

# CPD*Lab*

Continuing Professional  
Development *Lab*

## D3.1 Course Validation Protocol

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FINNISH NATIONAL  
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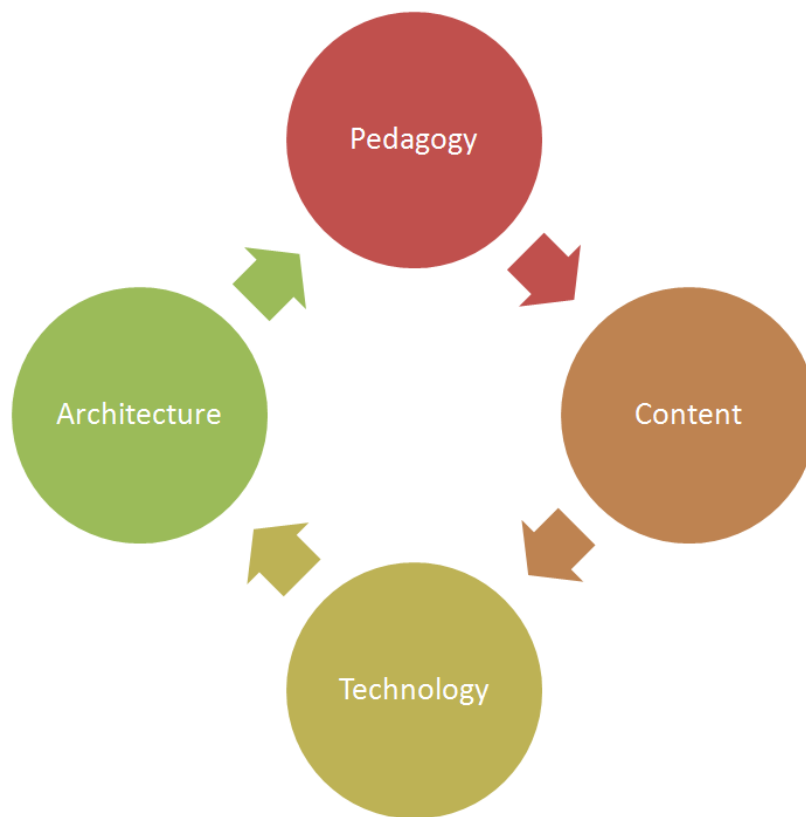
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Version control change history:

Version	Main Changes	Release date:
Version 1	First release	5 <sup>th</sup> April 2012
Version 2	Updated following testing of validation instruments with expert teachers, with refinement to instruments at course level.	6 <sup>th</sup> June 2012

## COURSE VALIDATION PROTOCOL MODEL

The course validation protocol model that INDIRE proposes, according to the task foreseen in WP3, is a framework based on four main pillars: Pedagogy, Architecture, Content and Technology (TPACK: “Technological, Pedagogical, Architectural, and Content Knowledge”). The framework is an adaptation of the original TPACK<sup>1</sup> model (Mishra & Koehler, 2006) integrated on the basis of the INDIRE experience in leading teacher addressed training initiatives.



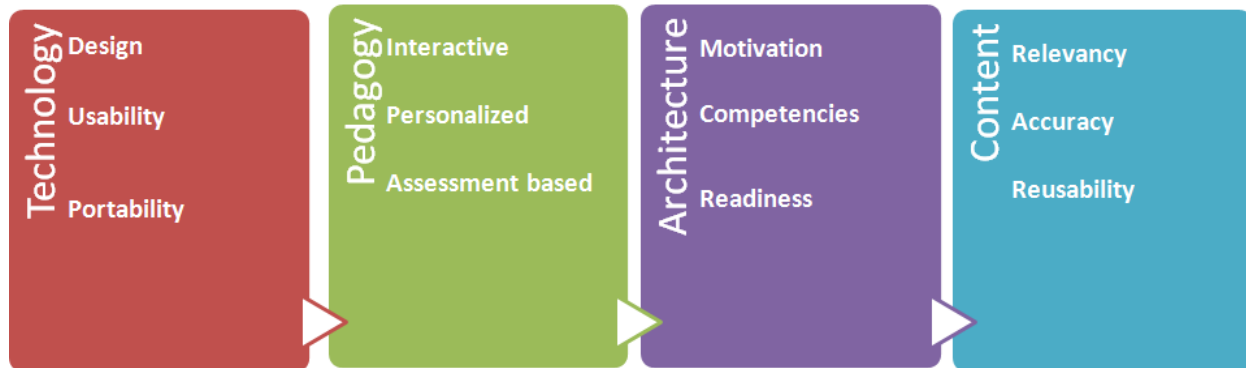
The four pillars break-down into specific indicators. Those indicators represent the overall validation framework that can be further detailed when building the operative tools that will be used to gather feedback by focus group teachers and provide input for the improvement of the training course structure and content.<sup>2</sup>

