UniSchooLabS

D.6.2. FIRST YEAR EVALUATION REPORT

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Introduction

This report is the review of the first year of UniSchooLabs project implementation in terms of project achievements and problems faced, collaboration between schools and universities, cost-effectiveness of approach. It is based on what stated and defined in the D 6.1 Quality assurance Plan and aims also to report results on quality monitoring of the project.

The accessibility and usability of the services provided, the user acceptance, the pedagogical effectiveness and impact, together with transferability to other users than those involved in the project, (mainly transferability to informal sector), will be included in the final evaluation report.

Data for these aspects will be collected through validation and exploitation activities foreseen in the second year of the project.

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In particular this report provides results on the following objects:

- Project implementation: evaluation results of project meeting and indicators vs results achieved so far
- Internal review process to assure quality of the deliverables
- State of art of collaboration between schools and universities.

1. Project objectives and evaluation objects

The UniSchooLabs Comenius project aims at improving quality in science education in Europe, by promoting collaboration between universities and schools in the provision of remote access to science laboratories for primary and secondary schools through internet-based services.

According to project goals and after a discussion held in 1st kick off meeting, the partnership agrees that the WP 6 Quality and evaluation shall refer to evaluate project management and implementation dynamics and processes. Nevertheless, since validation is part of evaluation, some objects defined as evaluation objects will fall under the validation activities and will be inserted in the validation plan.

According to this decision, the evaluation quality assurance plan has been drafted. The following evaluation objects have been defined[1]:

- Project management
- Project internal communication
- Partners contribution
- Quality of deliverable
- Respect of deadlines
- Dissemination activities
- Project events

To guarantee quality of the project implementation, the evaluation monitoring process includes also aspects related to the collaboration between universities and schools[2] (even if the D6.1 Quality

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[1] Please refer to chapter 3 of D 6.1 Quality assurance plan for details on evaluation objects

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assurance plan does not provide specifications about this object), and, takes into account successful indicators of the project as listed in the D 1.1 Project management guidelines. This approach will allow to:

- Foster collaboration between universities and schools is one of the project objectives
- Map projects activities and results

In the following chapter evaluation and quality results and state of art of the project activities are provided.

2. Evaluation results on project implementation

As decribed in the D6.1 Quality plan, the evaluation activity is focused mainly on the formative evaluation of project implementation. Indeed, results provided in this paragraph refer to the evaluation of the following objects:

- **Project Management performance**: being evaluation responsive to the lifecycle of the project development process, the evaluation approach proposed places great emphasis on linkages between evaluation itself and activities that are traditionally associated with Project Management.

- **Communication patterns internal and external**: the UniSchooLabS project requires the need for an efficient communication system among partners. The specific nature of the project implies also a clear definition of communication patterns and strategies to address target users, stakeholders and all interested parties.

- **Quality of the deliverables and respect of deadlines**; the quality of outcomes, both in terms of reports and services will undergo a process of internal and external evaluation. The actors involved in the monitoring of quality will be mainly project partners but a crucial role will be played also by the users of the products and services developed by the project.

- **Dissemination activities**; dissemination plays a key role within the development of this project. The evaluation of dissemination activities will mainly concern the assessment of the portal and

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[2] Collaboration between universities and schools it is an activity to be carried out together with validation and exploitation activities

[Type text]

of the products, services offered therein, as the portal will be the virtual interface of the platform with its direct and indirect target users and beneficiaries.

▪ **Project events;** they are direct output of the project and refer to national workshops and international seminar scheduled already as project activities and outputs

Criteria for each of those objects have been defined, (please refer to table 1 of D 6.1 Quality assurance).

According to methodology and tools defined in the D 6. 1 quality plan[3], data and results provided here below have been gathered during the following three project meetings:
- 2nd meeting in Brussels 21-22-March 2011
- 3rd meeting in Heraklion 6th July 2011
- 4th meeting in Athens 3-4 October 2011

In each of them, an evaluation session has been put in place, both by delivering questionnaires (ANNEX 1 of D 6.1 Quality assurance in the meeting in Brussels and Heraklion and ANNEX 3 of D 6.1 Quality assurance in the meeting in Athens) and by open discussion on problematic issues.

It goes without saying that actors involved in this session and for the evaluation of these objects were only project partners.

Instead the evaluation of project events has been implemented by involving event's attendees and through the delivery of questionnaires.

In particular evaluation results of events refer to one event held in Athens at 28th of October 2011 during EDEN Open Classroom. More results about this object will be acquired during the second year of the project when validation workshops as well as presentation of the project in the framework of important events such as ECSITE annual conference[4] will take place and have more impact due to the fact that the project outcome (the toolkit) will be more developed and so more attractive.

2.1 Results from 2ⁿᵈ and 3ʳᵈ meetings

The following paragraph describes results acquired during the evaluation sessions held in the two (2) project meetings and through the delivery of questionnaires during the first year of the project.

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[3] Please refer to table 3 in the D6.1 Quality assurance.

[4] It is already confirmed that a stand of UniSchooLabS will be present in the next ECISTE Annual conference in Toulouse.

[Type text]

Grades given to different evaluation objects go from 1 as minimum value (meaning completely insufficient) to 5 as maximum value (meaning excellent).

2.1.1 Project management

Project management refers to the way the project is managed. Criteria taken into account are:
- Effectiveness: in particular to what extent the project management achieves its planned results

<u>Results</u>

How do you assess the effectiveness of the project management in terms of result achieved so far?

- ■ 2nd meeting in Brussels ■ 3rd meeting in Heraklion

5 maximum	2
4	2 1
3	3 1
2	2
1 minimum	
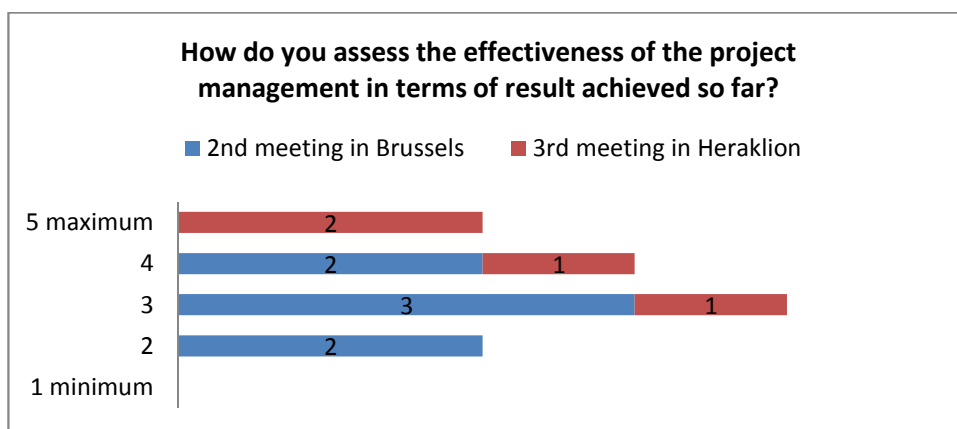
- Timing: refer to the effort of project management in achieving its results on time

<u>Results</u>

How do you assess the effort of project management in making project implementation proceed in time?

- ■ 2nd meeting in Brussels ■ 3rd meeting in Heraklion

5 maximum	2
4	4 1
3	3 1
1 minimum	1
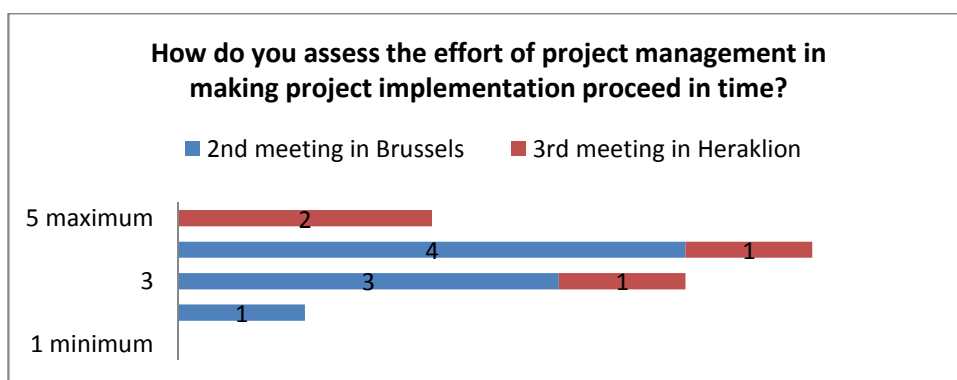
[Type text]

- Suitable: refer to the pertinence of project management with its implementation

Results

To what extent do you consider the project management fit the project implementation?

