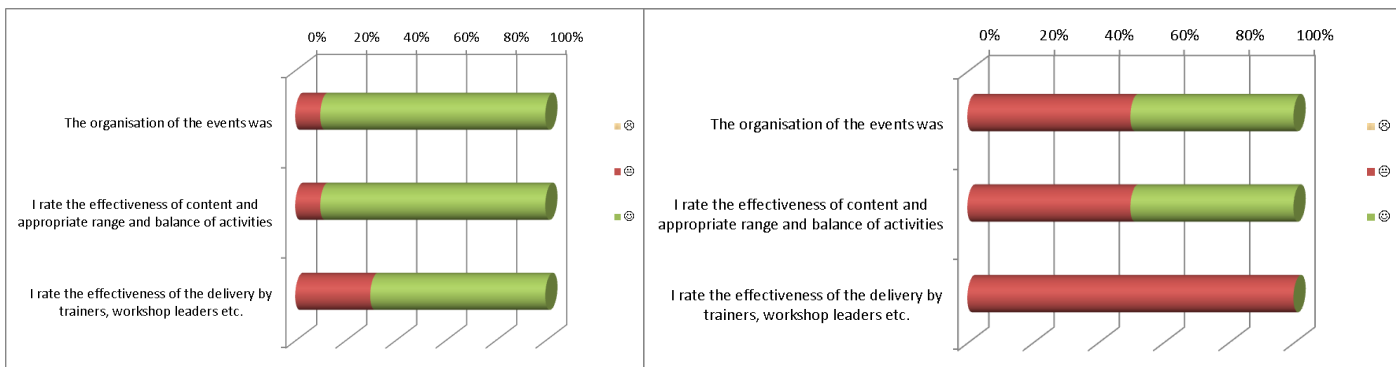
Number of participants evaluated the best practice: 19

Based on the questionnaire (cf. Annex 1) the evaluation shows following results:

Section 1: Feedback for the event:

Germany:

Spain

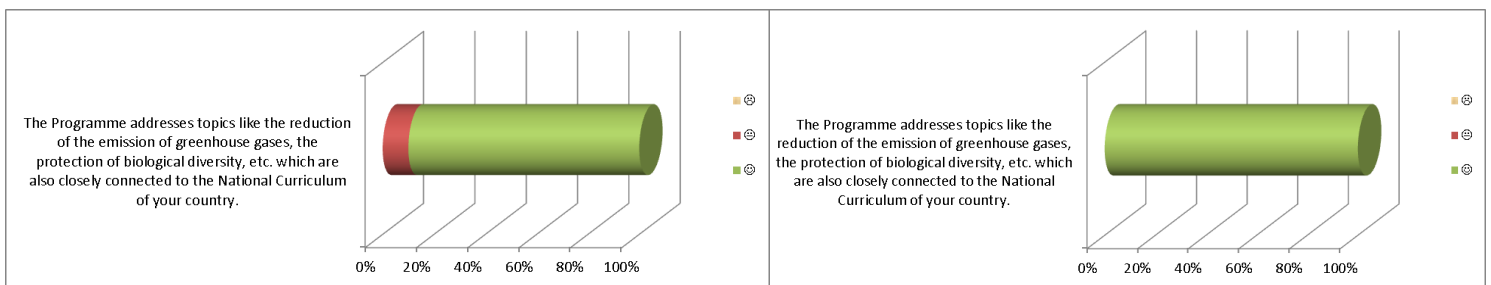


Section 2: “voice of user”:

1 Relation to a green topic and to the National Curriculum

Germany:

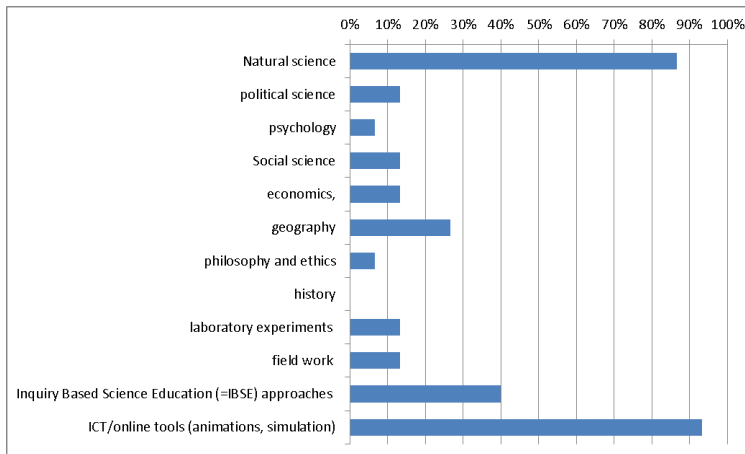
Spain



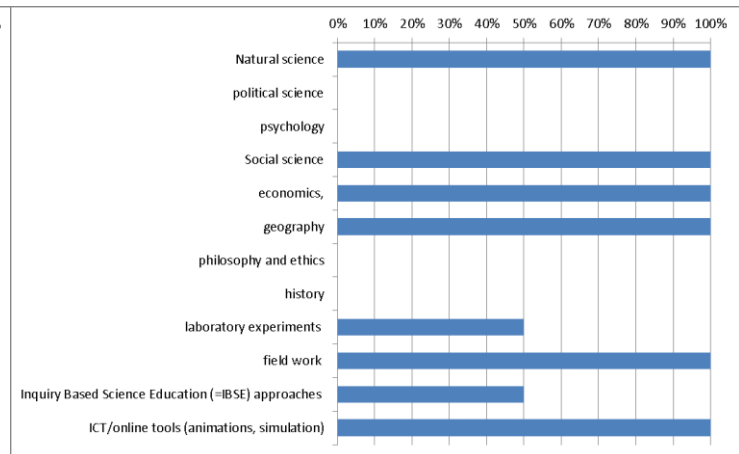
2. Being interdisciplinary: Drawing upon many academic disciplines and teaching methods, does the programme include following elements?

(The figures shows how many percentage t answered with yes)

Germany:

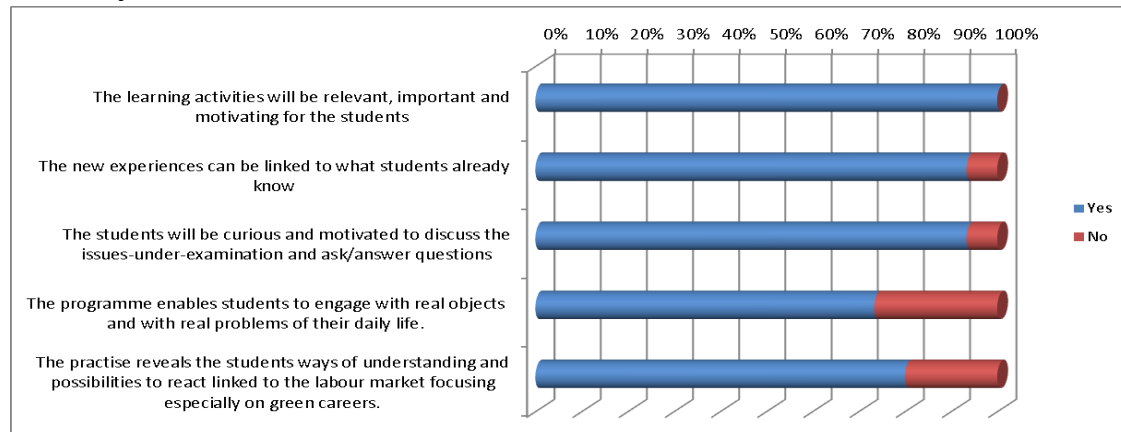


Spain

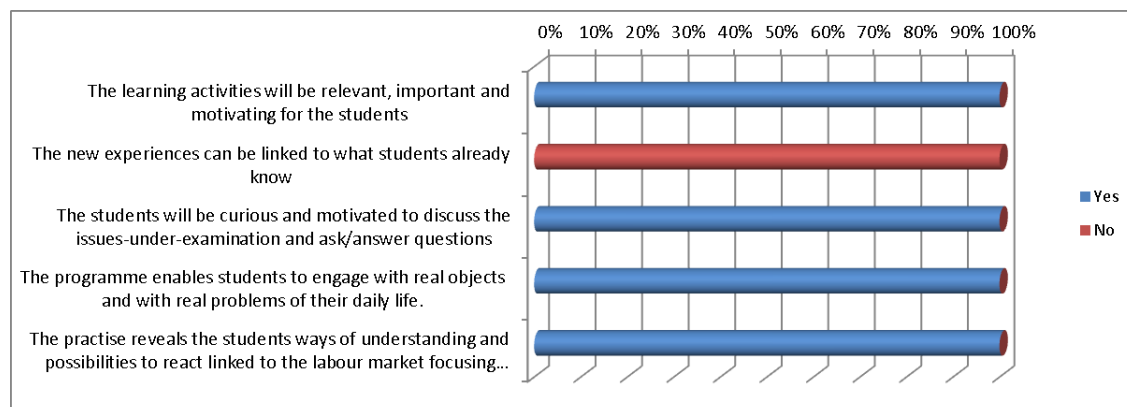


3. Relevance to the daily life of students

Germany:

