Tutorial: Training classroom teachers to use a Virtual Learning Environment - Handouts
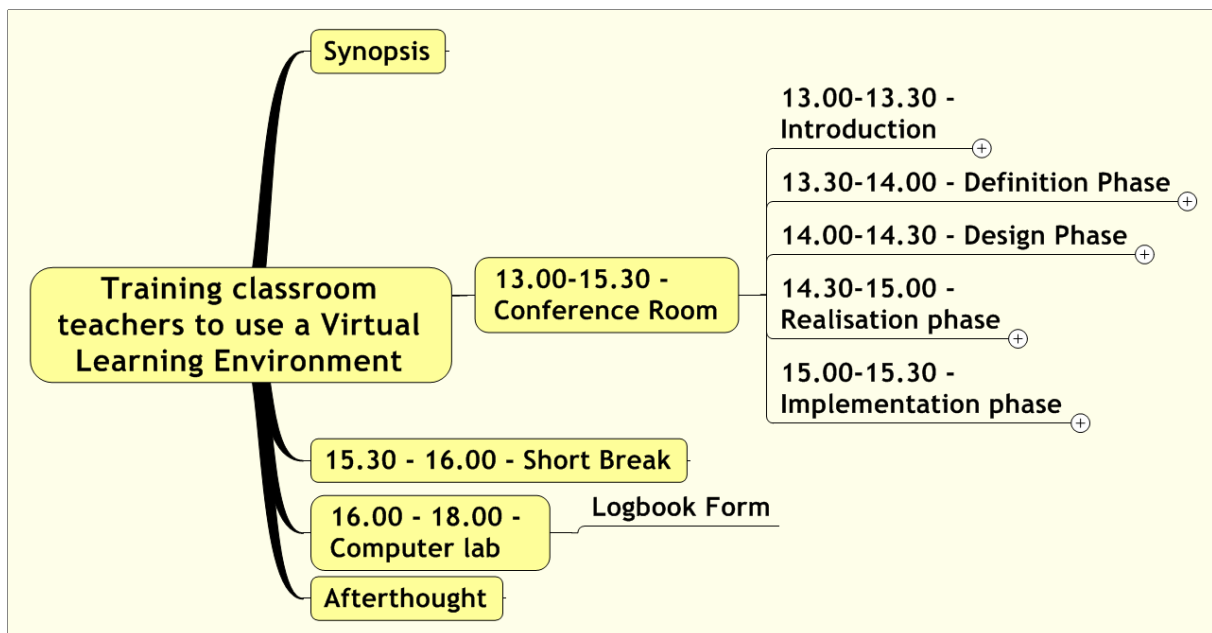
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Amsterdam, The Netherlands, 2006

Synopsis

Classroom teachers starting to use a Virtual Learning Environment (VLE) often feel helpless when learning the details of their VLE only. There is a gap between their own learning needs and the contents of a regular VLE course. A dedicated training for classroom teachers to use a VLE fills this gap. This training normally takes 5 full days. The tutorial is a compressed version of this training. The participants can bring their own course ideas and will work together towards a course design and the first steps of course realisation. The Learning Management System used is Moodle.

Although classroom teachers may be eager to know the technical operation of their Virtual Learning Environment (VLE), their focus is mainly educational. The software oriented users course provided by their computer centre does not fulfil their needs. Therefore, a dedicated five day training has been developed that combines cooperative classroom sessions and computer workshops. Mapping didactical concepts into functional VLE components is one of its critical components. The tutorial can be considered as a compressed version of this training.

The intended audience for the training is teachers who have some notion of a Virtual Learning environment and are motivated to be trained. We assume they have some conventional teaching materials and want to upload them to the VLE. During the training they will learn how to convert their existing teaching materials into interactive learning experiences.

In the normal training each of the five training days focuses on a single phase of the learning materials development process: definition phase, design phase, realisation phase, implementation phase and use & maintenance. In the morning the classroom sessions take place. The participants learn some indispensable concepts and apply them immediately to their own materials while preparing their later online activities. In the afternoon the training continues in a computer room. There, the participants execute what they learned and prepared during the morning session.