■ 2nd meeting in Brussels   ■ 3rd meeting in Heraklion

5 maximum	1
4	2 1
3	5 2
2	
1 minimum	
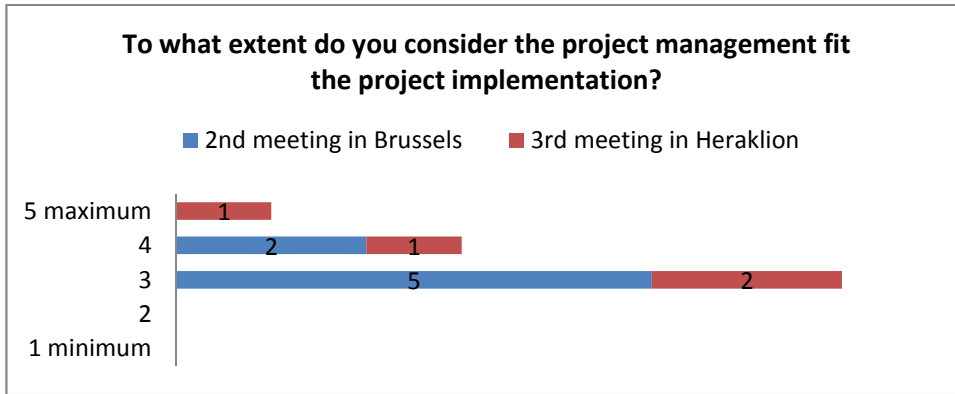
2.1.2 Project Internal Communication

Project internal Communication refers to the way communication among partnership and between partners and project manager is carried out. Criteria taken into account are:

- Efficiency: refer to significant communication had and resources spent

Results

How do you assess the efficiency of communication among partners?

■ 2nd meeting in Brussels   ■ 3rd meeting in Heraklion

5 maximum	1
4	3 2
3	3 2
2	1
1 minimum	

[Type text]

How do you assess the efficiency of communication between project manager and partnership?

■ 2nd meeting in Brussels   ■ 3rd meeting in Heraklion

5 maximum	1 │ 2
4	3 │ 1
3	1 │ 1
2	2
1 minimum	
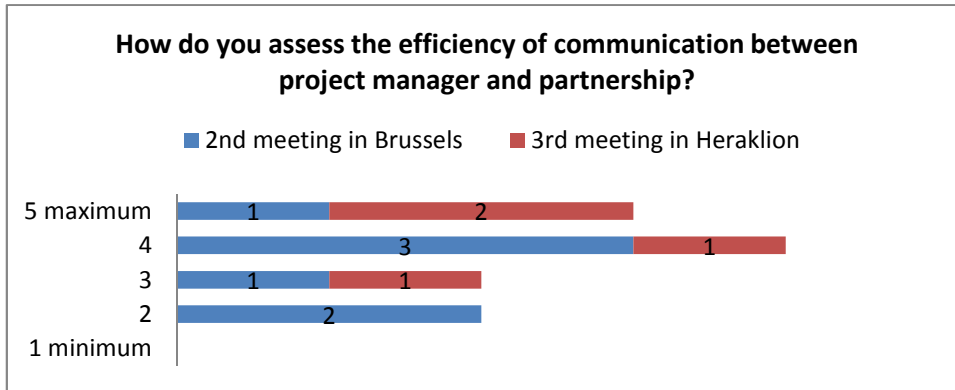
- Effectiveness: refer to message has to be communicated with message received by the others

Results

How do you assess the effectiveness of cumminaction in terms of well understanding the messages/contents/tasks?

■ 2nd meeting in Brussels   ■ 3rd meeting in Heraklion

5 maximum	2 │ 1
4	3
3	2 │ 2
2	1
1 minimum	

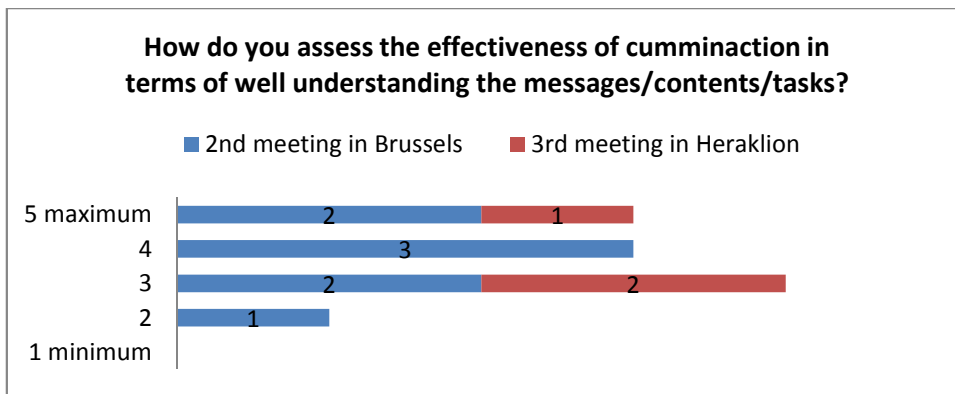- Timing: refer to the time passed by asking and receiving an answer among partnership

Results

[Type text]
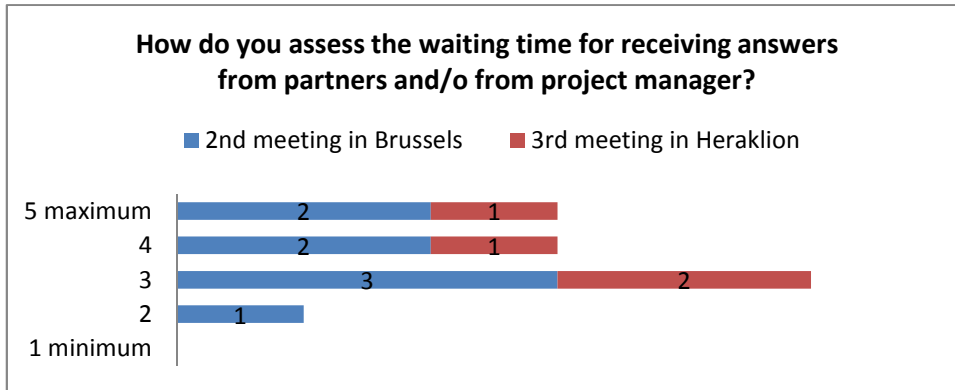
- Suitable: refer to the pertinence of the communication with the project implementation

Results
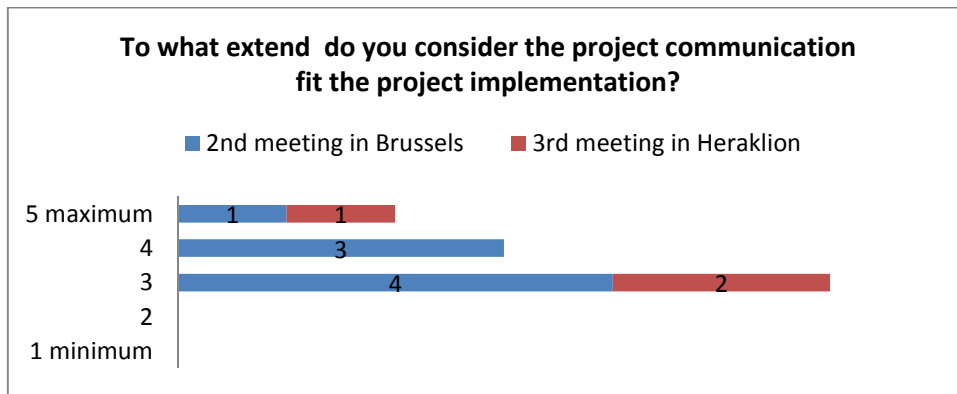
2.1.3 Partners Contribution

Partners Contribution refers to the way partners send and give their contributions in terms of time passed from asking contributions/comments and contributions/comments received.