<sup>1</sup> The original model is defined by Punya Mishra and Matthew J. Koehler and based on “the understanding that teaching is a highly complex activity that draws on many kinds of knowledge. Teaching is a complex cognitive skill occurring in an ill-structured, dynamic environment” (Mishra & Koehler, Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge, in Teachers College Record Volume 108, Number 6, June 2006, pp. 1017-1054).

<sup>2</sup> The training course course comprises a number of training *modules*, which comprise a structured set of training material/tools addressed to a target of trainees in order to support the development of certain competences and to allow the achievement of training aims and objectives. Every course is divided in

## VALIDATION PILLARS

According to previous experience in designing and delivering professional development courses, the balanced mixture of the above pillars guarantees both the quality of the course and its effectiveness in terms of teachers competences and change in their attitudes towards the ICT in everyday teaching practice.



The four pillars are described below:

- **Technology** (referred to the technological requirements of the training course). Indicators that refer to the training models, content and of the course.
- **Pedagogy** (referred to teachers practice and students learning strategies). Indicators that refer to the capacity to support and develop ICT enhanced innovative pedagogies that are flexible and effective and that foster change.
- **Architecture** (referred to course instructional design: structure, designs and materials of the training course). Indicators that refer to the capacity of the overall professional development course to effectively involve the trainees in order to achieve the objectives.
- **Content** (referred to the training materials). Indicators that refer to the quality of the materials that are included in the overall training offer.

In this specific context (only for the pedagogical pillar) we consider four general principles that drive the definition of specific pedagogy related indicators. The four principles should be considered as follows:

- **Effectiveness.** Capacity to enhance students learning attention, motivation and outcomes.
- **Change.** Capacity to support reflection-in-action on professional experience and potentially change the teaching practice.
- **Innovation.** Capacity to support the design and development of new learning strategies in the light of the educational potential of a range of available ICT enhanced teaching/learning aids and tools.

modules that are provided within a certain amount of time (i.e. a five days training course could be divided into five half-a-day or ten one-day modules). The number of modules depends on the training course outline proposals.

- **Flexibility.** Capacity to support the design of personalized learning paths and adapt learning strategies according to different learning context, targets and objectives.

The pedagogical pillar is fundamental to each of the courses.

In the IWB course it refers to competencies of the teacher to use the Interactive Whiteboard to develop effective and innovative learning strategies not only in a whole class teaching approach but also to explore innovative pedagogies across ICT enhanced classroom environments.

In the Future Scenarios course the pedagogical pillar is fundamental to enable the teacher to understand the educational scenarios concept and the learning stories approach and to design and implement related innovative learning activities.

In the eSafety course the pedagogical pillar applies both to inform the training itself, and to enable teachers to understand different ways to communicate and apply this learning to their students.

In order to test the presence of the four components in the CPD lab course proposal, we propose that both the teachers' focus groups (development and validation) analyze them through specific tools. In the following parts we suggest a range of indicators that will be adapted and further developed in operative input/feedback instruments (for the course development focus group) and validation tools (for the course validation focus group).

## SPECIFIC INDICATORS

### Technology

Some technological requirements need to be considered in the validation process in order to guarantee the efficient and effective access and usage of the materials and tools. The following indicators should be considered:

- **Design.** The tools and materials should be effectively designed in order to easily understand the structure and the organization of the training offer.
- **Usability.** Everybody should be able to access the training environment, use the tools and the activities. The interface should be clear and it should be easy to browse content and search information. It should be easy to understand what the tools are provided for.
- **Portability.** Training materials should be portable. It should be possible to use them in a flexible way and in different contexts.

