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UNFOLD Deliverable D8.1. Periodic evaluation report 1.

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**INFORMATION SOCIETY TECHNOLOGIES PROGRAMME
TECHNOLOGY ENHANCED LEARNING**



unfold

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Executive summary

This deliverable is the first Evaluation report of the UNFOLD project, and contains the results of the evaluation actions carried out during the first stage of the project. These actions correspond to the Evaluation Action Plan, period 1 (September-December 2004), as defined in the UNFOLD Evaluation plan¹.

The actions have proceeded according to the plan and have been:

- Evaluation at UNFOLD first face-to-face CoP Barcelona meeting
- Evaluation at UNFOLD Online EDUCA workshop
- Evaluation at UNFOLD workshop at EUCEN conference
- Usability inspection of the UNFOLD web site
- Log analysis of use of the UPF UNFOLD server

During this stage of the project, the evaluation actions aimed to identify which are the truly opportunities and challenges of the UNFOLD project; and the analysis of their results and possible shortcomings are the baseline for the next period of evaluation.

We have carried out evaluations at three key UNFOLD events, to assess the positive and negative aspects of the UNFOLD project. We have evaluated the UNFOLD web site, since it plays an essential role to support for the interaction of the Communities of Practice; and have tried to analyse the use of the UNFOLD servers.

The main aim of the first three actions, which correspond to the evaluations at several workshops and conferences, was to assess the support which UNFOLD offers to the Communities of Practice. Namely, these evaluations correspond to the following evaluation scenarios mentioned in the UNFOLD Evaluation plan:

- Scenario 1, "Effectiveness of awareness raising material and Web"
- Scenario 2, "Resources for each CoP"
- Scenario 5, "User group satisfaction with f2f meetings/workshops"
- Scenario 6, "The usefulness of the CoPs to their participants and organizations"

The evaluation procedure was based on structured questionnaires. These questionnaires were filled in by a total of 55 of those attendees. Based on the analysis of these questionnaires, the most important results are described below.

First, the wide attendance and geographic spread. The results of the evaluation at the Barcelona and Berlin workshops reveal that people from very different nationalities are interested in the UNFOLD project: Russia, Italy, Canada, Estonia, Switzerland, Germany, France, ... The numbers of participants are considered quite high for the early stage of the project.

Second, the user participation through the web is mainly passive. Though most of those attendees rated both the quality of the workshops and the quality of the information provided in the UNFOLD web site as excellent and very valuable for their professional activity, and there were quite a few contributions from participants external to the UNFOLD project nearly less than half of those attendees did not either visit the UNFOLD forums or put a message into the them. Third, UNFOLD opens up new opportunities to use IMS LD and can help people to be more effective in their work. For example, the main advantages of the UNFOLD project found by most attendees are that UNFOLD allows them to get in touch with people who work on

¹ The document can be found as an annex to this deliverable.

similar things as they are working on, and enables them to understand better the IMS-LD specification.

Fourth, and very related to the former result, relatively few of those attendees have used IMS-LD with learners². Nevertheless, as the results clearly point out, the majority of those attendees are willing to participate in the UNFOLD Communities of Practice. In addition, they found that UNFOLD is an excellent framework in which they can get a better insight into the IMS-LD specifications, case studies,... Again, these results are coherent with the expected situation at the uptake phase of the project.

The fourth action, usability inspection of the UNFOLD web site, aimed to analyse the usability of the UNFOLD web site. This action corresponds to the following scenarios, which are defined in the UNFOLD Evaluation plan:

- Scenario 1, “Effectiveness of awareness raising material and Web”
- Scenario 3, “Infrastructure provided for interactions”

The evaluation procedure consisted of a heuristic inspection and an analysis of part of the results of the questionnaires which were given out at the UNFOLD events. The main conclusions follow.

First, the majority of those interviewed (namely, more than 80%) found very clear, sufficient and easy to read the information provided on the Web about the UNFOLD workshops. The same results are obtained as far as forum interfaces are concerned.

Second, the results of the usability inspection suggest that the main positive aspects of the UNFOLD web site are the consistency and good readability of materials, whereas the main negative aspects might be the lack of visualization of the fora.

Finally, the fifth action aimed to analyse the levels of activity on the UNFOLD project servers, along with the degree to which people are participating in online interactions. This evaluation action corresponds to the following scenarios in the UNFOLD Evaluation plan:

- Scenario 4, “Level of information flows in CoP”
- Scenario 2, “Resources for each CoP”

The procedure consisted of a log file analysis of the use of the UPF UNFOLD server. The results, somewhat illustrative, point out that the UNFOLD server works quite well; users find the UNFOLD web site introducing the following query words: unfold, editor, SCORM, project and IMS, and also stress the passive participation of the users through the web.

The evaluation actions we have described do not seem enough to capture more formally some success indicators: participation and active participation in UNFOLD events, generation of papers, proposals, industrial plans, projects which spin off UNFOLD, ... The results have underlined that the main weakness is the active participation through the web. The next steps include the development of a new Evaluation action plan, which will take into account the results of these evaluation actions, along with the proposal and evaluation of solutions in order to overcome the main drawbacks which have been identified in this deliverable.

² As the Actions carried out and main results section shows, the results of the online EDUCA Berlin and EUCEN conference clearly reveal that, on average, approximately less than 75% of those attendees have used or are using IMS-LD with learners.

Introduction

This deliverable should be read within the context of the following two documents:

- UNFOLD Evaluation Plan
- D7.1 Public report on UNFOLD outcomes I.

The first document, UNFOLD Evaluation Plan, an internal milestone, defines both the evaluation philosophy and goals of the UNFOLD project, which are made explicit through evaluation scenarios, as well as indicating specific evaluation actions for the 9-12 month period of the project. The scenarios and actions are built upon the objectives and desired outcomes of the project, and aim at providing external and internal measures of success.

The second deliverable, Public report on UNFOLD outcomes I, describes the activities which have been organised to support the UNFOLD Communities of Practice since their launch in July 2004, and their specific outcomes. This deliverable might complement the present document, since it shows all the activities in which UNFOLD has taken part in, and includes some less formal but valuable assessments.

In the present document we build upon the Evaluation plan, and shows the results of the first evaluation actions carried out during the first stage of the project. These evaluation actions, which are the baseline for future evaluations, correspond to the evaluation actions mentioned in Evaluation Action Plan, period 1 (September-December 2004), as defined in the UNFOLD Evaluation plan³, which have been mentioned earlier:

- Evaluation at UNFOLD first face-to-face CoP Barcelona meeting
- Evaluation at UNFOLD Online EDUCA workshop
- Evaluation at UNFOLD workshop at EUCEN conference
- Usability inspection of the UNFOLD web site
- Log analysis of use of the UPF UNFOLD server

The rest of this document is structured into three sections. The first one summarizes the objectives, procedures and results of each action carried out. The second section provides a full description of each action. The third section corresponds to the annexes, and there can be found all the evaluation material and working material which was used during the evaluation.

³ The evaluation plan is an annex to this deliverable; we encourage the readers to have the outcomes deliverable close at hand.

Actions carried out and main results

Action 1. Evaluation at UNFOLD-Barcelona meeting

Objectives

The aim of this evaluation action was to evaluate the support which UNFOLD offers to the Communities of Practices. Within this general objective, two specific aspects were evaluated: (i) the organisation of the UNFOLD Communities of Practices meeting, and (ii) the support which UNFOLD provides for interaction.

This evaluation action corresponds to the UNFOLD Evaluation plan Scenario 1, “Scenario 1. Effectiveness of awareness raising material and Web”, Scenario 2, “Scenario 2: Resources for each CoP”, Scenario 5, “Scenario 5: User group satisfaction with f2f meetings/workshops”, Scenario 6, “Scenario 6: The usefulness of the CoPs to their participants and organizations”.

Procedure

The procedure consisted in two structured questionnaires. In order to gather both objective and subjective information about the support which UNFOLD offers to the Communities of Practices, we developed two questionnaires:

- **UNFOLD Barcelona CoP Meeting evaluation form**, to evaluate the organization and programme of the CoP meeting. It was filled in by 13 respondents.
- **UNFOLD Barcelona CoPs face-to-face meeting**, to evaluate the support which UNFOLD provides for interaction (quality of the materials, support for interaction, and involvement of the attendees with IMS-Learning Design). It was filled in by 16 respondents.

Barcelona CoP meeting results

Concerning the **organisation of the meeting**, the results indicate that the majority of those interviewed found very clear and sufficient the information provided on the Web. Nevertheless, the results are not so positive regarding the residences. The results reveal that only half of the attendees stayed at the residences suggested by the UNFOLD team because these were full.

With respect to the **programme** of the CoP meeting, the results reveal that both the quality of the presentations and the usefulness of the discussions were very positive. On the other hand, the balance between meetings of individual CoPs and joint sessions appear to be not so positive. Some suggestions are:

1. Introducing some hands-on activities
2. More interactive / group work sessions.
3. External presentations should have been made the first day, so that to refer these works in the discussions.
4. Sticking to the agenda.
5. More on pedagogy
6. Not sure that splitting people into different CoPs is necessary at this stage, when there is relatively few people involved.

Barcelona CoPs face-to-face meeting results

With respect to the **UNFOLD information resources**, the results reveal that whereas the information on the UNFOLD web is quite relevant and clear, more than half of those attendees

have only made use of some information. The main reason for this is: the information is not as much concrete / exhaustive as the attendees needed, above all in relation to their CoPs.

On the other hand, both general information about the UNFOLD project and objectives, and specific information related to Communities of Practice, were regarded very useful and sufficient so as to start working on. Nevertheless, in the near future, this information should be more precise, complete and exhaustive to encompass the different needs of the CoPs members.

Concerning the **Support for Interaction**, whereas a fair number of those attendees found online events very useful, solely 18 % of those interviewed participated in the first UNFOLD event. The results also indicate that a fair number of attendees (approx. 62%) did not visit the UNFOLD forums. In addition, only the 56 % of those interviewed put a message into the forums. On the other hand, the results indicate that the UNFOLD forums interface is clear and rather easy to use.

As far as **Involvement with IMS Learning Design** is concerned, the results point out that the majority of the attendees work with IMS LD most working days and every week, and, indeed, there is a huge number of them who are developing a fair number of distinct IMS LD implementations.

On the other hand, the results also reveal that these implementations are work in progress, since less than half of the those attendees neither have created IMS LD Units of Learning nor use them with learners.

The results also suggest that UNFOLD opens up new opportunities to use IMS LD and can help people be more effective in their work. Some of the advantages, which were stated by the attendees, are: a way to disseminate information and experiences, putting in touch developers and practitioners, understand better the specification, new ideas,...

Action 2. Evaluation at UNFOLD-Online EDUCA workshop

Objectives

The aim of this evaluation action was to evaluate the support which UNFOLD offers to the Communities of Practices. Within this general objective, there were evaluated three different aspects: (i) the organisation of the UNFOLD Communities of Practices meeting, (ii) the workshop information and (iii) the usefulness of the workshop.

This evaluation action corresponds to the UNFOLD Evaluation plan Scenario 1, “Scenario 1. Effectiveness of awareness raising material and Web”, Scenario 2, “Scenario 2: Resources for each CoP”, Scenario 5, “Scenario 5: User group satisfaction with f2f meetings/workshops”, Scenario 6, “Scenario 6: The usefulness of the CoPs to their participants and organizations”.

Procedure

The procedure consisted of a structured questionnaire. This questionnaire was divided into three sections:

- Workshop organisation, to gather specific information about the readability and usability of the information about the workshop provided on the web site, along with the hotels suggested by the conference.
- Workshop information, to gather specific information about the quality of the information provided by the speaker and the usefulness of workshop in relation to the professional activity of each attendee.
- Usefulness of the workshop, to gather specific information about the use of IMS-LD and which relationship UNFOLD can play to improve or foster the use of this standard.

Results

The results are based on the analysis of 21 questionnaires.

Concerning the **workshop organization**, the results reveal that nearly 70% of those attendees found clear, sufficient and easy to read the information provided about the UNFOLD workshop on the Web.

With respect to the **workshop information**, the results show that more than 80% of those attendees rated excellent the information provided by the speaker. The results also suggest that nearly 60% of those attendees rated their participation at the workshop very valuable for their professional activity.

Regarding the **usefulness of the workshop**, the results reveal that nearly half of those respondents work with eLearning standard frequently. However, **none of them have used IMS-Learning Design with learners**. On the other hand, the results also reveal that 85% of those attendees hope that UNFOLD will help them open up new opportunities to use IMS-LD and most attendees are willing to participate in the different UNFOLD Communities of Practice.

Action 3. Evaluation at UNFOLD workshop at EUCEN conference

Objectives

The UNFOLD workshop inside the EUCEN Conference had as main objective to disseminate the UNFOLD project within the European Universities Continuing Education Offices and European Universities Teachers participating in the conference in order to:

- Promote IMS_LD and UNFOLD aims within this target group
- Promote their (teachers and managers of continuing education in Universities) participation in UNFOLD Communities of Practice.
- Raise awareness about e-learning standards especially about IMS-LD

This evaluation action corresponds to the UNFOLD Evaluation plan Scenario 1, “Scenario 1. Effectiveness of awareness raising material and Web”, Scenario 2, “Scenario 2: Resources for each CoP”, Scenario 5, “Scenario 5: User group satisfaction with f2f meetings/workshops”, Scenario 6, “Scenario 6: The usefulness of the CoPs to their participants and organizations”.

Procedure

The procedure consisted of a structured questionnaire. This questionnaire was divided into three sections:

- Workshop organisation, to gather specific information about the readability and usability of the information about the workshop provided on the web site, along with the hotels suggested by the conference.
- Workshop information, to gather specific information about the quality of the information provided by the speaker and the usefulness of workshop in relation to the professional activity of each attendee.
- Usefulness of the workshop, to gather specific information about the use of IMS-LD and which relationship UNFOLD can play to improve or foster the use of this standard.

Results

The results are based on the analysis of 6 questionnaires.

Concerning the **workshop organization**, the results reveal that 83 % of those attendees found clear the information provided about the workshop on the web, whereas 22% of those attendees found it difficult to read.

With respect to the **workshop information**, the results clearly point out that the information offered by the speaker was excellent. The results also suggest that nearly 80% of those attendees rated very valuable their participation at the workshop for their professional activity.

Regarding the **usefulness of the workshop**, the results indicate that half of those attendees have not ever worked with eLearning standards. In addition, **none of them have used IMS-Learning Design with learners**. The results also reveal that 66% of those attendees considered that UNFOLD will help them open up new opportunities. Besides, they are willing to participate in the different UNFOLD Communities of Practice.

Some attendees' suggestions or comments are:

- 'I get new information about standards and IMS Learning design'
- 'More practical examples. Demonstration of tools (for example, RELOAD).'
- 'Each participant brings his point of view'

Action 4. Usability inspection of the UNFOLD web site

Objectives

The aim of this evaluation action was to analyse the usability of the UNFOLD web site. Namely, the following objectives of the UNFOLD web site were evaluated:

- improve the level of understanding about the IMS-LD specification (news, documents, specifications, experience,...)
- participation mechanisms to support the creation of Communities of Practices, so that people who are working on the IMS-LD specification can share their experiences, material,...

This evaluation action corresponds to the UNFOLD Evaluation plan Scenario 1, "Scenario 1. Effectiveness of awareness raising material and Web", and Scenario 3, "Scenario 3. Infrastructure provided for interactions".

Procedure

The procedure consisted of an heuristic evaluation. The evaluation criteria which were used to carry out the heuristic evaluation are listed below:

- Consistency
- Readability
- Navigation
- Participation

Whereas consistency, readability and navigation can be regarded as well-known criteria to evaluate the usability of web sites, *participation* is a particular and important criteria for this web site, as it is mentioned in the UNFOLD Evaluation Plan.

On one hand, as the UNFOLD web site provides a fair number of materials (news, specifications, papers,...), criteria such as readability and navigation are particularly important so that users can read and find them easily. Consistency is also a valuable usability criteria for the UNFOLD purposes, since consistency allows users to minimize the cognitive load of learning the structure of a web site.

On the other hand, as one of the main UNFOLD project objectives is to enhance the communication among people (teachers, students,...) who are working on the IMS-LD specification, participation has been evaluated solely from the standpoint of the usability of the forums interface, links, and visibility of these, for two types of users: members and not members.

Results

The results of this usability inspection suggest that the main positive aspects of the UNFOLD web site are the consistency and good readability of materials.

With respect to consistency, both the distribution of the elements in each page and the navigational scheme are rather consistent. Furthermore, both the downloaded documents and the content of the web pages are very well structured and easy to read; even though there are some minor errors, mainly related to the duplication and visualization of links in the home page.

The results also point out that the user interfaces of the UNFOLD forums are quite clear, despite the fact that there might be some minor problems regarding concrete options such as “subscribe”.