Results:

[Type text]

To what extant are they in time in delivering comments/inputs?

■ 2nd meeting in Brussels   ■ 3rd meeting in Heraklion

5 maximum	1
4	3 ... 1
3	2 ... 2
2	3
1 minimum	
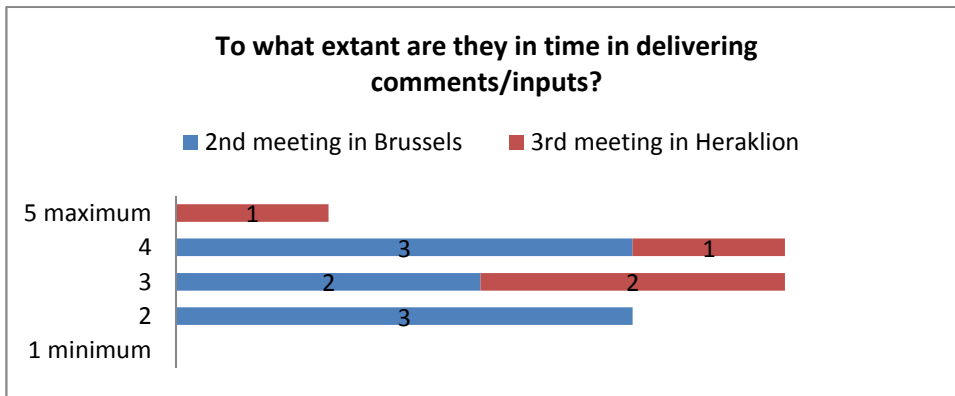
2.1.4 Quality of Deliverables

Quality of deliverables refers to what extant deliverables produced by partners are good in terms of format, language and content. Criteria taken into account for this objects are:

- Appropriateness refers to format, language and content of deliverable fit with standards and expectations

Results:

How do you assess the quality of deliverable in terms of appropriateness of
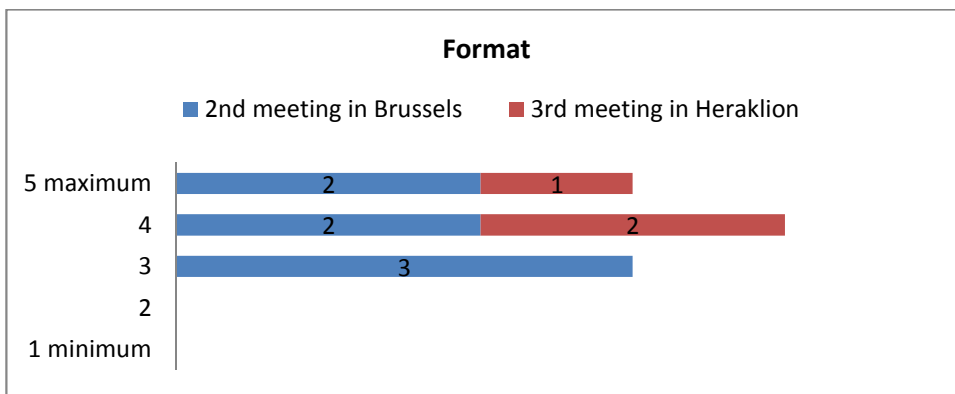
Format

■ 2nd meeting in Brussels   ■ 3rd meeting in Heraklion

5 maximum	2 ... 1
4	2 ... 2
3	3
2	
1 minimum	

[Type text]

Language

2nd meeting in Brussels 3rd meeting in Heraklion

5 maximum	1 — 1
4	3 — 2
3	3
2	
1 minimum	

Content

2nd meeting in Brussels 3rd meeting in Heraklion

5 maximum	1
4	5 — 2
3	2
2	
1 minimum	
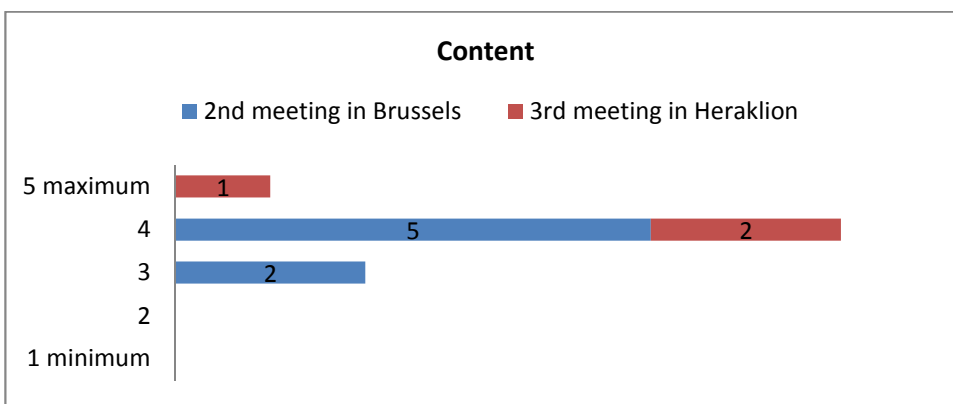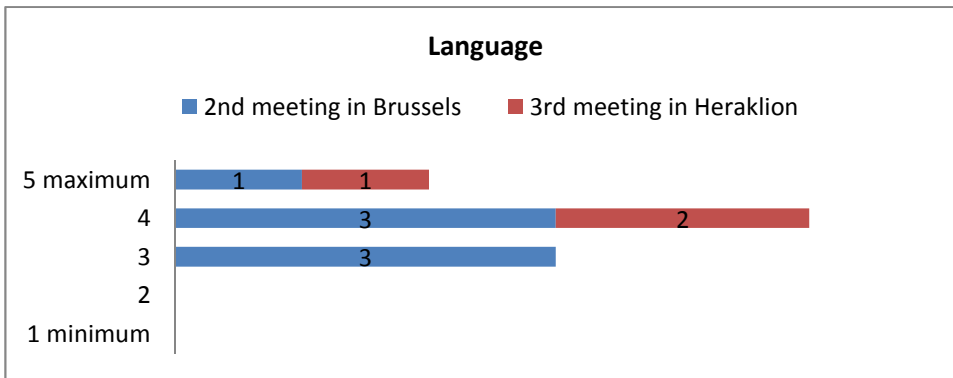
2.1. 5 Respect of Deadlines

This object refers to delivery of deliverables on time

Results:
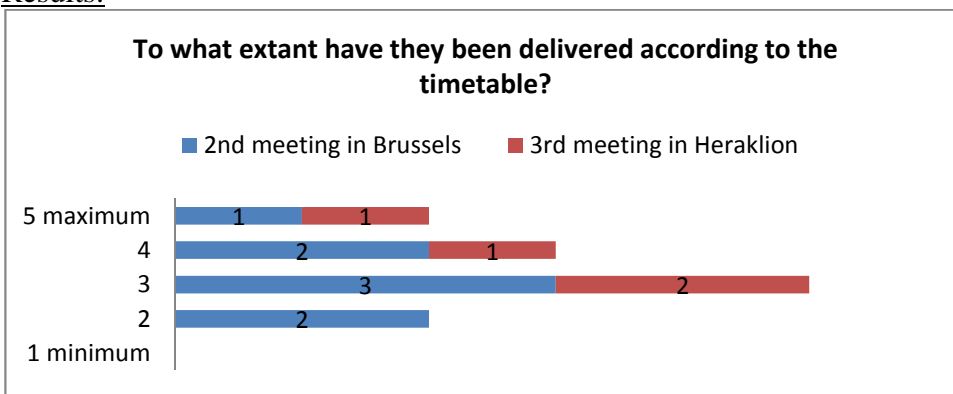
To what extant have they been delivered according to the timetable?