At the end of the full training, the participants have a detailed design of their VLE course, they have experienced all necessary operations, they are halfway in implementing their own course and they have a clear inventory of the tasks to be completed yet. They can finish them by oneself or with some help of their peers.

During the tutorial a selection will be presented of the training elements that have most added value for the participants. The participants can bring their own course ideas and will work together towards a course design and the first steps of course realisation. The Learning Management System used is Moodle.
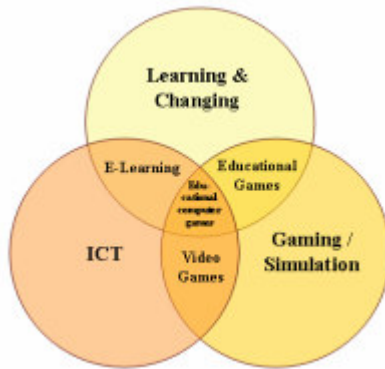
The full training fills the gap between educational focus and technical focus. It can be a welcome supplement to the regular courses delivered by university computer centres.

13.00-15.30 - Conference Room

13.00-13.30 - Introduction

Introduction

Trainer

Pieter van der Hijden MSc is consultant with Sofos Consultancy (Amsterdam, The Netherlands) and teaches part-time at Amsterdam University of Professional Education. He is member of the Executive Committee of the International Simulation and Gaming Association (ISAGA). His focus is on e-learning and gaming/simulation.

The original course(s)
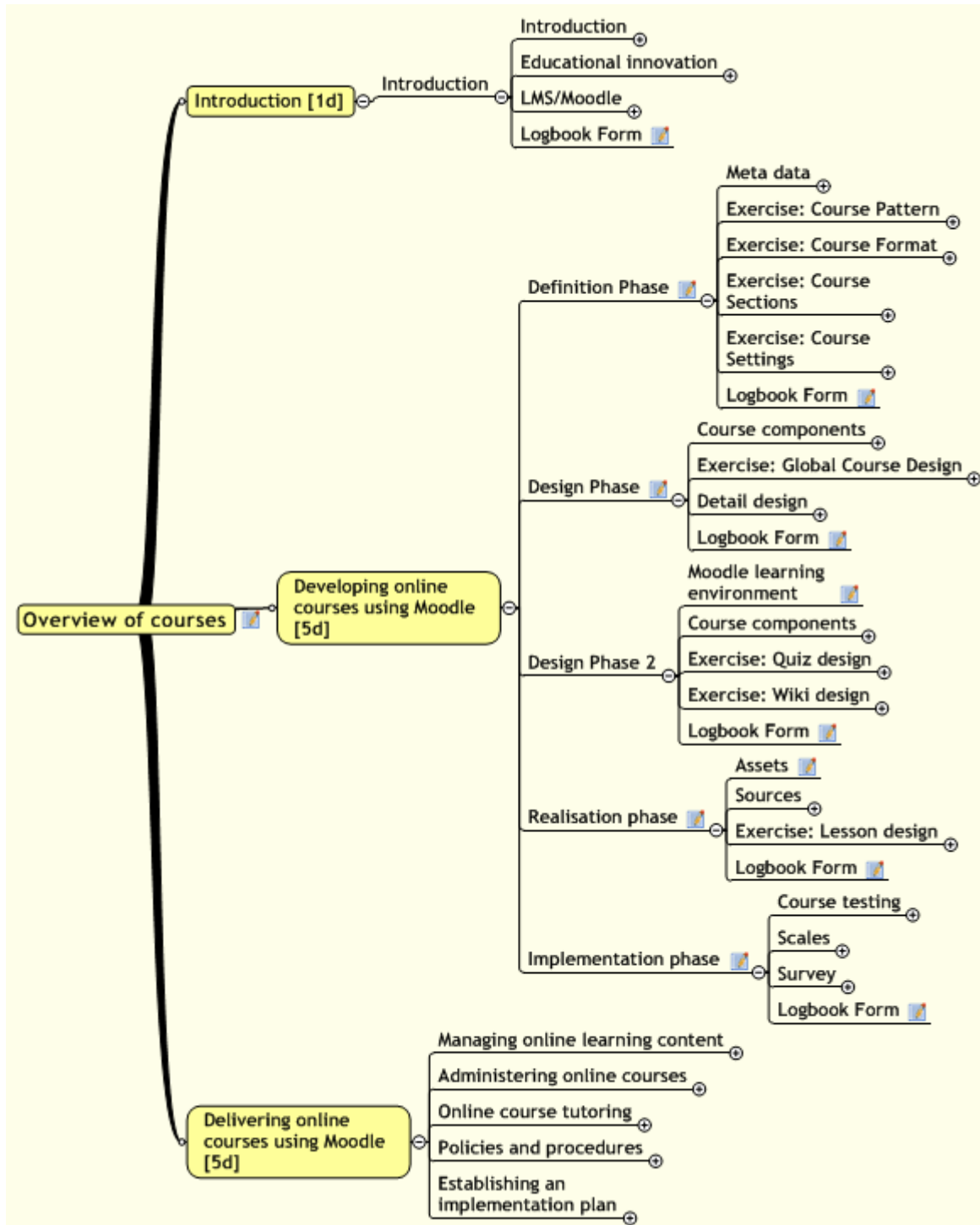
Exercise: Wanted and Offered