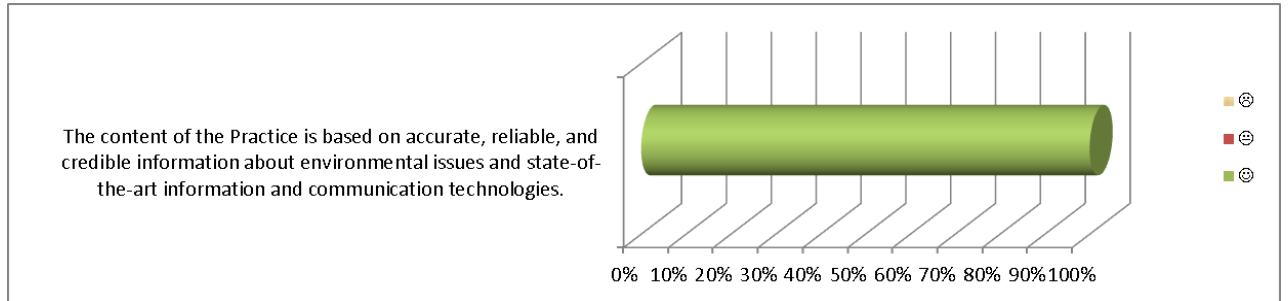


Spain

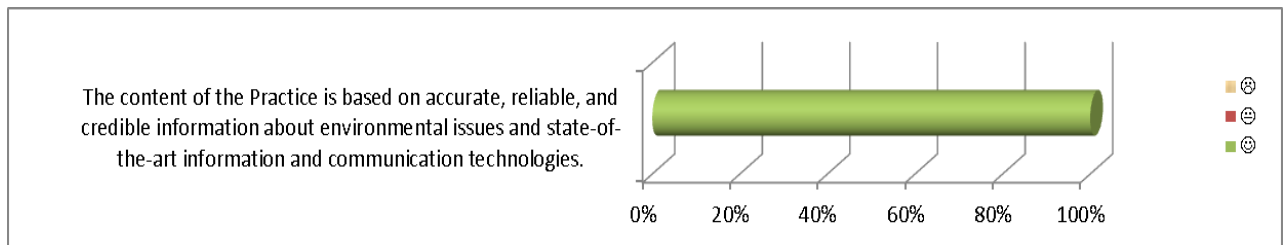


4. Based on accurate and factual professional expertise

Germany

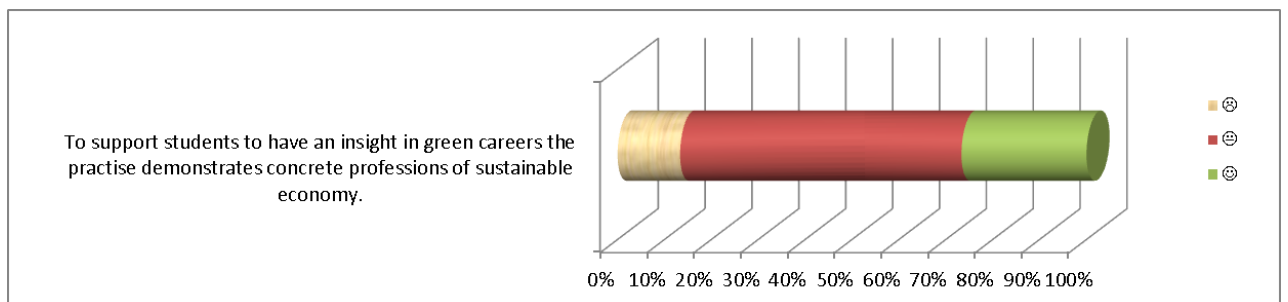


Spain

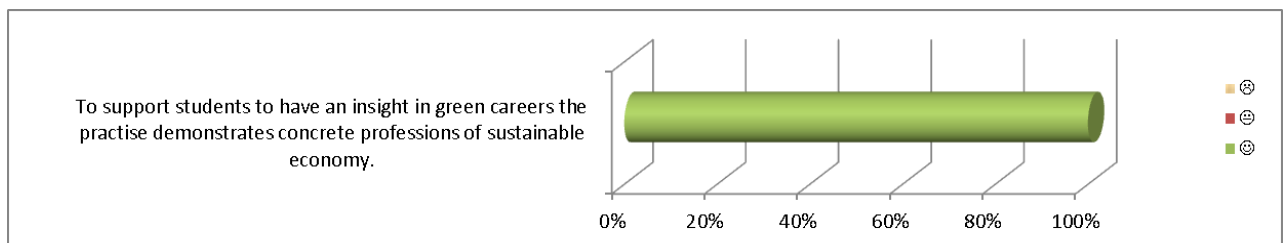


5. Connection to professions in the green labour market

Germany

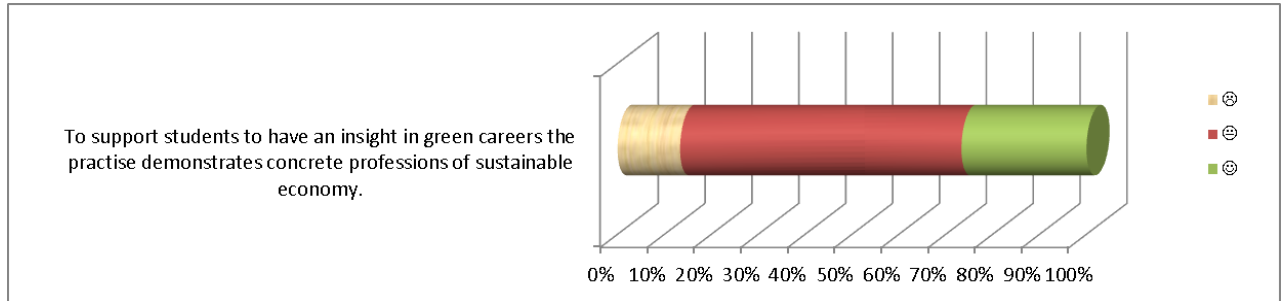


Spain

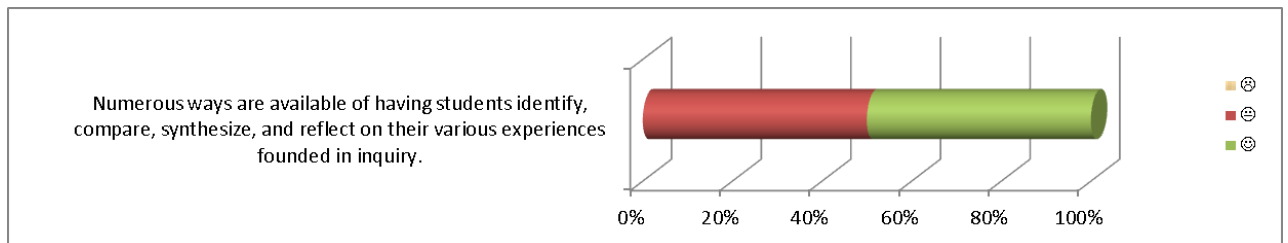


6. Learning by research and inquiry

Germany

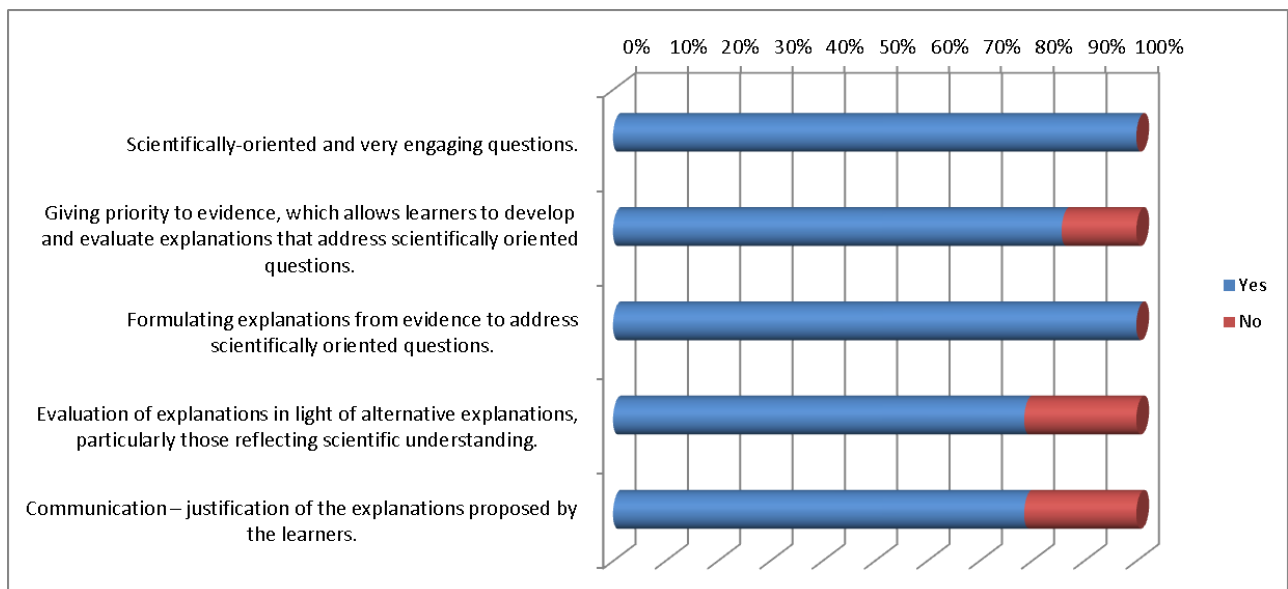


Spain

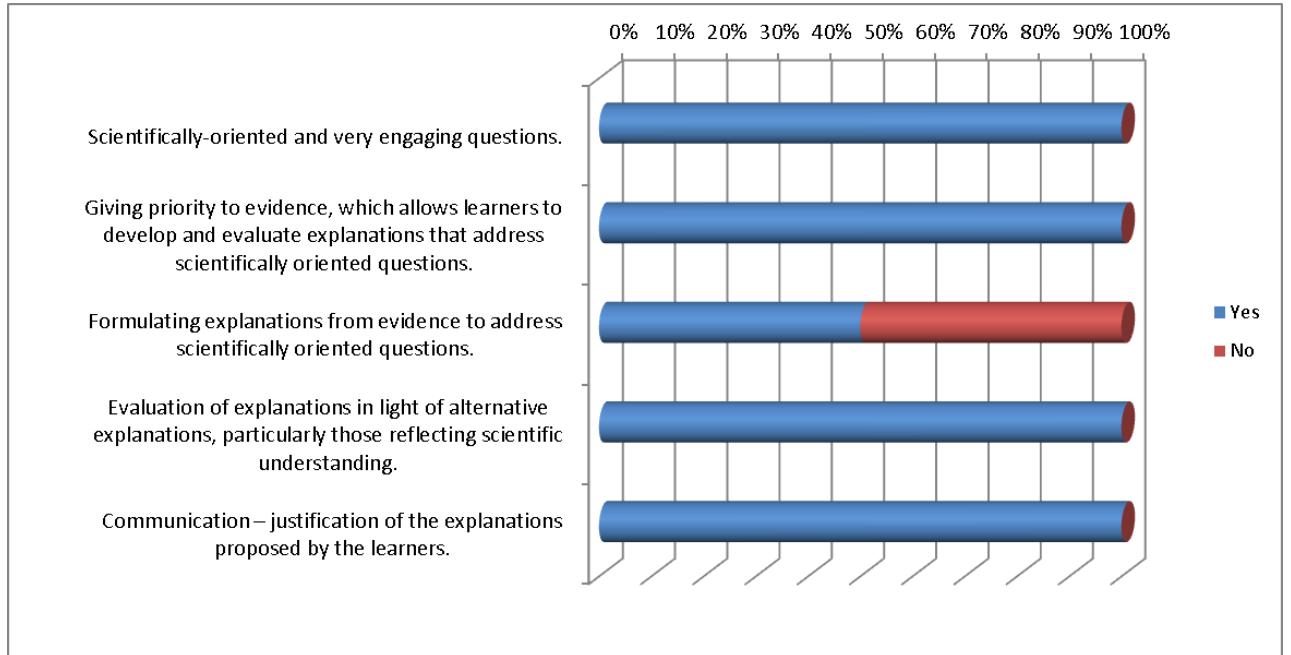


The learning activity supports following features:

Germany

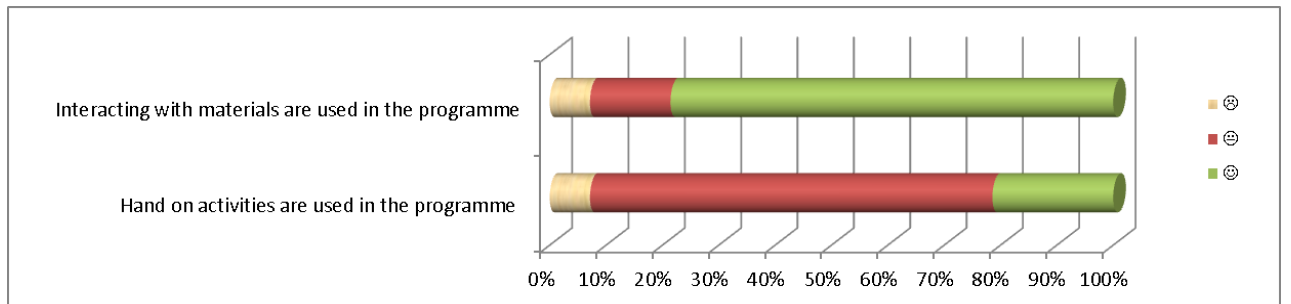


Spain

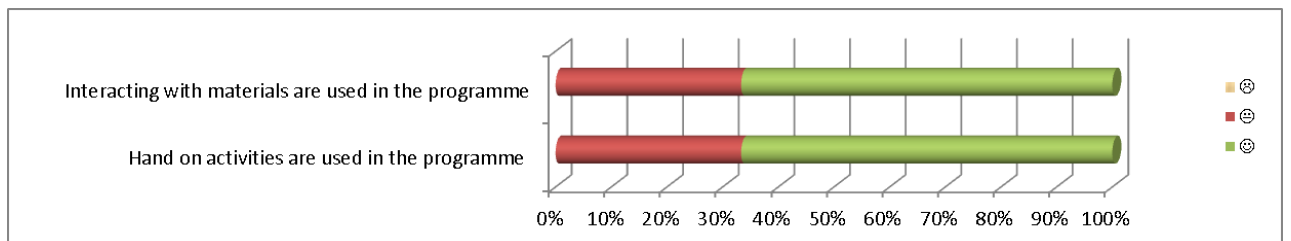


7. Activation of the students by hands-on

Germany

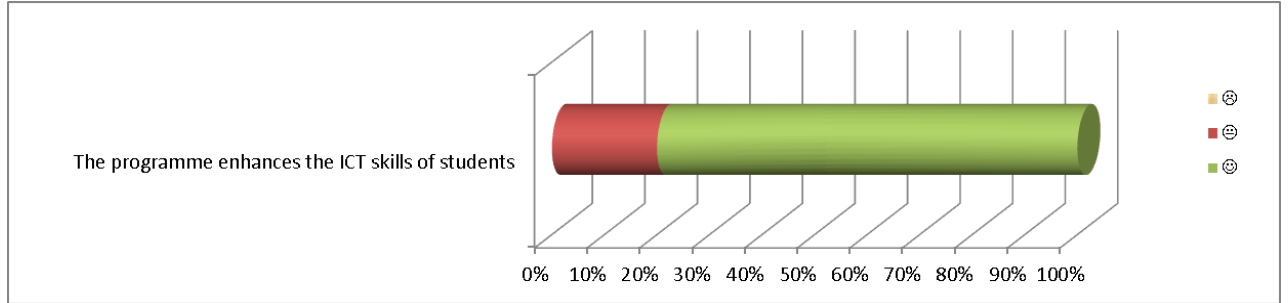


Spain

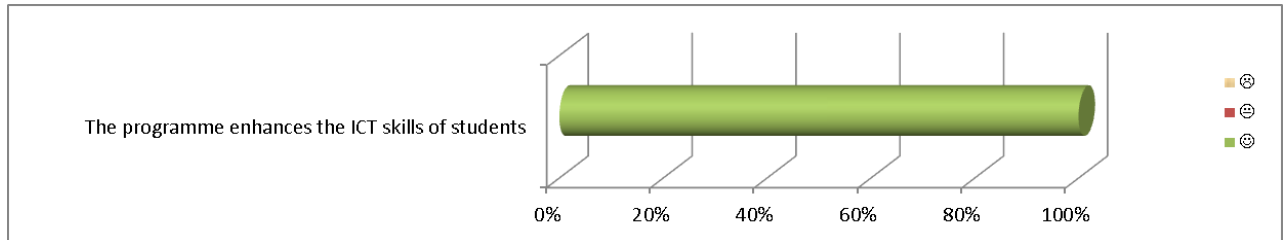


8. Enhancement of students' ICT skills

Germany

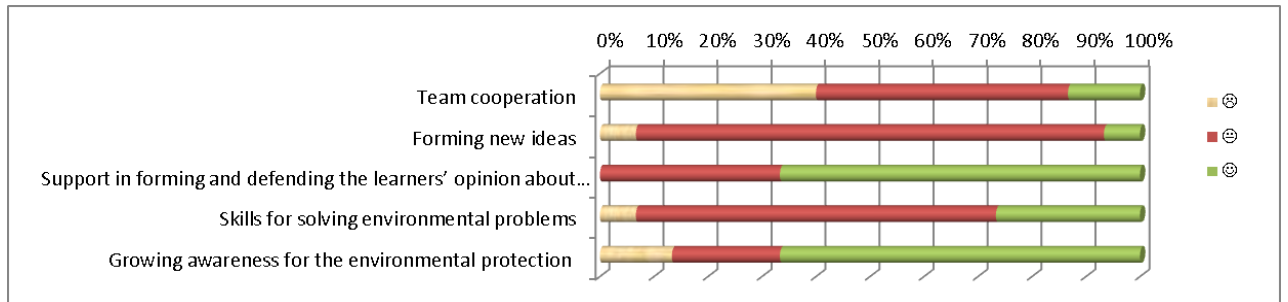


Spain

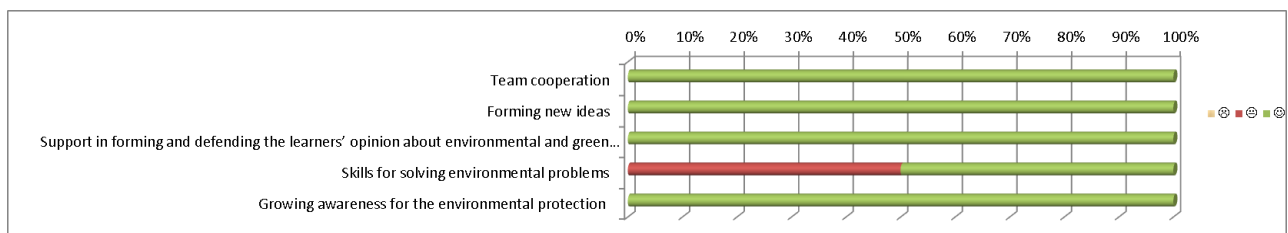


9. The learning activity supports the development of following social skills

Germany

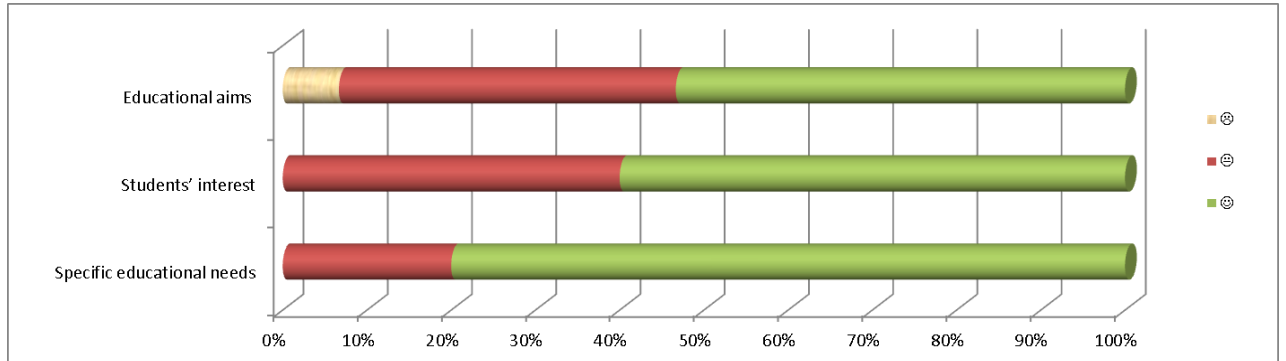


Spain

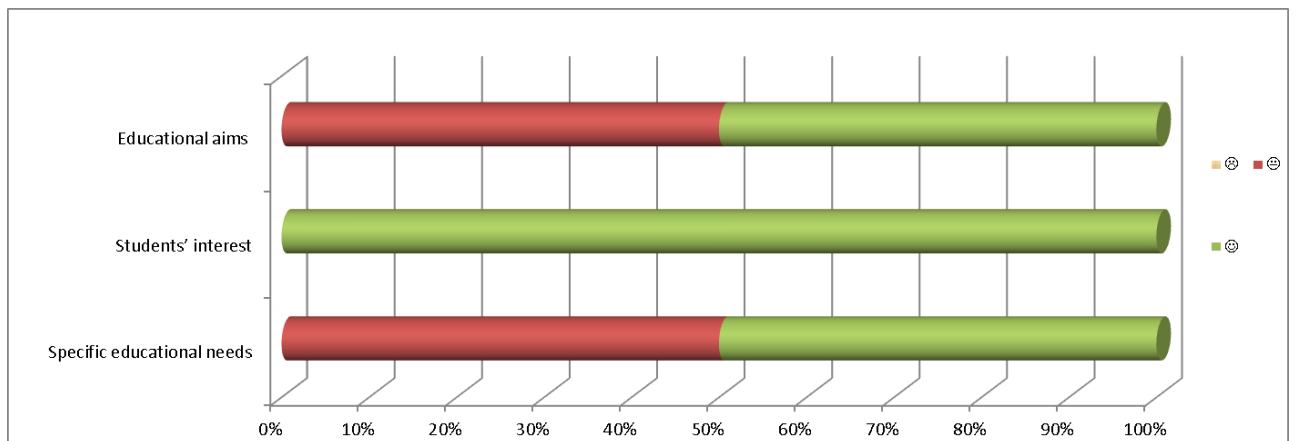


10. The programme is easily adaptably for

Germany

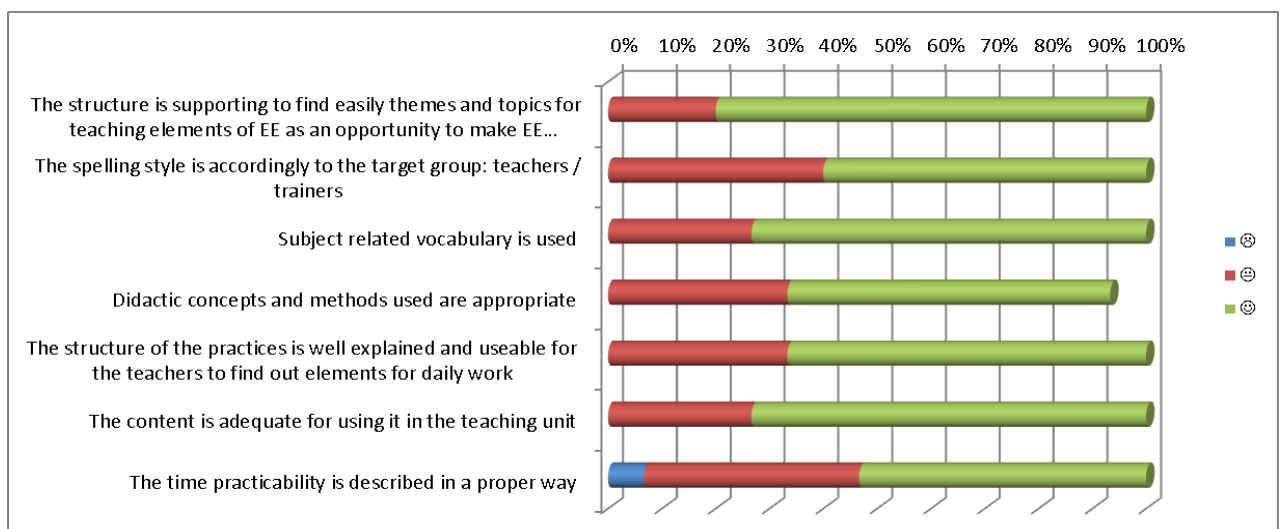


Spain



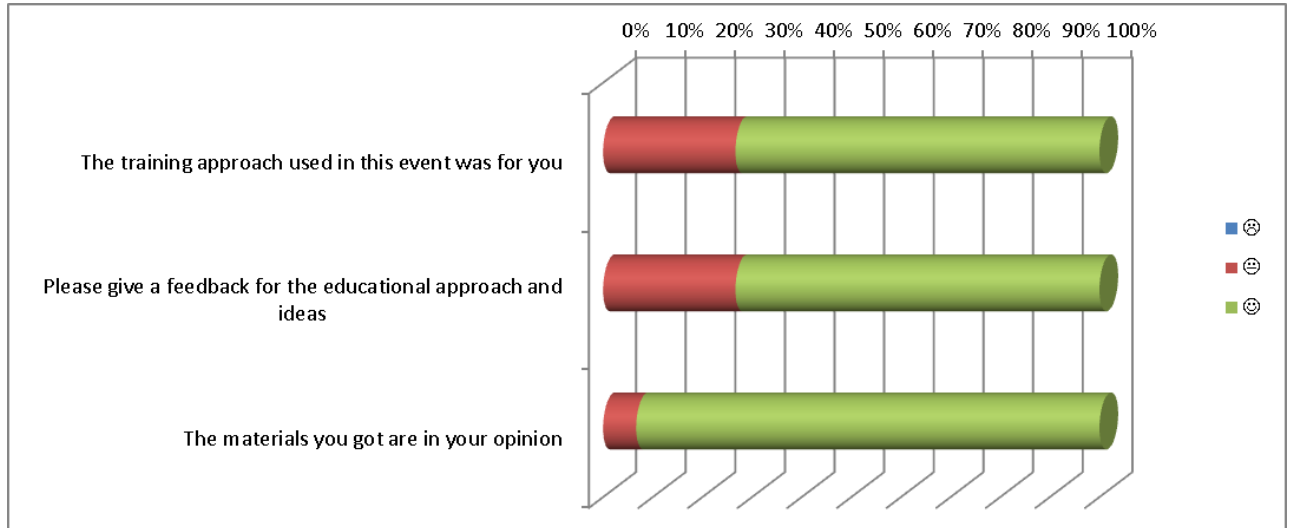
Section 3: The materials of the programme / practice and general feedback