2nd meeting in Brussels 3rd meeting in Heraklion

5 maximum	1 — 1
4	2 — 1
3	3 — 2
2	2
1 minimum	

[Type text]

2.1.6 Dissemination activities

Dissemination activities refer to all the dissemination actions, results, materials and products delivered up to meeting date. Since the project activities started in reality after the Kick off meeting held in Bologna on December 2010, the evaluation of this object is still in its first step; more relevant data related to this object will be collected in the next project meetings. Nevertheless criteria taken into account are:

- Efficiency: refer to dissemination results achieved related to expenditure and efforts made

Results

How do you assess the dissemination activities undertaken so far in terms of cost/benefit?

■ 2nd meeting in Brussels   ■ 3rd meeting in Heraklion

5 maximum	1
4	3 1
3	2
2	
1 minimum	
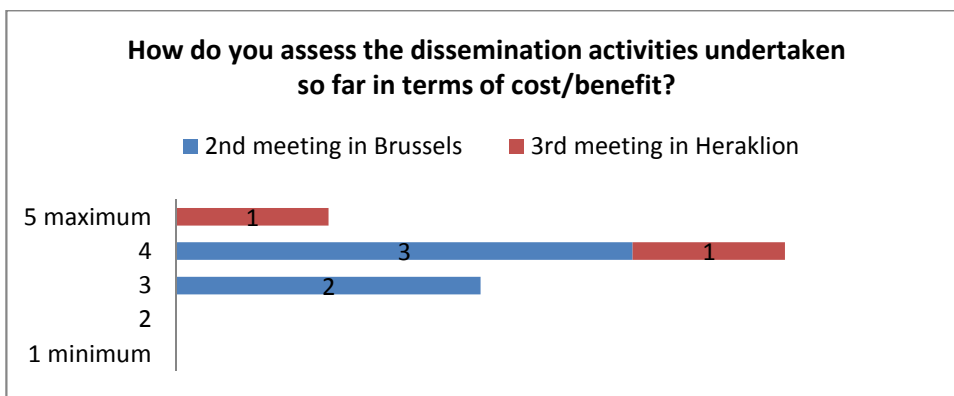
- Effectiveness: refer to dissemination results achieved up to project meeting date

Results
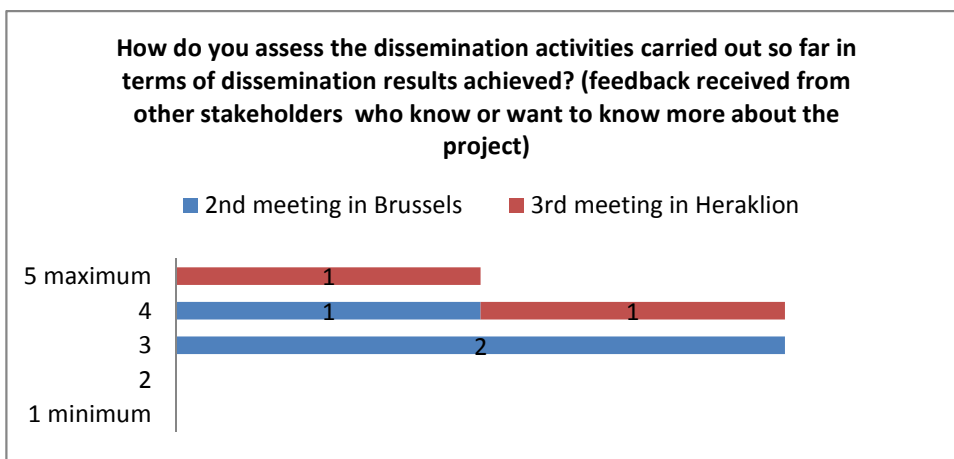
How do you assess the dissemination activities carried out so far in terms of dissemination results achieved? (feedback received from other stakeholders who know or want to know more about the project)

■ 2nd meeting in Brussels   ■ 3rd meeting in Heraklion

5 maximum	1
4	1 1
3	2
2	
1 minimum	

[Type text]

- Appropriateness: refers to the assessment of format, language and content of dissemination materials

Results

How do you assess the dissemination materials already delivered in terms of content format and language?

■ 2nd meeting in Brussels   ■ 3rd meeting in Heraklion

5 maximum	2 1
4	2 1
3	1
2	
1 minimum	
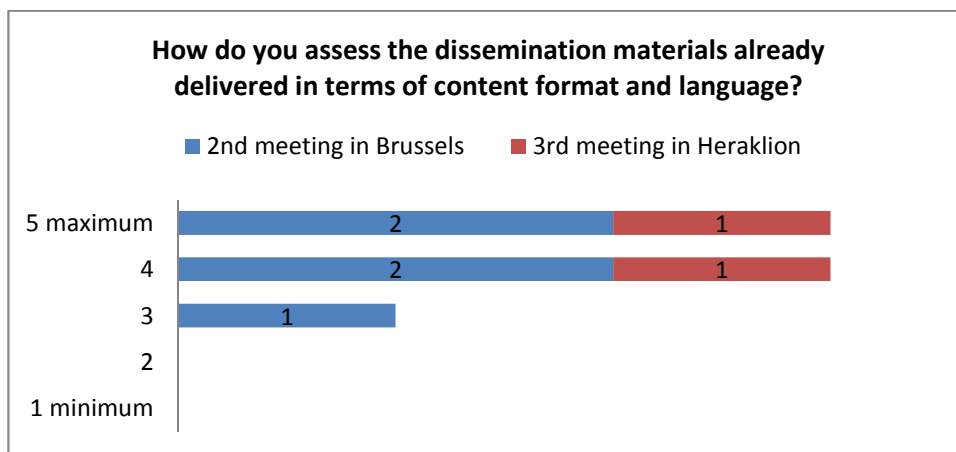
- Suitable: refer to pertinence of dissemination materials

Results

To what extend do you consider the dissemination materials/activities planned fit with the project implementation?

■ 2nd meeting in Brussels   ■ 3rd meeting in Heraklion

5 maximum	2 2
4	2 2
3	3
2	
1 minimum	
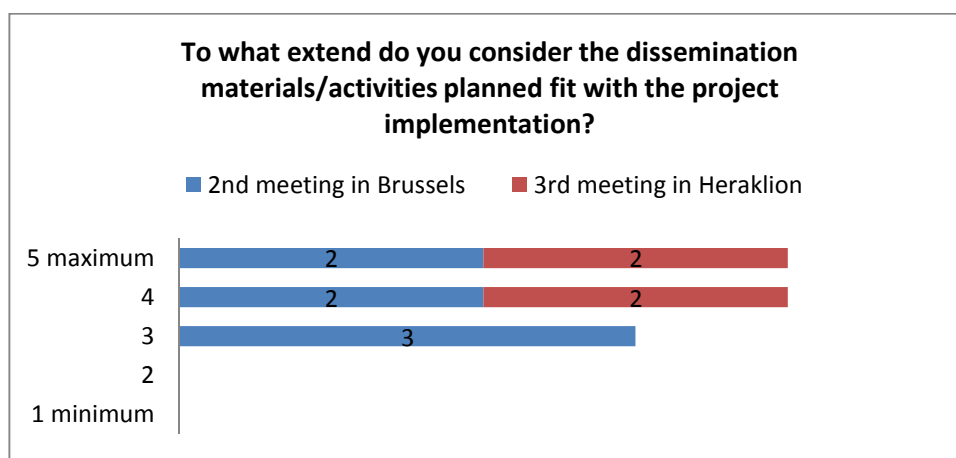
2.1.7 Lessons learned and conclusions

According to those results and short open explanations given in the 2 boxes of **STRENGTHS** and **WEAKNESSES** for last open comments, the project implementation is developing quite good. At the beginning some aspects related to the project management, internal communication and timing

[Type text]

in delivering contributions faced some difficulties as the above tables can show, but during the project implementation, thanks to the first evaluation results and also open discussion sessions during the meeting, these aspects have been improved.

In particular, each partner appreciates very much working and collaborating with the other partners especially for their expertise. Since the beginning partnership was really motivated in working with other partners moreover, having open discussion during the meeting stimulates the partners to work together and put more effort in their task implementation.