### Pedagogy

The course should promote innovative pedagogies and effective and flexible teaching practice. For that purpose a range of indicators are listed below.

- **Interactive.** The course enhances cognitive interactive learning providing learning contexts different from the traditional talk and chalk lecture where the teacher explains in a one-way communication flow. Interaction can be enhanced through different approaches. In particular three sub-topics should be considered:
  - **Active.** The course supports an active pedagogy and a student centered approach. This can happen through different learning strategies that help the student to be an active protagonist of his knowledge-building process and to take responsibility for it (i.e. problem based approach, project-based activities, learning by exploration, guided discovery, trial and errors, creativity based strategies ect.).
  - **Authentic.** The course supports authentic learning by connecting the new knowledge to authentic situations and the students real life experience.
  - **Cooperative.** The course proposes cooperative learning approaches. That means that besides the whole class learning activities the teacher should be able to design different learning activities for peers and small groups where problems are faced together, work is organized and distributed and decisions are made through a negotiation process.
- **Personalized.** The course supports the teacher to develop learning customization competencies. The teacher should be able to design personalized learning paths considering different cognitive paces and learning styles of the students.
- **Assessment based.** The course should link the learning activities to different assessment methods and tools.

## Architecture

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In order to provide an effective constructivist adult oriented training approach a range of indicators have been defined<sup>3</sup>:

- **Motivation.** The training modules and the structure of the course provide the necessary internal motivation (i.e. it provides visible added value to be spent in everyday teaching practice or professional career).
- **Competencies.** The training activities link the competencies to be developed to the concrete professional experience of the trainees. It provides opportunity to learn from errors. Linked to this topic, two specific sub-topics should be considered if applicable:
  - **Need to know.** The course structure and materials enable the teachers to know the reason for their professional development.
  - **Self-concept.** The participants are involved in the planning and evaluation of their own instruction. They are made responsible for their decisions.
- **Readiness.** The proposed subjects, activities, training materials, case studies or problem solving contexts have immediate relevance to the work and/or personal life of the teachers. The proposed training activities are problem-centered rather than content-oriented.

## Content

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This pillar is referred to the training materials. Indicators refer to the quality of the materials that are included in the overall training offer:

- **Relevancy.** The content is consistent with the general course objectives/modules.
- **Accuracy.** The content is well written, balanced and correct from a scientific perspective. That is one of the most important indicators since it measures the reliability of the information delivered by the resource.
- **Reusability.** The content can be reused both under a technological point of view as well as in a content oriented perspective. The content is available for use, namely it is license-free or under creative commons license.

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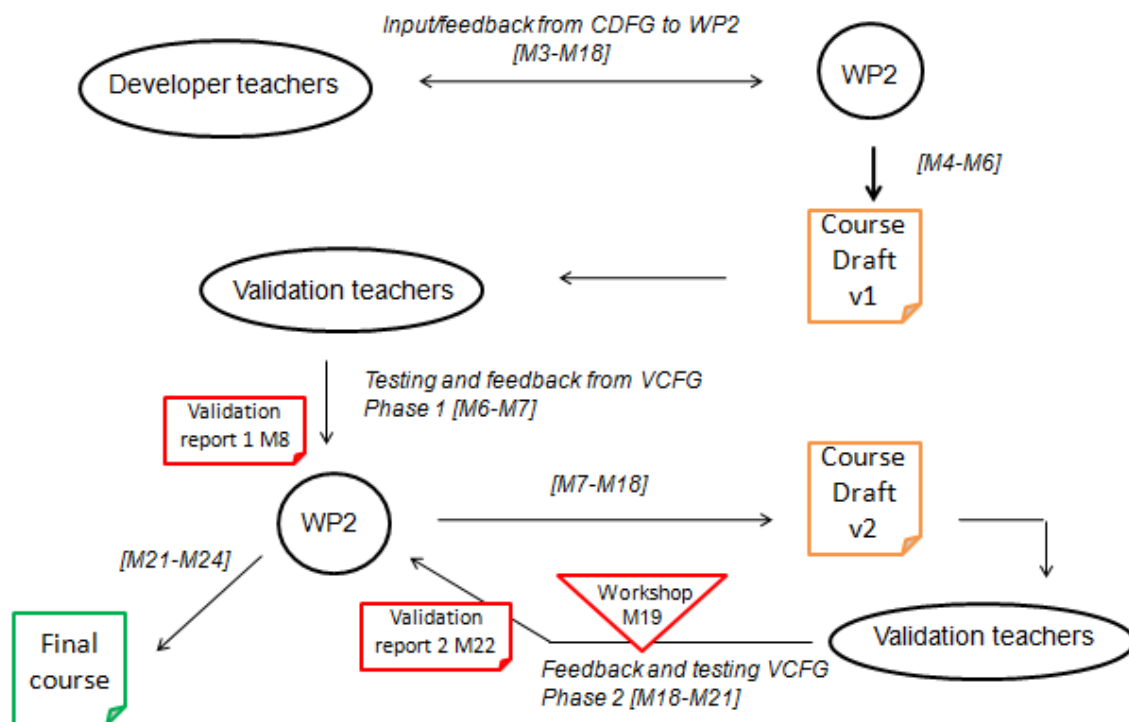
<sup>3</sup> The indicators have been defined adapting Knowles' theory principles on motivation of adult professionals in learning/training contexts (Knowles, M.. The Adult Learner: A Neglected Species, Gulf Publishing, Houston, 1990) to the specific requirements of the CPDLab courses.