Instruction

- Fill-in the wanted/offered form using a marker.

- Your name.

- Your internal and/or external position(s) as far as relevant for today's topic.

- Wanted

  - What do you want to learn?

  - What knowledge or service do you want from other people?

- Offered

  - What could you teach to other people?

 - What special knowledge or services could you deliver to other people?

Exercise: Wanted and Offered

Form

NAME

POSITION

WANTED

OFFERED

Educational innovation

Trends

| Educational Trends: .... (A = Actual, P = Desirable within 5-10 years)							
category	from	1	2	3	4	5	to
educational vision	supply driven education						demand driven education
role of the student	passive, wait and see						active, adventurous
role of the teacher	expert, transfers knowledge						coach, supports the learning
learning goals	facts						competencies
learning activities	processing of knowledge						working with knowledge
assessment	reproduction of knowledge						production of knowledge
learning type	individual self study						collaborative learning
teaching type	face to face education						blended learning
learning tools	textbooks						multimedia content
learning paths	uniform						flexible thanks on ICT
function of teacher	autonomous						member of a knowledge organisation
tasks of management	management of resources						strategic vision

Computers in education
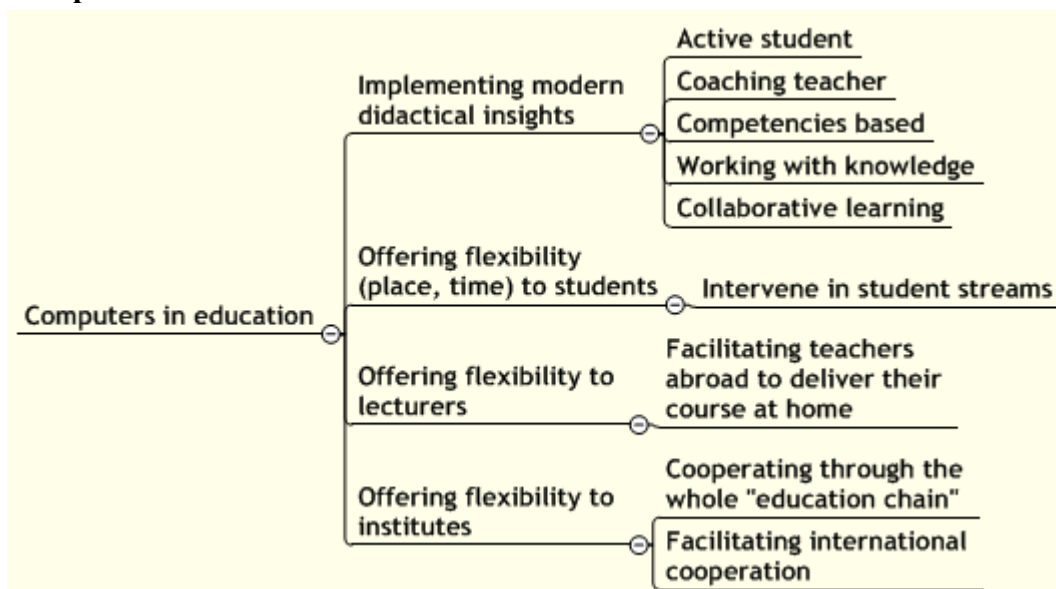
Virtual Learning Environment