Germany



Section 4: Feedback concerning the training

Germany



3.7 Green Ideas

Dates of evaluation: 26.02.2014 and 31.03.2014

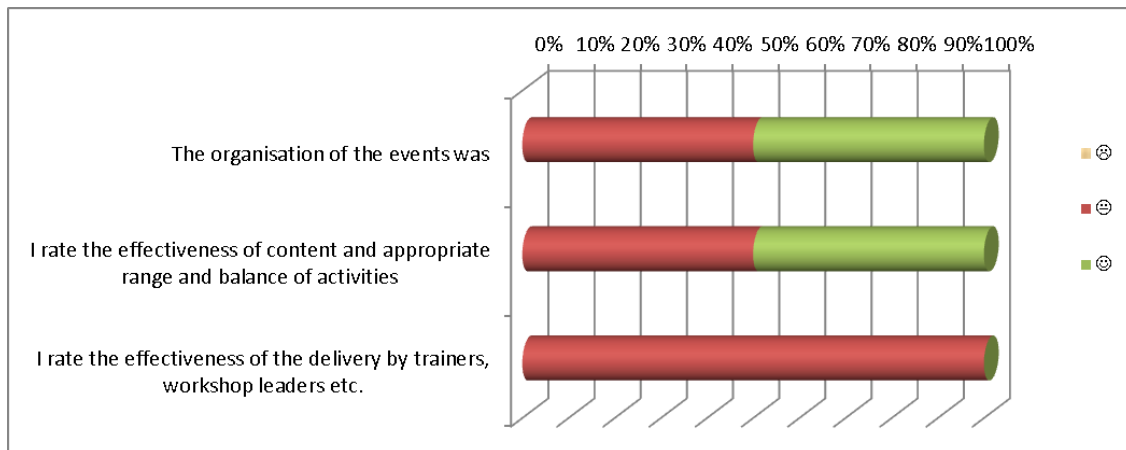
Country: Spain

Participants working with students in the age of: 16-19

Number of participants evaluated the best practice: 4

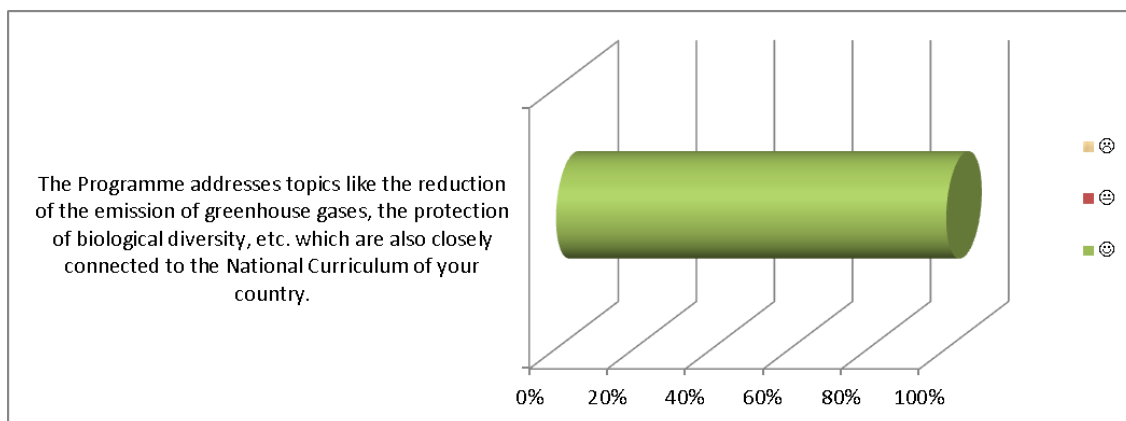
Based on the questionnaire (cf. Annex 1) the evaluation shows following results:

Section 1: Feedback for the event:



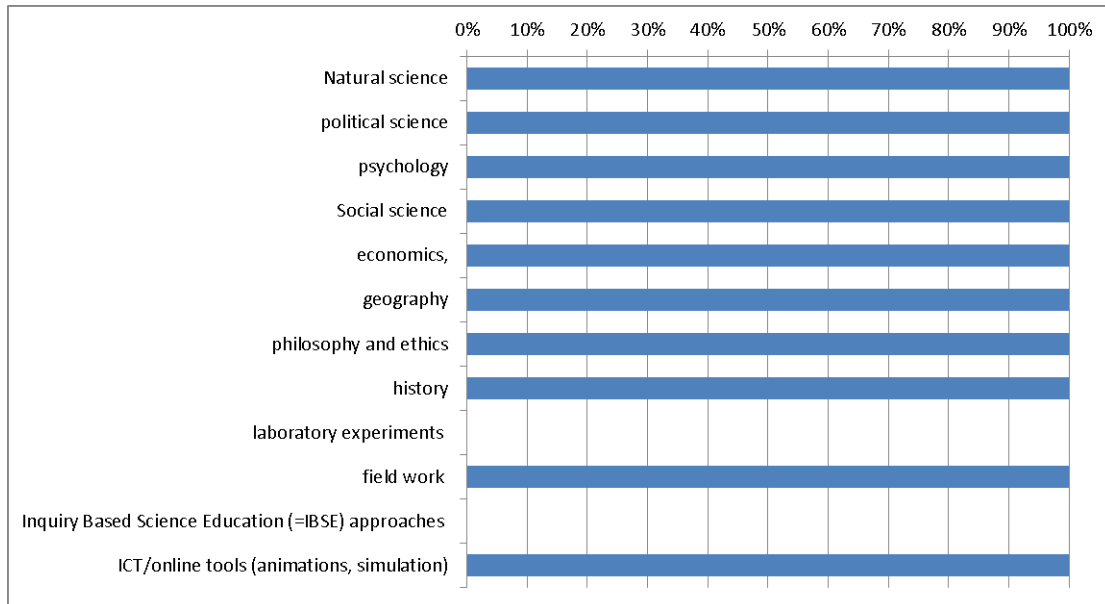
Section 2: “voice of user”:

1 Relation to a green topic and to the National Curriculum

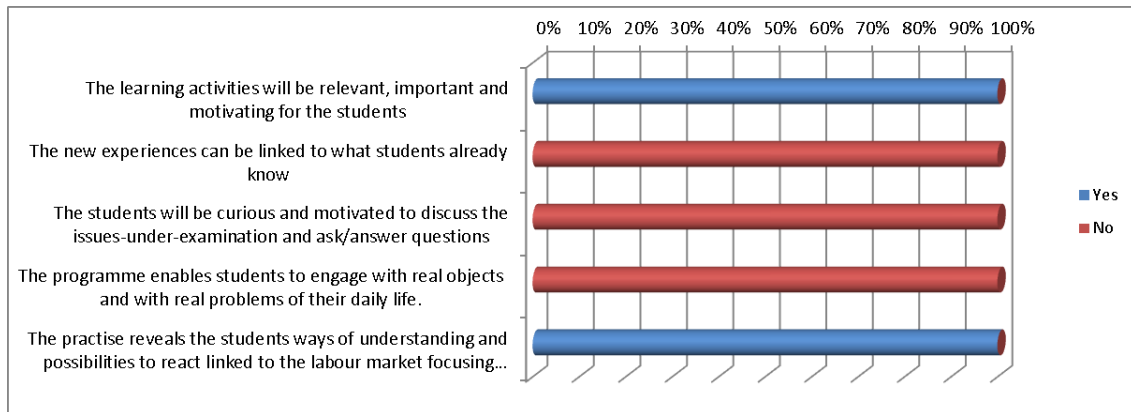


2. Being interdisciplinary: Drawing upon many academic disciplines and teaching methods, does the programme include following elements?

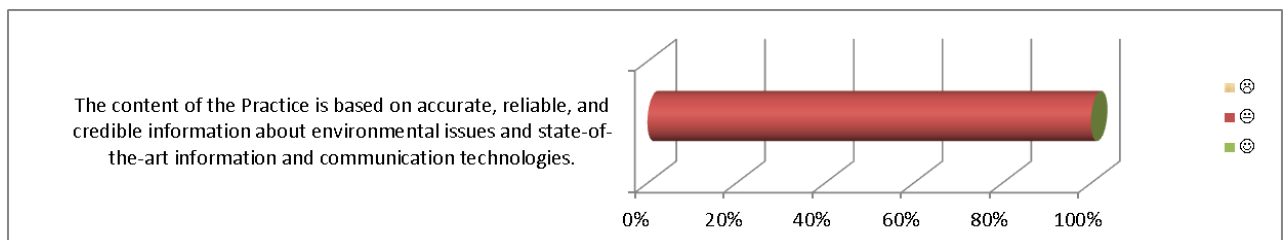
(The figures shows how many percentage t answered with yes)



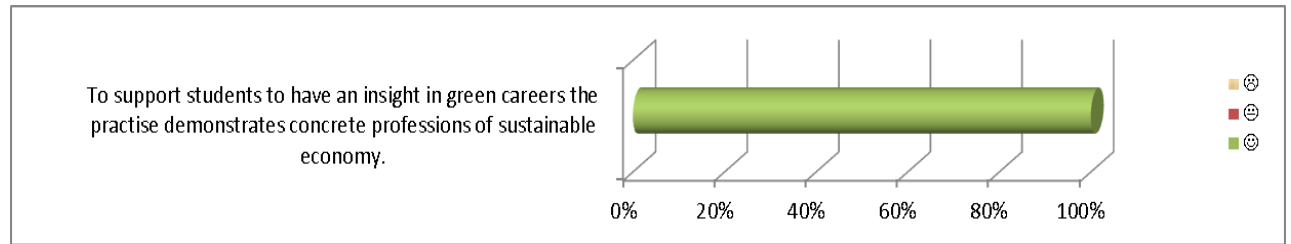
3. Relevance to the daily life of students



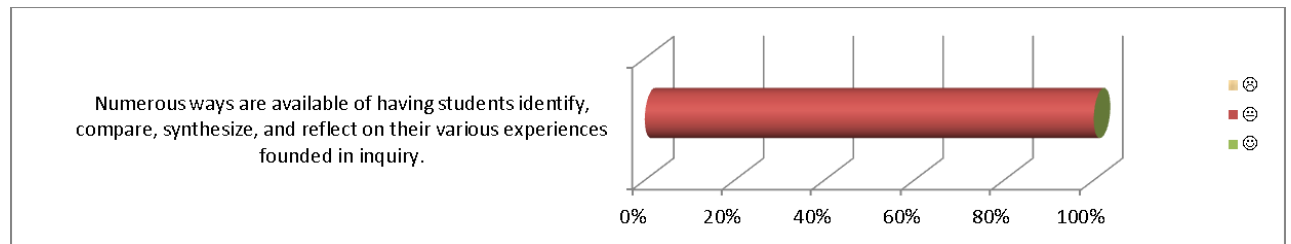
4. Based on accurate and factual professional expertise



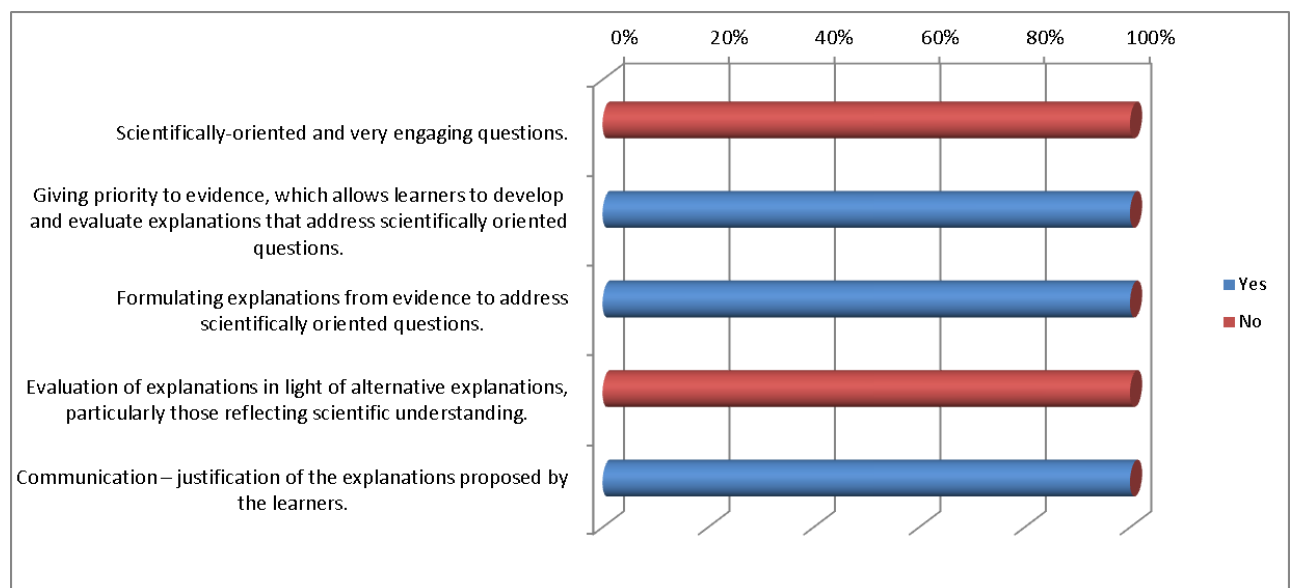
5. Connection to professions in the green labour market



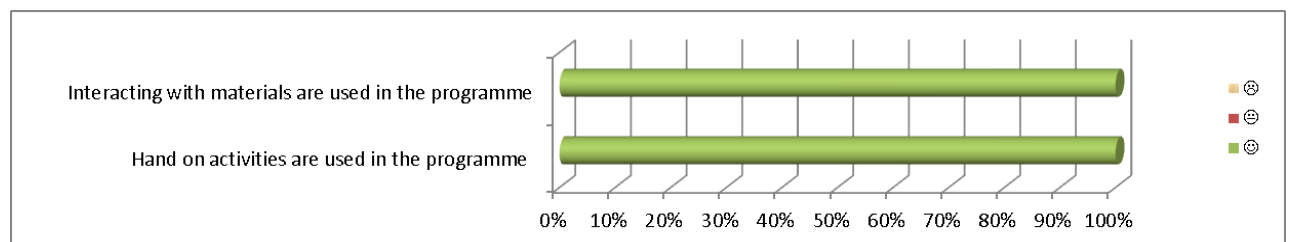
6. Learning by research and inquiry



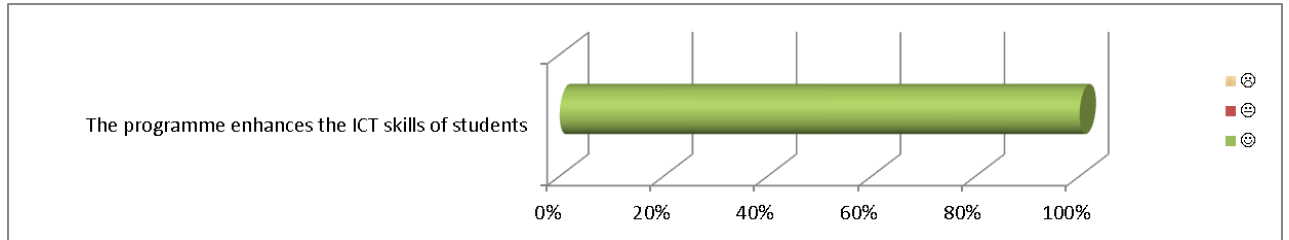
The learning activity supports following features:



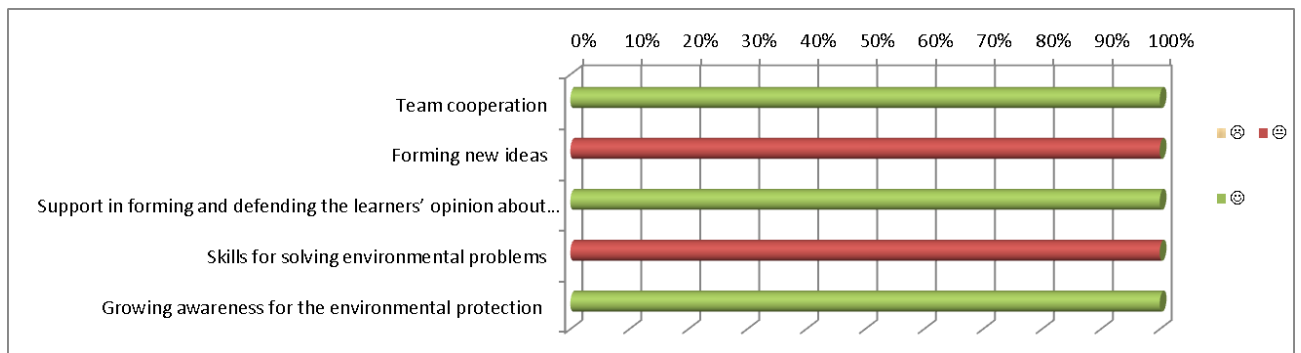
7. Activation of the students by hands-on



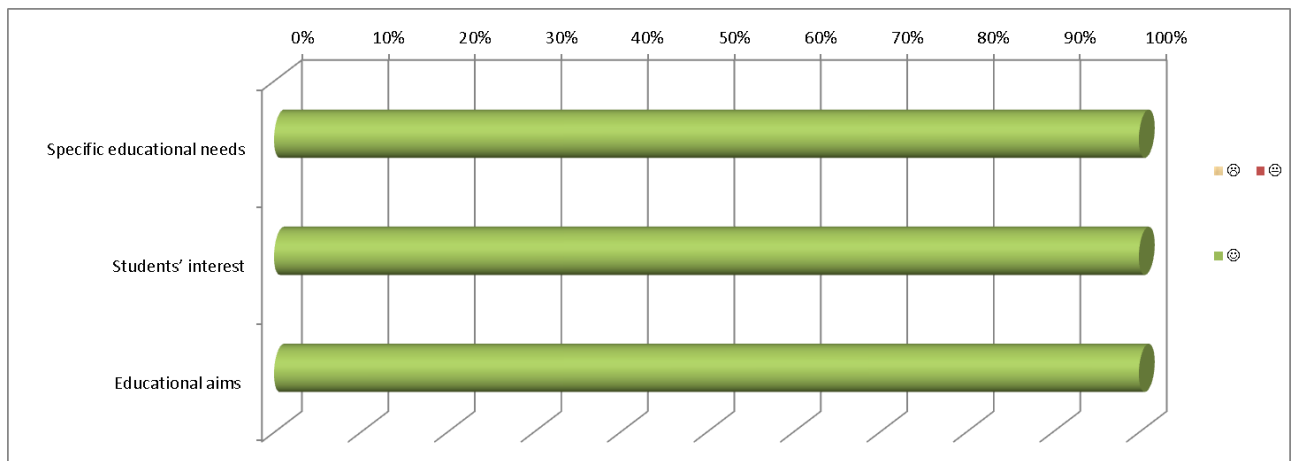
8. Enhancement of students' ICT skills



9. The learning activity supports the development of following social skills



10. The programme is easily adaptable for



3.8 My School Garden

Dates of evaluation: 21.02.2014, 27.03. 2014, 30.04.2014

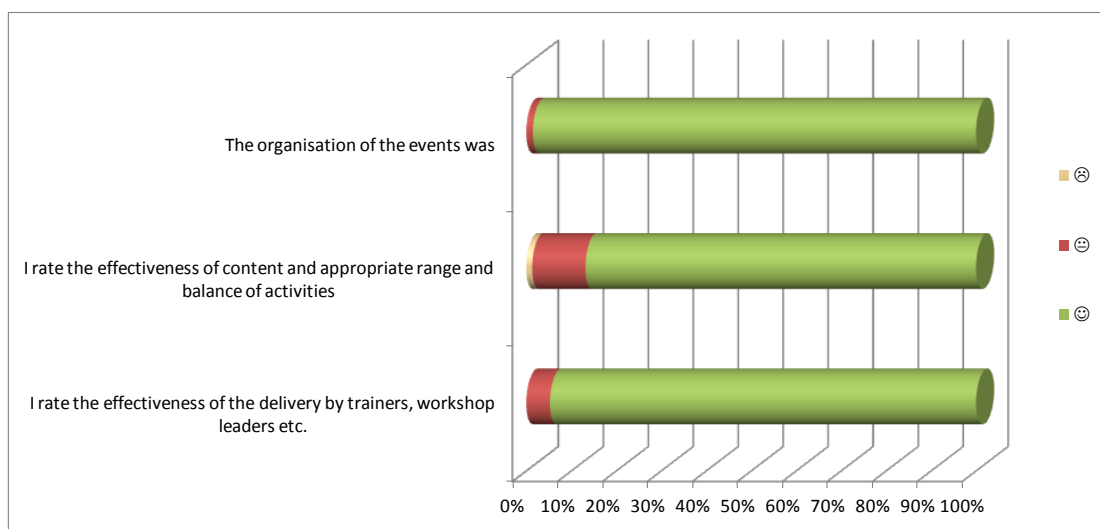
Country: Greece

Participants working with the Students in the age of: 6- 12, 13 -15 and 16-19

Number of participants evaluated the best practice: 76

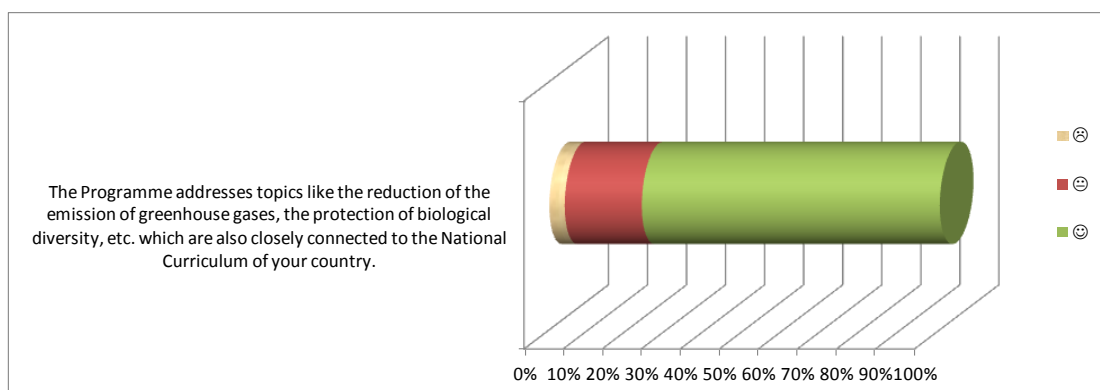
Based on the questionnaire (cf. Annex 1) the evaluation shows following results:

Section 1: Feedback for the event:



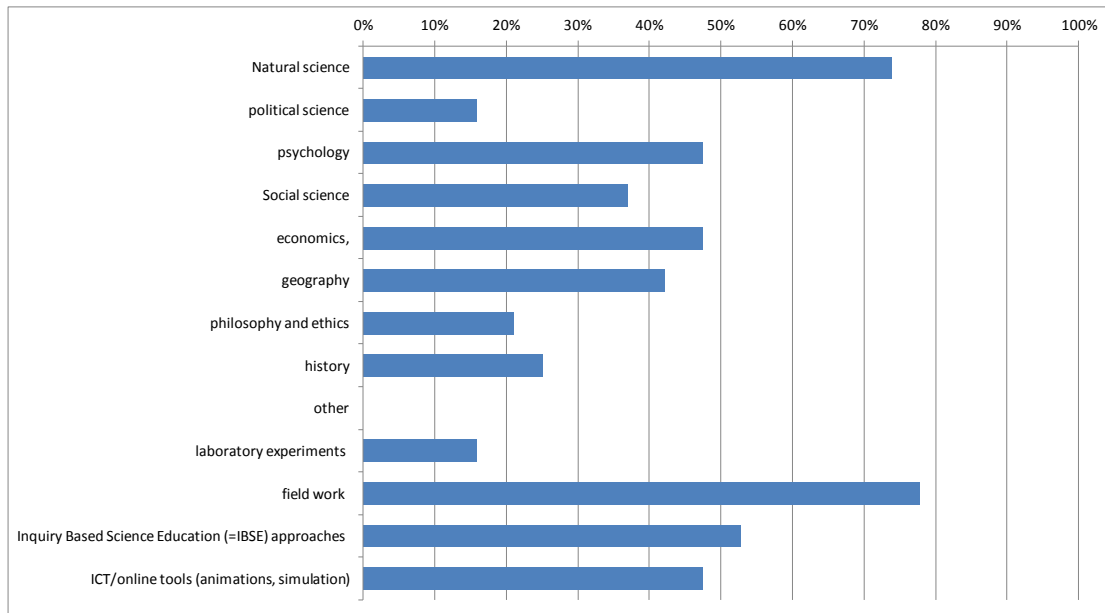
Section 2: “voice of user”:

1 Relation to a green topic and to the National Curriculum

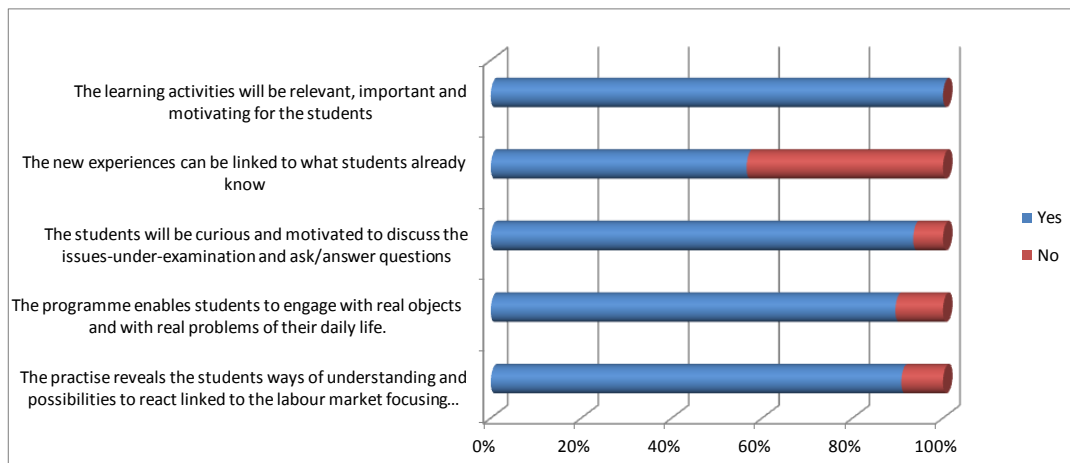


2. Being interdisciplinary: Drawing upon many academic disciplines and teaching methods, does the programme include following elements?

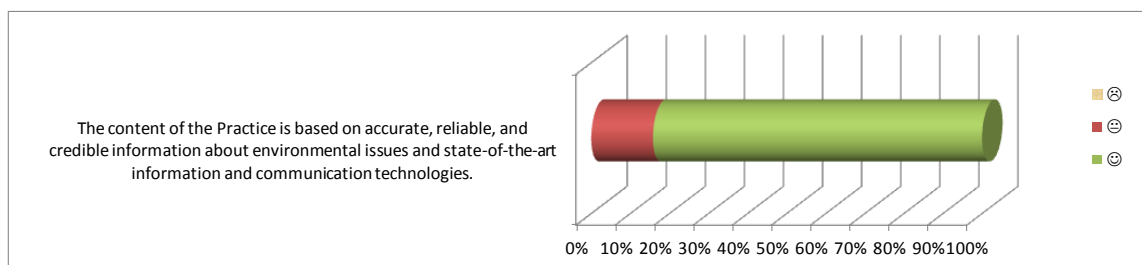
(The figures shows how many percentage t answered with yes)



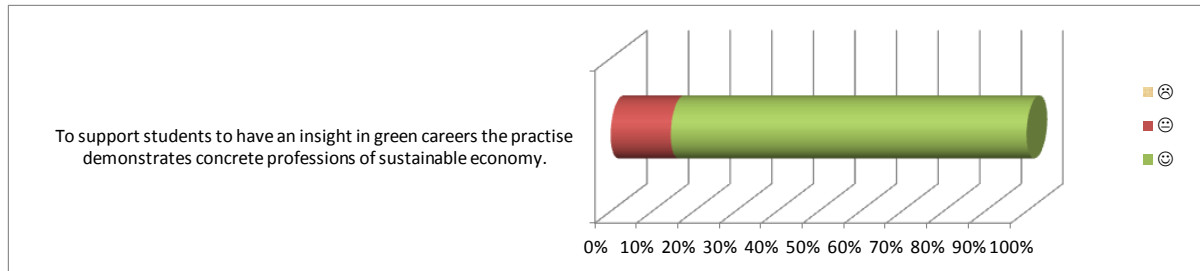
3. Relevance to the daily life of students



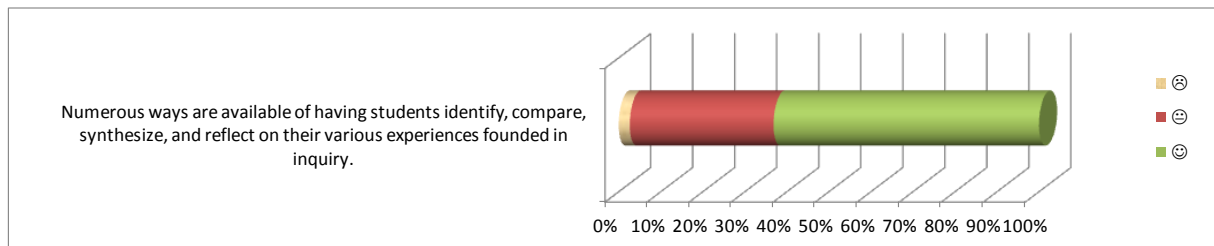
4. Based on accurate and factual professional expertise



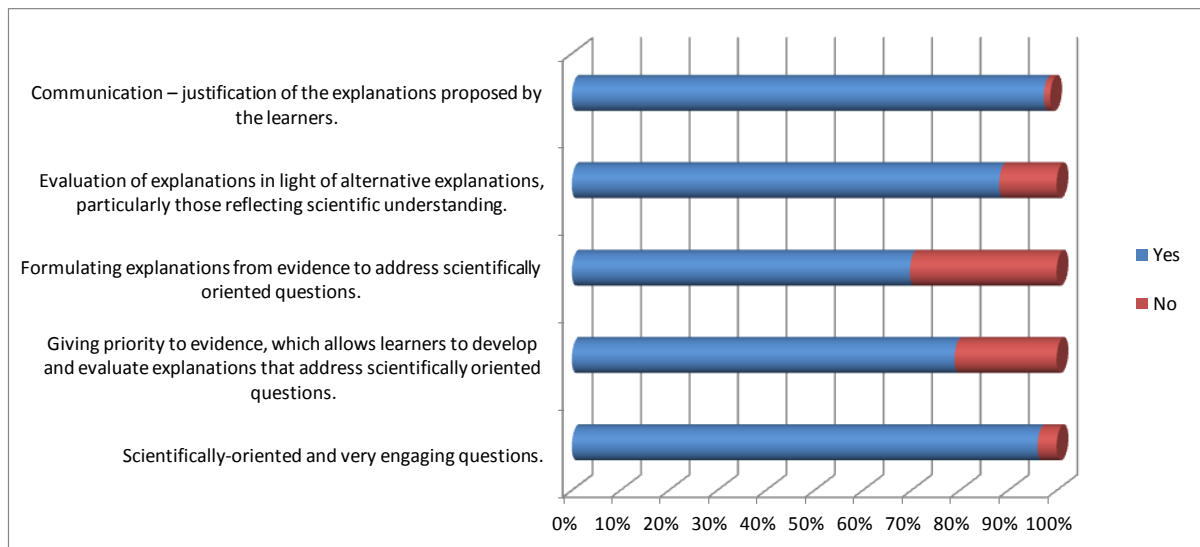
5. Connection to professions in the green labour market