## WORK FLOW

The workflow is developed within the project work plan. After the initial structure and topics of the courses are defined and some initial modules are developed an iterative development process involving focus group teachers is set up. The process proceeds through face-to-face meeting, conference calls and online feedback from these teachers.

Teachers in the Course Development focus group work in an iterative manner with project partners to design the structure for each course, and provide input to and feedback on the development of initial and final course modules.

Using the validation protocol, teachers in the Course Validation Focus Group provide feedback on the final modules produced for each course including recommendations for adaptations to these modules. This work includes organization of a five-day course validation workshop in M19 involving project partners and focus group teachers. The overall flow is described in the picture below which shows the input from the developer focus group feeds into the course development work package (WP2). This feedback contributes to the updating of the course drafts, which are then in turn reviewed with the course validation teachers.





## APPLICATION TOOLS

As the effectiveness of the face-to-face meetings is also based on the quality of the distance collaboration among the course development and validation focus group teachers it is strongly suggested to use cloud based collaboration tools during the iterative process. That should avoid many of the technical problems related to the use of different platforms and enable the teachers to know each other, exchange feedback, get to know the materials they are asked to validate and therefore lay the foundations of a efficient and effective face-to-face seminar.

### Tools for online collaboration

**Videoconference tool.** Suggested for synchronous online meetings in the most critical/important phases of the analysis and validation process. The chosen tool (i.e. Skype, Flashmeeting, Elluminate, most appropriate tool to be selected) should enable the distance connected teachers to share local computer screens in order to navigate (through the guidance of one member of the group) the online training materials and the platform in real time.

**Content share environment.** Suggested to work cooperatively in asynchronous mode (in order to enable time flexibility) on share documents (i.e. Google Docs).

**Social environment.** The use of an integrated social network is suggested to integrate the different collaborative components in a unique environment and exchange ongoing inputs, feedbacks and information about the ongoing process. I.e. the Google Plus social network enables the participants to create private (working) circles (not accessible to external users) and to integrate the Google collaborative tools and videoconference hang-outs.

### Tools for course validation

**Multiple choice questionnaires.** Questionnaires can be used to gather quantitative feedback on the validation indicators. Those tools are addressed individually to each validation teacher that will be able to answer on the basis of his expertise and competencies. I.e. a tool like Google Module can be easily used and works out immediate statistics.

**Open ended Interviews.** Short open interviews could be used to gather deeper feedback on specific aspects. Validation teachers can experiment different training materials themselves and provide feedback. Questions should be a limited number and focus on very strategic aspects (such as possible course-breakers).