Education Production Process

Supporting Software Systems
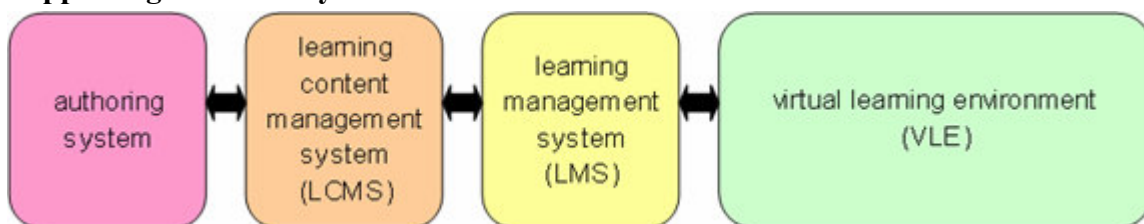
Software solutions
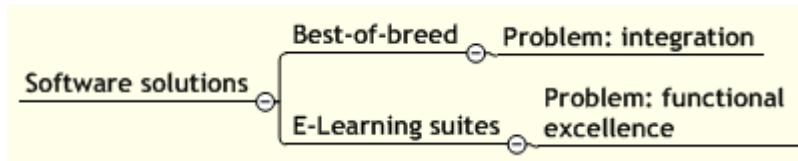
Feature Comparison

	A	B	C	D
1	Feature Comparison			
2	Feature	Blackboard	WebCT	Moodle
3	Upload and share documents	Y	Y	Y
4	Create content online in HTML	N	Y	Y
5	Online discussions	Y	Y	Y
6	Grade discussions / participation	N	Y	Y
7	Online chat	Y	Y	Y
8	Student peer review	N	N	Y
9	Online quizzes / surveys	Y	Y	Y
10	Online gradebook	Y	Y	Y
11	Student submission of documents	Y	Y	Y
12	Self-assessment of submission	N	N	Y
13	Student workgroups	Y	Y	Y
14	Lessons with paths	Y	Y	Y
15	Student journals	N	N	Y
16	Embedded glossary	N	N	Y
17				
18	Source: Using Moodle; Jason Cole; O'Reilly, Sebastopol CA, 2005.			