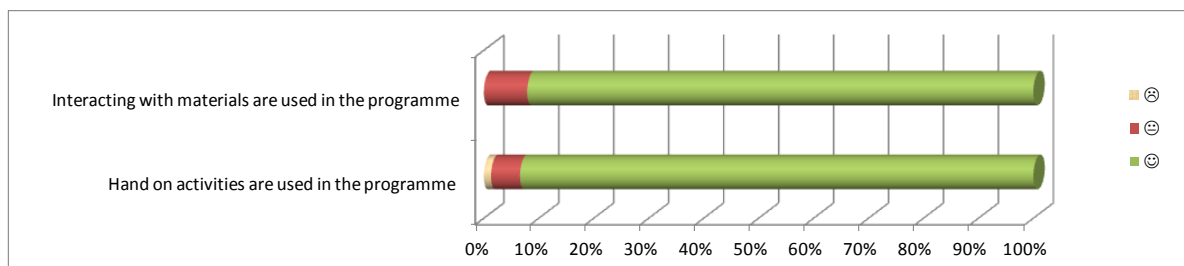
6. Learning by research and inquiry



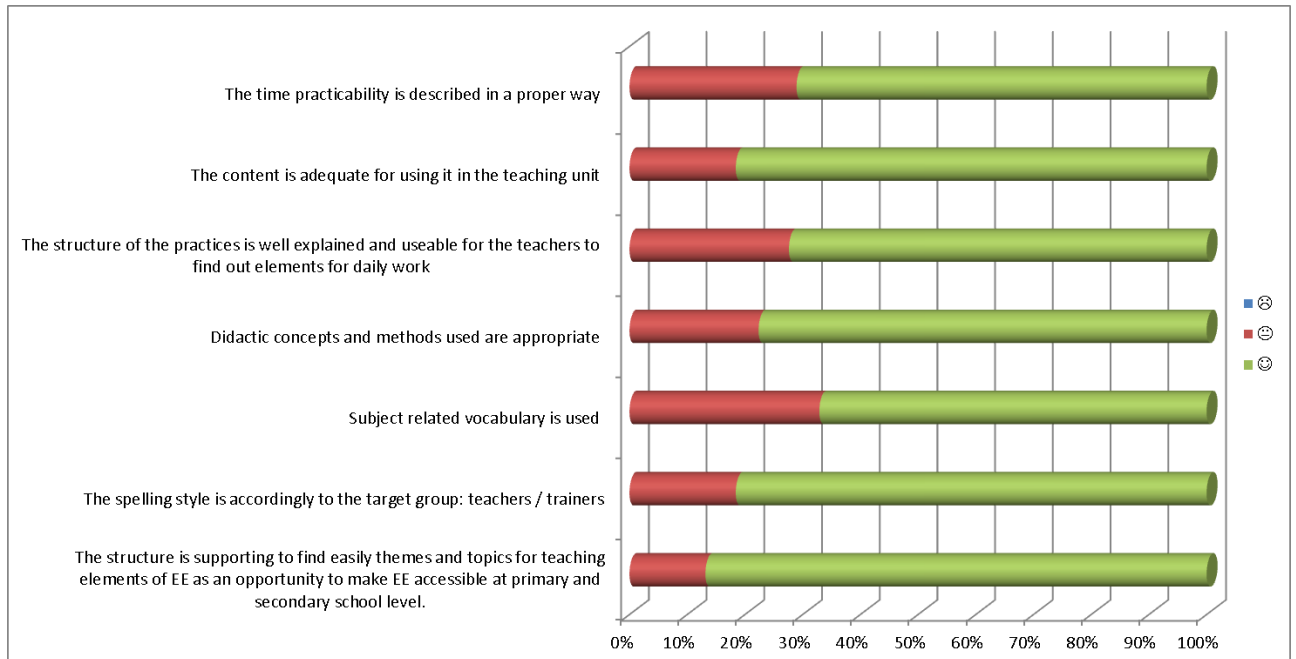
The learning activity supports following features:



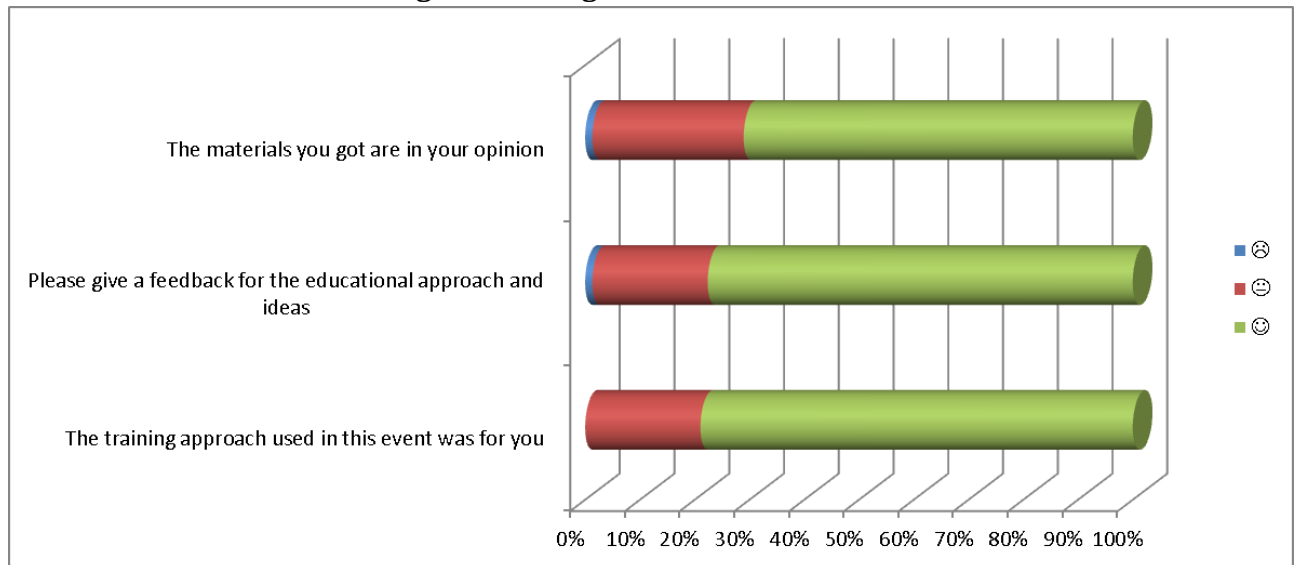
7. Activation of the students by hands-on



Section 3: The materials of the programme / practice and general feedback



Section 4: Feedback concerning the training



3.9 ConsuManiac – Check your daily shopping!

Dates of evaluation: 26.02.2014 and 31.03.2014

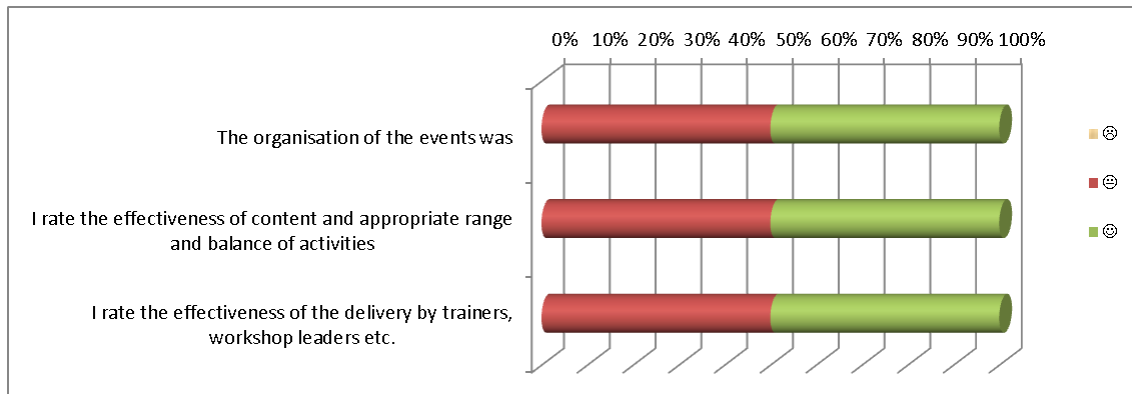
Country: Spain

Participants working with students in the age of: 16-19

Number of participants evaluated the best practice: 4

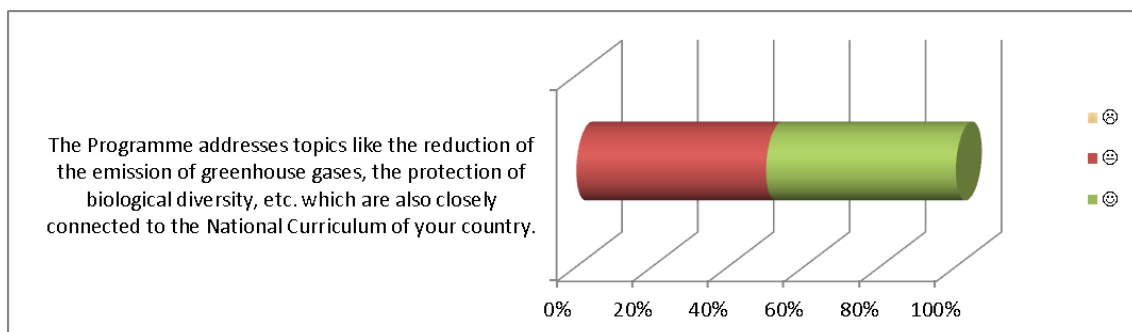
Based on the questionnaire (cf. Annex 1) the evaluation shows following results:

Section 1: Feedback for the event:



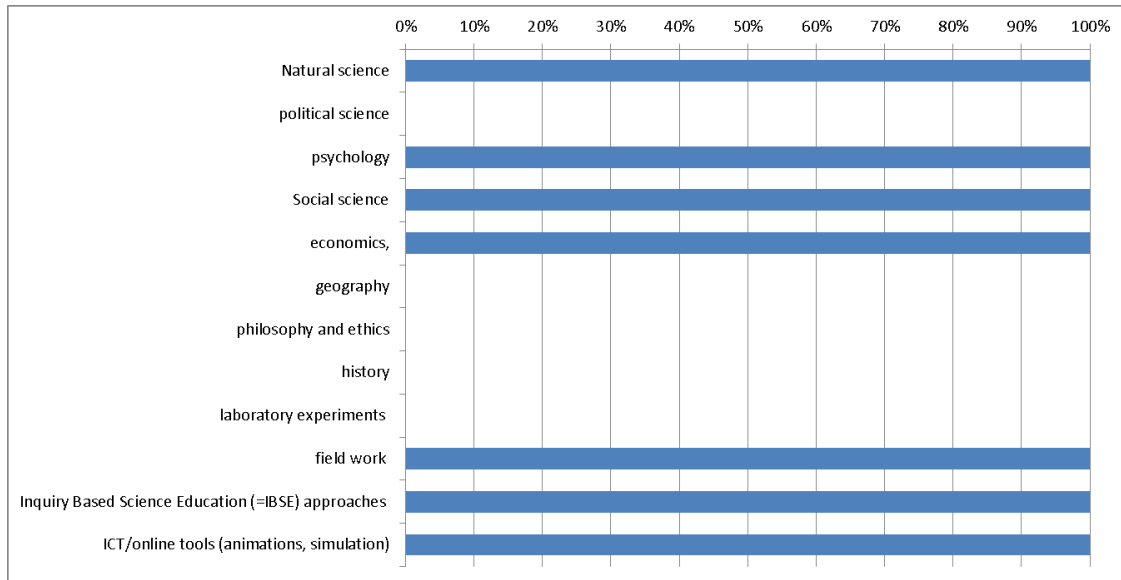
Section 2: “voice of user”:

1 Relation to a green topic and to the National Curriculum

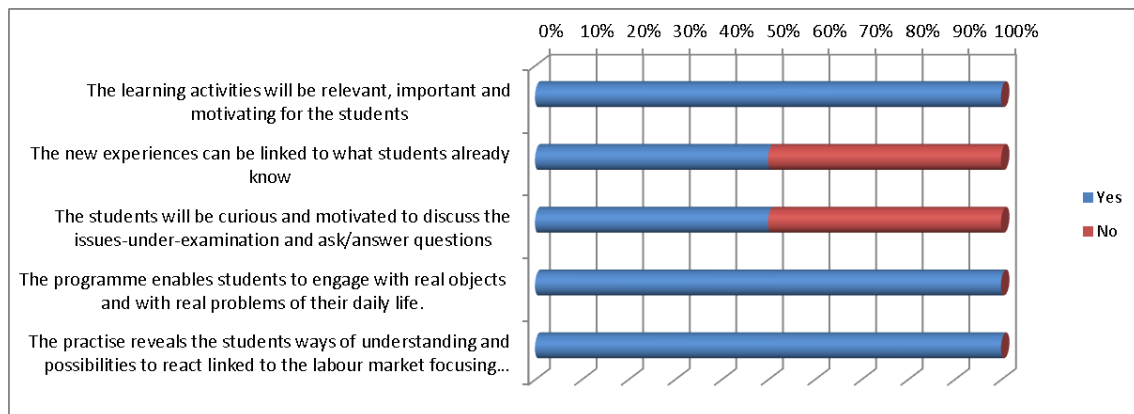


2. Being interdisciplinary: Drawing upon many academic disciplines and teaching methods, does the programme include following elements?

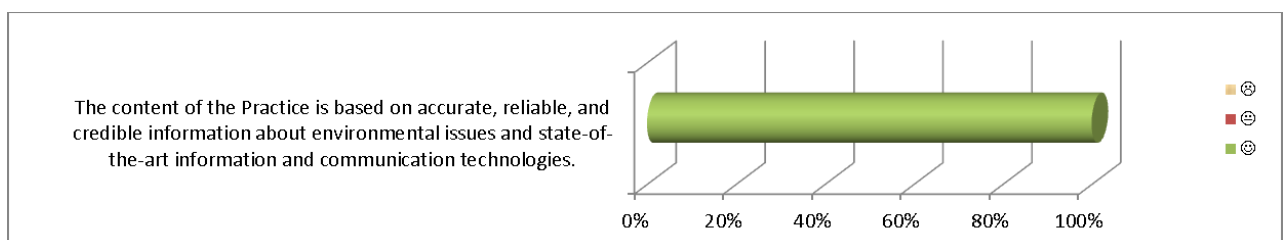
(The figures shows how many percentage t answered with yes)



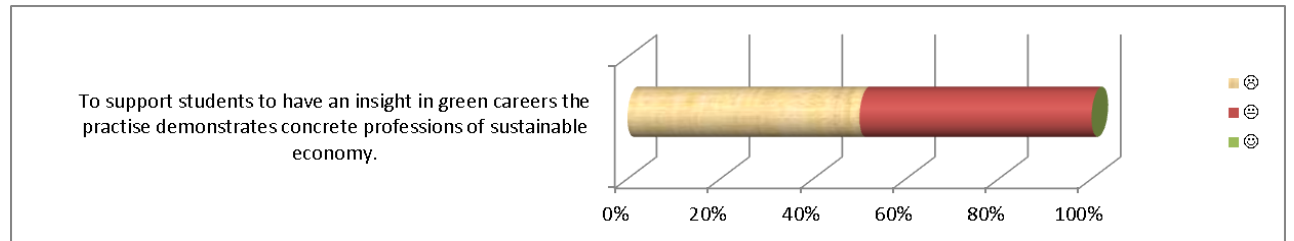
3. Relevance to the daily life of students



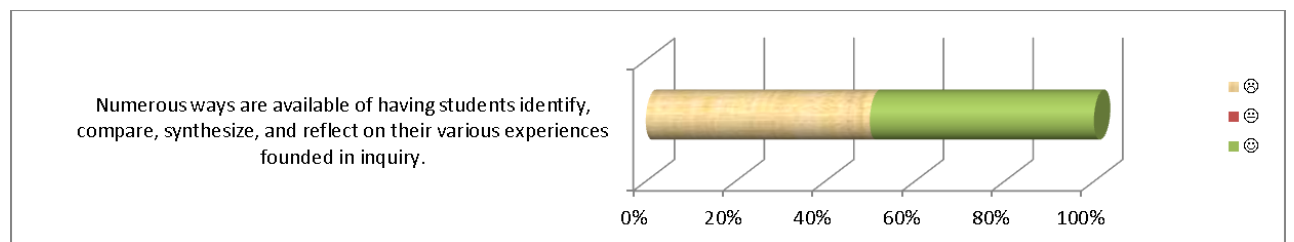
4. Based on accurate and factual professional expertise



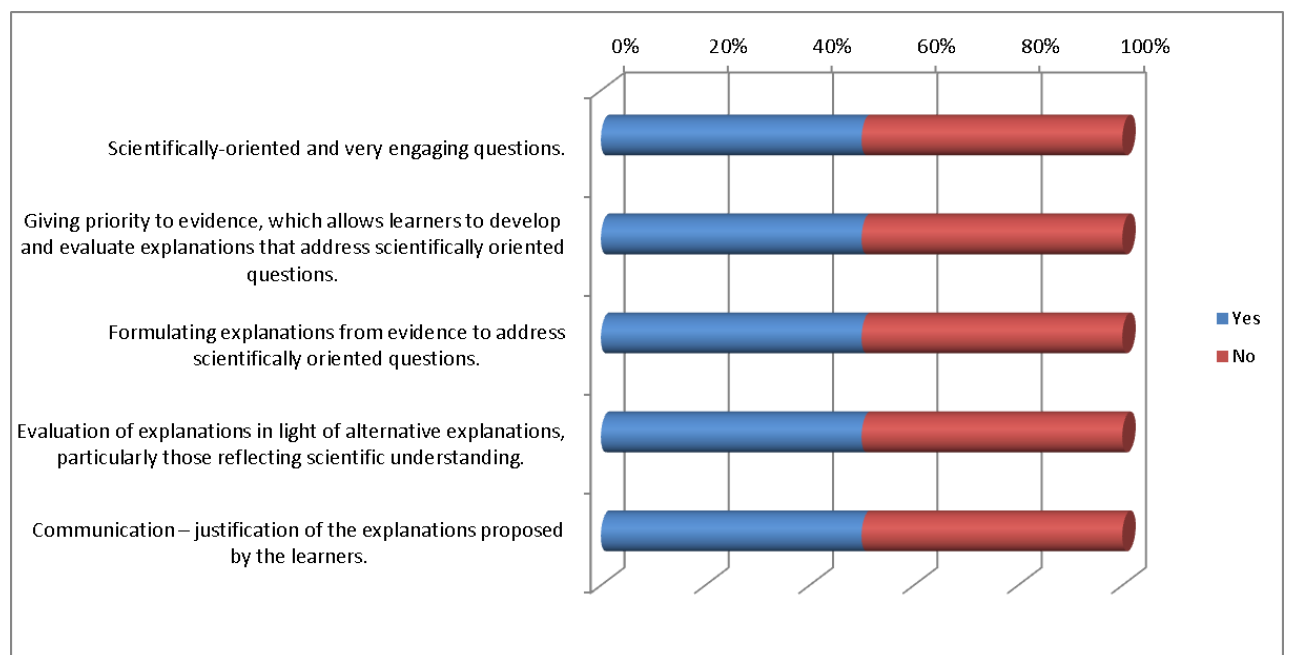
5. Connection to professions in the green labour market