On the other hand, the main negative aspect of this web site might be the lack of visualization of the forums. To a greater extent, concerning the participation, the most important thing is to allow users to post (and read) messages into the UNFOLD forums. Nevertheless, at the same time that there is an option to join to the UNFOLD project on the home page in order to become an UNFOLD member, there is not a **visual** and **clear** option to “participate in UNFOLD”; although the web site provides three forums.

The results strongly suggests that the possibility of participation in the UNFOLD web site should be clearly showed on the home page, in such a way that users can take one look at the home page and realize that they are invited to post their messages, create topics, polls, etc.

Action 5. Log analysis of use of UNFOLD servers (only UPF server)

Objectives

The aim of this evaluation action was to analyse the levels of activity on the UNFOLD project servers, along with the degree to which people are participating in online interactions.

This evaluation action corresponds to the UNFOLD Evaluation plan Scenario 4, “Scenario 4. Level of information flows in CoP”, and Scenario 2, “Scenario 2. Resources for each CoP”.

Procedure

The procedure consisted in log file analysis. In order to carry out this evaluation action, the first step consisted in gathering the use of UNFOLD servers by means of log files. Afterwards, the Analog tool was used. Analog is a free web log analyzer, multiplatform and implemented in Perl, in order to analyze the log files.

With respect to the evaluation of the UPF-UNFOLD log files, this evaluation analyzed the log files corresponding to August, September, October and November 2004. The topics which were analysed are listed below:

- Activity in each month
- Daily summary
- Hourly summary
- Search word

- Operating systems
- Status code report
- File type

Results

The results of this analysis point out that the busiest month was October. The results also suggest that the majority of the accesses are done during the week, especially on Thursday, during the morning.

The results also reveal that the UNFOLD users find the UNFOLD web site introducing the following query words: unfold, editor, SCORM, project and IMS. The most consulted documents were the agenda for the UNFOLD Barcelona meeting and the paper of Bill Olivier: "Learning design: the state of play". The results also point out that the UNFOLD server works fair well, since seems to reply to the majority of the requests.

Full description of the evaluation actions

Barcelona CoPs f2f meeting, 8th – 9th – 10th of September questionnaire

This questionnaire will help us improve the support which UNFOLD offers to the Communities of Practice. The questionnaire is divided into three parts: (i) unfold information resources, (ii) support for interaction and (iii) your involvement with IMS Learning design.

All the data which you provide will be kept strictly private, and used solely to evaluate the UNFOLD project. The results of this questionnaire will be used exclusively to prepare an evaluation report, which will be used to improve the performance of the project, and will be submitted to the European Commission. This study is being carried out by the Interactive Technologies Group of the Fundació Universitat Pompeu Fabra.

Your name and personal information will not be included in the report or provided to any other party.

If you do not want to answer any of the questions, please leave them blank.

We estimate that you can complete this questionnaire in less than 15 minutes.

Thank you in advance for your collaboration.

Part 1: UNFOLD Information Resources

To help us how to design resources of good quality about the UNFOLD project, CoPs and IMS Learning Design, please answer the following questions about your experience with the UNFOLD information resources.

“Information resources” refers to information about UNFOLD, about the IMS-LD Specification, and about the UNFOLD CoPs

How much use have you made of the information resources

- A lot
- Some
- None

Was the **information** on the UNFOLD Web

very relevant	1 – 2 – 3 – 4 – 5	irrelevant
clearly written	1 – 2 – 3 – 4 – 5	confusing
complete	1 – 2 – 3 – 4 – 5	partial
easy to navigate	1 – 2 – 3 – 4 – 5	very difficult to navigate

Has the information on the server helped you in some way?

- Yes
- No

If so, how?

No

Are they **sufficient for the CoP** to start work?

Yes

No

What **documents** do you think are **essential** for your **CoP**? Please make suggestions.

What **suggestions** can you make to help us **improve** the information provided by UNFOLD?

Support for interaction

UNFOLD plans to have a series of **online events** with invited experts discussing position papers on aspects of IMS Learning Design. Do you think that this is a **useful activity**?

Yes. Please, specify why you think it is a useful activity

No

Did you participate in the online event “The State of Learning Design” with Bill Olivier in July?

Yes *(please fill in questionnaire for the event)*

No

Do you think that the **UNFOLD online discussion forums** are **useful** for you?

Yes

No

Have you **visited** the **UNFOLD forums**?

Yes

No

If you have visited the UNFOLD forums,

Have you **posted a message**?

Yes

No

Did you find the **forum interface clear**?

Yes

No

How could it be improved?

Part 3: Your involvement with IMS Learning Design

To help us understand better how to support the CoPs, please tell us about your experience with IMS LD.

How often do you **work with IMS LD** (read a document about the spec, work on developing a compliant application, design UoLs, work with learners on UoLs, etc.)

- every working day
- most working days
- every week
- every month
- never

Are you or your colleagues **developing an IMS LD implementation**?

Yes. Please specify

No

Have you or your colleagues **created any online courses or modules**?

Yes. Please specify

No

Have you **created any IMS LD UoLs**?

Yes. Please provide details

Yes

No

Have you used **IMS Learning Design with Learners**?

Yes. Please provide details

No

Do you hope that UNFOLD will help you **open up new opportunities** to use IMS LD?

Yes. How?

No

To what extent do you expect that **UNFOLD** could **help** you be **more effective** in your work or in achieving your research goals?

- Help a lot 1 – 2 – 3 – 4 – 5 Will not help at all
- How can UNFOLD help you in your work?

General feedback

Do you have any **further suggestions** on how we can **improve UNFOLD**?

Barcelona CoPs f2f meeting, 8th – 9th – 10th of September results⁴

This report is based on the results of 16 questionnaires filled in by the Barcelona CoPs f2f meeting attendees.

With respect to the UNFOLD information resources, the results reveal that whereas the information on the UNFOLD web is quite relevant and clear, more than half of the attendees have only made use of some information. The results also suggest that this fact can be brought about because of the information is not as much concrete / exhaustive as the attendees need, above all in relation to their CoPs.

On the other hand, both general information about the UNFOLD project and objectives, and specific information related to Communities of Practice, are regarded very useful and sufficient so as to start working on. However, in the near future this information should be more precise, complete and exhaustive to encompass the different needs of the CoPs members.

Concerning Support for Interaction, whereas a fair number of attendees believe that online events are an useful activity, only the 18 % of those interviewed participated in the first UNFOLD event. The results also indicate that a fair number of attendees (approx. 62%) do not visited the UNFOLD forums. Moreover, only the 56 % of those interviewed put a message into the forums. On the other hand, the results indicate that the UNFOLD forums interface is clear and rather easy to use.

As far as Involvement with IMS Learning Design is concerned, the results point out that the majority of the attendees work with IMS LD most working days and every week, and, indeed, there is a huge number of them who are developing a fair number of distinct IMS LD implementations.

On the other hand, the results also reveal that these implementations are ongoing implementations. Mainly, it is due to the fact that less than half of the those attendees neither have created IMS LD Units of Learning nor use them with learners.

The results also suggest that UNFOLD opens up new opportunities to use IMS LD and can help people be more effective in their work. Some of the advantages, which were stated by the attendees, are: a way to disseminate information and experiences, putting in touch developers and practitioners, understand better the specification, new ideas,...

Next we show the results of the analysis.

Results

Part 1: UNFOLD information resources

Question 1. How much use have attendees made of the information resources at UNFOLD web site

Results					
A lot	0				
Some	56,25%				
None	43,75%				

⁴ UNFOLD Barcelona CoPs face-to-face meeting aimed to evaluate the support which UNFOLD provides for interaction (quality of the materials, support for interaction, and involvement of the attendees with IMS-Learning Design).

Results: The results suggest that there is a considerable number of attendees who have not made use of the information available at the UNFOLD web site. On the other hand, people who have made use of the information, have only made use of some information.

Question 2. About the information on the UNFOLD web

Results	1 (very good)	2	3	4	5 (very bad)
Relevant	25%	31,25%	6,25%	0	6,25%
Clearly written	25%	31,25%	6,25%	6,25%	0
Complete	6,25%	25%	25%	12,5%	0
Easy to navigate	12,5%	37,5%	12,5%		0

Results: The results are very positive. The main negative point is related to the completeness of the information. Some of the attendees believe that the information has to be more exhaustive, as we show at the suggestions section.

Question 3. Usefulness of the information on the web

Results					
Yes	68,75%				
No	0				

Results: The results are clear. The information is useful, despite being a bit incomplete, taking the former results into account.

Question 4. Looking at the resources for your CoP

Results					
Yes	62,5%				
No	12,5%				

Results: The results are clear. The majority of the attendees have look at the resources for their community of practice.

Question 5. Are the resources sufficient for the CoP to start work?

Results					
Yes	62,5%				
No	6,25%				

Results: The results suggest that the current resources are sufficient to start working. However, according to the suggestions, they would need to be more complete and deal with more topics.

How the information on the UNFOLD web site has helped attendees?

- Good introduction to Learning Design
- Transcripts of online events
- Documents for discussion
- Information about events
- References to LD work
- General overview of LD
- Communities of practice
- To have a general picture of CoP work and how their members can collaborate
- Papers on LD
- Projects on LD

Suggestions

- Clear starting point
- Encourage participation in forums.
- More on traditional learning design methods.

Part 2: Support for interactionQuestion 1. Usefulness of online events

Results					
Yes	81,25%				
No	0				

Results: The results are clear. Online events are considered very useful.

Question 2. Participation in the online event “The state of Learning Design”

Results					
Yes	18,75%				
No	75%				

Results: The results show that the level of participation was very poor, despite the fact that these sort of activities are considered useful.

Question 3. Visiting the UNFOLD forums

Results					
Yes	37,5%				
No	62,5%				

Results: The results show that the UNFOLD forums are rather unpopular.

Question 4. Posting a message to the forums

Results					
Yes	18,75%				
No	56,25%				

Results: The results show that attendees have not posted many messages to the forums.

Question 5. Is the forum interface clear?

Results					
Yes	43,75%				
No	0%				

Results: The interface is clear.

Suggestions

- A general discussion area would be useful, so people who don't want to join a particular CoP can participate.

Part 3: Your involvement with IMS Learning Design

Question 1. How often do you work with IMS LD

Results					
Every working day	12,5%				
Most working days	31,25%				
Every week	25%				
Every month	12,5%				
Never	31,25%				

Results. The results point out that the majority of the attendees work with IMS LD, and also, they use IMS LD quite frequently (most working days and every week).

Question 2. Developing an IMS LD implementation

Results					
Yes	62,5%				
No	37,5%				

Results. The results clearly reveal that the majority of the attendees are developing IMS LS implementations. These implementations are:

- Not a technical implementation, but we are using IMS LD in pedagogical descriptions of RLO context use.
- SBLDS
- Developing a player for LD
- A system that integrates grid services using a script formalize with IMS-LD
- Developing an authoring tool and a runtime environment
- Web service framework for collaborative creating of learning material (Spanish project)
- Incorporate to our system an LS tool.
- LD and games
- RELOAD
- An editor and a runtime system built around *coppercore*

Question 3. Created any online courses or modules

Results					
Yes	56,25%				
No	12,5%				

Results. Whereas the attendees are developing IMS LD implementations, the results show that only half of those interviewed created online courses or modules. The online courses created are:

- Scottish primary school
- Created modules as e-moderator
- Project ALLES (learning units for a language online course)
- Virtual university project for all public universities in Madrid
- A lots of courses for the OU (UK)
- Masters online

Question 4. Created any IMS LD UoLs.

Results					
Yes	31,25%				
No	43,75%				

Results. The results suggest that less than half of those interviewed have created any IMS LD UoLs.

Question 5. Using IMS Learning Design with Learners

Results					
Yes	6,25%				
No	50%				

Results. The results point out that IMS LD Learning is not very used with Learners yet.

Question 6. Can UNFOLD opens up new opportunities?

Results					
Yes	75%				
No	0%				

Results. The results are very clear: UNFOLD is very useful. Some reasons are:

- A way to disseminate and validate work
- Gain a better understanding of can and can not be done with IMS LD
- Discussion and feedback of my work
- Ideas to developed applications and carry out experiences
- Understand the specification
- IMS LD feasibility
- Editors and players developed
- Put in touch with people working on my area

Question 7. Can UNFOLD helps you be more effective in your work?

Results					
Yes	75%				
No	12,5%				

Results. The results are clear: UNFOLD can improve the effectiveness of the people who are working on eLearning and eLearning standards. Some examples are:

- Single point of information about LD
- Support, advise and information
- Contact with developers
- Engage practitioners in relevance of specification
- Research works (PhD)
- Feedback of ideas and communication (forums)

Part 2: Support for interaction

Question 1. Usefulness of online events

Results					
Yes	81,25%				
No	0				

Results: The results are clear. Online events are considered very useful.

Question 2. Participation in the online event “The state of Learning Design”

Results					
Yes	18,75%				
No	75%				

Results: The results show that the level of participation was very poor, despite the fact that these sort of activities are considered useful.

Question 3. Visiting the UNFOLD forums

Results					
Yes	37,5%				
No	62,5%				

Results: The results show that the UNFOLD forums are rather unpopular.

Question 4. Posting a message to the forums

Results					
Yes	18,75%				
No	56,25%				

Results: The results show that attendees have not posted many messages to the forums.

Question 5. Is the forum interface clear?

Results					
Yes	43,75%				
No	0%				

Results: The interface is clear.

Suggestions

- A general discussion area would be useful, so people who don't want to join a particular CoP can participate.

Part 3: Your involvement with IMS Learning Design

Question 1. How often do you work with IMS LD

Results					
Every working day	12,5%				
Most working days	31,25%				
Every week	25%				
Every month	12,5%				
never	31,25%				

Results. The results point out that the majority of the attendees work with IMS LD, and also, they use IMS LD quite frequently (most working days and every week).

Question 2. Developing an IMS LD implementation

Results					
Yes	62,5%				
No	37,5%				

Results. The results clearly reveal that the majority of the attendees are developing IMS LS implementations. These implementations are:

- Not a technical implementation, but we are using IMS LD in pedagogical descriptions of RLO context use.
- SBLDS
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- Virtual university project for all public universities in Madrid
- A lots of courses for the OU (UK)
- Masters online

Question 4. Created any IMS LD UoLs.

Results					
Yes	31,25%				
No	43,75%				

Results. The results suggest that less than half of those interviewed have created any IMS LD UoLs.

Question 5. Using IMS Learning Design with Learners

Results					
Yes	6,25%				
No	50%				

Results. The results point out that IMS LD Learning is not very used with Learners yet.

Question 6. Can UNFOLD opens up new opportunities?

Results					
Yes	75%				
No	0%				

Results. The results are very clear: UNFOLD is very useful. Some reasons are:

- A way to disseminate and validate work
- Gain a better understanding of can and can not be done with IMS LD
- Discussion and feedback of my work
- Ideas to developed applications and carry out experiences
- Understand the specification
- IMS LD feasibility
- Editors and players developed
- Put in touch with people working on my area

Question 7. Can UNFOLD helps you be more effective in your work?

Results					
Yes	75%				
No	12,5%				

Results. The results are clear: UNFOLD can improve the effectiveness of the people who are working on eLearning and eLearning standards. Some examples are:

- Single point of information about LD
- Support, advise and information
- Contact with developers
- Engage practitioners in relevance of specification
- Research works (PhD)
- Feedback of ideas and communication (forums)

UNFOLD Barcelona CoP Meeting questionnaire

This questionnaire will help us improve the UNFOLD CoPs meetings. The questionnaire is divided into three parts: (i) organization, (ii) programme of the CoP meeting and (iii) suggestions.

All the data which you provide will be kept strictly private, and used solely to evaluate the UNFOLD CoPs events. The results of this questionnaire will be used exclusively to prepare an evaluation report, which will be used to improve the performance of the project, and will be submitted to the European Commission. This study is being carried out by the Interactive Technologies Group of the Fundació Universitat Pompeu Fabra.

Your name and personal information will not be included in the report or provided to any other party. If you do not want to answer any of the questions, please leave them blank.

We estimate that you can complete this questionnaire in less than 10 minutes.

Thank you in advance for your collaboration.

Please rate the following aspects of the Barcelona CoP meeting.

PART 1: ORGANISATION

The **information** provided about the **meeting on the Web** was

- | | | |
|----------------|-------------------|-------------------|
| ▪ Clear | 1 – 2 – 3 – 4 – 5 | Unclear |
| ▪ Sufficient | 1 – 2 – 3 – 4 – 5 | Insufficient |
| ▪ Easy to read | 1 – 2 – 3 – 4 – 5 | Difficult to read |

Can you **suggest** any way in which it could have been improved?

Did you **stay** at one of the **residences suggested** on the UNFOLD Web?