In addition, partners think that the scope and goals of UniSchooLabS project are really interesting and innovative.

Coming back in comparing the results of the two meetings and the implemented improvements, during the 2nd meeting partners asked for smoother communication both among them and in relation to the project manager. This aspect has been improved by scheduling monthly audio calls and by fostering bilateral communication both via emails and by phone.
The project management has also received some remarks, at the beginning of the project, suggesting to demonstrate more assertiveness in terms of decision taking. More specifically, partners suggested that once a decision is taken by the partnership no further comments or changes are allowed. This suggestion has been taken on board by the project manager who is always encouraging partners to take final decisions based on the discussion held within the partnership..

The partnership asked for more effort in giving contributions, either in terms of comments and/or in terms of information and data. This aspect has been improved also as consequence of a smoother communication applied among and between partners.

On the other hand, aspects related to dissemination did not cause problems and results from both meetings shows that dissemination activities are progressing and carried out without any problems.

In conclusion, we can assume that these weaknesses faced at the beginning can be considered as normal aspects of new partnership collaboration. On the contrary, since strengths of the project partnership relates more on deep motivation from all the partner in developing the project, we can foresee that the next project phase keep on going well and reaching the project goals and achievements.

2.2 Results analysed for the 4th meeting in Athens after one year of the project start

To make a general intermediate evaluation after one year on how project implementation is going on following partner's opinions, a specific questionnaire has been set (please refer to ANNEX 3 of D6.1 Quality assurance) and delivered to partnership during the meeting held in Athens. This questionnaire is composed of some open questions related to evaluation objects with the purpose to

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make each partner free to express his/her opinions on strengths and weakness about evaluation objects taken into account, a final open question was set up to make them suggest solutions to some risks they perceived project implementation still has to tackle.

Here below results gathered from those questions are reported and analysed per evaluation object

2.2.1 Strengths and weaknesses of the overall project management

The project management started with a low rate at the beginning but it increased a lot during the first year of project activity. Indeed, as showed by results presented in the previous paragraph, the answers received on level of satisfaction about it are quite high

Please give an assessment about your satisfaction of the project management

5 maximum	1
4	2
3	1
2	
1 minimum	
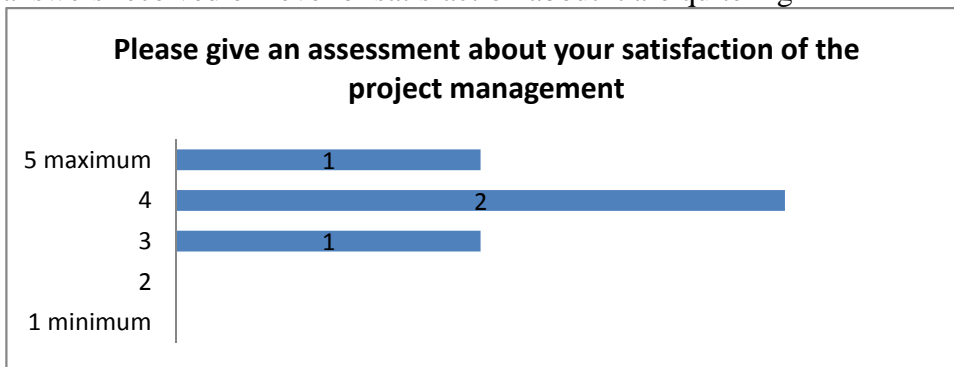
About **STRENGTHS** highlighted by partners they declared that:

- Timely and detailed status of project reporting
- Frequency and usefulness of audio conference to complement project meetings
- Good overall organisation, planning, follow up, task list
- Current tasks and timelines are clear
- Email responses are usually very quick, everyone is connected through skype
- Good team work to organise briefing sessions with teachers which involved every partner contribution
- Project management is very satisfying
- Tasks appointed to partners are always very clear for everyone
- Reminders for deadlines are always given out so as to make sure the project is on track
- The project meetings are well organised with regards to the agenda and the coordinator is in position to direct and manage conversation among partners at all times
- Often skype meetings make it easier for partners to have a complete overview of all the progress that goes on

[Type text]

- The project management has a very complete and detailed overview of the whole project and the tasks that each partner has to accomplish at any given time.
- The response of the coordinator in any issue that might come up is always very fast

These results show that what was perceived as weakness or in need of improvements at the beginning of the project about project management, now they are good points in favour of how the project management has been driven.

However, some **WEAKNESSES** still remain, in particular:

- Difficulties in achieving a shared view of the various components of the project
- Difficulties to follow up on the various developments (though this is connected to communication problems)
- Need to be more "strict" and get partners
- The project somehow suffered from miscommunications between WP2 (good practices) and WP3 (toolkit development), which led to various misunderstandings and the need to go back to previous decisions
- Not every WP leader clearly communicates to partners about pending tasks

Particular attention will be paid on those remarks for the second year of the project by continuously monitoring them.

2.2.2 Strengths and weaknesses of the overall project communication

Project communication has also received good rate of assessment, but still some difficulties appear regarding the project communication among partners.

[Type text]

About **STRENGTHS** highlighted by partners they declared that:

- Project brochure produced and distributed. Participation to dissemination events
- Good relationships and working atmosphere among partners allows direct and informal communication to take place regularly
- Regular audios with almost all partners having participated in each of them
- High number of bilateral telephone and chat conversations
- Every partner makes use of the online collaboration tool and the shared files and discussions there are up to date
- All partners are eager to help each other when needed and response from all partners to emails is always very quick
- Skype meetings are plenty so that all partners are informed about the status of all the tasks at hand

Instead as **WEAKNESSES** by partners are the following:

- Since this is the first year of the project, it is difficult to communicate our main contributions to the remote/virtual lab field. We are clearly in a process to review the objective states in the proposal
- Use of various communication means (emails, pbworks, chats, etc can cause loss of information or confusion
- Decisions are not always clear or agreed by all partners, which causes misunderstandings and the revisiting of the same issues
- Some partners comment regularly on work of other team members, other do not, but I think this is connected to workload in different periods of the year
- Some presentations at meetings could be more structured to ease communication
- During project and skype meetings sometimes discussion over some issues takes longer than it would be necessary

According to those results, it seems that problems faced in the communication are not referring to the quantity of tools and/or moments through which communicate, neither in the quality of relationship built among partnership that are instead perceived very good for each partner. However problems can be encountered in the quality of communication in terms of agreements and messages passed. For the next year special emphasis will be given especially during the meeting and/ skype call to check if major decisions taken during the meeting or the call are clearly and mutual understood.

[Type text]

2.2.3 Strengths and weaknesses of partners engagement and contributions in general

According to results gathered in the previous two meetings (as shown in the tables above), the partners engagement and their reactions in giving contribution are always increasing from the start of the project. As confirmation of this trend, the following assessment given in the meeting in Athens shows that partners feel themselves more and more as part/member of a group who works for a common and shared goal.

Please give an assessment about your satisfaction of the project partners engagement

5 maximum	1
4	2
3	1
2	
1 minimum	
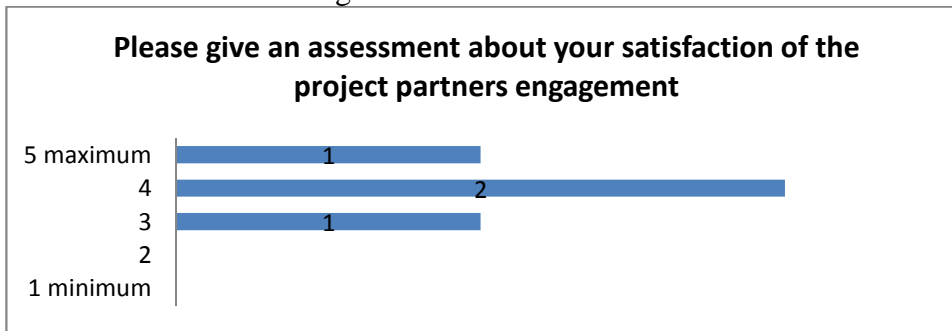
The level of engagement and the enthusiasm of working together are showed also by answer given to the open questions.