See also: www.edutools.info

Moodle

User Interface

Moodle Basic Concepts

See document: Moodle Concepts.mmap
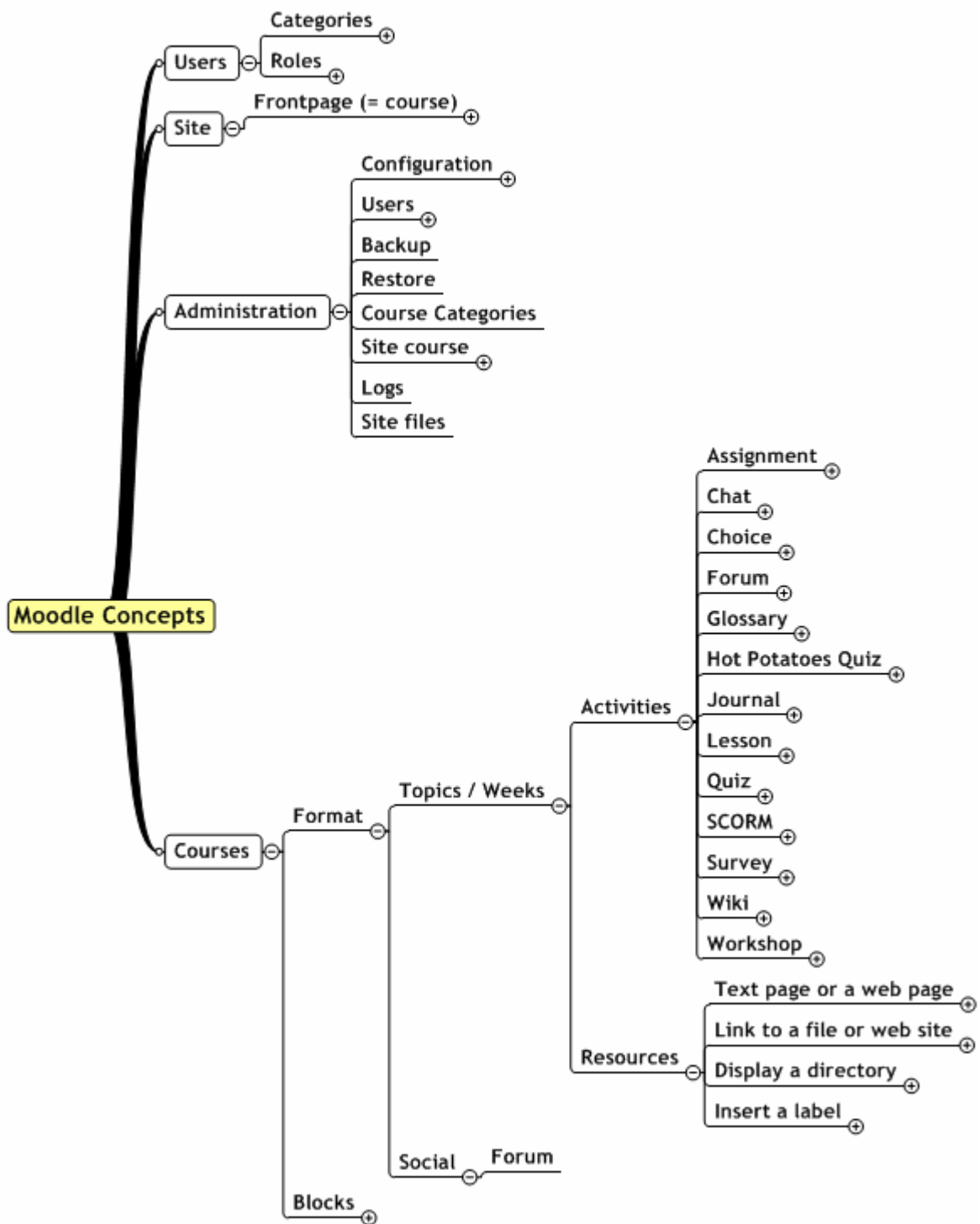
13.30-14.00 - Definition Phase

The first phase of the course development process is the definition phase. At the end of this phase it must be clear which "problem" this development process is going to solve and in which direction a "solution" will be created.

During this phase, the educational requirements for the course are specified. Which is the learning challenge the course is focused on? Which are the characteristics of the learners? How much support should the online course offer to the participants?

Further, the course developer has to explore the organisational context of the online support. What is more appropriate, synchronous or asynchronous activities?

This workbook of the full training course offers:

- a form to describe the new course's meta data,
- a form to reflect on the course pattern,
- a form to reflect on the course format,
- a form to specify course sections,
- a form to specify the course settings.

Meta data

Sooner or later, universities will have hundreds of courses online. To use them in an efficient and effective way, descriptions of the online courses will find their way to search engines, catalogues and a variety of listings. These metadata, data on data, have been standardised. One such a standard is the IMS Learning Resource Meta-Data Information Model, an open standard published by the IMS Global Learning Consortium. In our training we use a subset of the IMS Meta-Data model.