Yes. Please, rate the accommodation

- | | | |
|---------------------|-------------------|---------------------|
| ▪ Very satisfactory | 1 – 2 – 3 – 4 – 5 | Very unsatisfactory |
|---------------------|-------------------|---------------------|

No

PART 2: PROGRAMME OF THE COP MEETING

The programme consisted of both **meetings of individual CoPs**, and **joint sessions of two CoPs**. The balance between these two was

- | | | |
|---------|-------------------|---------------------|
| ▪ Ideal | 1 – 2 – 3 – 4 – 5 | Very unsatisfactory |
|---------|-------------------|---------------------|

The **discussions** which I participated in at the meeting **were**

- | | | |
|-----------------|-------------------|-------------|
| ▪ Very valuable | 1 – 2 – 3 – 4 – 5 | Of no value |
|-----------------|-------------------|-------------|

The **mix of presentations and discussions** was

- | | | |
|---------|-------------------|---------------------|
| ▪ Ideal | 1 – 2 – 3 – 4 – 5 | Very unsatisfactory |
|---------|-------------------|---------------------|

The **quality of the presentations** was

- Excellent 1 – 2 – 3 – 4 – 5 Very poor

How could the **programme** for the meeting have been **improved**?

Value of the meeting

In relation to my **professional activity**, **my participation** at the meeting was

- Very useful 1 – 2 – 3 – 4 – 5 Of no use

Overall, I **found the meeting** to be

- Very interesting 1 – 2 – 3 – 4 – 5 Very boring
- Well organised 1 – 2 – 3 – 4 – 5 Badly organised

Which **aspects** did you find **most valuable** about your participation in the meeting?

What **aspects** did you find **least valuable** about the meeting?

PART 3: SUGGESTIONS

Please add any comments which will help us in planning the next meeting of the UNFOLD CoPs

UNFOLD Barcelona CoP Meeting results⁵

This report is based on the results of 13 questionnaires filled in by the UNFOLD Barcelona meeting attendees.

Concerning the organisation of the meeting, the results indicate that the majority of those interviewed believe that the information provided on the Web was very clear and sufficient. However, the results are not so positive regarding the residences. The results reveal that only half of the attendees stayed at the residences suggested by the UNFOLD team, due to the fact that the residences were full.

As far as the programme of the CoP meeting is concerned, the results reveal that both the quality of the presentations and the usefulness of the discussions were very positive. On the other hand, the balance between meetings of individual CoPs and joint sessions appear to be not so positive. Some suggestions are:

1. Introducing some hands-on activities
2. More interactive / group work sessions.
3. External presentations should have been made the first day, so that to refer these works in the discussions.
4. Sticking to the agenda.
5. More on pedagogy
6. Not sure that splitting people into different CoPs is necessary at this stage, when there is relatively few people involved.

Next we show the results.

Part 1: Organisation

Question 1. The information provided about the meeting on the Web was:

Results	1 (very good)	2	3	4	5 (very bad)
Clear	30,77	69,23			
Sufficient	23,07	61,54	7,7		
Easy to read	38,5	53,9	7,7		

Results: The results suggest that the information provided on the web was clear, sufficient and easy to read.

Question 2. Did you stay at one of the residences suggested on the UNFOLD web?

Results					
Yes	53,9				

⁵ UNFOLD Barcelona CoP Meeting aimed to evaluate the organization and programme of the CoP meeting.

No	43,15				
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Results: The results suggest that there were a considerable number of people who preferred staying at other hotels to staying at the residences suggested by the UNFOLD team. One of the reasons is due to the fact that residences were full.

Suggestions

1. Maybe the objectives of the meeting should have been explicitly explained.
2. Clearer about structure of CoPs and meeting.

Part 2: Programme of the CoP meeting

Question 1. The balance between meetings of individual CoPs and joint sessions of two CoPs.

Results	1 (very good)	2	3	4	5 (very bad)
Ideal	7,7	43,15	15,39	23,07	

Results: The results suggest that the balance was good, but there are a significant number of attendees which believe that the balance was not very positive.

Question 2. The discussions which I participated in at the meeting were:

Results	1 (very good)	2	3	4	5 (very bad)
Valuable	23,07	53,9	15,39		

Results: The results suggest that the discussions were very useful.

Question 3. The mix of presentations and discussions was

Results	1 (very good)	2	3	4	5 (very bad)
Ideal	7,7	53,9	30,8	7,7	

Results: the results suggest that the mix of presentations was good, but there is a big number of those interviewed who believe that this combination was not so positive.

Question 4. The quality of the presentations was:

Results	1 (very good)	2	3	4	5 (very bad)
Excellent	15,39	69,23	7,7		

Results: The results suggest that the quality of the presentations was excellent.

Question 5. In relation to my professional activity, my participation at the meeting was:

Results	1 (very good)	2	3	4	5 (very bad)
Useful	30,8	30,8	15,39		

Results: The results suggest that the participation at the meeting was very positive for the professional activity of the attendees.

Question 6. Overall, I found the meeting to be:

Results	1 (very good)	2	3	4	5 (very bad)
Interesting	30,8	53,9	15,39		
Well organised	15,39	53,9	15,39		

Results: The results suggest that the meeting was interesting and well organised.

Suggestions

1. Introducing some hands-on activities
2. More interactive / group work sessions.
3. External presentations should have been made the first day, so that to refer these works in the discussions.
4. Sticking to the agenda.
5. More on pedagogy
6. Not sure that splitting people into different CoPs is necessary at this stage, when there is relatively few people involved.

UNFOLD workshop at Online EDUCA Berlin questionnaire

This questionnaire will help us improve the UNFOLD workshops. The questionnaire is divided into four parts: (i) workshop organisation, (ii) workshop information, (iii) usefulness of the workshop and (iv) suggestions.

All the data which you provide will be kept strictly private, and used solely to evaluate the UNFOLD project dissemination activities. The results of this questionnaire will be used exclusively to prepare an evaluation report, which will be used to improve the performance of the project, and will be submitted, to the European Commission.

We estimate that you can complete this questionnaire in less than 10 minutes.

Thank you in advance for your collaboration.

Part 1: Workshop organization

1. The **information** provided about the **UNFOLD workshop on the Web** was

▪ Clear	1 – 2 – 3 – 4 – 5	Unclear
▪ Sufficient	1 – 2 – 3 – 4 – 5	Insufficient
▪ Easy to read	1 – 2 – 3 – 4 – 5	Difficult to read

Part 2: Workshop information

2. The **quality of the information offered by the speakers** was

▪ Excellent	1 – 2 – 3 – 4 – 5	Very poor
-------------	-------------------	-----------
3. In relation to my **professional activity, my participation** at the workshop was

▪ Very useful	1 – 2 – 3 – 4 – 5	Of no use
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Part 3: Usefulness of the workshop

4. **How often** do you **work with e-learning Standards** (read a document about the spec, work on developing a compliant application, design UoLs, work with learners on UoLs, etc.)
 - every working day
 - most working days
 - every week
 - every month
 - never
5. Have you used **IMS Learning Design with Learners**?
 - Yes. Please provide details

No

6. Do you hope that UNFOLD will help you **open up new opportunities** to use IMS LD?

Yes. How?

No

7. Are you **willing to participate** in the different UNFOLD Communities of Practices?

Yes.

No. Please, specify why:

Part 4: Suggestions

8. Which **aspects** did you find **most valuable** about your participation in the workshop?

9. What **aspects** did you find **least valuable** about the workshop?

Please add any comments which will help us in planning the next meeting

UNFOLD workshop at Online EDUCA Berlin results

This report shows the results of the UNFOLD workshop evaluation at Online EDUCA Berlin conference. The results are based on the analysis of 21 questionnaires.

Concerning the **workshop organization**, the results reveal that nearly 70% of those attendees found clear, sufficient and easy to read the information provided about the UNFOLD workshop on the Web.

With respect to the **workshop information**, the results show that more than 80% of those attendees regarded the information provided by the speaker as excellent. The results also suggest that nearly 60% of those attendees rated their participation at the workshop very valuable for their professional activity.

Regarding the **usefulness of the workshop**, the results reveal that nearly half of those respondents work with eLearning standard frequently. However, **none of them have used IMS-Learning Design with learners**. On the other hand, the results also reveal that 85% of those attendees hope that UNFOLD will help them open up new opportunities to use IMS-LD and most attendees are willing to participate in the different UNFOLD Communities of Practice.

Part 1. Workshop organisation

Question 1. The information provided about the UNFOLD workshop on the Web

Clear (*)	1	2	3	4	5	Unclear
	33%	38%	9%	0%	4%	
Sufficient (**)						Insufficient
	43%	19%	14%	4%	0%	
Easy to read (***)						Difficult to read
	33%	24%	14%	4%	4%	

(*) 14%, (**) 19%, (***) 19 % blank

Results: The results reveal that nearly 70% of those attendees found clear, sufficient and easy to read the information provided about the UNFOLD workshop on the Web.

Part 2. Workshop information

Question 2. The quality of the information offered by the speakers was

Excellent	1	2	3	4	5	Very poor
	57%	42%	0%	0%	0%	

Results: The results suggest that the quality of the information offered by the speakers was excellent.

Question 3. In relation to my professional activity, my participation at the workshop was

Very useful	1	2	3	4	5	Of no use
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	14%	66%	14%	4%	0%	
--	-----	-----	-----	----	----	--

Results: The results point out that the participation at the workshop was rated as very useful in relation to the respondents' professional activity.

Part 3. Usefulness of the workshop

Question 4. How often do you work with eLearning standards

every working day	29%
most working days	14%
every week	19%
every month	19%
Never	19%

Results: The results reveal that nearly half of those interviewed work with eLearning standard frequently.

Question 5. Have you used IMS-Learning Design with learners

Yes	0%
No	100%

Results: The results clearly shows that none of those respondents have used IMS-Learning Design with learners.

Question 6. Do you hope that UNFOLD will help you open up new opportunities to use IMS-LD

Yes	85%
No (*)	9%

(*) 4%, not sure

Results: The results reveal that 85% of those attendees hope that UNFOLD will help them open up new opportunities to use IMS-LD.

Question 7. Are you willing to participate in the different UNFOLD Communities of Practice

Yes	81%
No (*)	14%

(*) 4%, not sure

Results: The results indicate that 81% of those attendees are willing to participate in the different UNFOLD Communities of Practice.

UNFOLD workshop at EUCEN Conference questionnaire

This questionnaire will help us improve the UNFOLD workshops. The questionnaire is divided into four parts: (i) workshop organisation, (ii) workshop information, (iii) usefulness of the workshop and (iv) suggestions.

All the data which you provide will be kept strictly private, and used solely to evaluate the UNFOLD project dissemination activities. The results of this questionnaire will be used exclusively to prepare an evaluation report, which will be used to improve the performance of the project, and will be submitted, to the European Commission.

We estimate that you can complete this questionnaire in less than 10 minutes.

Thank you in advance for your collaboration.

Part 1: Workshop organisation

1. The **information** provided about the **workshop on the Web** was
 - Clear 1 – 2 – 3 – 4 – 5 Unclear
 - Sufficient 1 – 2 – 3 – 4 – 5 Insufficient
 - Easy to read 1 – 2 – 3 – 4 – 5 Difficult to read

2. Did you **stay** at one of the **hotels suggested** on the EUCEN Conference web site?
 - Yes. Please, rate the accommodation
 - Very satisfactory 1 – 2 – 3 – 4 – 5 Very unsatisfactory
 - No

Part 2: Workshop information

3. The **quality of the information offered by the speaker** was
 - Excellent 1 – 2 – 3 – 4 – 5 Very poor

4. In relation to my **professional activity**, **my participation** at the workshop was
 - Very useful 1 – 2 – 3 – 4 – 5 Of no use

Part 3: Usefulness of the Workshop

5. **How often** do you **work with e-learning Standards** (read a document about the spec, work on developing a compliant application, design UoLs, work with learners on UoLs, etc.)
 - every working day
 - most working days
 - every week
 - every month
 - never

6. Have you used **IMS Learning Design with Learners**?
 - Yes. Please provide details

No

7. Do you hope that UNFOLD will help you **open up new opportunities** to use IMS LD?

Yes. How?

No

8. Are you **willing to participate** in the different UNFOLD Communities of Practices?

Yes.

No. Please, specify why:

Part 4: Suggestions

9. Which **aspects** did you find **most valuable** about your participation in the workshop?

10. What **aspects** did you find **least valuable** about the workshop?

Please add any comments which will help us in planning the next meeting

UNFOLD workshop at EUCEN Conference results

This report shows the results of the UNFOLD workshop evaluation at EUCEN conference. The results are based on the analysis of 6 questionnaires.

Concerning the **workshop organization**, the results reveal that 83 % of those attendees found clear the information provided about the workshop on the web, whereas 32% of those attendees found it difficult to read.

With respect to the **workshop information**, the results clearly point out that the information offered by the speaker was regarded as excellent. The results also suggest that nearly 80% of those attendees rated their participation at the workshop as very valuable.

Regarding the **usefulness of the workshop**, the results indicate that half of those attendees have not ever worked with eLearning standards. In addition, **none of them have used IMS-Learning Design with learners**. The results also reveal that 66% of those attendees consider that UNFOLD will help them open up new opportunities, and they are willing to participate in the different UNFOLD Communities of Practice.

Some attendees' suggestions or comments are:

- 'I get new information about standards and IMS Learning design'
- 'More practical examples. Demonstration of tools (for example, RELOAD).'
- 'Each participant brings his point of view'

Part 1: Workshop organisation

Question 1. The information provided about the workshop

Clear	1	2	3	4	5	Unclear
	16%	83%	0%	0%	0%	
Sufficient (*)						Insufficient
	0%	16%	50%	0%	0%	
Easy to read (*)						Difficult to read
	33%	0%	16%	16%	0%	

(*) 33% blank

Results: The results reveal that the information provided about the workshop on the web was very clear and sufficient. On the other hand, the results also suggest that this information is difficult to read (32%).

Question 2. Did you stay at one of the hotels suggested on the EUCEN Conference web site?

Yes	66%				
No	33%				

Results: The results clearly suggest that most of those attendees stayed at one of the hotels suggested on the EUCEN conference web site. In addition, the results point out that hotels were rated very satisfactorily.

Part 2: Workshop information

Question 3. The quality of the information offered by the speaker

Excellent	1	2	3	4	5	Very poor
	66%	33%	0%	0%	0%	

Results: The results reveal that the quality of the information offered by the speaker was excellent.

Question 4. In relation to my professional activity, my participation at the workshop was

Very useful	1	2	3	4	5	Of no use
	0%	83%	0%	16%	0%	

Results: The results clearly point out that the participation at the workshop was useful for most attendees.

Part 3: Usefulness of the workshop

Question 5. How often do you work with eLearning standards

every working day	0%
most working days	0%
every week	16%
every month	33%
Never	50%

Results: The results suggest that half of those attendees have not ever worked with eLearning standards.

Question 6. Have you used IMS Learning Design with Learners

Yes	0%
No	100%

Results: The results point out that none of those attendees have ever used the IMS Learning Design standard with Learners.

Question 7. Do you hope that UNFOLD will help you open up new opportunities to use IMS-LD

Yes (*)	66%
No	

(*) 33% blank

Results: The results suggest that UNFOLD will help attendees open up new opportunities to use IMS-LD.

Question 8. Are you willing to participate in the different UNFOLD Communities of Practice

Yes	66%
No	16%

(* 16% blank

Results: The results point out that the majority of those attendees are willing to participate in the different UNFOLD communities of practice.

Part 4: Suggestions or comments

- 'I get new information about standards and IMS Learning design'
- 'More practical examples. Demonstration of tools (for example, RELOAD).'
- 'Each participant brings his point of view'

UNFOLD web site usability inspection

Results

The main aim of this evaluation action is to identify the main strengths and weaknesses of the UNFOLD web site. There are a great deal of objectives behind the UNFOLD web site. Concerning this evaluation action, the aims of the UNFOLD web site which has been evaluated are:

- improve the level of understanding about the IMS-LD specification (news, documents, specifications, experience,...)
- participation mechanisms to support the creation of Communities of Practices, so that people who are working on the IMS-LD specification can share their experiences, material,...

In order to carry out the usability inspection, the evaluation criteria which have been contemplated are:

- Consistency
- Readability
- Navigation
- Participation

Whereas consistency, readability and navigation are well-known criteria to evaluate the usability of web sites, *participation* is a particular and important criteria for this web site.

On the one hand, due to the fact that the UNFOLD web site offers a fair number of materials (news, specifications, papers,...), criteria such as readability and navigation are particularly important so that users can read and find easily the materials. Consistency is a valuable usability criteria for the UNFOLD purposes as well because it allows users to minimize the cognitive load of learning the structure of a web site.