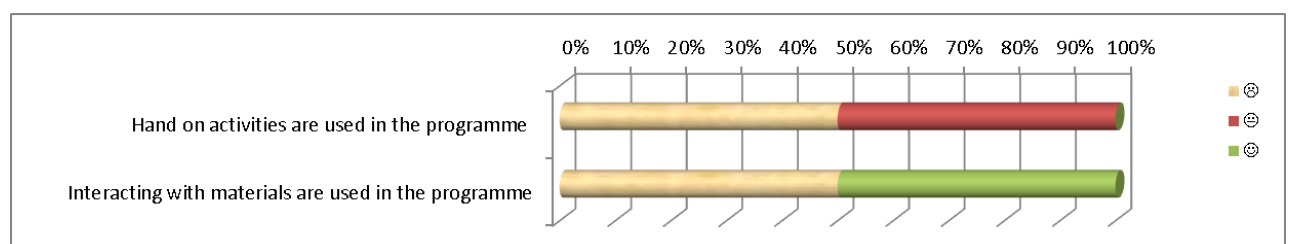
6. Learning by research and inquiry



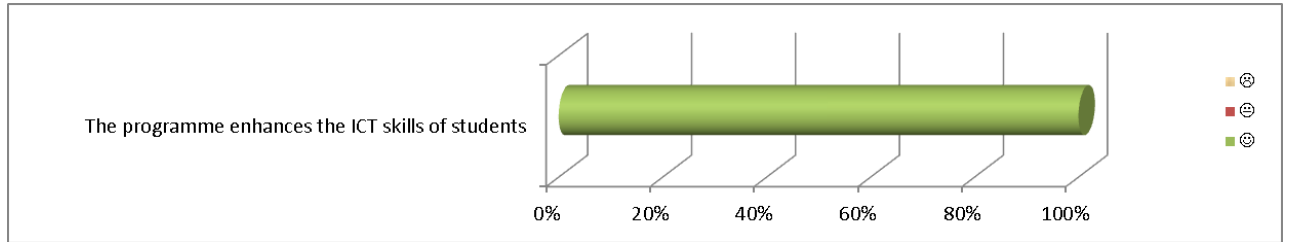
The learning activity supports following features:



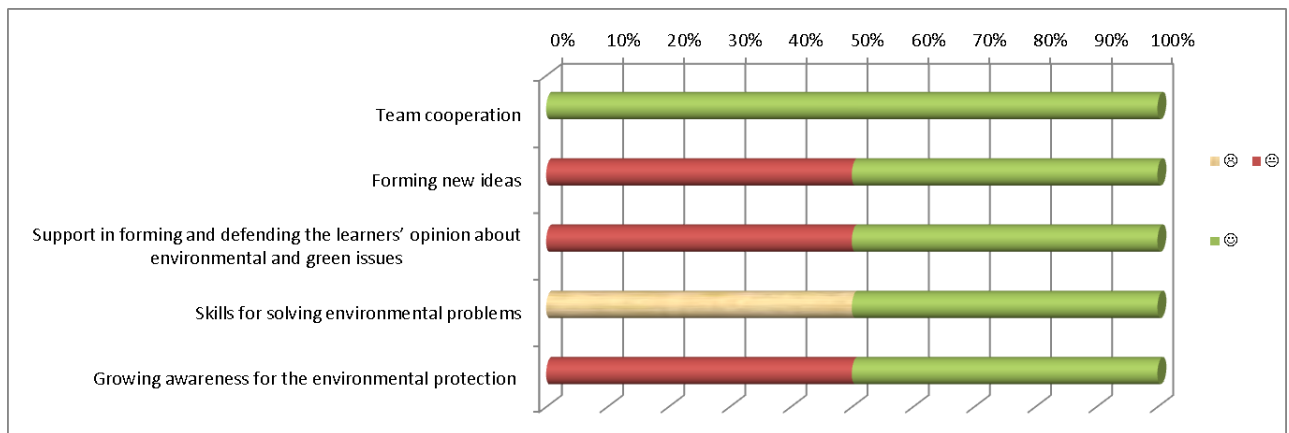
7. Activation of the students by hands-on



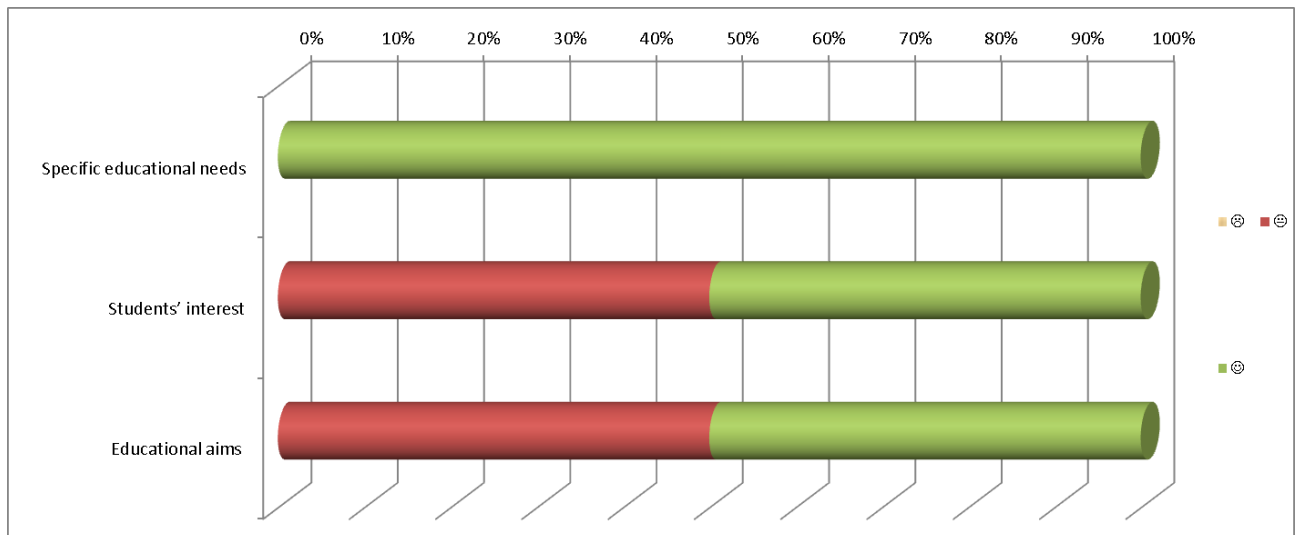
8. Enhancement of students' ICT skills



9. The learning activity supports the development of following social skills



10. The programme is easily adaptably for



4 General events with specific focus within the 1st implementation circle

4.1 Overview and method

If events within the 1st implementation circle were not combined explicitly to find out in detail the quality aspect of a learning activity / program or practice a general evaluation was developed. (cf. Annex 2). Additional focuses could be support the implementation within the own country. This is up the partners if they want to do so.

The decisions to use “Smiles” for evaluation were appreciated by the organizers, because it allows an easy and quick access to carry out the evaluation.

Level of Evaluation

Evaluations were undertaken by the participants of different events and activities.

The evaluation was done with paper and pencil in the national languages (if the partners wanted to do so) and summed up by the partners in an excel-sheet and by written feedback.

Table 5: Overview about general events within the 1st implementation circle

No.	Country	The event was focused on...	Type of event	date	no of participants	Level of event	Teachers	Trainers	Stakeholders
1	EL	ICT and practises in school	Training activity	28.11.2013	14	regional	14	0	0
2	EL	ICT and practises in school	Training activity	01.12.2013	11	regional	11	0	0
3	AT	Synergiemeeting ENIS Österreich-GreenNET Workshop	Training activity	25.03.2014	27	national	18	3	6
4	ES	Exchange of good practices of environmental education	Training activity	26.02.2014	10	local	10	0	0
5	ES	Environmental education for the labor market of the green	Training activity	02.04.2014	6	local	6	0	0
			Total	5	68	0	59	3	6

Additional to the activities of implementation of best practices which were focussed on the evaluation of the practices 5 events were held in 3 countries of the network to promote the best practices and to require teachers, trainers and stakeholders to use different best practices in their own settings of daily work.

This methodology to combine the evaluation process of the best practices and to be able to choose additional events to make teachers and trainers familiar with more practices is an added value and allows to made tailor made actions in each partner country.

Following the results of the evaluations of the events are shown.

4.2 Greece

Name of Event: EE and ICT in classroom

Date 28.11.2013

Venue Ellinogermaniki Agogi

Level of Event: Regional

Number of participants 14

Male 8

Female 6

Kind of participants:

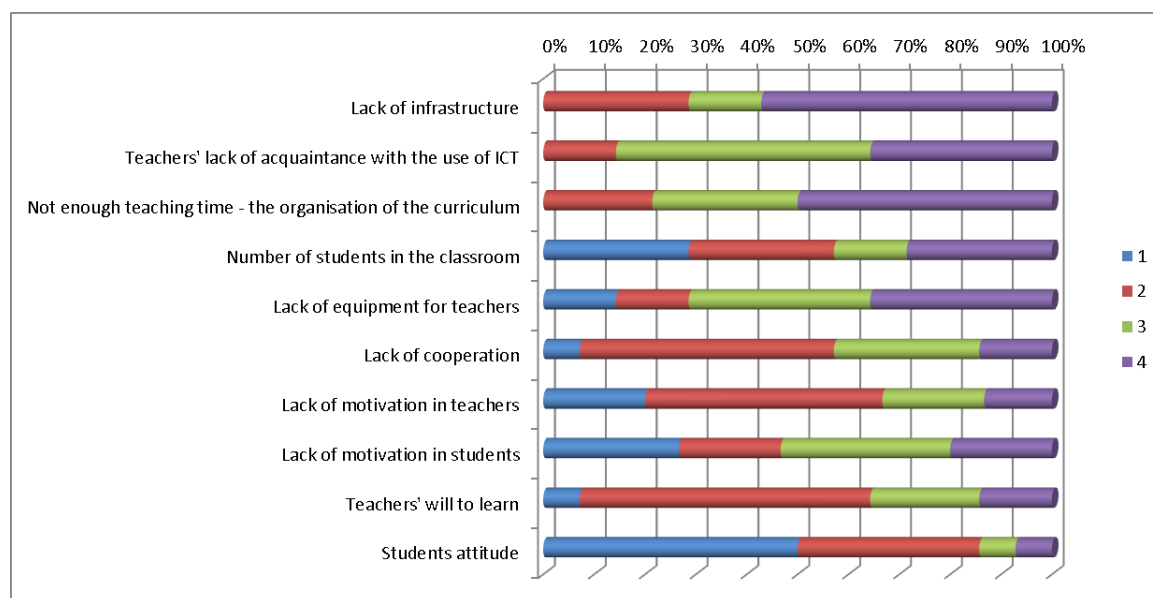
Teachers: 14

Trainers: 0

Stakeholders: 0

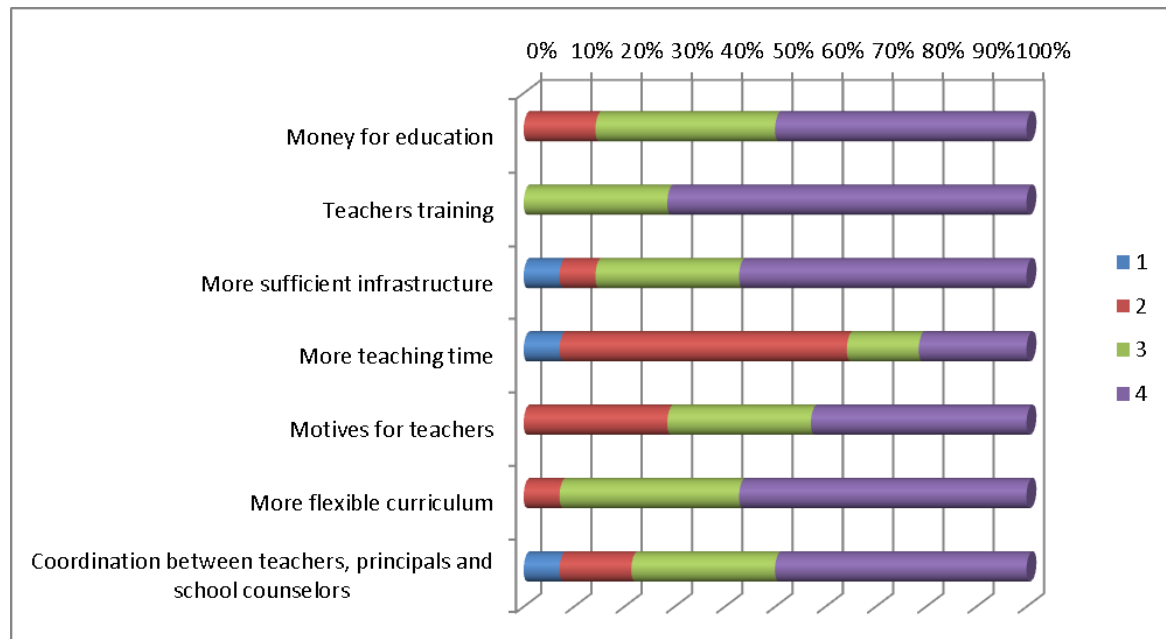
Questions were asked to make the focus on ICT and Environmental Education visible:

Which do you believe are the most important problems that have to be dealt with in order to integrate the use of eLearning tools in the classroom and in learning activities in general? [1. not important at all - 4. of primary importance]



The answers shows the most challenging areas: the lack of infrastructure as well as the equipment of teachers on the one hand and on the other hand the teachers's lack of acquaintance with the use of ICT and how to organise the curriculum. Also the numbers of students in one classroom seems to be challenging.

Which do you believe are the most important ways to overcome these problems? [1. not important at all - 4. of primary importance]



To overcome these problems the participants agree that it is necessary to have more money for infrastructure, as well as a more flexible curriculum which also can be achieved by the coordination within school. But also the teacher training is one of the most effective ways to overcome these problems.

In what ways do you believe that new technologies and eLearning tools change everyday school practices?

They are attractive to students, they offer access to information, students are more familiar with new technologies, direct and instant access to info, motivating, engaging, making teaching more alive, leaving behind traditional educational practices, promoting innovation, together with workshops and traditional teaching, combining scenarios and various activities, working together with virtual and physical workshops to understand various phenomena

In what ways do you believe that new technologies and eLearning tools change the role of the teacher as provider of knowledge?

They add value to traditional teaching, the teacher can guide the student to look for knowledge, the teacher acts as facilitator, they can support the guiding role of the teacher, teacher is the facilitator not the boss, they simplify the teaching process, teacher acts as organizer, and the teacher is no longer the beholder of all knowledge

In what ways do you believe that the use of innovative eLearning tools and resources will expand your opportunities for professional development?