**Checklists.** The interviews/questionnaires should be accompanied by a checklist to gather more specific feedback on very specific yes/no answers. The checklist can be used to further develop specific aspects of the main indicators

**Focus group.** The previous tools can be used individually online by each validation teacher in his own country or, with adequate adaptation, in the face to face meetings. Focus groups involve the whole validation team and bring together different backgrounds and experiences towards a common aim. This should be performed mainly in the face-to-face meetings.

**Informal reviews.** Videoconference tools and forum can be used as informal ongoing validation tools to exchange feedback before face-to-face meetings or after specific testing or experimentation activities performed in different countries.

The validation process includes two phases: phase 1 [M6-7] and phase 2 [M18-21]. The online tools are used to provide ongoing feedback and provide recommendations for adaptation of modules or specific materials (i.e. on the initial modules). They can be partly used also in preparation of the five-days validation workshop [M19].

During the final five days workshop project partners and focus group teachers work together to finalize a collective validation feedback that will be used for the final elaboration of the courses.

Validation reports are scheduled by the end of phase 1 [M8] and phase 2 [M22].



## ANNEX 1: COURSE DEVELOPMENT INSTRUMENTS

### Course Feedback Form [CDI1]

The Course Development Focus Group feedback form is used by the selected teachers to provide input to WP2 in order to develop training courses with adequate quality levels.. The online electronic form will be used in **phase 1 and phase 2** by the Course Development Teachers (see “Timeframe and type of development instruments”).

Course Feedback form [CDI1]						
Name and surname of the teacher						
Type of course		Interactive Whiteboard				
		E-Safety				
		Future Scenarios				
		Low	<	<	<	High
		1	2	3	4	5
Are the goals and the outcomes of the course clear?						
Is the description of the course easy to understand?						
Is the course relevant to my professional responsibilities?						
Is the course content relevant to my future professional aspirations?						
Will the outcomes I achieve enhance my students learning?						
Overall how would you rate the overall quality of the course?						
Name three things you liked the most about the course?	a)					
	b)					
	c)					
What are the three things that you think need to be changed/revised?	a)					
	b)					
	c)					

<p>Please state any existing material that you know of, that should be included or is relevant for the course?</p>		
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## Content Input Form [CDI2]

The Course Development Focus Group content input form is used as a checklist to guide the discussion on the training materials and provide input to the course content development process and will be used during the group discussions. The final results of the discussion will be gathered through the collaborative feedback form. (see “Timeframe and type of development instruments”)

<b>Content input Form [CDI2]</b>	
Name and surname of the teacher	
Type of course	Interactive Whiteboard
	E-Safety
	Future Scenarios
Topics to be covered during the focus group discussion:	
<b>Technology</b>	
The tools/materials should be effectively designed and it should be easy to understand what it should be used for	
The materials/tools information should be easy to access and it should be easy to understand how to use it	
It should be possible to use the materials/tools in a flexible way and in different contexts	
<b>Pedagogy</b>	
The materials/tools should enhance the students’ learning experience	
The materials/tools should enable teachers to personalize their approach referring to the students’ different learning styles	
Where applicable the tools/materials should be adequately linked to assessment tools/methods	
<b>Architecture</b>	
The materials/tools should motivate and actively involve the teachers	
The materials/tools should link the competencies to the concrete professional experience of the teachers	
The materials/tools should be linked to teachers’ concrete professional context	

<b>Content</b>	
The materials/tools should be relevant to the outcomes of the module	
The content should be well written, balanced and reliable	
The content should be easily reusable	
The content should be easily understood and comprehensive	

## Feedback Form [CDI3]

The Course Development Focus Group needs to provide a concrete feedback on the analyzed content. Therefore the focus discussion should be finalized and synthesized through a common electronic form. For each topic the group should come to a shared feedback through a negotiation process (one appointed teacher fills the form on behalf of the whole group). The aim of the form is to provide a clear unique feedback for each course version that will be available in the **phase 1 workshop in Bruxelles**. A unique filled form will be delivered for each of the three training courses to WP2 at the end of the workshop (see “Timeframe and type of development instruments”).