During the EUNIS tutorial, we limit the metadata to the following:

Category	Entry
Course title	
Short description (1 paragraph)	
Author	
Number of topic sections	

During the EUNIS tutorial, we restrict our course development to a single topic section:

Category	Entry
Topic section sequence number	
Topic section title	

14.00-14.30 - Design Phase

The second phase of the course development process is the design phase. The results of the definition phase form its starting point. At the end of this phase the course has to be specified completely. Other people (programmers, graphic designers, text writers) have enough information to be able to really build it. The design is tested for internal consistency and for a consistent application of the definition phase results.

Designing an online course is not a mechanical process. Numerous questions have to be dealt with. To give a short impression:

• what is really needed to fulfil the mission of the course?

• what is needed to accommodate a variety of learning styles?

• what is needed to compensate for the drawbacks of asynchronous learning?

• what should be fixed as part of the online course, what should flexible in the hand of the teacher during course delivery?

The workbook of the full course offers an exercise to create a global course design and an exercise to prepare quizzes.

Course components
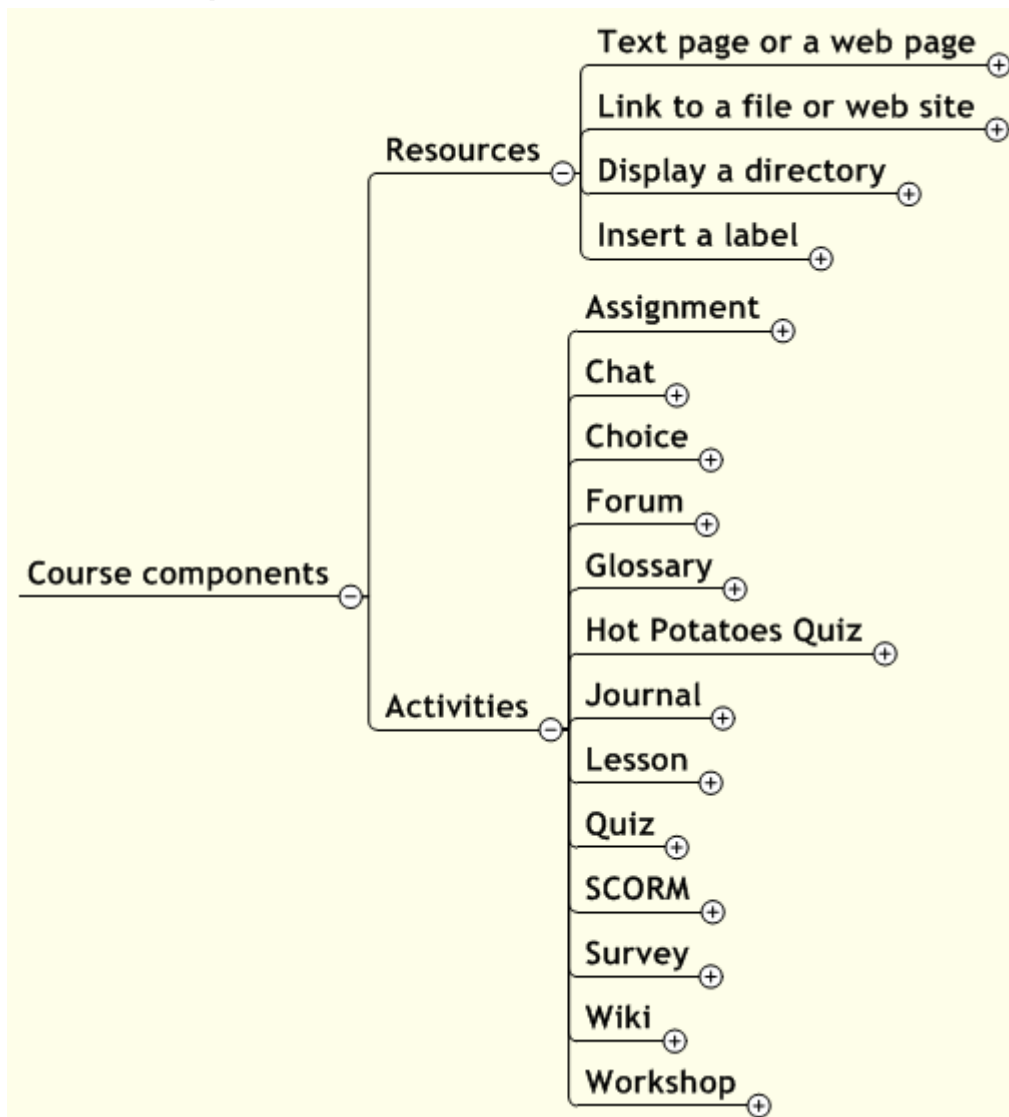
Exercise: Global Course Design