On the other hand, due to the fact that one of the main UNFOLD project objectives is to enhance the communication among people who are working on the IMS-LD specification, participation has been evaluated solely from the standpoint of the usability of the forums interface, links, and visibility of these, for two types of users: members and not members.

The results of this usability inspection suggest that the main positive aspects of the UNFOLD web site are the consistency and good readability of the materials.

With respect to consistency, both the distribution of the elements in each page and the navigational scheme are rather consistent. Furthermore, both the downloaded documents and the content of the web pages are very well structured and easy to read; even though there are some minor errors, mainly related to the duplication and visualization of links in the home page.

The results also point out that the UNFOLD forums user interfaces are quite clear, despite the fact that there might be some minor problems regarding concrete options such as “subscribe”.

On the other hand, the main negative aspect of this web site might be the lack of visualization of the forums. To a greater extent, concerning the participation, the most important thing is to allow users to post (and read) messages into the UNFOLD forums. Nevertheless, at the same time that there is an option to join to the UNFOLD project on the home page in order to become an UNFOLD member, there is not a **visual** and **clear** option to “participate in UNFOLD”; despite the fact that there are three forums.

The results strongly suggests that the possibility of participation in the UNFOLD web site should be clearly showed on the home page, in such a way that users can have a glance at the home page and realize that they are invited to post their messages, create topics, polls, etc.

Next section shows the usability inspection of the UNFOLD web site. This section is divided into two sections: (i) general user view, this section shows the evaluation of those pages where log in is not necessary; (ii) members view, this section shows the evaluation of those pages where log in is necessary.

Both sections show those pages which have some usability problem. For each page, it is showed an screenshot along with the evaluation comments.

Next we detail the evaluations.

Detailed evaluations

General user view

Home page

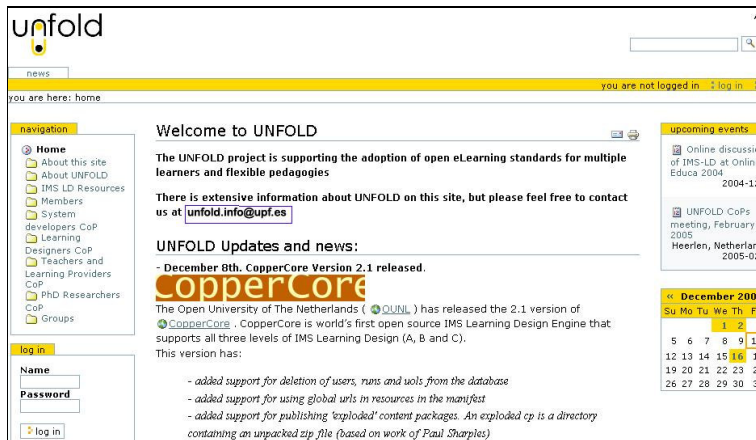


Image 1: Home page

URL	http://www.unfold-project.net
Consistency	OK
Navigation	OK
Readability	OK
Comments	<p>Major problem: The info e-mail is not consistent with the rest of the links</p> <p>Major problem: To participate in the forums is not clear (are there forums in this web site?)</p>

About UNFOLD

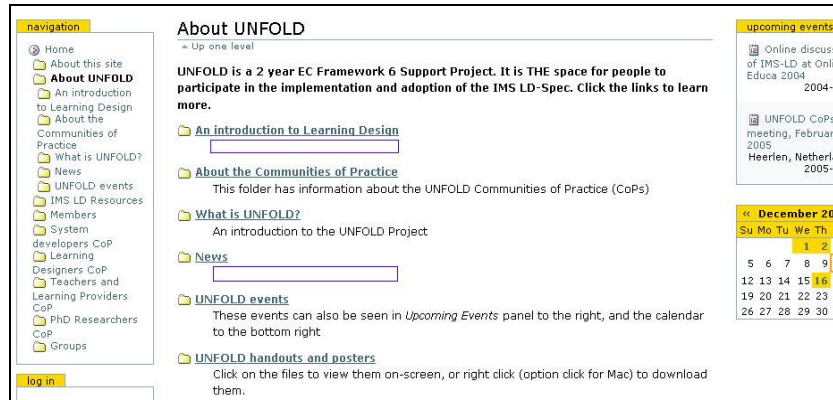


Image 2: About UNFOLD page

URL	http://www.unfold-project.net:8085/UNFOLD/about_folder/
Consistency	OK
Navigation	OK
Readability	OK
Comments	Minor problem: only some sections offer an abstract of the content. For consistency, each section should offer an abstract.

IMS LD Resources

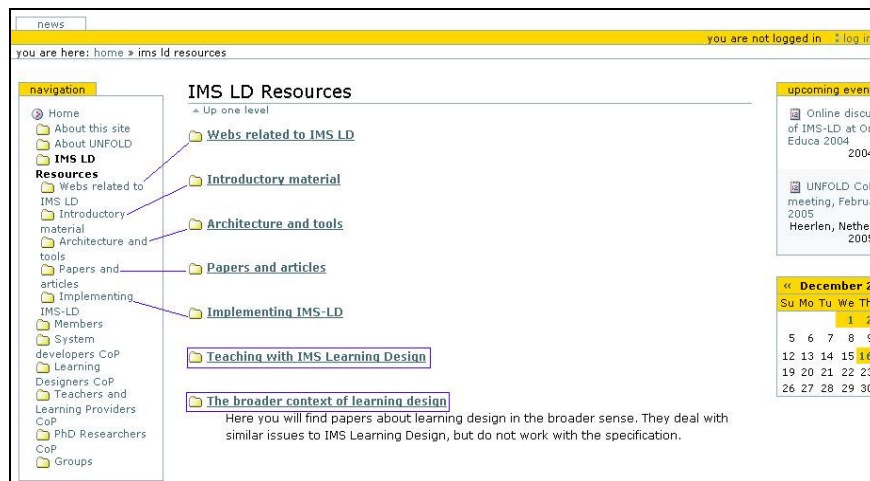


Image 3: IMS Ld Resources page

URL	http://www.unfold-project.net:8085/UNFOLD/general_resources_folder/
Consistency	OK
Navigation	OK
Readability	OK
Comments	Minor problem: there are two invisible subsections in the tree: teaching with IMS Learning Design, the broader context of learning design

System developers CoP

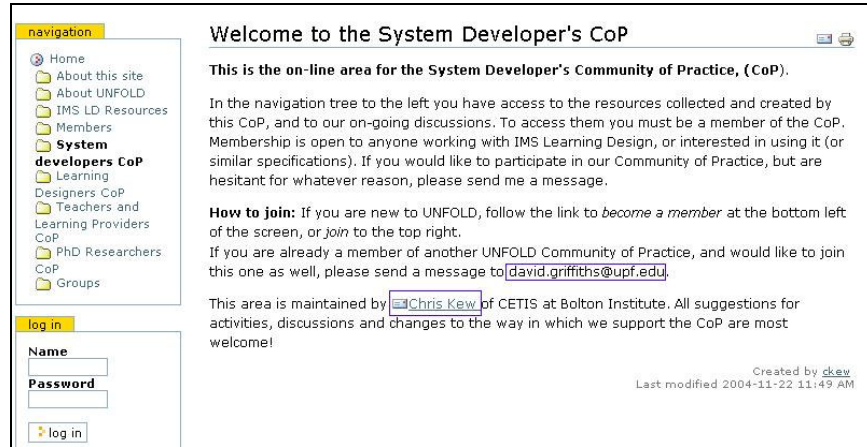


Image 4: System developers CoP page

URL	http://www.unfold-project.net:8085/UNFOLD/developers_folder/
Consistency	OK
Navigation	OK
Readability	OK
Comments	Minor problem: different ways of showing e-mails (david.griffiths@upf.edu , Chris Kew).

Members

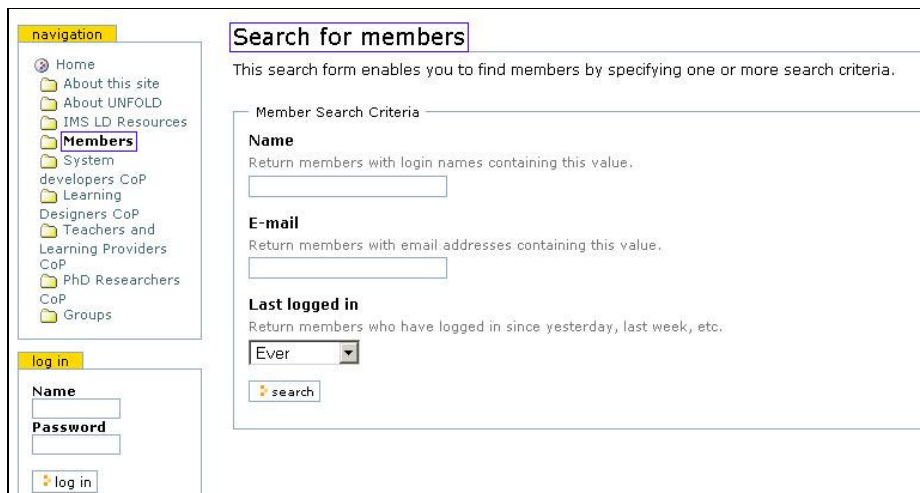


Image 5: Members page

URL	http://www.unfold-project.net:8085/UNFOLD/Members/
Consistency	OK
Navigation	OK

Readability	OK
Comments	Minor problem: in the former sections, the page name is the same as the name that appears in the left menu. In this page, the name is different (tree = members; page = search for members).

Teachers and learning providers CoP

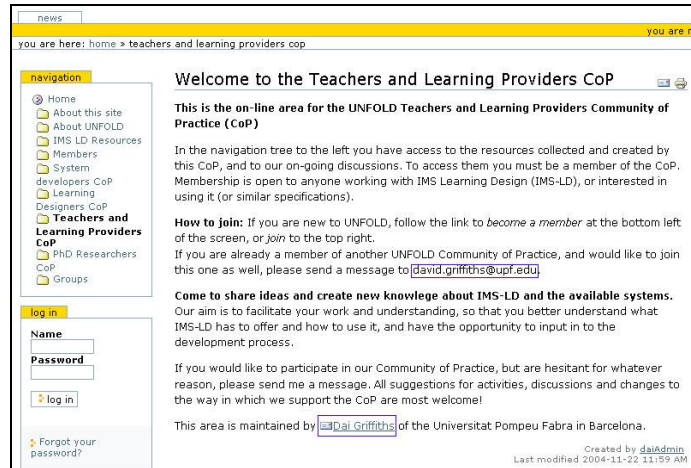


Image 6: Teachers and learning providers CoP page

URL	http://www.unfold-project.net:8085/UNFOLD/providers_folder/
Consistency	OK
Navigation	OK
Readability	OK
Comments	Minor problem: different ways of showing e-mails (david.griffiths@upf.edu , Dai Griffiths)

Log in

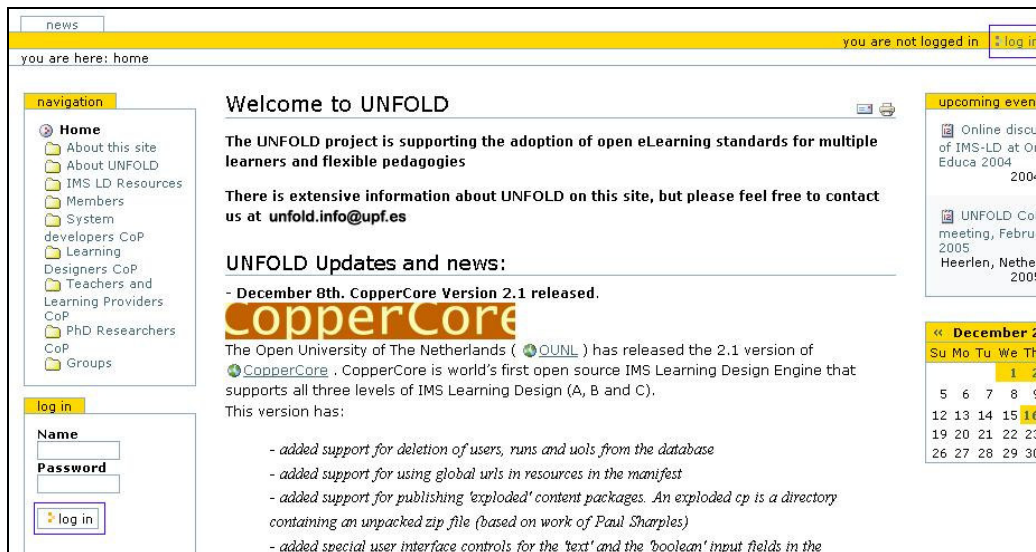


Image 7: Log in page

URL	http://www.unfold-project.net
Consistency	OK
Navigation	OK
Readability	OK
Comments	Minor problem: this information is duplicated. Duplication is not done in the rest of the web site. Users can log in by using the text boxes available at the home page, or using the option “log in”. The information available at both pages is the same.

Member view

Developer’s Forums

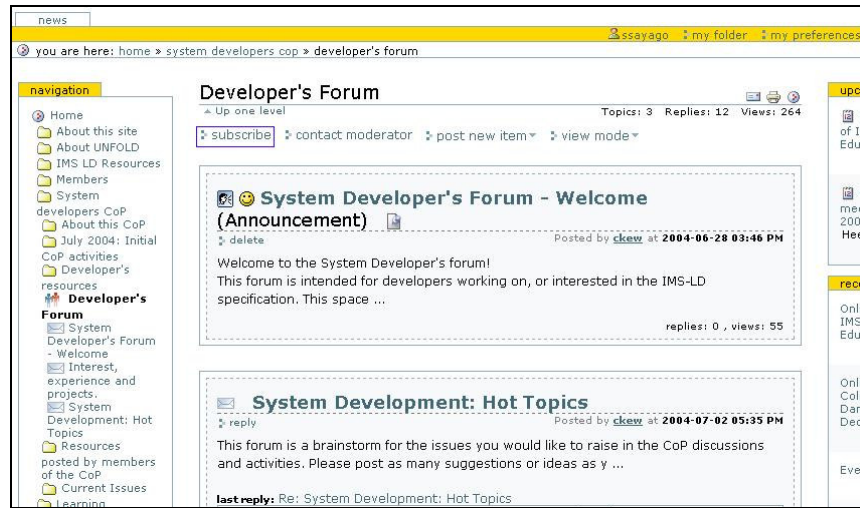


Image 8: Developers' forum page

URL	http://www.unfold-project.net (log in)
Consistency	OK
Navigation	OK
Readability	OK
Comments	Minor problem: What happens when users click on subscribe? Perhaps it is not clear that subscribe implies send an e-mail to the user (this information is not clearly mentioned on the page).

Learning Designer’s Forum

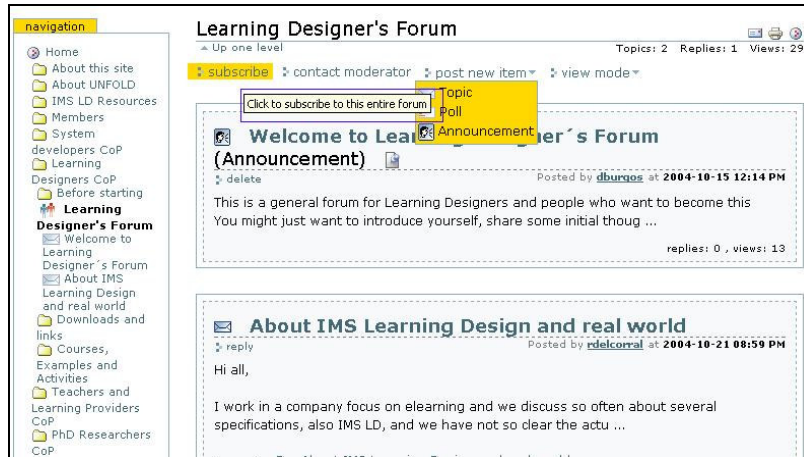


Image 9: Learning Designer's Forum page

URL	http://www.unfold-project.net (log in)
Consistency	OK
Navigation	OK
Readability	OK
Comments	Minor problem: What happens when I click on subscribe? Perhaps it is not clear than subscribe implies send an e-mail to the user (this information is not clearly mentioned on the page).