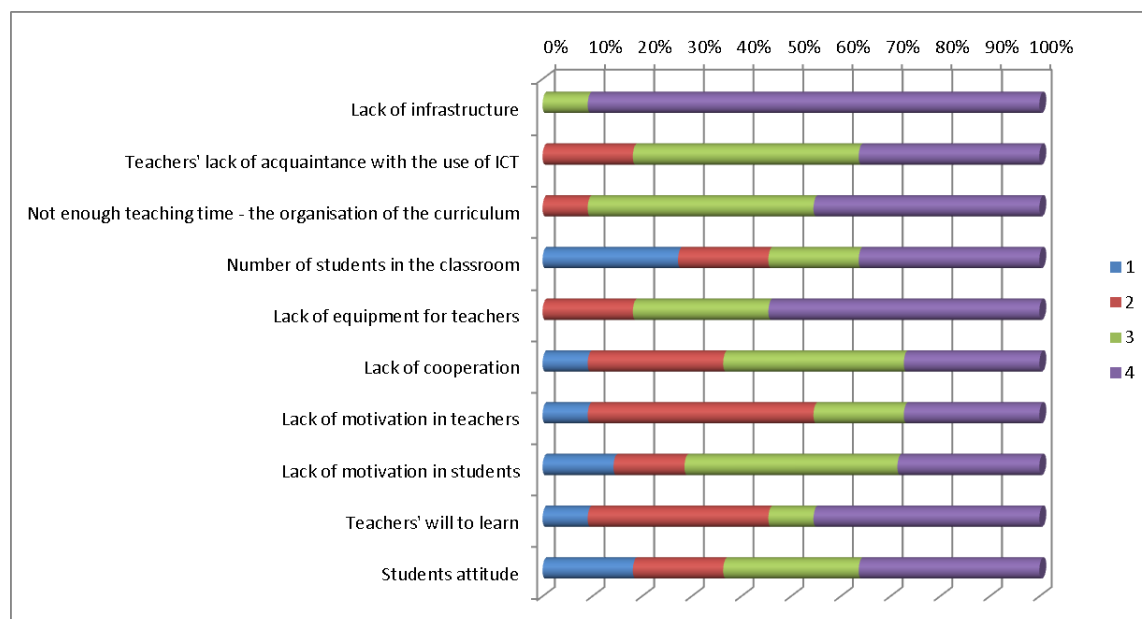
They are tools so they will, I will learn more and innovative things, I will exchange ideas and knowledge, I will be more creative, I will be more efficient, I will use them as part of the everyday teaching, they will offer new possibilities, they will offer a way to better understand everyday phenomena

Name of Event: EE and ICT in classroom

Date	01.12.2013
Venue	Athens University
Level of Event:	Regional
Kind of Event:	Training Activity
Number of participants	11
Male:	0
Female:	11
Kind of participants:	
Teachers:	11
Trainers:	0
Stakeholders:	0

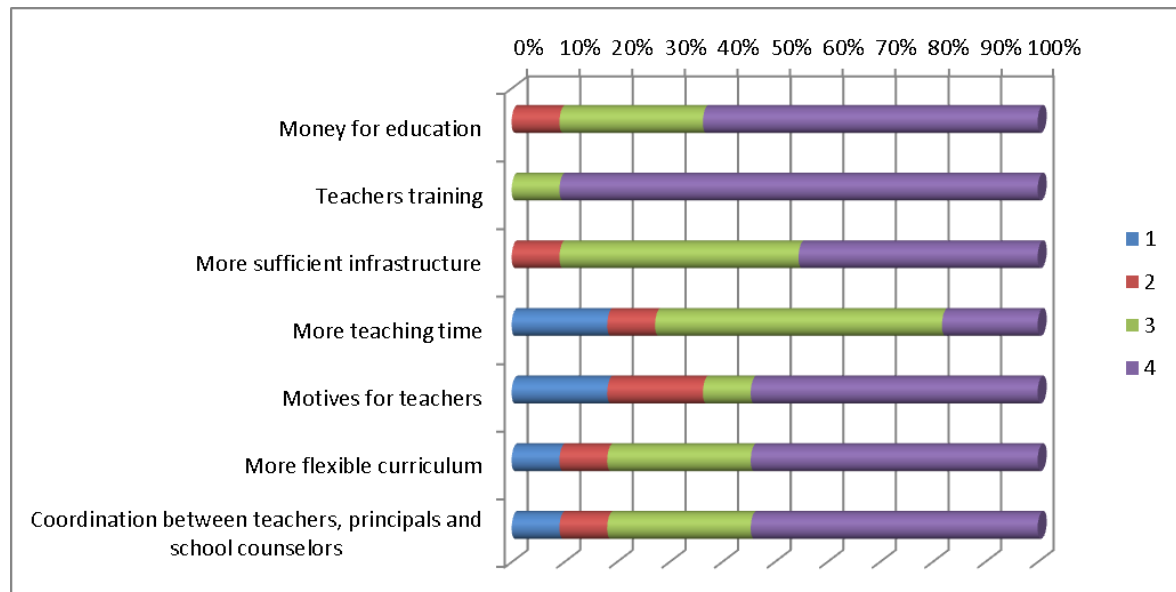
Questions were asked to make the focus on ICT and Environmental Education visible:

Which do you believe are the most important problems that have to be dealt with in order to integrate the use of eLearning tools in the classroom and in learning activities in general? [1. not important at all - 4. of primary importance]



Again in this group the lack of infrastructure, the equipment for teachers and the challenge to organise ICT based learning in the curriculum are rated very high.

Which do you believe are the most important ways to overcome these problems? [1. not important at all - 4. of primary importance]



To overcome these problems the participants agree that it is necessary to have more money for education and coordination within school. But the most important way could be the teacher training.

In what ways do you believe that new technologies and eLearning tools change everyday school practices?

If they can be added to everyday teaching, if the infrastructure is enough for all students, they make teaching interesting and offer a variety of influences, they attract the students interest and thus make teaching more enjoyable for all, students are interested in technology, they should be used as the means not the purpose to enhance the students' participation, students feel more comfortable when technology is involved

In what ways do you believe that new technologies and eLearning tools change the role of the teacher as provider of knowledge?

Teacher will become facilitator and will guide the students to discover knowledge, teacher will enhance the students' key competencies, the learning procedure will become more interactive, the teacher's role will be more accurately defined, the teacher's role becomes more complicated as the teacher will need to combine and manage more resources and information, student's role is enhanced and this changes the role of the teacher as well

In what ways do you believe that the use of innovative eLearning tools and resources will expand your opportunities for professional development?

I don't think this can be done, they help me work on certain key competencies, they open the door to undiscovered paths, I don't see that it will bring much difference

4.3 *Austria*

Name of Event:	Synergiemeeting ENIS Österreich-GreenNET Workshop
Date:	25.03.2014
Venue	Bad Hofgastein
Level of Event:	national
Kind of Event:	Training Activity
Number of participants:	27
Male:	18
Female:	9
Kind of participants:	
Teachers:	18
Trainers:	3
Stakeholders:	6

The first BMBF implementation WS in the GreenNET project took place in the framework of a 3days “Synergy-Meeting of ENIS Network” (European Network of Innovative Schools, Austria <http://www.enis.at/>) in Bad Hofgastein, Salzburg (Austria).

The aims of this implementation WS were:

1. To present the aims and milestones of the GreenNET project
 - a. <http://virtuelleschule.bmukk.gv.at/projekte-international/eu-projekte/greenet/>
 - b. <http://greenet.ea.gr/>
2. To demonstrate the activities carried through so far in Austria (esp. nomination of 5 Best Practice examples and the establishment of an Associated Partners Network) in the frame of this project
<http://greenet.ea.gr/content/associated-partners>
3. To present participants the Austrian Best Practices of the GreenNET project:
 - a. Energy Tutors:
<http://www.hsmunderfing.at/projekte/Energy%20Tutors/ETS.htm>
 - b. RIO 92+:
http://www.astgasse.net/cms/index.php?option=com_content&view=article&id=508:informationen-zum-rio92-projekt&catid=41:projekte&Itemid=66
 - c. Plastiksackerl-Nein, danke!:
<http://www.youtube.com/playlist?list=PL01834C34BA9AE27F>
 - d. Gehen geht! <http://www.umweltbildung.enu.at/start.asp?id=15718>

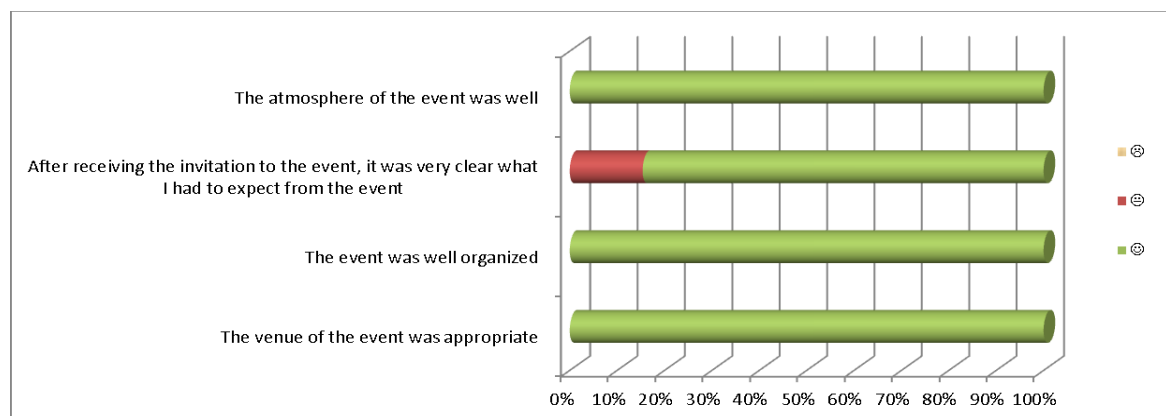
- e. Konsumaniac: <http://www.umweltbildung.at/online-materialien/interaktive-tools/konsumaniac.html>
4. Introduce the GreenNET community on the ODS portal <http://ods-portal-dev.intrasoft-intl.com/beta/community/greenet-umweltbildung-oesterreich-388487>
5. To present additional material of Associated Partners, especially from FORUM Umweltbildung: <http://www.umweltbildung.at/publikationen/forum-didaktik.html>

The 27 participants of this workshop were invited to discuss on the presented topics and materials. The idea and the general aims of then GreenNET project were well taken up and considered to be very useful for teachers. Some of the participants know the educational material provided by the *Associated Partner* FORUM UMWELTBILDUNG and they seemed to be very inspired by them. The idea of integrating BEST PRACTICES to an international educational metaportal (ODS) was supported although some of the participants felt a bit overstrained by it.

At the end of the workshop „Table 6 questionnaires“ (german version: *Feedback zur Evaluierung allgemeiner Veranstaltungen*) were handed out to each second participant. The results are documented in D.5.2.GreenNET_Table_10_WS_Bad-Hofgastein25.03.2014.

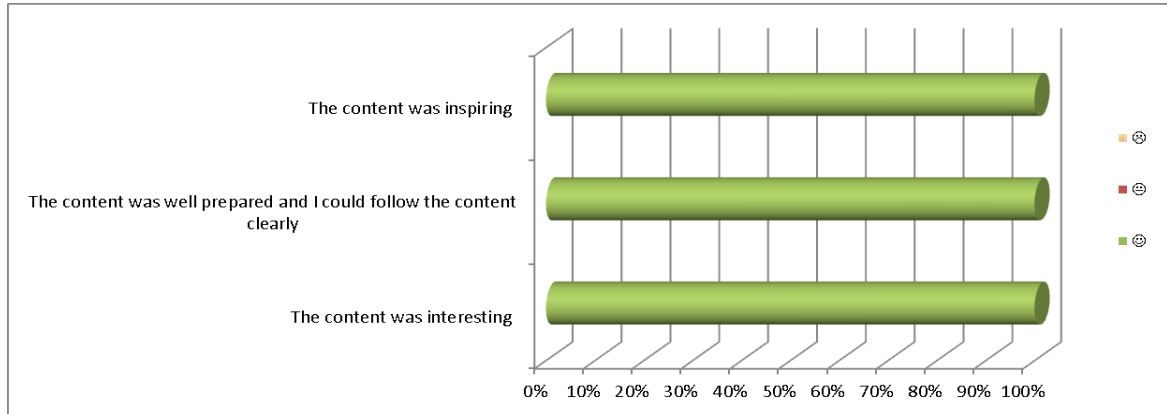
The results of the evaluation shows following:

1. Organisation



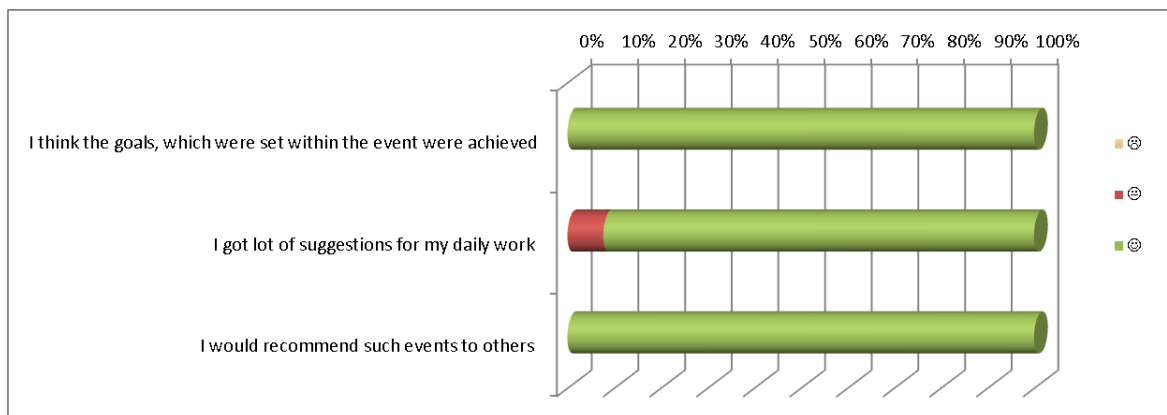
The event was highly evaluated concerning the organisation of the event, for the atmosphere, the organisation and the venue everybody was very happy. Only the clearness what to expect from the event was not highly evaluated by everybody. This might be caused by a numerous aims and according content which was set up for this event.

2. Content



The results of this area of evaluation shows a complete satisfaction with the content provided the organisers.

3. Results



Only the second question concerning the suggestions for daily work was not evaluated with 100%. But anyway for an event with 27 participants it is a very good result and allows the impression of high experienced organisers and contributors within the event.

4.4 Spain

Name of event: Exchange of good practices of environmental education

Date: 26.02.2014

Venue: Professional Training Centre Arco, Barcelona

Level of event: National

Kind of event Training activity

Number of participants: 10

Male 7

Female 4

Kind of participants:

Teachers: 10

Trainers:

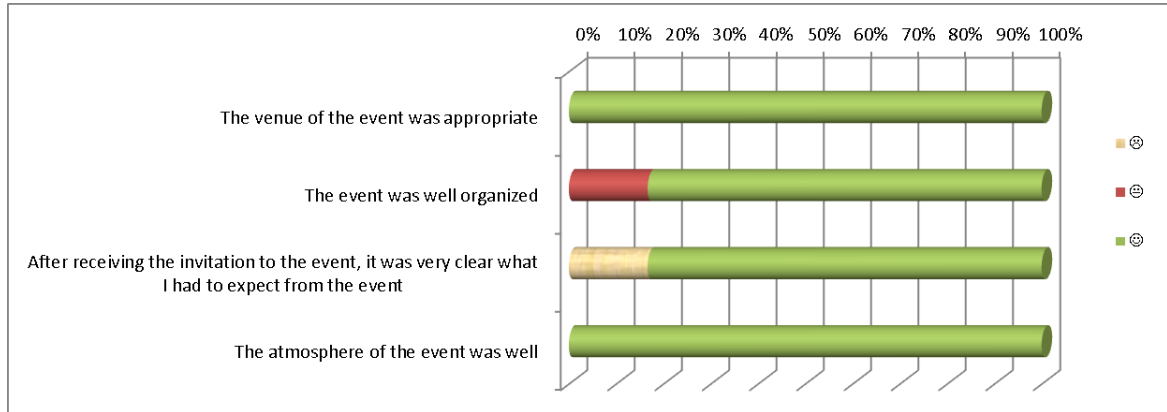
Stakeholders:

The workshop was an activity for teachers of professional training. The aim of the session was exchange some best environmental practices of the GreeNET previously elected by ECOI.

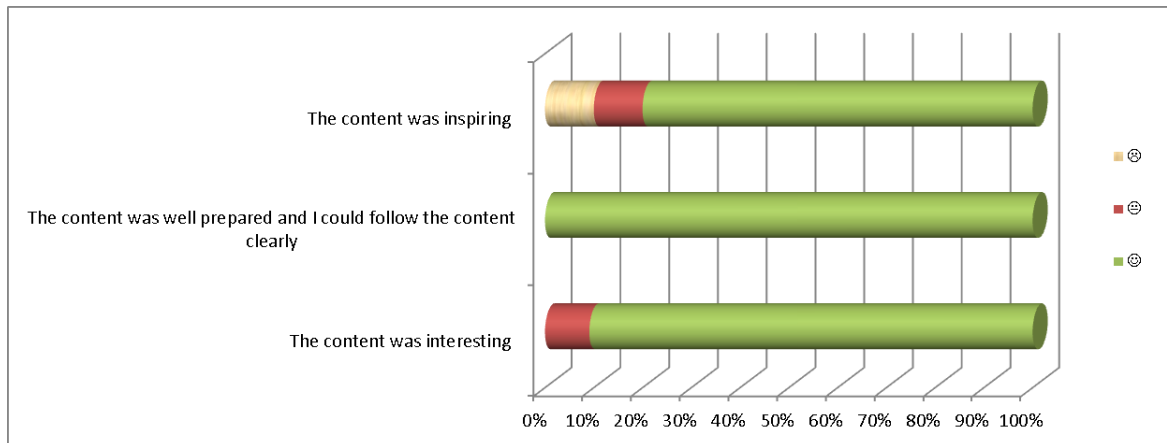
First we presented the GreeNET project, the steps done and the steps we must to be done, emphasizing the role of the different school centers in Europe. Secondly we provided to teachers different materials related to Best Practices selected in GreeNET.

Then the teachers had time to read 2 different best practices and answer Environmental education for the labour market of the green economy questionnaire for one best practice in pairs (one Questionnaire for Teachers/Trainers table 4 of the D5.2. Evaluation Instruments. Finally they had time to discuss the possibility to use these education materials in their school and answered, individually, the evaluation form for general events (table 6 of the D5.2. Evaluation Instruments).