Procedure

Educational activities

- Look at the "course story board form". This form is a tool to design a whole course. One sheet has room for 1-5 topics containing 1-5 items each. If this is not enough, use more copies of the form.

- Place a yellow sticker in the left cell of each row. Write the title of the topic on it.

- Now, fill each topic with 1-5 activities (red, yellow, or green stickers).

  - Choose a colour for each student activity (see table below)

  - Write on the upper half of each sticker: the activity plus the eventual subtopic. It is important to concentrate on what you want to happen, not on how you are going to use Moodle, e.g. Reading O'Brien, Chapter 5.

- Compare your "global design" with your peers. Change it when appropriate.

Colour	Meaning	Examples (from student point of view)
Red	Individual activities	Reading, working individually, being tested individually.
Yellow	Synchronous group activities	Synchronous activity, either offline (face-to-face meeting) or online (like chat).
Green	Asynchronous group activities	Asynchronous group activity, like working collectively, communicating, presenting, receiving feedback, testing.

Moodle activities

- Link each educational activity to one or more Moodle activities. Use the following mind map to search for possible links. Write your solution in the lower half of the stickers.
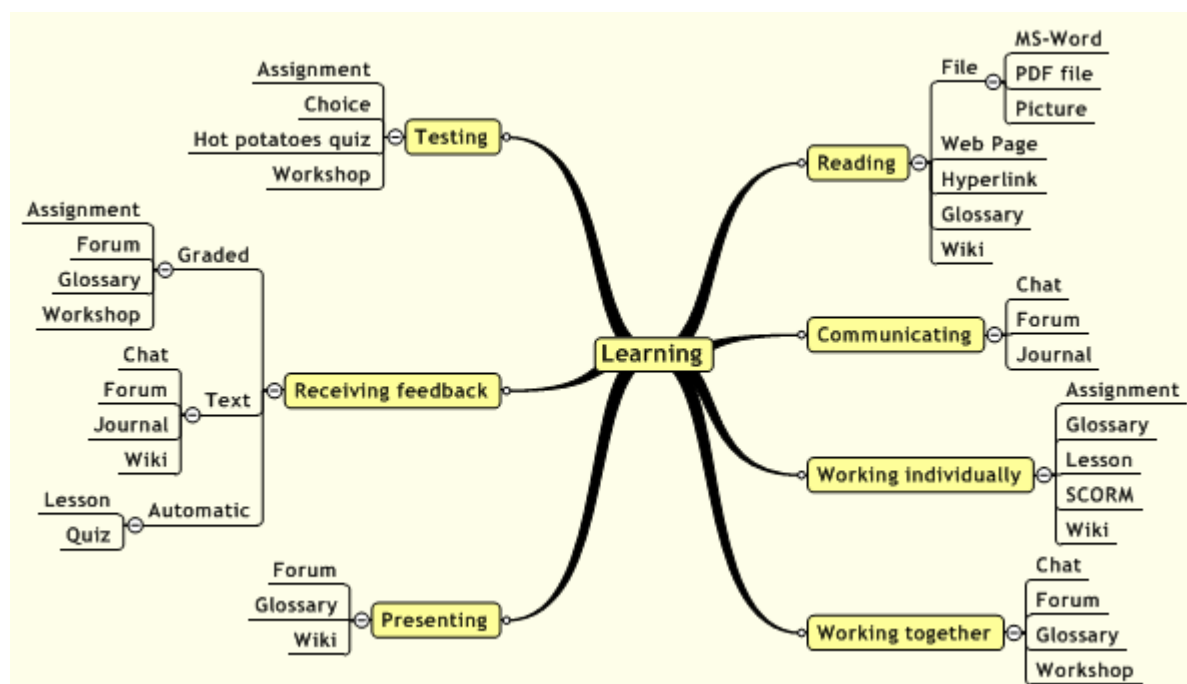
Student Task	File	Web Page	Web Link	Assign-ment	Chat	Choice	Forum	Glossary	Hot Pota-to	Journal	Lesson	Quiz	SCORM	Survey	Wiki	Work-shop
reading	x	x	x					x							x	
communica-ting					x		x			x						
working individually				x				x			x		x		x	
working collectively					x		x	x							x	x
presenting							x	x							x	
receiving feedback				x	x		x	x		x	x	x			x	x
testing				x		x			x			x				x