About **STRENGTHS** highlighted by partners they declared that

- All partners are fully engaged in the project and deliver what they are expected to do on time. They are all quite enthusiastic about the project, hence their excellent performance in the dissemination events and the positive feedback from participants
- All partners will have delivered their part until mid-term
- Sometimes passionate discussions show the level of engagement
- Good working atmosphere
- The capacity, as a group, to accommodate an evolving agenda that sometimes requires a redefinition of each partner contribution

Instead as **WEAKNESSES** by partners are the following:

- Talking time at meetings is often imbalanced, especially in a smaller partnership everyone should share her/his opinion on decisions to be taken
- Tasks follow-up is occasionally poor
- Requests are sometimes ignored and feedback is not always provided.
- Since the project is ambitious, it would need more time and resources than originally budgeted for. This creates pressures and difficulties in meeting deadlines

[Type text]

There are not big problems about partners engagement and contributions given, what it is still remarked is the fact that these contributions sometime come in late respect to the query or are ignored. Since good relationship built among the partnership, this problem is quite easy to solve, by underling each time deadlines and/or sending reminds to partners involved.

2.2.4 Strengths and weaknesses of quality and evaluation procedures applied so far

This question about the evaluation after one year of the project aimed to meta-evaluate the procedure applied so far to guarantee quality to the project implementation.
The purpose was to check the level of satisfaction of the partnership on evaluation tools and procedures applied so far and, in case, make some amendments to improve them and to gather further qualitative and quantitative results.

Assessment given to evaluation activity is the following:
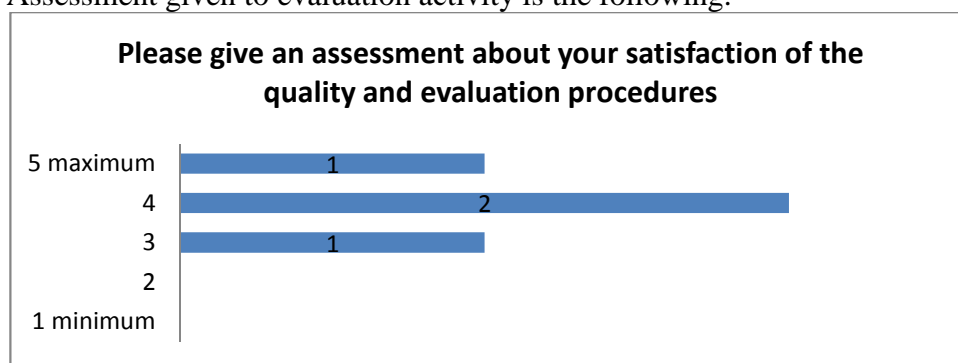
The level of satisfaction is showed also by the following answers to open questions
About **STRENGTHS** highlighted by partners they declared that

- Quality and evaluation procedures are OK. The procedure behind the review of the deliverables is very convenient, well structured and clear to everyone. Evaluation questionnaires for partners are always sent very quickly and are always complete and cover all aspects of the project
- Good feedback of results
- Good follow-up with partners input
- A review process of documents/deliverables has been established and agreed among partners
- Clear evaluation and quality procedures
- Good communication on outcomes and results
- The timing and coverage of the questionnaires

[Type text]

Instead as **WEAKNESSES** by partners are the following

- We did not have a questionnaire for dissemination events while 2 external ones were already implemented
- We might have included items regarding difference in viewpoints to proactively promote discussion

The partnerships is quite satisfied on evaluation activities carried out so far, even if questionnaires for evaluation of project events have not been delivered for the first two events (please refer for more details about the evaluation of this object to the devoted paragraph below). Furthermore, there is also a request to promote discussions on strategic and important project steps to achieve best results. With this scope, a focus group session has been put in action during the meeting in Athens, in which agreement on success project indicators (please refer to next chapter) has been definitely reached.

2.2.5 Potential risks and potential solutions

Due to the fact that the UniSchooLabS project reached its first year of life, partners are now aware of current problems as well as they are able to foresee potential one. This exercise had the scope to make partners think and already find a potential solution to major risks that the project should tackle in its second year.

RISKS foreseen are the following**:**

- We will not manage to establish a real collaboration with university lab owners
- The toolkit created might be too difficult to handle for the average science teacher and does not ease access to remote science labs sufficiently
- Further misunderstandings on running tasks with shared partners responsibilities
- Lack of support from Universities
- Toolkit not fulfilling its requirements
- The project won't be able to attract users beyond its lifetime
- Unable to use materials that accompany some of the labs due to reserved rights
- Dissemination events with less participants than expected
- A pilot teacher may not carry out a toolkit activity as expected

While potential **SOLUTIONS** are:

- The agreements should be done via telephone on a personal basis

[Type text]

- Lab owners should get a presentation of the toolkit in one or another way
- Lab owners should have access to the toolkit and take ownership for the description of labs there and possibly be easily contacted by teachers through the platform
- Clear communication of WP leaders on what is expected by/suggested to other team members, present achievements in a structured way
- Need to communicate with Universities as soon as possible, present the benefits of the project and make an effort to gain their support
- Providing input to ITD, listening to teachers' input
- Being able to substantially increase the labs' offer
- Direct communications with the lab owners and ask for permission (already in process)
- Schedule more dissemination events so as to ensure that we reach as many teachers as we are expected
- Look for teachers that might be interested to participate in the pilot phase through the dissemination events

The next evaluation activities will pay particular attention on those risks as well as promote solutions proposed by the others.

2.3 Evaluation from project events

As previously mentioned, while results presented so far refer to feedback received by project partners through the delivery of devoted questionnaires, the evaluation of project events involve actors and people out of the project partnership who are engaged in UniSchooLabS subjects through external project activities and with purpose to disseminate the project.

From the start of the project, three external/ dissemination events have been organised:

1. One presentation on UniSchooLabS in a session in a framework of EDEN annual conference 2011 in Dublin
2. UniSchooLabS workshop at the Spice Summer Academy, 27-28 August 2011 in Prague
3. A workshop in EDEN open Classroom on 28 October 2011.

Questionnaires have been delivered only in the last event in Athens, this because:

- The presentation of UniSchooLabS in EDEN Annual conference was in a common sessions with other projects and since attendees were not only focused on UniSchooLabS subjects, results gathered in that moment could be not completely "true"

[Type text]

- The workshop at Spice was already demanding for the attendees so delivering also questionnaires were really too much. Nevertheless, qualitative results and feedback from teachers have been collected by project partners who worked with those teachers. They refer that teachers were really enthusiastic on the project and on the labs that are available on the portal, they asked lot of questions and wanted to be updated of further project development (especially about the toolkit).

Instead, results of the workshop held in Athens in the framework of EDEN Open classroom have been collected through the delivery of the external evaluation questionnaire (ANNEX 2 of D6.1).

In particular, the table below shows the main results and provide suggestions for future activities to foster dissemination of UniSchooLabS:

Results	Suggestions
Majority of participants learned about the UniSchooLabS because it was inserted in the EDEN Open Classroom event	It could be good to organise devoted UniSchooLabS session in the framework of important existing event. For example, to this purpose it is already foreseen and scheduled that UniSchooLabS will have a stand in the framework of ECSITE Annual conference 2012 in Toulouse
Was the UniSchooLabS Seminar able to meet your expectations? <table><tr><td>1 Not at all</td><td>2</td><td>3</td><td>4</td><td>5 Fully</td><td>6</td><td>7 Fully</td></tr><tr><td></td><td></td><td></td><td></td><td>2 answers</td><td></td><td>3 answers</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Comment received by attendees was related to problems with PC. It could be good to verify before the start of the event if PC and internet connection work well, especially in case a sessions will be based on practical presentation and activity with UniSchooLabS portal that
Do you feel sufficiently introduced to the	Comment received: I'd like to join another one

[Type text]

UniSchooLabS objectives	for better understanding.

1 Not at all	2	3	4	5	6	7 Fully
			2 answers			3 answers

Did the presentation adequately introduce the UniSchooLabS Toolkit?	