Teacher's Forums

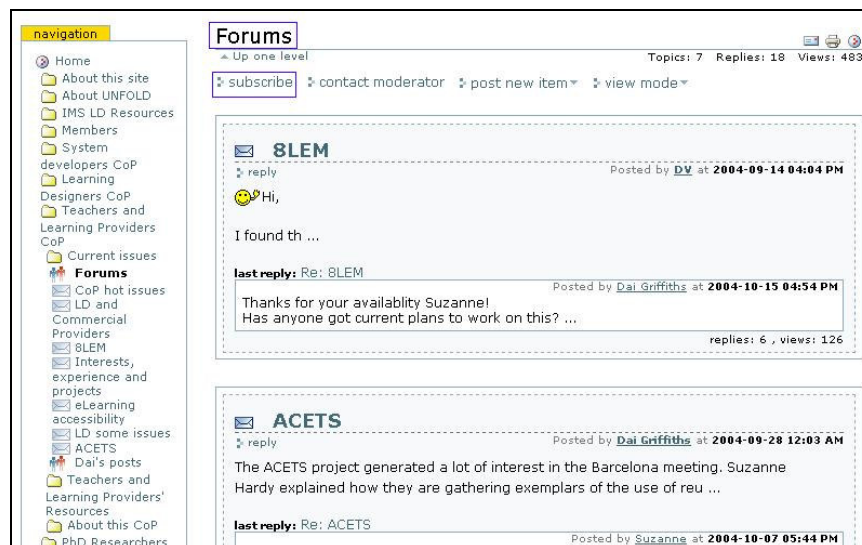


Image 10: Teachers forums page

URL	http://www.unfold-project.net (log in)
Consistency	OK

Navigation	OK
Readability	OK
Comments	Minor problem: What happens when I click on subscribe? Perhaps it is not clear than subscribe implies send an e-mail to the user (this information is not clearly mentioned on the page).

Log analysis of use of UNFOLD servers (UPF)

Results

This report shows the analysis of the UNFOLD servers log files. This evaluation action corresponds to the D3 Evaluation Plan, action 8 “Log analysis of use of UNFOLD servers”.

This document is structured into two sections. The first section corresponds to the analysis of the UPF-UNFOLD server analysis. The second section corresponds to the analysis of the OUNL-UNFOLD server analysis.

With respect to the evaluation of the UPF-UNFOLD log files, this evaluation has covered the log files corresponding to August, September, October and November 2004. The issues which have been analyzed are:

- Activity in each month.
- Daily summary
- Hourly summary
- Search word
- Operating systems
- Status code report
- File type

To carry out this analysis, it has been used the Analog 5.32 tool⁶. Analog 5.32 is a free web log analyzer, multiplatform and implemented in Perl.

The results of this analysis point out that the busiest month was October. The results also suggest that the majority of the accesses are done during the week, especially on Thursday, during the morning. The result also reveal that the UNFOLD users find the UNFOLD web site introducing the following query words: unfold, editor, SCORM, project and IMS. The most consulted documents were the agenda for the UNFOLD Barcelona meeting and the paper of Bill Olivier: “Learning design: the state of play”. The results also point out that the UNFOLD server seems to reply to the majority of the requests.

Analysis of use of the UPF-UNFOLD server

This section shows the analysis of the:

- **Activity in each month.** Which is the month with the highest activity?
- **Daily summary.** Which is the day with the highest activity?
- **Hourly summary.** Which is the hour with the highest activity?
- **Search word.** Which type of queries do our users write in order to find the UNFOLD web site?
- **Operating systems.** Which operating systems do our users use?
- **Status code report.** Which is the availability of the UNFOLD server ?
- **File type.** Which are the most consulted documents?

All of the results are figured out as the number of requests for pages. Each of the following diagrams show the total number of requests (‘reqs’ column) and the number of requests for pages (‘pages’ column).

Activity in each month

⁶ <http://www.analog.cx/>

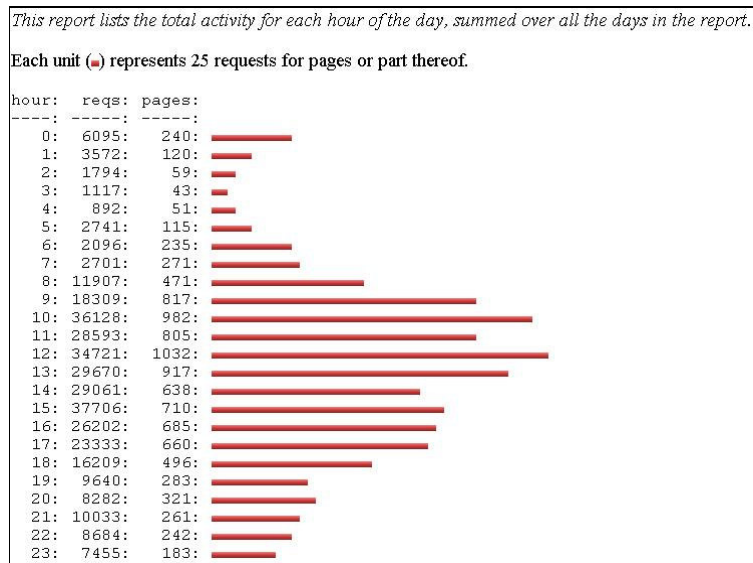


Image 13: Hourly summary

This diagram represents the total activity for each hour of the day. According to the analysis, the highest level of activity takes place from 9 to 12 am.

Search word



Image 14: Search word

This picture shows the list of the top 30 query words by the number of requests, sorted by the number of request. According to the analysis, the most used query words are: unfold, editor, scorm, project, ims and ld (IMS LD).

Operating systems

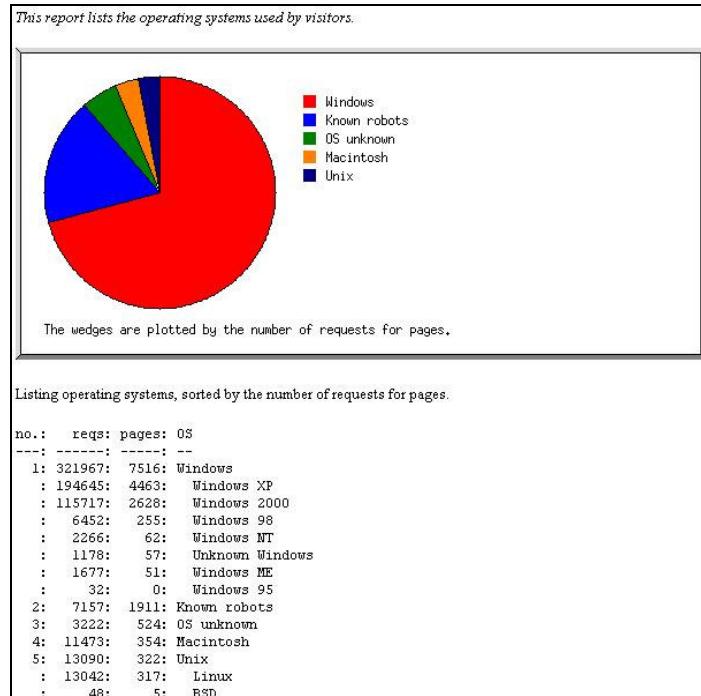


Image 15: Operating systems

This diagram represents the operating systems used by the visitors. According to the analysis, the most used operating system is Windows (Windows XP and Windows 2000). Comparing Windows to Unix, the rate is: 24:1.

Status code report

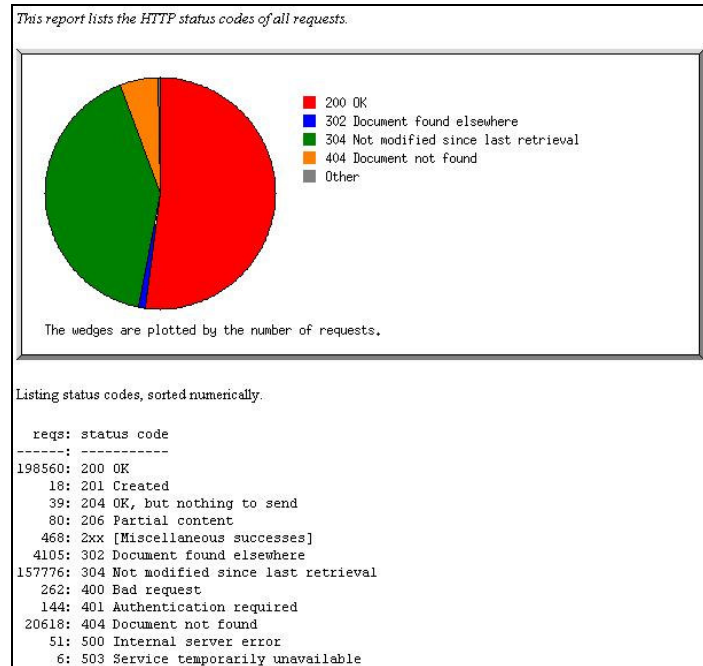


Image 16: Status code report

This diagram represents the HTTP status of the requests. The most interesting HTTP status which have been analysed are: 200, OK; 302, document found; 404, document not found.

According to the analysis, the majority of the HTTP requests have been OK, but, on the other hand, it is worth mentioning that there is a fair number of request corresponding to “Document not found”. In this respect, the rate between documents not found and documents found is: 5:1.

File type

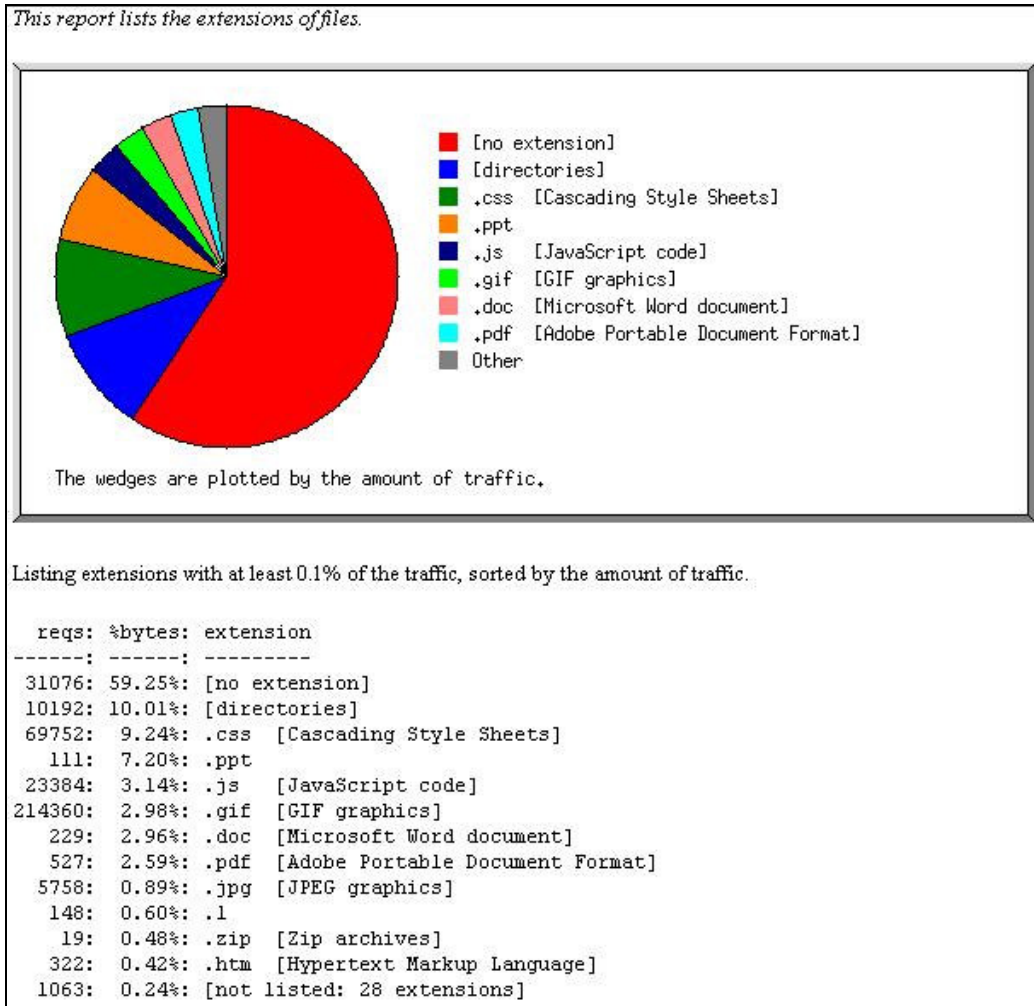


Image 17: File type

This diagram represents the extension of the files related to the amount of traffic. According to this analysis, UNFOLD visitors prefer PDF to WORD or PPT files.

The most consulted PDF and WORD documents from August to October are⁷:

Number of requests	Date	File name
108	21/Sep/04	/unfold/about_folder/events/f2fbarcelona/agenda_barcelona_sep04_v2.pdf
105	17/Nov/04	/unfold/about_folder/events/billjuly04/learning_design_the_state_of_play.doc
85	18/Nov/04	/unfold/about_folder/events/daionline/about_folder/events/daionline/discussiondoc/

⁷ The results of December are not showed because at the moment of writing this report we did not have the log files of the whole month.

		griffiths_17nov04.pdf/download
82	16/Nov/04	/unfold/about_folder/briefings/unfold-handout_cast_08may04.pdf
59	17/Nov/04	/unfold/general_resources_folder/introsld/griffiths_final.pdf/download
51	5/Nov/04	/unfold/about_folder/events/billjuly04/ld_the_state_of_play_no-apendix.doc
37	4/Nov/04	/unfold/about_folder/briefings/unfold-handout_cast_08may04_onepage.pdf
30	13/Nov/04	/unfold/about_folder/events/f2fbarcelona/bcnapresentations/folder.2004-09-28.7763032381/icalt04_davinia.pdf
28	13/Nov/04	/unfold/about_folder/events/f2fbarcelona/bcnapresentations/folder.2004-09-28.6203614329/unfoldpresentacion.pdf

Summary and future steps

According to the preliminary results gathered during the first stage of the project, UNFOLD clearly opens up new opportunities to use IMS LD. Namely, both the information provided in the UNFOLD web site and the Communities of Practice are rated very positively and the opinion of participants is that UNFOLD can help people be more effective in their work. Namely, for learning designers, developers and teachers, UNFOLD allows them to get a better insight into the IMS-LD specifications and to be aware of recent experiences, case studies, tools, other people working in the field, etc.

UNFOLD can also play an essential role to disseminate information about the IMS-LD specifications. On one hand, the results point out that whereas most of those attendees to the UNFOLD workshops have never used IMS-LD with learners, they are willing to participate in the UNFOLD Communities of Practices. On the other hand, the results also indicate that the UNFOLD CoPs are able to disseminate information about IMS-LD among people from different nationalities, specially by providing opportunities for skills development, access to good practices and a set of valuable resources.

The main negative aspect which needs to be addressed during the next stage of the project is the lack of active participation through the web in fora, contributing material, Some corrective measures are indicated in the "Outcomes" deliverable. Apart from this aspect, other issues which need to be addressed are: (i) the evolution of the role of UNFOLD as resource for understanding the IMS-LD specifications and case studies, and (ii) the impact on adoption: new tools, case studies, etc, which complete the whole set of scenarios devised in the Evaluation Plan milestone. All this will be translated into the specific actions of the forthcoming evaluation plan

Annex I. UNFOLD Evaluation Plan

1. Introduction

This document is the evaluation plan for the UNFOLD project. It is intended to explain the program of evaluation activities in self-contained document, and in a style that enables non-evaluation specialists to understand the techniques to be employed, as well as the relevance of the evaluation.

It is divided into sections which provide easy reference for project workers. Thus the detailed evaluation plan for period one of the evaluation work may be regarded as a separate document which will be consulted by project staff in their evaluation work. Similarly the evaluation scenarios provide a reference document for the development of future evaluation action plans.

This plan will be discussed and revised at the UNFOLD project meeting in Barcelona on 7th September 2004 prior to the implementation of the full evaluation programme. This provides project partners with the opportunity to discuss the actions in detail, and to commit themselves to the programme to be undertaken. In the case of UNFOLD, however, this revision has an additional function. As set out in the project plan, is only in month 7 of the project, July 2004, that partner OUNL start to make a full contribution to the project. Consequently, while they have been as active as possible given their limited resources, they have not been able to devote the effort to evaluation planning which is necessary for detailed planning. The Barcelona meeting, and prior work on this plan, will overcome this structural difficulty.

2. Executive Summary

This plan provides a framework for evaluation work in the UNFOLD project, and for successful completion of the periodic evaluation reports which constitute project deliverables 8.1, 8.2 and 8.3, due in months 12, 18 and 24. The approach adopted is to commence with general observations and reflections concerning evaluation of the project, and on the basis of this analysis define a specific set of detailed evaluation scenarios to guide evaluation work.

Evaluation work in UNFOLD has been divided into three periods, corresponding to the delivery of the three evaluation reports. The first of these evaluation scenarios (September – December 2004) is developed into a detailed evaluation plan. On the basis of the results of this action plan, a plan will be produced for the second period of evaluation. This approach maintains flexibility, and to enable the results of evaluation work to inform subsequent project work and evaluation.

The structure of the plan, and the main conclusions are as follows.

The first sections (3, 4, and 5) establish the context for the evaluation.