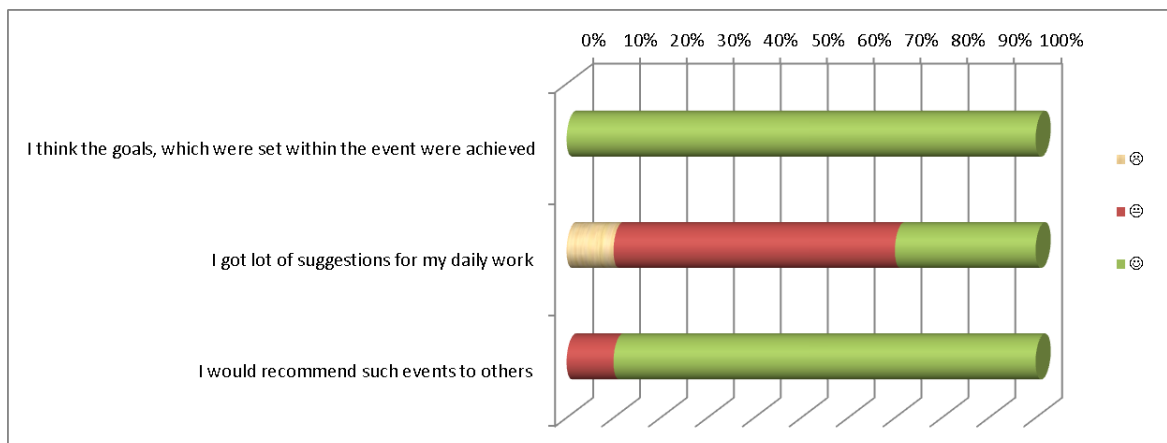
1. Organisation



2. Content



3. Results



Name of event: Environmental education for the labor market of the green economy

Date: 02.04.2014

Venue: IES Narcís Monturiol, Barcelona

Level of event: Local

Kind of event Training activity

Number of participants: 6

Male 2

Female 4

Kind of participants:

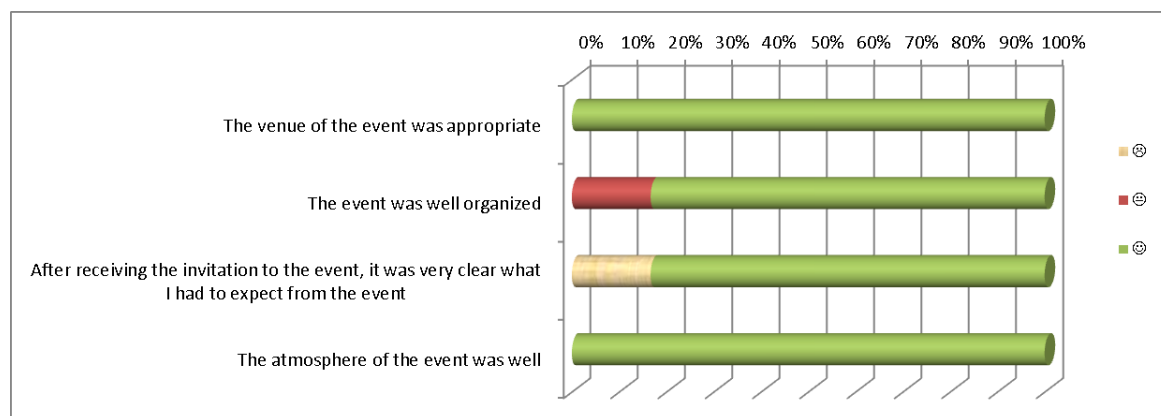
Teachers: 6

Trainers:

Stakeholders:

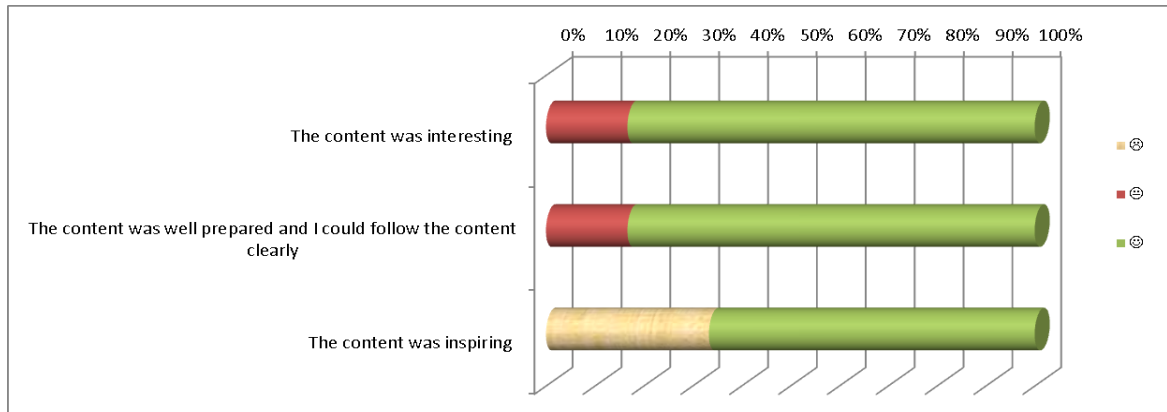
The workshop was a training activity for teachers of professional training; some were teachers of environmental educators, guides or instructors. The aim of the session was exchange opinions and evaluates the 10 criteria to select one Best Practise of the GreenNET focus groups (Best Practice Exchange Forum in WP2). Previously ECOI had done a questionnaire to qualitatively evaluate these 10 criteria with 4 possible answers (Completely disagree, disagree, agree, I totally agree).

1. Organisation



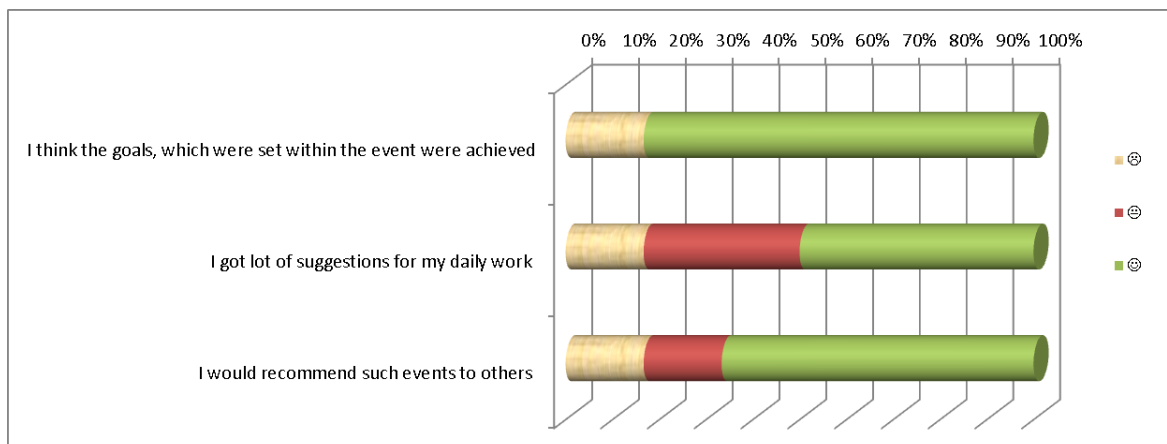
The evaluation gives the impression of a high quality of organisation of the event concerning the venue, the atmosphere as well as for the invitation process. Only 12 % was not so satisfied with the organisation.

2. Content



Some of the participants were not so inspired by the content; maybe the teachers could not see the connections with their daily work in detail which is also visible within the results below.

3. Results



One thesis if looking on these results of the evaluation could be: If evaluation of practices is the focus of training activities the added value for some teachers might not be very high because they would need more “fixed” practices to use them in daily work.

5 Recommendations for Phase B – the 2nd implementation circle of GreeNET

5.1 *Evaluation of Best Practices*

The detailed evaluation of the best practices is based on the feedback of users on 9 best practices, out of 6 partners, used in sum 18 times.

The number of feedbacks per used best practice differs from 2 to 76. This fact causes a great variety concerning quality and validity of the evaluation outcomes.

It could be considered that this is an innovative process of using, comparing, evaluating best practices, nevertheless there should be a common objective to improve the comparability and validity of feedback processes.

General Recommendations:

- It should be an objective to come closer to a common format concerning quantitative dimensions of feedback to the used and evaluated best practices, but respecting the different approaches and in regard to their specific features
- The numbers of evaluated best practices should be increased – recommended at least 20 out of the 26 practices by the end of the activities.
- The responsible institutions and persons for developing, using, transferring the best practice examples are asked to study and interpret the single examples in detail and reflect the evaluation results seriously.
- It can not be the approach of this evaluation to give overall recommendations to the sections in detail, by the reason of the quite diverse background of database for each best practice example.
- But, there could give some remarks and comments in general, for reflection at the level of practitioners, institutions and the consortium of GreeNET for the further Network process and beyond.

Section 1 Organization, effectiveness of content and delivery

- The feedback concerning organization, effectiveness of content and delivery by the teachers and trainers shows a great variety – from 100% positive to quite problematic responses.
- The responsible actors for and within the “best practice” examples should reflect these reported responses in detail-

- If more reliable data will be available a conjunction between feedback to these items and other outcomes and effects of the best practice examples is recommended by the evaluator.

Section 2: “Voice of user”:

1. Relation to a green topic and to the National Curriculum

A majority of responses address a connection between the issues of best practices and national curricula.

But, nevertheless, concrete relations to national curriculums are not seen within the most of the best practices. This affects the quality of best practice itself because in this case the teachers have to integrate the practice in a different way in schools if it is not possible to integrate the practice in the curriculum.

Recommendation: more focus on the curricula and the contents concerning the age group should be in consideration.

2. Being interdisciplinary: Drawing upon many academic disciplines and teaching methods

The results show a different approach of interdisciplinarity, there are covered at least four of the asked disciplines in some practices and all twelve of the mentioned disciplines in other practices.

Qualitative surveys may help to recognize, that a maximum of interdisciplinarity must not secure a maximum of quality. A clear focus to what topics a best practice is addressed should be necessary

Recommendation: clear focus on interdisciplinary practices, but not to overload single issues with all possible aspects

3. Relevance to the daily life of students

Most of best practices are rated high to the issue “relevance for daily life” – with some exceptions...

This seems to be a very positive aspect from the personal and pedagogical point of view,

Recommendation: This aspect should be consequently considered during the network lifetime and beyond

4. Based on accurate and factual professional expertise

Concerning this issue great differences are visible in the feedbacks – so a discussion on “best practice” concerning this topic is recommended.

Some excellent feedbacks are visible – as well as the opposite from the point of view of the users.

Recommendation: reflection of each single topic concerning future options, in general and in special.

5. Connection to professions in the green labour market

Feedbacks to this topic is quite different

The range of estimation reaches from 100 to 0%

Recommendation: This should be reflected, no practice should be considered as best practice without concern to this aspect, of course related to curriculum and age group...

6. Learning by research and inquiry

It is obvious that not all of the best practice examples could have the same background of research and inquiry.

But, no “best practice” should be used without any background of research and inquiry.

Recommendation: each declared “best practice” example shows a research and inquire background, this must not be an intensive scientific study, but at least one relevant reference...

7. Activation of the students by hands-on

Data for this item are not available for all used best practices. Those that are available show that at least the interaction with materials and hands-on practice could be a motivating aspect for such practices

Recommendation: more data should be collected concerning this item

8. Enhancement of students’ ICT skills

Data that are available show a positive effect concerning this item

Recommendation: more data should be collected concerning this item

9. The learning activity supports the development of following social skills....

There is no significant effect visible in the available data

Recommendation: more data should be collected concerning this item

10. The programme is easily adaptably for....

Available feedback data concerning this item show a positive estimation concerning the aspect of adaptation and transferability, addressing both educational aims as well as students' interests

Recommendation: more data should be collected concerning this item

Section 3: The materials of the programme / practice and general feedback

Available data show positive effects concerning the items practicability of materials, structure, pedagogical methods etc.

Recommendation: more data should be collected concerning this item

Section 4: Feedback concerning the training

Available data give a positive feedback concerning these items

Recommendation: more data should be collected concerning this item

5.2 *General events*

5 general events were organized within the 1st implementation circle with topics of use of ICT, environment and green labor market, with local, regional or national scope.

Most of participants were teachers; some stakeholder took part in one of these events.

Feedback concerning organizational and content topics seems quite positive. Most relevant common recognitions are the challenges of lack of infrastructure and equipment for ICT and teachers acquaintance, also time resources for teaching.

Details of feedback to the events are available in chapter 5 of this report.

General recommendation

Based on the feedback to these five events a general recommendation could be, additional to special events concerning the topics ICT, environment etc. to use events, courses, initial and further training for teacher for addressing topics out of the GreeNET work.

A special question concerns the equipment and infrastructure. If there are not enough resources – especially in the public sector – cooperation with other institutions, private companies, education institutes etc. could be helpful.

5 Annexes

5.1 Annex 1: GreeNET Implementation Activity: Questionnaire for Teachers / Trainers

GreeNET Implementation Feedback Form

Name of programme:

Questionnaire for Teachers / Trainers

Country:

Name of school:

Type of school:

Please let us know the age of students in your school:

- 6-12 13-15 16-19
Subject you teach: Physics Mathematics
 Biology Chemistry
 other _____

You are female male
(Please mark)

Thank you for supporting us with feedback on the activity you participated in 😊

Section 1: Please support us first with your feedback for the event:

The organisation of the event was

☹ 😐 😊

I rate the effectiveness of content and appropriate range and balance of activities

☹ 😐 😊

I rate the effectiveness of the delivery by trainers, workshop leaders etc.

☹ 😐 😊

Section 2: Please support us with your “voice of user”:

1. Relation to a green topic and to the National Curriculum

The Programme addresses topics that are closely connected to the National Curriculum of your country.

☹ 😐 😊

Remarks for improving:

2. Being interdisciplinary: Drawing upon many academic disciplines and teaching methods

- | | | |
|--|--|-------------------------------------|
| <input type="checkbox"/> Natural science | <input type="checkbox"/> Social science | <input type="checkbox"/> economics, |
| <input type="checkbox"/> political science | <input type="checkbox"/> history | <input type="checkbox"/> geography |
| <input type="checkbox"/> psychology | <input type="checkbox"/> philosophy and ethics | |

The programme includes

- laboratory experiments
- field work
- Enquiry Based Science Education approaches
- ICT/online tools (animations, simulation)

Remarks for improving:

3. Relevance to the daily life of students

The learning activities will be relevant, important and motivating for the students	yes	no
The new experiences can be linked to what students already know	yes	no
The students will be curious and motivated to discuss the issues-under-examination and ask/answer questions	yes	no
The learning activity enables students to engage with real objects and with real problems of their daily life	yes	no
The practise reveals to the students new ways of understanding and possibilities for personal choices especially linked to green careers	yes	no

Remarks for improving:

4. Based on accurate and factual professional expertise

The content of the learning activity _____ is based on accurate, reliable, and credible information about environmental issues and on state-of-the-art information and communication technologies.

☹ 😐 ☺

Remarks for improving:

5. Connection to professions in the green labour market

The learning activity _____ demonstrates concrete professions of sustainable economy, to support students to have an insight in green careers.

☹ 😐 ☺

Remarks for improving:

6. Learning by research and enquiry

There are numerous enquiry-based ways of inspiring students to identify, compare, synthesize, and reflect on their various experiences.

I believe that the learning activity _____ supports the following features:

Scientifically-oriented and very engaging questions.	yes	no
Giving priority to evidence, which allows learners to develop and evaluate explanations that address scientifically oriented questions.	yes	no
Formulating explanations from evidence to address scientifically oriented questions.	yes	no
Evaluation of explanations in light of alternative explanations, particularly those reflecting scientific understanding.	yes	no
Communication – justification of the explanations proposed by the learners.	yes	no

Remarks for improving:

7. Activation of the students by hands-on

The learning activity includes hands-on activities ☹️ 😐 😊	The learning activity includes interaction with various materials ☹️ 😐 😊
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Remarks for improving:

8. Enhancement of students' ICT skills

The programme enhances the ICT skills of students

☹️ 😐 😊

Remarks for improving:

9. The learning activity supports the development of following social skills

Team cooperation ☹️ 😐 😊	Forming new ideas ☹️ 😐 😊
Support in forming and defending the learners' opinion about environmental and green issues ☹️ 😐 😊	Skills for solving environmental problems ☹️ 😐 😊
Growing awareness for the environmental protection ☹️ 😐 😊	

Remarks for improving:

10. The programme is easily adaptable for

Specific educational needs ☹️ 😐 😊	Students' interest ☹️ 😐 😊
Educational aims ☹️ 😐 😊	

Remarks for improving:

Section 3: The materials of the programme / practice and general feedback

The structure supports easy retrieval of themes and topics for teaching elements of environmental education as an opportunity to make environmental education accessible at primary and secondary school level.

☹️ 😐 😊

The spelling style is linked to the target group: teachers / trainers

☹️ 😐 😊

Subject-related vocabulary is used

☹️ 😐 😊

Didactic concepts and methods used are appropriate

☹️ 😐 😊

The structure of the practices is well explained and useable for the teachers to find out elements for daily work

☹️ 😐 😊

The content is adequate for using it in the teaching unit

☹️ 😐 😊

The time practicability is described in a proper way

☹️ 😐 😊

Section 4: Feedback concerning the training

The training approach used in this event was for you



Please give a feedback for the educational approach and ideas



The materials you got are in your opinion



Section 5: You are kindly invited to give any general remarks:

Thank you for your support!

5.2 Annex 2: Feedback form / Evaluation form for general events

Date: (insert the date)

Venue. (please insert the venue)

Dear participant of the event (insert the name of the event)

Thank you for your participation.

Please support us with your feedback to some areas.

1. Organisation

The venue of the event was appropriate

The event was well organized

After receiving the invitation to the event, it was very clear what I had to expect from the event

The atmosphere of the event was well

2. Content

The content was interesting

The content was well prepared and I could follow the content clearly

The content was inspiring

3. Results

I think the goals, which were set within the event were achieved

I got lot of suggestions for my daily work

I would recommend such events to others

General remarks.....

Thank you for your feedback!