Content feedback form [CDI3]						
Name and surname of the teacher						
Type of course	Interactive Whiteboard					
	E-Safety					
	Future Scenarios					
<b>INDICATOR</b> (Ref CDI2 for definitions)		<b>POSITIONING</b>				
<b>TECHNOLOGY</b>						
<b>Design</b>	Weak	1	2	3	4	Effective
<b>Usability</b>	Confusing	1	2	3	4	Clear
<b>Portability</b>	Linked to a specific context	1	2	3	4	Portable

PEDAGOGY						
<b>Interactivity</b>	Teacher-centred	1	2	3	4	Student-centred
<b>Personalization</b>	Undifferentiated	1	2	3	4	Customizable
<b>Assessment based</b>	disjointed	1	2	3	4	Linked to assessment

ARCHITECTURE						
<b>Motivation</b>	Boring	1	2	3	4	Engaging
<b>Competencies</b>	Knowledge-based	1	2	3	4	Competence-based
<b>Readiness</b>	Not relevant to professional responsibilities.	1	2	3	4	Relevant to professional responsibilities

CONTENT						
<b>Relevancy</b>	Not relevant to the outcomes	1	2	3	4	Relevant to the outcomes
<b>Accuracy</b>	Unreliable	1	2	3	4	Reliable
<b>Reusability</b>	Not reusable	1	2	3	4	Reusable
<b>Comprehensive</b>	Contains gaps which are important to cover	1	2	3	4	Comprehensive

Please describe how you can improve the aspects that have been rated with score 1 or 2 and what additional materials/tools you	
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suggest to add/insert	
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## Timeframe and type of development instruments

Timeframe, type of instrument, type of input and expected result are described in the table below.

### Course Development - Timeframe and input instrument

WP 2 Course Development	Type of input	Timeframe	Instruments	Result
First modules (phase 1)	Face-to-face Workshop Bruxelles	16/17 April 2012	Content input Form (only to guide discussion) [CDI2-paper format], Content Feedback Form [CDI3-digital format]	1 group feedback [CDI3] for each of the three courses
Module development (phase 1)	Electronic / online	May to September 2012	Module Feedback Form [CDI1-digital format]	1 feedback form [CDI1] for each course filled by each of the group members
Course modules (phase 2)	Electronic / online	October to June 2013	Feedback Form [CDI1-digital format]	1 feedback form [CDI1] for each course filled by each of the group members

## ANNEX 2: COURSE VALIDATION INSTRUMENTS

### Course Validation Checklist [CVI1]

The Course Validation group provides feedback on the modules produced for each course including recommendations for adaptations to these modules. In the **first and second online validation phase** the teachers of the validation group meet online using a videoconferencing tool to brainstorm, discuss qualitative aspects and agree on the feedback deadline. A feedback is provided individually through the following online instrument.

Course validation feedback form (to be applied to each of the three courses)			
Name and surname of the teacher			
<i>For each course check the most appropriate validation option. In case of red or yellow light please write a short comment on how to implement the module.</i>			
Courses		Changes needed	Minor adaptation
Interactive Whiteboard (title)		Changes needed	Minor adaptation
Comments (max 300 characters)			
E-Safety (title)		Changes needed	Minor adaptation
Comments (max 300 characters)			
Future Scenarios		Changes needed	Minor adaptation
Comments (max 300 characters)			

### Course Validation questionnaire [CVI2]

In the **first and second online validation phase** together with the online validation checklist the teachers of the Validation Group need to provide individually additional information on each of the three courses general structure through an online questionnaire (see “Timeframe and type of validation instruments”).

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<b>Feedback on the general structure of the courses</b>	
Name and surname of the teacher	
<b>Interactive Whiteboard course</b>	
What are the three things you liked the most about the course?	
What are the three things that you think need to be change/revised?	
<b>E-safety course</b>	
What are the three things you liked the most about the course?	
What are the three things that you think need to be changed/revised?	
<b>Future scenario course</b>	
What are the three thing you liked the most about the course?	

<p>What are the three things that you think need to be changed/revised?</p>	
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## Focus outline [CVI3]

The outline is used by the validation groups as an open screenplay during the **five days workshop**. The questions are only a guide to orient the discussion on focusing on relevant course topics. They will be integrated and enriched by the participants during the workshop discussion. During the validation the whole group is divided into three smaller groups each of them validating one of the three courses. At the end of the three days every group has tested the three courses (see “Timeframe and type of validation instruments”).