(3) *Goals and Objectives*: The goals and objectives of the project are reviewed, and are classified in order to provide a basis for evaluation work. Three levels are identified

- Level one: outputs. These are the contractual outputs of the project.
- Level two: objectives: These correspond to the objectives of the CoPs with regard to their members.
- Level three: goals: These concern the strategic goals of the project in terms of supporting the IMS Learning Design specification.

The (4) *Areas to be evaluated* are then identified for each of the three levels of project activity.

A section on (5) *Evaluating Communities of Practice* provides an overview of the specific challenges raised in evaluating this kind of action. Etienne Wenger's definition of a Community of

Practice is adopted, and the differences between the classical single organisation community with a practical focus and the UNFOLD communities of practice are explored. Examples of previous evaluation work which provides a basis for the UNFOLD evaluation are identified, of which two are particularly significant. Firstly the work of Preece and Nonnacke into participation in virtual communities includes metrics for demographic studies and assessment of the efficacy of community design. Secondly the evaluation of two recent projects, Talking Heads, and Star Science, shows the importance of gathering case studies and other smaller granularity evidence of the value of participation in Communities to the individual participants.

The next three sections (*6, 7, and 8*) build on the analysis of the context of the evaluation to produce a specific framework for UNFOLD evaluation work.

In the first of these sections (*6*) *Indicators and benchmarks* are discussed. A variety of indicators are specified ranging from hard data from log files, to the expressed perceptions of participants. The indicators are gathered both from the literature described in the previous section, and from discussions within the project team. Benchmarking is discussed, and the particular problems of benchmarking Communities of Practice in general, and the UNFOLD project in particular. It is concluded that the most effective benchmark is the state of the art at the start of the project.

The (*7*) *Evaluation Framework* builds on the analysis so far to identify a set of scenarios where the evaluation work of the project will be focused. The evaluation techniques to be used are outlined, and the actors in the evaluation identified. These elements, together with the observations made in previous sections, are brought together to define nine (*9*) *Detailed evaluation scenarios*.

The final section, (*10*) *Evaluation timetable and reporting* discusses how the evaluation framework is to be transformed into a detailed plan throughout the project. A table is presented with a detailed schedule of evaluation actions to be carried out in the first period of evaluation, which provides the basis for implementation evaluation work. Eleven evaluation actions are planned, covering all three levels of project activity identified above.

3. UNFOLD: goals and objectives

This section provides an overview of the UNFOLD project. Sub-section 2.1 presents the project definition and the description of the work; 2.2 deals with the participants and the main tasks in which they will be the leader; 2.3 summarizes the main objectives and outcomes of the project.

Project goals

A key aspect for the development of eLearning is that it supports better learning which is in some way better than what has been previously available. Progress towards this goal depends on the adoption of open standards, but so far these limit eLearning to a relatively simple, single learner, 'deliver-and-test' approach, and are a step backwards if we were to consider them from a pedagogic perspective alone. Recent developments however, open the door to sophisticated and diverse pedagogical approaches to eLearning. This is the case with the Educational Modelling Language (EML), established by the Open University of the Netherlands (OUNL), which has been adapted and turned into an IMS Global Learning Consortium specification, named IMS Learning Design (LD). UNFOLD is focusing its efforts on IMS Learning Design, which is the only open specification providing support for multiple users and flexible pedagogies.

There is a significant gap between the release of a new specification such as IMS Learning Design and the full realisation of its potential benefits in the teaching and learning practice. UNFOLD will:

- 1 Reduce the time taken in realising the benefits of flexible open eLearning standards in Europe.
- 2 Create an engine for the continuing development of European eLearning practice.
- 3 Provide a model for the rapid realisation of the full benefits of any other eLearning specification.

The definition, implementation and adoption of standards in eLearning involve a hierarchy of groups with very different roles, and highly divergent discourses. They are also relatively few in number and geographically widely distributed. As a result:

- researchers are often not in contact with their peers
- there is a lack of vertical communication between groups
- there is poor communication with other disciplines.

Consequently adoption of standards is slow, and critical mass is hard to achieve. At the same time feedback from users, teachers and learners, is not provided to developers and implementers who need it to produce more effective solutions.

Approach taken in addressing project goals

The definition, implementation and adoption of standards in eLearning involve a hierarchy of groups with very different roles, and highly divergent discourses. They are also relatively few in number and geographically widely distributed. As a result:

- researchers are often not in contact with their peers
- there is a lack of vertical communication between groups
- there is poor communication with other disciplines.

Consequently adoption of standards is slow, and critical mass is hard to achieve. At the same time feedback from users, teachers and learners, is not provided to developers and implementers who need it to produce more effective solutions.

In order to address these challenges UNFOLD builds on existing collaboration to create an open coordination framework, which will create and facilitate communities of practice for the actors involved, and through these:

- exchange and disseminate examples of good practice
- agree consistent interpretations and usage of specifications to establish working interoperability

- provide a focus for studies of issues raised by the specification, implementation and use of eLearning educational standards, in the context of enhancing learning and better pedagogy.

Goals, objectives and outputs

The UNFOLD workplan specifies six project objectives.

- i) To stimulate the formation of a critical mass of researcher , developers, learning designers and – practitioners
- ii) To improve information flows between researchers , developers, learning designers and practitioners working in an emerging field.
- iii) To improve the quality of feedback provided to standard definition bodies on the performance of standards and unmet user needs
- iv) To significantly accelerate up the iterative development cycles of tools and eLearning implementations
- v) To establish best practice in tool design and eLearning using flexible open eLearning standards
- vi) To ensure interoperability of flexible open learning systems implementing standards

Objectives i) and ii) refer to researchers, but these actors should not be included in the core user group. Scientific dissemination of UNFOLD is not a primary goal, as the goal of UNFOLD is to support adoption and implementation. Researchers as such are outside the CoPs, although they may wish to study what the members are doing, and what they are enabling. Similarly UNFOLD may also wish to participate in research, but it is not a core activity. The scientific dissemination of UNFOLD will probably be in the field of learning technology, and possibly education and training, but such dissemination is not verification of our success, which is related to adoption and implementation.

It is noticeable that the objectives above refer to widely differing areas in which the project will have an impact. In order to plan evaluation this needs to be clarified, and three levels of outputs and outcomes are therefore proposed. This framework provides a context for project evaluation enabling planning to be carried out.

The outcomes of the project may be clarified by dividing them into three logical levels, as follows:

Level one (outputs)

Firstly the contractual outputs of UNFOLD are clearly defined in the work plan. They consist principally of holding meetings, facilitating Communities of Practice (hereafter CoPs), and producing the edit proceedings of this work. These can and will be evaluated, both in order to confirm that we have fulfilled our contractual obligations, and also to ensure that these quality of these activities is as high as possible, and improved with each half yearly iteration of the work plan.

Level two (objectives)

The outputs described above are not, however, the desired outcomes of the project. A second level may be defined which is much less tangible, and which addresses the objectives of the CoPs, rather than the contractual obligations of the project. In common with other CoPs, these outcomes are comprised of aspects such as

- learning
- knowledge
- good practices
- personal skills
- organisational capacity

Level three (goals)

In many CoPs in commercial organisations it is assumed that the objectives of CoPs outlined in level two are automatically beneficial for the organisation, although cost benefit analysis may well be carried out. In UNFOLD, however, the goal is to facilitate the adoption of open and flexible eLearning standards, in particular IMS LD, as a means to improving the educational experiences offered to citizens, and, in the final analysis, to thereby make the world better place. This is much less tightly linked to the level two objectives than is the case in commercial organisations. Even if the project is successful in improving the knowledge and skills of participants, it may not be taken for granted that adoption of IMS Learning Design (hereafter IMS-LD) will be accelerated.

4. Areas to be evaluated

In the light of the three levels of project activity, three clearly differentiated areas for evaluation actions may be defined. The project objectives described above are associated with these levels.

Evaluation level 1: CoP effectiveness

The effectiveness of UNFOLD in forming Communities of Practice formation and running their associated events (level one above)

The project objectives associated with this level are:

- *To stimulate the formation of a critical mass of developers, learning designers and practitioners.*
- *To improve information flows between, developers, learning designers and practitioners working in an emerging field.*

Evaluation level 2: Value to members

The value of the CoPs to their members (level 2 above)

No project objectives are specifically at this level, as presumably this "means to an end" function was assumed. Nevertheless, the following objectives should be defined and evaluation actions carried out.

- *To provide learning opportunities for CoP members*
- *To provide useful resources for CoP members*
- *To provide opportunities for skills development*
- *To provide CoP members with access to good practice*

Evaluation level 3: Impact on adoption

The impact of the CoPs against the wider adoption aims of UNFOLD. On pragmatic grounds we exclude the educational and other consequences of adoption of IMS-LD, although this may well be an object of study within the CoPs, particularly the Learning Providers CoP.

The project objectives associated with this level are:

- *To improve the quality of feedback provided to standard definition bodies on the performance of standards and unmet user needs*
- *To significantly accelerate up the iterative development cycles of tools and eLearning implementations*
- *To establish best practice in tool design and eLearning using flexible open eLearning standards*
- *To ensure interoperability of flexible open learning systems implementing standards*

5. Evaluating Communities of Practice

The seminal work in establishing the concept of Community of Practice is usually traced back to a seminal ethnographic study by Orr (1966) which examined how photocopy machine technicians actually learnt. He demonstrated that they learnt by sharing information between them, rather than from the formal structures provided by their employers.

This work was taken up by Seely Brown, for example in (Seely Brown and Duguid 1991), who extrapolated Orr's insights to a wider context. The chief theorist and proponent of Communities of Practice has been, however, Etienne Wenger, who provides a clear statement of the nature of a Community of Practice which has informed not only this evaluation plan, but the whole UNFOLD approach.

“Communities of Practice are groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis.

These people don't necessarily work together every day, but they meet because they find value in their interactions. As they spend time together they typically share information, insight and advice. They help each other and they solve problems, they discuss their situations, their aspirations and their needs. They ponder common issues explore ideas, and act as sounding boards. They may create tools, standards, generic designs, manuals, and other documents, - or they may simply develop a tacit understanding that they share. However they accumulate knowledge, they become informally bound by the value that they find in learning together.” (Wenger, McDermott et al. 2002)

In the original work which established the Community of Practice as an approach to learning, the context was typically technical, where the members of the community were within a single organisation and carrying out a clearly defined activity with easily identifiable indicators and benchmarks. For example (Seely Brown and Duguid 1991) discussed the work of photocopy machine technicians, while Etienne Wenger in his influential *Communities of Practice, Learning, Meaning and Identity* (Wenger 1998) focuses on claims processing. In these environments the success of a Community of Practice is relatively easily measured. If the members of the community learn, then their performance in their jobs will improve, and this can be measured using the assessment procedures of the organisation, benchmarked against previous performance. It is, of course, assumed that improved skills among the Community members help the organisation of which they form part reach its goals.

In UNFOLD the context is very different. The members do not form part of a single organisation, and indeed are widely distributed geographically. Because the task being undertaken (implementation and use of the IMS Learning Design specification) is a new one, there is no established measurement technique, and no benchmark against which performance can be measured. Thus a key task in this document is to identify indicators, and to consider if any benchmarks can be identified.

Moreover, unlike the photocopier technicians and claims processors discussed above, it is not possible to establish an automatic link between learning in the community of practice and progress towards the goals of the project. This is because it would be possible for members to meet their own learning goals, and to improve their skills, without making a significant contribution to the project goal of accelerating the adoption of the IMS Learning Design specification. This linkage therefore has to be addressed in this evaluation plan.

Proper evaluation of Communities of Practice such as those supported by UNFOLD is consequently not simple. Their immediate outcomes are easy to observe and quantify in terms of meetings, exchanges, documents, etc. Their most significant outcomes, however, are intangibles – learning, knowledge, good practices, personal and organisational capabilities, described here as value to

members. They may also have further goals beyond these, as is the case in UNFOLD, which aspires to accelerate the adoption of IMS Learning Design.

A relevant body of research is that conducted by Preece and Nonnacke into the levels of participation in online fora and lists, and the factors which mould this. In (Nonnecke and Preece 2000) the authors report that a study of a busy software support community showed that 82% of members were *lurkers* (i.e. observing the community but not participating)., while in (Preece 2000) they show how that levels of lurking in online communities vary extremely, from 99% to 1%. They note that non-participation is may be the result of many factors, both personal and work related. They also stress that lurking can be a satisfactory form of participation for many users. A more recent study (Preece, Nonnecke et al. 2004) reaffirms and extends these conclusions.

(Preece and . 2001) suggests the following metrics, both for demographic studies and to assess the efficacy of community design.

Demography of participants:

Number of members/subscribers in the community

Number of posters by gender, age, occupation (i.e. demography)

Behavior online:

Number of posts per person, connect hours etc.

Number of posters over a period of time (e.g. access to web pages per month)

Number of lurkers – but it is hard to get this information.

Characteristics of interaction:

Number of posters by category of type of communication

Length of message

Number of messages in a thread

Number of threads

How much and what type of moderation?

These metrics will be taken into consideration in the design of instruments to evaluate the effectiveness of the UNFOLD CoPs (evaluation level 1)

(Saint-Onge, Wallace et al. 2003), p.188, also provide some guidelines, which while they are limited in scope provide some useful pointers.

- Establish a routine of seeking constant feedback. Welcome comments throughout the development process, not just at certain points along the way.
- Keep the channels open, acknowledging positive as well as negative comments. Be willing to meet concerns head on in order to make the community a better place for its members.
- Collect statistical data in order to create a baseline. When venturing into new territory, it's important to establish a baseline from the very beginning for measuring progress. ...
- Communicate results. Good news and bad news should be communicated to the various stakeholder groups. Include measures in regular forms of communications, such as newsletters, bulletin boards, and announcements. Did you know that...? Helps frame the progress on an ongoing basis.

As may be seen, these are principally concerned to gather evidence of the value of the community to participants, our Level 2. From these guidelines we note the importance of establishing a baseline at the start of the project, and the focus on gathering comments from users as a basis for establishing the value of participation, and indications of how support for the Community may be improved.

A highly successful project using Communities of Practice is Talking Heads, run by Ultralab⁸, an online learning community designed for use by head teachers in England. The evaluation work reported in (Ramondt, Chapman et al. 2002) focuses on two areas:

- a) How the Community of Practice was used by the members.
- b) The value of the Community of Practice to the use group.

In both these aspects the principal evidence consists of statements by members, gathered in various ways, which describe their activities in the Community and the benefits which have resulted.

The Star project is another educational Community of Practice, in this case oriented at science teachers. It is rather different from both Talking Heads and UNFOLD, in that it is a “blended” community, with on-line support for teachers who all live in the same city, and who can therefore meet regularly. In the case of UNFOLD some members of the community will meet regularly, though only at three monthly intervals, while others will never meet in person. The evaluation of the Star project is described in (Jones, McAndrew et al. 2004), an unpublished paper made available to the UNFOLD project by the authors. Like the Talking Heads project, they rely on the statements of participants to provide evidence of the value of the community, though in this case, perhaps because they are working with smaller groups of people, the case studies are more extensive and the feedback is more in depth.

In this plan we build follow these examples in seeking to build up a body of evidence of the value of the Communities of Practice to the participants. We augment this qualitative approach, however, by gathering quantitative data on levels of participation, and monitor the impact of the project in terms of its stated goals, i.e. supporting the adoption of IMS Learning Design.

⁸ <http://www.ultralab.net>

6. Indicators and benchmarks

In this section we extrapolate from the analysis of the areas to be evaluated, and identify indicators of success. These are the result of discussion between the project partners, and will enable us to focus the evaluation actions on relevant aspects of the project. Taking the three levels of evaluation in turn we specify the indicators, and describe the benchmarking difficulties.

Indicators for level 1: CoP effectiveness

The indicators for success in CoP effectiveness are largely quantitative.

- The number of people joining the CoPs
- The number attending f2f2 meetings/workshops
- The numbers participating in the online CoPs, and types of organisation, country they represent, their level of involvement with LD and the numbers of their products, designs, LD based learning events (over time)
- The number of exchanges on discussion forums, documents on web site, number of hits on web site
- The level of satisfaction of members regarding materials and resources

We do not know the size of the potential pool of participants (i.e. those interested in IMS Learning Design in Europe and around the world) and consequently we cannot establish a satisfactory level of participation. Nor do we know the degree of interest of those who register for the site, and so we cannot establishment a satisfactory level of participation for registered participants.

The concept of "community" is not easy to pin down, and less so in an on-line environment. Consequently it is not an easy matter to decide if a community has indeed formed. [Whittaker, 1997 #4]specifies five characteristics of online interaction which contribute to the creation of the phenomenon, which provide a structure for observation of community interactions.

1. A sense of community among the participants
2. Social networking: this may include, for example, an economy of 'public goods' in the form of exchanges of information
3. Shared discourse
4. Social control (for example control over undesirable behaviour)
5. Membership trajectories – involving patterns of participation and non-participation.