1 Not at all	2	3	4	5	6	7 Fully
			2 answers			3 answers

Did the event encourage you to get involved in any of the UniSchooLabS activities or using some USL products?	Comment received : Totally

1 Not at all	2	3	4	5	6	7 Fully
					1 answers	4 answers

Did this event foster you to collaborate with other Universities or schools?	

1 Not at all	2	3	4	5	6	7 Fully

[Type text]

			1 answers		1 answers	3 answers	

| Which difficulties do you foreseen to face in the application and use the Toolkit in a school environment? | | | | | | | Trainer's comment: As participants did not have the chance to actually use the platform due to connection problems, most of them proffered not to answer this question. As they said, they'd prefer to use the further first. Please see previous suggestions related to the use of PC and intent connection |

1 Not at all	2	3	4	5	6	7 Fully
			1 answers			1 answers

| If you are a teacher, do you suggest to one of your teacher colleague to use this toolkit? | | | | | | | Comment received: Important teaching value This is a good answer that allow to determinate the interest/need and the useful of UniSchooLabS toolkit |

1 Not at all	2	3	4	5	6	7 Fully
						5 answers

It goes without saying that for the second year of project implementation, due to the fact that the Toolokit will be more improved and developed, the validation activities will be enter into force as well as exploitation activities, results on project events will be much more in terms of numbers of answers/feedback and in terms of people involved (not only teachers but also other stakeholders who can give their point of view about UniSchooLabS approach and toolkit).
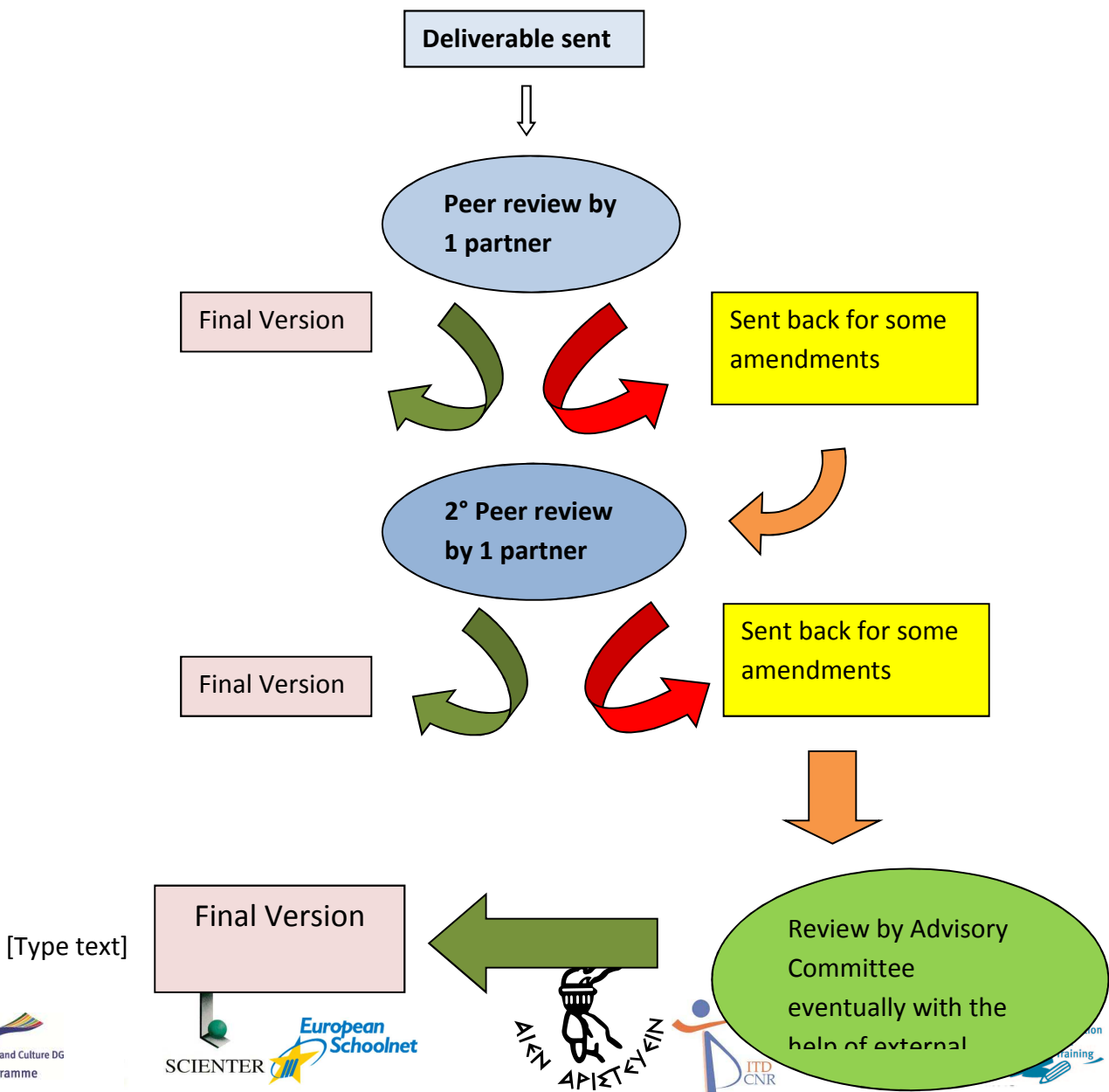
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3. Results on internal review process to assure quality of the deliverables

According to D 6.1 Quality assurance and to guarantee quality of deliverables, the partnership agreed in following a review procedure for each deliverable. The following design shows clearly step by step review process.

Quality cycle procedure

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                    ┌──────────────────┐
                    │ Deliverable sent │
                    └──────────────────┘
                              ↓
                    ╭──────────────────╮
                    │  Peer review by  │
                    │    1 partner     │
                    ╰──────────────────╯

  ┌───────────────┐                        ┌─────────────────────┐
  │ Final Version │                        │  Sent back for some │
  └───────────────┘                        │      amendments     │
                                           └─────────────────────┘

                    ╭──────────────────╮
                    │  2° Peer review  │
                    │   by 1 partner   │
                    ╰──────────────────╯

  ┌───────────────┐                        ┌─────────────────────┐
  │ Final Version │                        │  Sent back for some │
  └───────────────┘                        │      amendments     │
                                           └─────────────────────┘

  ┌───────────────┐                        ╭─────────────────────╮
  │ Final Version │ ←───────────────────── │ Review by Advisory  │
  └───────────────┘                        │ Committee           │
[Type text]                                │ eventually with the │
                                           │ help of external    │
                                           ╰─────────────────────╯
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This procedure was clear since the beginning for all the partners. Periodically, especially during monthly skype calls, the project coordinator reminded which were the deliverables scheduled in next period, and in the same moment started an open discussion on who was the right partner to review them and then closed with the partner names in charge to review those deliverables.

It has to be underlined as good sign in terms of partnership common understanding and collaboration, that none of the deliverables scheduled has been rejected by the other partners for more than two times and moreover reasons of re- submission were related mainly on minor changes to be done, and never because the other partners did not agree or were dissatisfied with the contents of the deliverable itself. This result shows also that all the deliverables had a high level of expertise and contents.

The table below shows the list of deliverables reviewed and the partners in charge to review.

UniSchooLabS deliverables for the first year

List of deliverables	Name of Deliverable	Lead Partner	Deadline	Reviewer
1.1	Project Management Guidelines	Scienter	31/10/2010	EUN
1.3	Progress report	Scienter	30/09/2011	EC
2.1	Guidelines for identification of good practices	EUN	31/10/2010	EA

[Type text]

2.2	Good practice report (12 case studies)	EUN	31/01/2011	EA
3.1	UniSchoolab toolkit	ITD	31/03/2011	ALL
3.2	Support services	ITD	31/03/2011	ALL
4.1	Validation plan	Scienter	31/05/2011	MENON
5.1	Dissemination plan	EUN	30/11/2010	MENON
5.2	UniSchoolab brochure	EUN	31/03/2011	MENON
5.3	UniSchoolab webportal	EUN	30/04/2011	ALL
5.4	Web-based teachers community	EUN	30/10/2011	ALL
6.1	Quality assurance plan	MENON	31/10/2010	SCIENTER
6.2	1st year evaluation report	MENON	30/09/2011	EUN

3.2 Success Indicators

As previously mentioned, a series of success indicators have been defined, proposed by the project manager in the D 1.1 Project Management Guidelines and then discussed in an evaluation focus group session in Athens, for a final agreement especially in terms of foresight of people involved or reached by different activities of the project. Due to the fact that some of them were not clearly specified in the project contract, the partnerships decided to define them anyway so that everybody has a clear overview on what we want to achieve, how we can proceed in order to achieve them, and what is the state of art to be periodically checked and monitored.