<b>Interview</b>	
Type of course	Interactive Whiteboard
	E-Safety
	Future Scenarios
<b>Technology</b>	
Design	Is the module effectively designed in order to easily understand what it should be used for?
Usability	Is the module easy to access and navigate?
Portability	To which extent is the module portable and adaptable?
<b>Pedagogy (do not apply in case of e-safety course)</b>	
Interactive	Does the module enhance your students’ learning experience? Does it support a student-centred approach?
Personalized	Is the module compatible with the students different learning styles?
Assessment based	Is the module linked to assessment tools or measures?

<b>Architecture</b>	
Motivation	Is the module proposal motivating for the teachers?
Competencies	Does the module support new competencies that are relevant for teachers' aspirations?
Readiness	Is the module linked to teachers' professional contexts and responsibilities?
<b>Content</b>	
Relevancy	Is the module consistent with the module objectives?
Accuracy	Is the content well written, balanced and reliable?
Reusability	Is the module reusable in contexts other than the current course?
Comprehensive	Is the module content comprehensive considering the outcomes of the course?

## Small Group validation feedback form [CVI4]

To shape the final feedback of each group **during the workshop** the following form will be used by the group leader to gather the group's feedback and finalize the results. The aim of the form is to provide a clear unique feedback for course. Every group uses the following form to validate one specific course (see "Timeframe and type of validation instruments").

Course group feedback form						
Name and surname of the teacher						
<b>MODULE</b>	<b>RATING</b>					
Interactive Whiteboard	Unsatisfactory	1	2	3	4	Satisfactory
<b>Comments</b>						
E-Safety	Unsatisfactory	1	2	3	4	Satisfactory
<b>Comments</b>						
Future Scenarios	Unsatisfactory	1	2	3	4	Satisfactory
<b>Comments</b>						

## Whole Group feedback form [CVI5]

At the end of the **five days validation workshop** the Course Validation Focus Group provides a unique feedback on each course. That feedback includes:

- A rating score 1 to 4 for each module
- A comment for each module
- General feedback on the overall course

For that purpose the following form is used by one moderator to gather the final negotiated feedback from the whole workshop validation group.

Course	Module	Score				Comment
<b>Interactive Whiteboard</b>	Module 1	1	2	3	4	
	Module 2	1	2	3	4	
	Module 3	1	2	3	4	
	Module 4	1	2	3	4	
	Module N...	1	2	3	4	
	General feedback on the course					
<b>E-safety</b>	Module 1	1	2	3	4	
	Module 2	1	2	3	4	
	Module 3	1	2	3	4	
	Module 4	1	2	3	4	
	Module N...	1	2	3	4	
	General feedback on the course					
<b>Future scenarios</b>	Module 1	1	2	3	4	
	Module 2	1	2	3	4	
	Module 3	1	2	3	4	
	Module 4	1	2	3	4	

	Module N...	1	2	3	4	
	General feedback on the course					



## Timeframe and type of validation instruments

Timeframe, type of instrument, type of input and expected result are described in the table below.

### Course validation - Timeframe and review instrument

WP 2 Course Development	Type of input	Timeframe	Instruments	Result
First modules (phase 1)	Electronic / online	September to December 2012	Course validation checklist [CVI1-digital format], Course validation questionnaire [CVI2-digital format]	1 feedback [CVI1+CVI2] for each of the three courses completed by each teacher
Course modules - draft (phase 2)	Electronic / online	September to December 2012	Course validation checklist [CVI1-digital format], Course validation questionnaire [CVI2-digital format]	1 feedback [CVI1+CVI2] for each of the three courses completed by each teacher
Course modules – final versions (phase 2)	Electronic / online	January to June 2013	Course validation checklist [CVI1-digital format], Course validation questionnaire [CVI2-digital format]	1 feedback [CVI1+CVI2] for each of the three courses completed by each teacher
Courses (phase 2)	Face-to-face	5 days Workshop in Bruxelles, April 2013	Focus outline [CVI3-paper format], Small group validation feedback form [CVI4-paper format], Whole group feedback form [CVI5-digital format]	One unique feedback [CVI5] of the whole focus group on each of the three courses