While the first point may seem to be self-referential, we understand it to mean that the participants state that they feel that a community exists.

http://dis.shef.ac.uk/stevewhittaker/community_sigchi97.html

Indicators for level 2: value to participants

Indicators for level 2 are of two types.

1) Objectively identified outcomes of project activities (e.g. problems solved, contacts made, actions taken...) These may be reported by participants, observed by project workers, or identified in studies.

2) Expressed perception of participants. The participants will be requested to report on the outcomes of the project for themselves as individuals, and, if appropriate for their organisations. The focus will be on identifying experience of the CoPs, in terms of their learning, knowledge, good practices, and personal and organisational capabilities.

There are no initiatives which are directly comparable to UNFOLD, and so there is no established level of user satisfaction, or standard instruments which can be used to establish these levels.

Indicators for level 3: impact on adoption

Our evaluation work should seek to determine if we are making a positive contribution to the adoption of standards, and on this basis we can make a recommendation as to the value of adopting CoPs for the implementation of other specifications and standards. This is particularly true because IMS are considering doing something internationally, and will be very interested in the results of what we are doing.

The indicators which we have identified are:

- The level of adoption of LD achieved during the project, in terms of implementations, plugfests, number of UoLs, and how often they are used with learners.
- The range of learning supported (pedagogical approaches, cultural diversity)
- If UNFOLD puts forward a proposal for revision of LD, that would be a strong indicator that the project has made a contribution to moving the specification forward.
- Practical interoperability of systems.

UNFOLD is involved in an innovative approach to the adoption of standards. Most specifications which have become de facto or actual standards have done so without the benefit of a coordinated approach to adoption. One exception is SCORM, which has had millions of dollars in funding through ADL to roll out the specification and support adoption, and because of this it is in some respects an appropriate yardstick for success. It should be remembered, however, that Learning Design is more complex specification, both for authoring and the creation of tools, and that the level of funding for SCORM is orders of magnitude greater than that which UNFOLD enjoys. Moreover it is only after some years of funded support that SCORM is now starting to enjoy widespread adoption. Consequently, despite the apparent parallels, SCORM does not offer a good benchmark for UNFOLD, except in as much as it demonstrates that the task being undertaken is extremely demanding, and that the success of SCORM has been at a very high price. No pro-rata figure for increase in adoption can be extrapolated, and indeed on this basis the conclusion may be drawn that, given the enormous funding provided for SCORM, any noticeable increase in adoption which could be ascribed UNFOLD would be a satisfactory outcome. We could also compare the adoption of Learning Design with that of unsupported specifications, although accurate comparison may be hard and remote. For example, the Wireless LAN 80211b specification has received support for information flows relating to the specification, but this is outside our area, and would need a benchmark which we do not have. Uncontrollable variables relating information flows include the workload of the user group, and on the existing links between members.

Benchmarking

Given the difficulties in finding appropriate benchmarks, this plan proposes to establish a baseline, and assess progress in relation to this. In doing so we follow the advice on evaluating Communities of Practice provided by (Saint-Onge, Wallace et al. 2003) above, *When venturing into new territory, it is important to establish a baseline from the very beginning for measuring progress*. This will be done for all levels of evaluations:

- CoP effectiveness: Level of participation after launch. Degree of participation. Number of members attending initial launch meeting. Method: analysis of servers and feedback from first meeting.
- Value to members: Levels of members use of IMS Learning Design, and their skills. Method: Questionnaires administered at first meeting and on-line.
- Impact on adoption: Level of adoption of IMS Learning Design at start of project. Method: a survey has already been carried out on tools implementation, and this has been discussed on-line on the UNFOLD server. This will be expanded to include UoPs implemented, and UoPs used with learners.

7. Evaluation framework

This section identifies scenarios to be evaluated, the techniques to be employed, and the actors who take part.

Scenarios to be evaluated

Discussion between partners led to the identification of the following scenarios for evaluation.

CoP effectiveness

- Perceived quality of awareness raising materials
- Usefulness of awareness raising materials
- Use of the UNFOLD as an information resource.
- Use of resources for each CoP
- Level of satisfaction with resources for each CoP
- Level of satisfaction with infrastructure provided for interactions
- Levels of activity in the on-line CoPs
- User group satisfaction with f2f meetings/workshops

Value to CoP members

- The usefulness of the CoPs to their participants and organisations
- CoP members' level of involvement with LD over the lifetime of the project.

Impact on adoption

- Level of adoption of LD achieved during the project
- Range of learning supported (pedagogical approaches, cultural diversity)
- Effectiveness of UNFOLD with respect to the adoption of LD

Evaluation methods

We use two well-established distinctions between types of evaluation methods.

Firstly, following the widely used distinction established in (Bhola 1990) we distinguish

- *Formative evaluation*: a method of judging the worth of a program while the program activities are forming or happening. Formative evaluation focuses on the process, and is valuable in raising the awareness of the participants regarding what they are doing, how they are progressing, and how improvements may be brought about.
- *Summative evaluation* is a method of judging the worth of a program at the end of the program activities. The focus is on the outcome, and on establishing the achievements of the project.

Secondly we distinguish qualitative and quantitative evaluation.

- In *quantitative evaluation* the emphasis is on numerical analysis by the evaluation team of observations and responses to instruments. Quantitative methods aspire to be objective, but have the drawback that many aspects of participation in UNFOLD are not easily addressed by such methods.
- In *qualitative evaluation* the focus is on aspects of the project which depend on the experiences of individual participants, particularly with regard to knowledge, attitudes and skills. The aspiration is not to achieve objectivity, but rather obtaining a rich picture of project activity and its achievements, accepting and indeed valuing the subjective nature of the evidence.

Given the focus on

Quantitative techniques

Log file analysis. Quantitative technique.

Log files analysis is a quantitative⁴ technique. Log files store information related to the actions which carry out in a web site. The type of information which can be analyzed includes the sections visited, the number of clicks, etc.

We plan to use log files to evaluate the use of the UNFOLD infrastructure. The log files will be created in the UNFOLD web site, and we will use them to evaluate, for example, how many resources have been consulted, what sections are the most visited, and patterns of use.

Structured Questionnaires.

Structured questionnaires are a quantitative evaluation technique which can be used either to obtain information from a very large numbers of users, or to capture in-depth information. Questionnaires are generally better for gathering unambiguous, factual data (which may also involve explicit metrics) than for opinions or descriptions that require explanation. Data can be gathered from each respondent in far less time than with an interview or focus group but there is a danger of low response rates from large samples, which may produce unrepresentative results. Questionnaires typically include both 'closed' questions, which allow only a limited range of answers, and 'open' questions with free-form results. These require more thinking and more time on the part of the respondent and are therefore less likely to be answered.

We plan to use structured questionnaires to evaluate UNFOLD events. They will also be used to evaluate the Web sites and their components (learning design resources, forums, etc) of the web site.

The in person administration of the forms will be at the in-person events.

The way in which the structured questionnaires will be administered is yet to be finalised. One option, which will be discussed at the Project Meeting in Barcelona, 7th December, is to persuade the members to respond to the questionnaire by restricting access to the site if they do not respond. Alternatively the criteria could be number of posts.

We can provide users with a number of opportunities to fill in the form before they are obliged to do so. Clearly, if we do this, it is essential that the form is quick and easy to complete.

Survey

Within the context of UNFOLD, a survey involves using the resources of the Web, email and libraries to establish as accurately as possible the state of adoption and implementation of IMS Learning Design. To increase reliability a protocol should be established, which will ensure a degree of internal consistency in the results over the period of the project.

Talk through

In this usability evaluation technique a small number of users are asked to carry out a set of defined tasks using a Web site or application. While they are carrying out the tasks the evaluation monitor asks them to verbalise what they are thinking, and the doubts they have about the application. A structured questionnaire is also administered. The session is filmed, and the results of the questionnaire combined with analysis of the users' interaction with the application. The result is a prioritised list of the most frequently occurring problems, with suggestions for solutions.

Qualitative techniques

Semi-structured interview.

The semi-structured interview is a technique which is frequently used in social communication. It will enable us to collect subjective data about the user such, such as work experience, opinions, feelings, suggestions, which are hard to obtain using other methods. It should be recognised, however, that quantitative data is not obtained, and that the results are difficult to generalise. We plan to conduct semi structured interviews with the different target users groups of UNFOLD: developers, learning designers and practitioners. These will enable us to establish how useful and effective UNFOLD is in addressing their various needs.

Usability inspection

In this technique a usability expert analyses an application or Web site, using a set of guidelines. It is also known as *heuristic analysis*. It is valuable for identifying severe usability problems, but is not appropriate for answering specific research questions. It depends substantially on the skill of the expert, and different experts may produce different results.

Focus group.

A focus group is a particular kind of interview, typically involving 6 to 12 participants and a moderator (Nielsen, 1993).. It is an open-ended group discussion guided by the moderator, which typically lasts at least an hour. Recording of the session is a substantial aid to analysis. The technique gives participants substantial control over the direction to be taken by the evaluation, as they outnumber the moderator, and this sometimes leads to unexpected results being uncovered. The participants also tend to provide checks and balances on each other, disagreeing with extreme views.

Observation of meetings

Notes will be taken of the proceedings of the meetings, and, if the attendees give permission, they may also be recorded, so that the content of the discussions is not lost. In this evaluation technique, however, we focus not on the content of the discussions, but on the types of input provided by the attendees (points of information, questions, suggestions to guide the community, etc.) and the interpersonal processes involved (how many people participate, the role of the facilitator, etc.). This technique can provide valuable feedback on the functioning of the CoP. It may be regarded as a simple form of ethnography.

It will be important to explain this action to all attendees, so that they are aware of the note taking and observation, and can approve or disapprove the process.

Case studies

A case study involves the development of detailed knowledge about a single case, in context, often using a variety of data collection techniques. This is likely to be outside the scope of the present evaluation. It is however, planned to gather a larger number of less detailed reports, in which a single participant explains the outcomes of participation in the project.

Actors in the evaluation

The evaluation leader is the UPF team. UPF will co-ordinate all the evaluation actions by defining the instruments and procedures to be carried out, circulating these documents to all the partners and reporting the results into Deliverables and internal documents. An evaluation work group will be formed, with one representative from each partner, to implement the UNFOLD Evaluation Plan. The evaluation workgroup will be constituted at the Barcelona project meeting, 7th September 2004.

The potential subjects in the evaluation studies are the members of the UNFOLD Communities of Practice, and, to a lesser extent, the project staff, particularly the facilitators.

FUPF will work closely with all the partners in order to achieve effective evaluation of the project. Partners FUPF, OUNL and Bolton Institute are all responsible for a Community of Practice each. Coordinated by FUPF, each partner will have responsibility for maintaining information on the user group corresponding to that CoP, and will liaise with the user group, to arrange evaluation activities.. Partners will also have responsibility for carrying out evaluation actions on the telematic infrastructure which they have developed and are using, with the support and assistance of the other partners and FUPF as coordinators.

Partner EUCEN has no responsibility for a Community of Practice, but may be called upon to make contact with their own user group of members.

The evaluation actions and reports will mainly be carried out and directed by designated evaluation monitors, who administer instruments, or conduct an observation. Each partner will also provide evaluation monitors to carry out evaluation actions as necessary

8. Detailed evaluation scenarios

In this section we take bring together the aspects of project evaluation identified above to define evaluation scenarios, which can guide the evaluation team in the creation of instruments to carry out the evaluation. We add additional elements, transforming the objectives into evaluation questions, and discussing benchmarks and timing, and discuss any anticipated problems to be overcome. We also combine some of the scenarios identified in the previous section in the interests of maintaining a concise structure. Not all the scenarios will be evaluated using all the techniques identified, as this would be too great a task for the resources of the project. This report will prioritise the evaluation questions and methods available and provide an initial timetable, to be revised at the Barcelona Meeting, 7th September 2004, and in the light of subsequent results.

Scenario 1: Effectiveness of awareness raising material and Web

In this scenario we evaluate the awareness raising materials and web. These are intended to raise the profile of both the project and the IMS LD specification. However, these material might be effective or ineffective in a number of different ways, such as, as indicated in the *questions to be answered* below.

Evaluation level	Level 1, CoP effectiveness
Actors involved	<ul style="list-style-type: none"> - Users interested in eLearning, but not members of CoPs (respondents) - CoP members (respondents) - evaluation team (design instruments and analyse results.) - facilitators (evaluation monitors)
Questions to be answered	<ul style="list-style-type: none"> - Are the resources and Web of good quality? - Do they meet the needs of the user group? - Are the resources and Web well designed and easy to navigate? - What additional materials or functionality would be valuable?
Indicators	<ul style="list-style-type: none"> - Frequency of use of the resources and Web, in terms of registered users. - Quality of awareness raising materials as reported by users - Feedback from users in both structured and unstructured contexts
Benchmarking	No benchmark available. Evaluated in terms of expressed satisfaction of user group.
Evaluation methods available	<ul style="list-style-type: none"> - Structured questionnaire - focus group at face to face meetings - (phone) semi-structured interviews (in case to holding a focus group is too difficult, we can conduct a phone interview with some of the users) - (e-mail) questionnaires (for the same reason) - Usability inspection - Talk through
Outcomes	The outcomes of this evaluation scenario will be principally formative, and will identify improvements which can be made to the awareness resources and Web.
Timing	Six monthly intervals. The timing depends to some extent on the rhythm of production of new materials, and the rate at which new users join.

Scenario 2: Resources for each CoP

This evaluation is distinct from Scenario 1, because both the users, the resources, and the use to which they are put are different. Each community of practice has its own resources which are particularly focused on the needs of that community. They are not intended to raise awareness of the project, but are rather the raw materials for the work of the CoP. It should be noted that to a substantial degree these resources will be the result of the work of the CoP. Consequently this evaluation is in part formative, that is to say, it is intended to guide the future development of the CoP as well as to assess the past, and this is reflected in the *questions to be answered*. It may also not be appropriate to include it in the first period of evaluation.

Evaluation level	Level 1, CoP effectiveness
Actors involved	<ul style="list-style-type: none"> - Members of each CoP (respondents) - evaluation team.(design and analysis of instruments) - CoP facilitator (evaluation monitor)
Questions to be answered	<ul style="list-style-type: none"> - Are the resources appropriate to the needs of members of the CoP? - Are the resources of good quality and clearly presented? - What additional resources would be valuable? - How should they be created
Indicators	<ul style="list-style-type: none"> - Frequency of use of the resources and Web, in terms of registered users. - Feedback from users in both structured and unstructured contexts
Benchmarking	No benchmark available. Evaluated in terms of expressed satisfaction of user group.
Evaluation methods	<ul style="list-style-type: none"> - questionnaire administered to participants after they have been participating for a time (at least one month) - focus group at face to face meetings - log files of access to resources
Outcomes	The outcomes of this evaluation scenario will be principally formative, and will serve to identify improvements which can be made in the resources provided for each CoP, and the way in which the resources are identified, created, posted and used.
Timing	<ul style="list-style-type: none"> - Quarterly meetings - regular administration of questionnaire to all new users (provisionally six monthly, but depending on response)

Scenario 3: Infrastructure provided for interactions

The on-line activities of the CoP will be mediated by a web site with conferencing facilities provided, and access to discussion materials, CoP documents, and resources. In this scenario we seek to establish if the solution which we have implemented is effective, and how it could be improved. We also evaluate the effectiveness of the technology used to support the CoPs. We plan to carry out some trials with varying structures and facilitation techniques to provide formative evaluation results.

Evaluation level	Level 1, CoP effectiveness
Actors involved	<ul style="list-style-type: none"> - CoP members and facilitators (respondents) - CoP facilitators (delivery of instrument to CoP members) - UNFOLD evaluation workgroup (development of instruments) - CoP infrastructure developers (receive results)
Questions to be answered	<ul style="list-style-type: none"> - Do the online facilities provided to the CoPs meet the needs of the CoP participants in their online activities? - Is the system easy to use? - Is the system hard to learn? - Is the system consistent? - Is the system well integrated? - What improvements could be made to the system? - How effective and usable is the technology used to support the CoPs
Indicators	<ul style="list-style-type: none"> - Expressed opinions of the users - Levels of use (although this is dependent on, for example, the selection of suitable topics, the success of awareness raising, etc.)
Benchmarking	No benchmark available. Evaluated in terms of expressed satisfaction of user group. Trials of revised infrastructure will use earlier results as a benchmark.
Evaluation methods	<ul style="list-style-type: none"> - permanent link for feedback on the site - focus group at face to face meetings - heuristic inspection - structured online questionnaires
Outcomes	The outcomes of this evaluation scenario will be principally formative, and will provide a framework for improving the infrastructure provided for CoPs as the project progresses.
Timing	<ul style="list-style-type: none"> - Heuristic inspection for each version of the system. - Open questionnaires with selected members at face to face meetings - Structured questionnaires can be combined with resources questionnaire

Scenario 4: Information flows in CoP

This scenario will enable us to monitor the levels of activity on the UNFOLD project servers, and the degree to which people are participating in on-line interactions. This will provide basic information, which then needs to be contrasted with results from other actions which provide evidence of the quality of the interactions and their consequences.