Some of the following indicators are already reached, others are still in progress and other can be verified only at the end of the project. Here below the table with indicators and state of art after one year of the project.

[Type text]

Number of remote/virtual university science labs as part of the UniSchooLabS toolkit based on an agreement	9 labs available Number stated in the contract 10 Here it is important to underline that the decision to insert only 9 out of 10 foreseen in the contract is because the partnership choice has been to insert only qualitative high level of labs and focused on particular science subjects.
Number of teachers participating in the validation activities (including national workshops)	30 (in progress)
Number of students reached with the piloting in schools	200 (in progress)
Number of teachers who plan to continue to use the developed toolkit for their science teaching	20 at the end of the project
Number of registered teacher to the UniSchooLabS online community	30 in progress
Number of national workshop participants: teachers, school directors, university professors, local, regional and national policy makers	100 in progress

[Type text]

Number of international workshop participants	90 in progress even if number of participants reached with the first two workshop in Dublin and Prague is around 60
Number of schools reached with dissemination activities	40 at the end of the project
Number of publications	2 in progress[5]
Collaboration with Universities	In progress see next chapter

4. State of art of collaboration between schools and universities

To foster collaboration between schools and universities is one of the main objectives of the UniSchooLabS project. Since the beginning of the project (during the Kick off meeting) this was one of the point most discussed and it is still one of the main point in discussion among partnership.

At the moment partial collaboration has been set up with university owners of labs, but still much more should be done. The partnership agreed that this will be the main issue tackled by the exploitation activities that enter into force in the second years of the project. Particular attention will be given to involve and invite universities and other stakeholders in all workshops scheduled also for validation activities as well as in all the dissemination events that are planned for the second

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[5] After one year and according to what achieved so far, the partnership will evaluate the possibility to make these Scientific papers in a digital form and publishing digital papers in order to reach a broader "readership" including teachers and students

[Type text]

years. The partnership will try to organise dissemination events in the most important existing events (as previously suggested in the paragraph of project events) specifically addressed to universities science centres and museums (this is why the partnership submitted a proposal to ECSITE conference that has been accepted).

The scope of this activity is while engaging universities try to involve other stakeholders and set up a wider collaboration between all actors involved (in formal and informal setting) in science education.

[Type text]

5. Final conclusions

According to results presented so far we can deduct the following conclusions related to different evaluation objects:

Project Management performance: the project implementation is developing quite good. At the beginning some aspects related to the project management faced some difficulties, but during the project implementation, thanks to the first evaluation results and open discussion sessions during the meetings, these aspects improved. In particular, each partner appreciates very much working and collaborating with the other partners especially for their expertise. Since the beginning partnership was really motivated in working with other partners. Also the project management received some remarks at the beginning such as to be more assertive in terms of decision taken after discussion had, in particular partners asked for acting in the following way, once a decision is taken by the partnership no further comments and changes are allowed. This aspect has been improved by the project manager by taking always final decision according to discussion had in the partnerships and with the agreement of all the others. As previously mentioned, a series of success indicators have been defined, proposed by the project manager in the D 1.1 Project Management Guidelines and then discussed in an evaluation focus group session in Athens, for a final agreement especially in terms of foresight of people involved or reached by different activities of the project. Due to the fact that some of them were not clearly specified in the project contract, the partnerships decided to define them anyway so that everybody has a clear overview on what we want to achieve, how we can proceed in order to achieve them, and what is the state of art to be periodically checked and monitored.

Communication patterns internal and external: Partners asked for smoother communication both among them and with the project manager. This aspect has been improved with scheduling periodically partners audio call and fostering bilateral communication both by mails and by phone call. According to those results, it seems that problems faced in the communication are not referring to the quantity of tools and/or moments through which communicate, neither in the quality of relationship built among partnership that are instead perceived very good for each partner. However problems can be encountered in the quality of communication in terms of agreements and messages passed. For the next year special emphasis will be given especially during the meeting and/ skype call to check if major decisions taken during

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the meeting or the call will are clearly and mutual understood. Furthermore, there is also a request to promote discussions among partnership on strategic and important steps to achieve best results. With this scope, a focus group session has been put in action during the meeting in Athens, in which agreement on success project indicators (please refer to next chapter) has been definitely reached.

Quality of the deliverables and respect of deadlines; The partnership asked for more effort in giving contributions, either in terms of comments and/or in term of information and data. This aspect has been improved also as consequence of a smoother communication applied among and between partners There are not big problems about partners engagement and contributions given, what it is remarked is the fact that these contributions sometime come in late respect to the query or are ignored. Since good relationship built among the partnership, this problem is quite easy to solve, by underling each time deadlines and/or sending reminds to partners involved. It has to be underlined as good sign in terms of partnership common understanding and collaboration, that none of the deliverables scheduled has been rejected by the other partners for more than two times and moreover reasons of re-submission were related mainly on minor changes to be done, and never because the other partners did not agree or unsatisfied on the contents of the deliverable in itself. These results demonstrate that all the deliverables had a high level of expertise and contents.

Dissemination activities and Project events: It goes without saying that for the second year of project implementation, due to the fact that the Toolokit will be more improved and developed, the validation activities will be enter into force as well as exploitation activities, results on project events will be much more in terms of numbers of answers/feedback and in terms of people involved (not only teachers but also other stakeholders who can give their point of view about UniSchooLabS approach and toolkit)

Collaboration between schools and universities: At the moment partial collaboration has been set up with university owners of labs, but still much more should be done. The partnership agreed that this will be the main issue tackled by the exploitation activities that enter into force in the second years of the project. Particular attention will be given to involve and invite universities and other stakeholders in all

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workshops scheduled also for validation activities as well as in all the dissemination events that are planned for the second years.

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ANNEX 1 Evaluation Objects - information sources - tools

Evaluation Objects	Approach	Sources of information	Tools
Project management	Formative	Project partners	Semi- structured

[Type text]

performance			questionnaires ANNEX 1 ANNEX 3
Internal Project communication	Formative	Project partners	Semi- structured questionnaires ANNEX 1 ANNEX 3
External Project communication	Formative	Stakeholders	Structured questionnaires ANNEX 2
Project partner involvement	Formative	Project partners	Semi – structured questionnaires ANNEX 1 ANNEX 3
Quality of deliverable and respect of deadline	Formative	Project partners	Semi – structured questionnaires ANNEX 1 ANNEX 3 Open discussion in project meeting

[Type text]

Dissemination activities	Formative	Project partners Stakeholders	Semi – structured questionnaires ANNEX 1 ANNEX 3 Open discussion in project meeting
Tool Kit[6]	Formative	Project partners Pilot teachers and their students	questionnaires
Support Services[7]	Formative	Pilot teachers and their students	questionnaires
Project Events[8]	Formative-Summative	Project partners Stakeholders Teachers not	Semi – structured questionnaires

[6] According to Validation plan and in collaboration with Validation activities

[7] According to Validation plan and in collaboration with Validation activities

[8] They are direct outputs of the project, and refer to international and national workshops scheduled in the framework of WP 5 Dissemination of implementation and results of the project
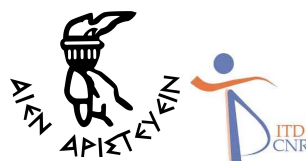
[Type text]

		only the one involved in validation Students not only one involved in validation	ANNEX 2

[Type text]

[Type text]