Evaluation level	Level 1: UNFOLD CoP effectiveness
Actors involved	- System administrator - Evaluation team
Questions to be answered	- How many people is the project reaching? - What is the geographic spread of participants? - What sectors do the participants come from? - What proportion of the participants are active, and to what extent? - How can the flows of information be characterised in terms of their social function and content? - How do changes in the structure of the infrastructure and facilitation interventions change the levels of information flows and their character?
Indicators	- Levels of activity in the on-line CoPs and face-to-face meetings.
Benchmarking	There is no benchmark for activity in CoPs. There is a quality / quantity problem. Small number of good quality interactions is better than many unproductive interactions. A high level of activity does not necessarily indicate success, and so results must be analysed in conjunction with Level 2 studies. We note that Nonnecke and Preece (2001) report that “Lurkers reportedly make up the majority of members in online groups and discussion lists In a logging study of 109 support DLs, we found that lurking varies for different DLs, ranging from as much as 99% to a low of 1%”
Outcomes	The outcomes of this evaluation scenario will provide valuable feedback to facilitators on the levels of activity in the CoPs, and the types of interactions. Comparison between the CoPs will enable the best practice from each CoP to be applied across the project.
Evaluation methods available	- analysis of records of CoP interactions (both online and face to face) - analysis of log files - data gathered on joining CoP - structured online questionnaires
Timing	6 monthly, to coincide with summaries of CoP activities

Scenario 5: User group satisfaction with f2f meetings/workshops

This scenario will enable the project team to assess how successful they have been in the organisation of face-to-face events, identify unmet needs, and plan for measures to improve performance. Observation of CoP proceedings will provide valuable feedback for facilitators, and can also be contrasted with on-line interactions.

Evaluation Level	Level 1: CoP effectiveness
Actors involved	Attendees at UFOLD f2f events (respondents) Evaluation team (design of instruments and analysis of results) CoP facilitators (evaluation monitors)
Questions to be answered	- Do the regular UNFOLD F2F events produce valuable outcomes for the participants? - Are the events well organized? How could they be improved? - Are the facilities satisfactory? How could they be improved? - Were the formal inputs (if any) valuable and interesting?
Indicators	Expressed opinions of participants
Benchmarking	No benchmark available. Evaluated in terms of expressed satisfaction of user group, and compared across events.
Evaluation methods available	Structured questionnaires Focus group Semi-structured interviews (phone) Observation of proceedings
Outcomes	The results from this evaluation scenario will be used to improve the quality of the service provided to the user group at each successive meeting. They will also provide a record of project achievement to be incorporated in the final evaluation report.
Timing	During and after each event

Scenario 6: The usefulness of the CoPs to their participants and organizations

It has been shown by experience in commercial organisations that activity in CoPs will only be condoned by employers if it is shown to be of value not only to individuals, but also to the organisation which pays the salary of the participant. This action will enable us to assess if participation in the UNFOLD project is effective these actors, and also provide the project with evidence which can be used to attract new members and to provide input into the sustainability plan.

Evaluation level	Level 2: Value to CoP members
Actors involved	<ul style="list-style-type: none"> - Members of each CoP (respondents) - CoP facilitator (administration of instruments) - UNFOLD evaluation team (designers of instruments, analysis of results)
Questions to be answered	<ul style="list-style-type: none"> - Have the CoPs opened up new possibilities for the participants? - What outcomes can be identified from participation in UNFOLD? - What has the balance been between effort put in and benefit received?
Indicators	<ul style="list-style-type: none"> - Identified outcomes of project activities (e.g. problems solved, contacts made, actions taken...) - Perception of participants
Available evaluation methods	Structured questionnaires Focus group Semi-structured interviews Analysis of CoP online interactions Observation of face to face meetings Short case studies
Outcomes	This scenario will result in two types of outcomes a) formative evaluation results will be reported to the CoP facilitators to help guide the CoPs towards activities which best meet the needs of the user group. b) provide a body of evidence will be gathered with which to assess the degree to which UNFOLD project activities have addressed the goals of the project.
Benchmarking	Cost benefit analysis UNFOLD activity. Comparison with other ways of achieving the same results (individual study and Web search, cost of training, consultancy, hiring staff, etc.)
Timing	Six monthly

Scenario 7: CoP members level of involvement with LD over lifetime of project

The pragmatic goal of the UNFOLD project is to accelerate adoption of the IMS LD specification. This will manifest itself at the level of CoP members in terms of a deepening level of involvement in Learning Design over the duration of the project. We are seeking an overview, and will combine this with illustrative case studies.

Evaluation level	Level 2: Value to CoP members
Actors involved	CoP members (respondents) Facilitators (evaluation monitors) Evaluation team (design of instruments, analysis of results)
Questions to be answered	- Have members made use of the opportunity to deepen their understanding of Learning Design, and to use it? - How has their level of involvement with LD varied over the lifetime of the project
Indicators	- Number and scale of Learning Design related activities reported by members - Level of understanding and adoption of the LD specification
Benchmarking	Current levels of implementation, adoption and understanding of the specification. Not all participants can be expected to show a pattern of increasing involvement, as many will join with a mistaken idea of what the project can offer, and what the relevance is to them. Nor is it possible to exclude other reasons for increasing involvement in IMS Learning Design. Because of this small scale case studies are important in establishing causality.
Evaluation methods available	- Structured questionnaires - Semi-structured interviews - Focus group
Outcomes	Reports on this scenario will be valuable to the project management team in assessing the degree to which the project is attaining its larger objectives, and will provide evidence of the value of the UNFOLD model for supporting specifications.
Timing	6 monthly, to coincide with summaries of CoP activities At the end of the project, as a summary

Scenario 8: Level of adoption of LD achieved during the project

In this scenario we address the same goal as Scenario 7, that is to say the increasing adoption of IMS Learning Design, but we address it not at the level of the individual, but rather at the industry and institutional level. The user group

Evaluation level	Level 3: Impact on adoption
Actors involved	CoP members (respondents) Facilitators (evaluation monitors) Evaluation team (creation of instruments, evaluation monitors, analysis) Project staff (surveys)
Questions to be answered	<ul style="list-style-type: none"> - To what extent has the UNFOLD project accelerated the adoption of LD in industries, universities, ...? - Which are the main problems which UNFOLD have found in carrying out these tasks? - How many tools (designs, unit of learning, ...) have been created since UNFOLD was launched? - How many plugfests have been held, and how satisfactory were the results - How many UoLs have been created, and often have they been used with learners - What kinds of pedagogical approaches have been undertaken? <p>Is there a relationship between cultural diversity and range of learning approaches? How great is it? Has it increased over the life of the project?</p>
Indicators	<ul style="list-style-type: none"> Number of implementations Number of plugfests Number of UoLs and their use Pedagogical approaches identified in UoLs and tooling Range of cultural diversity in UoLs and tooling
Benchmarking	The state of learning design at the start of the project
Evaluation methods	<ul style="list-style-type: none"> Structured questionnaires Interviews Focus group Survey of state of the art and number of implementations
Outcomes	Reports on this scenario will be valuable to the project management team in assessing the degree to which the project is attaining its larger objectives, and will provide evidence of the value of the UNFOLD model for supporting specifications. The reports will also be valuable in raising awareness of the project and its activities, and as inputs to the CoPs.
Timing	<ul style="list-style-type: none"> State of the art survey at start of CoP activities 6 monthly, to coincide with summaries of CoP activities At the end of the project, as a summary

Scenario 9: Effectiveness of UNFOLD with respect to the adoption of LD

In this evaluation scenario we draw together the results of the project, and evaluation work carried out throughout the project, to reach a summative conclusion on the effectiveness of UNFOLD and the approach which it has taken to adoption.

Evaluation Level	Level 3, impact on adoption
Actors involved	Evaluation team (design of evaluation action and instruments, analysis) Project staff (surveys)
Questions to be answered	<ul style="list-style-type: none"> - Is the model of supporting the adoption of an eLearning specification proposed by UNFOLD an effective one? - Which aspects of UNFOLD activity have been most effective in achieving these goals? - In what ways could the UNFOLD approach be improved?
Indicators	Results of UNFOLD project as analysed in previous evaluation actions.
Benchmarking	<p>Comparison of the effectiveness of UNFOLD with respect to the adoption of LD against ADL+ SCORM and against unsupported specifications.</p> <ul style="list-style-type: none"> - LIP is only supported by CETIS - SCORM supported by ADL. - IMS LD is supported principally by UNFOLD <p>This is complicated by many other variables, such as the quality of the specification, financial and organisational barriers to adoption, etc.</p>
Outcomes	A report on the effectiveness of the project. The audience for this report is not only the Commission, but also specification developing bodies such as IMS and CEN/ISSS.
Evaluation methods available	<ul style="list-style-type: none"> - Surveys - Cost / benefit analysis. - Analysis of UNFOLD evaluation results throughout the project, (in order to identify the most effective actions) - Focus group
Timing	End of project

9. Evaluation timetable and reporting

The timetable for UNFOLD evaluation is to some extent determined by the project structure. This sets out that phase two starts in month 6, when project infrastructure and resources have been prepared and work with users commences. There are then three six-month reporting periods, and at the end of each of these an evaluation report will be submitted. The final report will include overall conclusions from the evaluation.

The pattern of project activities will be similar for all three periods, and so it is inevitable that there will be some repetition of evaluation activities. Indeed this is desirable if we are to obtain information about changes in the performance of the project and the quality of its outcomes. However the pattern of activity will also change as the project progresses, with benchmarking actions at the start of the project to establish the current situation, a greater focus on formative evaluation in the middle section of the project, and an emphasis on summative evaluation at the end in order to provide an overview of project effectiveness.

In the following section a detailed plan is provided for the first period of evaluation work, from September to December 2004.

This plan is subject to review at the working meeting in Barcelona, 7th September 2004.

UNFOLD evaluation action plan 1 (September – December 2004)

<i>Action and lead partner</i>	<i>Place</i>	<i>Month</i>	<i>Scenarios addressed</i>	<i>Comments</i>	Tasks	<i>Days effort</i>
1. First structured questionnaire for CoP members FUPF	Barcelona event Online	9 - 11	1. Effectiveness resources 3 Infrastructure CoPs 4. Information flows (user information) 5. Satisfaction with f2f meetings 6. Value to participants 7. Level involvement with LD 8. Level of adoption 9. Identify UoLs	We wish to avoid overloading the members with questionnaires, so this questionnaire will include a wide range of questions. If the questionnaire is too long or time consuming, some of these may have to be dropped.	Develop instrument and trial Administration in Barcelona Online administration Analysis and reporting	2 1 2 2
2. Observation at Barcelona meeting FUPF	Barcelona event	9	1. Effectiveness awareness raising resources 3 Infrastructure CoPs 4. Information flows (user information) 5. Satisfaction with f2f meetings 6. Value to participants 7. Level involvement with LD 9. Identify UoLs	An evaluation monitor will be present at all sessions to note down key interactions. If participants are willing an audio recording will be made of all sessions, to provide back up and confirmation of the observers report. The report will be posted for approval by participants prior to publication. Information will be gathered which may be of use in all the scenarios in the previous column, but the focus of this action is principally on information flows.	Preparation Observation Analysis and report writing	1 3 2
3. Focus group at Barcelona meeting FUPF	Barcelona event	9	1. Effectiveness resources 3 Infrastructure CoPs	This focus group will consist of a short plenary session in which feedback is obtained from members present at the meeting.	Preparation Analysis and reporting	0,5 1

4. Usability inspection of www.unofld-project.net	online	9	3. Infrastructure for CoPs	This action is intended to identify any major usability actions which there may be, and so indicate priority areas for action.	Preparation Inspection Analysis and reporting	1 1 1
FUPF						

<i>Action and lead partner</i>	<i>Place</i>	<i>Month</i>	<i>Scenarios addressed</i>	<i>Comments</i>	<i>Tasks</i>	<i>Days effort</i>
5. Benchmark studies Bolton	online	9-10	7. Level of members involvement 8. Level of adoption achieved	These studies will establish the baseline of use of IMS LD, and provide a benchmark for future evaluations.	- Literature search - Web search and preparation of working notes - Mail and phone contacts with experts - Analysis and report writing	1 2 2 3
6. Usability trials of www.unfold-project.net	Barcelona	10-11	1. Effectiveness awareness raising resources 3 Infrastructure CoPs	These trials will provide in depth feedback on the usability of the main UNFOLD web infrastructure, and priorities for action.		
7. Log analysis of use of UNFOLD servers FUPF, OUNL	Online	10 (trial) 12	1. Awareness resources 3. Infrastructure CoPs 4. Information flows	Results from all three project servers will be obtained and collated	Planning Implementation of mechanisms Analysis	1 3 2
8. Semi-structured interviews with members FUPF	UNFOLD events and telephone	9-12	1. Effectiveness awareness raising resources 3 Infrastructure CoPs 5. Satisfaction face to face 6. Value to members 7. Level of involvement with LD	The practicality and methodological coherence of this technique has been questioned for the context of UNFOLD, and will be reviewed at the project meeting, 7 th September.	- Preparation and identification of respondents - Arranging and carrying out interviews - Analysis and report writing	1 2 3
9. Observation at Berlin meeting	Berlin meeting	12	1. Effectiveness awareness raising resources 2. CoP resources	An evaluation monitor will be present at all sessions to note down key interactions. If participants are willing an audio recording	Preparation Observation Analysis and report	1 3 2

FUPF			3 Infrastructure CoPs 4. Information flows (user information) 5. Satisfaction with f2f meetings 6. Value to participants 7. Level involvement with LD 9. Identify UoLs	will be made of all sessions, to provide back up and confirmation of the observers report. The report will be posted for approval by participants prior to publication. Information will be gathered which may be of use in all the scenarios in the previous column, but the focus of this action is principally on information flows.	writing	
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<i>Action and lead partner</i>	<i>Place</i>	<i>Month</i>	<i>Scenarios addressed</i>	<i>Comments</i>	<i>Tasks</i>	<i>Days effort</i>
10. Focus group at Berlin meeting FUPF	Berlin meeting	9	1. Effectiveness resources 2. CoP resources 3 Infrastructure CoPs	This focus group will consist of a short plenary session in which feedback is obtained from members present at the meeting.	Preparation Analysis and reporting	0,5 1
11. Structured questionnaire OUNL	Berlin	12	1. Effectiveness resources 2. CoP resources 3 Infrastructure CoPs 4. Information flows (user information) 5. Satisfaction with f2f meetings 6. Value to participants 7. Level involvement with LD 8. Level of adoption 9. Identify UoLs		Develop instrument and trial Administer Analysis	3 1 1
UNFOLD evaluation plan				This UNFOLD evaluation plan, D3	Research, planning, consultation, writing	20
Coordination				Day to day management and coordination of the evaluation process	Coordinating, organising, monitoring	

FUPF					and assessing on-going evaluation work. Planning for the next phase	20
Report writing FUPF and all partners		13		A report on the work carried out in this phase of evaluation will be prepared for month 13, January 2004	Coordination and compilation of results Analysis Report writing Revision by all partners	2 1 2 2
					Approximate total effort	97

UNFOLD evaluation action plan 1 in the context of the whole evaluation

Effort

The total effort for evaluation in UNFOLD is planned to be as follows:

Planned person months for Workpackage 6, Evaluation					
	FUPF	OUNL	Bolton Institute	EUCEN	Total
WP 6 Evaluation	10	3	5	0	18

FUPF has the majority of the effort, and this is reflected in the leadership of planned evaluation work.

There is a total of 18 months effort for this workpackage, which will be distributed approximately equally, but with an intensified effort in the final period. This gives an approximate 110 working days on evaluation in each period. The anticipated effort for this present action plan is 97 days, leaving some margin for error and changes.

Evaluation periods 2 and 3

Following review of the evaluation work in this period, a new evaluation action plan will be produced for the following 6-month period. Six months later the final evaluation action plan will be produced.

This approach to planning will enable the project to respond to the developing evaluation needs.

The framework of evaluation levels and scenarios provided in this document, however, provides an overarching structure which will ensure that the coherence evaluation process is maintained, and that it remains focused on the priority areas identified for evaluation.

It may, nevertheless, be foreseen that many key elements of this evaluation plan will also feature in future plans, in particular the structured questionnaires and evaluation of face-to-face events. It is also foreseen that the final plan will include a focus on the impact of the project on adoption, as is set out above in this plan.

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