Finishing touch

Now, review your course design:

- For the resources: add a symbol to indicate whether:
  - the resource is home-made,
  - the resource is purchased elsewhere.
- For the green and yellow activities: add a symbol to indicate:
  - plenary activities,
  - separated subgroup activities,
  - visible subgroup activities.

Story board

STORY BOARD FOR COURSE:

	Title	Item-A	Item-B	Item-C	Item-D	Item-E	Item-F
Topic-1	Topic-1 Title	Topic-1 Item-A	Topic-1 Item-B	Topic-1 Item-C	Topic-1 Item-D	Topic-1 Item-E	Item-F
Topic-2	Topic-2 Title	Topic-2 Item-A	Topic-2 Item-B	Topic-2 Item-C	Topic-2 Item-D	Topic-2 Item-E	
Topic-3	Topic-3 Title	Topic-3 Item-A	Topic-3 Item-B	Topic-3 Item-C	Topic-3 Item-D	Topic-3 Item-E	
Topic-4	Topic-4 Title	Topic-4 Item-A	Topic-4 Item-B	Topic-4 Item-C	Topic-4 Item-D	Topic-4 Item-E	
Topic-5	Topic-5 Title	Topic-5 Item-A	Topic-5 Item-B	Topic-5 Item-C	Topic-5 Item-D	Topic-5 Item-E	

Detail design

Forum

Assignment

Assignment
- Assignment Name
- Description
- Grade
- Available from
- Due date
- Prevent late submissions
- Assignment type
  - Offline activity
  - Online text
  - Upload a single file
- Group mode
  - No groups
  - Separate groups
  - Visible groups
- Visible to students
  - Show
  - Hide
- Maximum size
- Allow resubmitting
  - Yes
  - No
- Email alerts to teachers
  - Yes
  - No

Choice

Choice
- Choice name
- Choice text
- Choice 1
  - Text
  - Limit
- Choice 2
  - Text
  - Limit
- Choice 3
  - Text
  - Limit
- Choice 4
  - Text
  - Limit
- Choice 5
  - Text
  - Limit
- Choice 6
  - Text
  - Limit
- Choice 7
  - Text
  - Limit
- Choice 8
  - Text
  - Limit
- Choice 9
  - Text
  - Limit
- Choice 10
  - Text
  - Limit
- Restrict answering to this time period
  - No
  - Yes
    - Open
    - Until
- Display mode
  - Display horizontally
  - Display vertically
- Publish results
  - Do not publish results to students
  - Show results to a student after they answer
  - Show results to students only after the choice is closed
  - Always show results to students
- Privacy of results
  - Publish anonymous results, do not show student names
  - Publish full results, showing names and their choices
- Allow choice to be updated
  - No
  - Yes
- Show column for unanswered
  - No
  - Yes
- Group mode
  - No groups
  - Separate groups
  - Visible groups
- Visible to students
  - Show
  - Hide

Chat

```
Chat
├─ Name of this chat room
├─ Introduction text
├─ Next chat time
├─ Repeat sessions
│   ├─ Don't publish any chat times
│   ├─ No repeats - publish the specified time only
│   ├─ At the same time every day
│   └─ At the same time every week
├─ Save past sessions
├─ Everyone can view past sessions
│   ├─ No
│   └─ Yes
├─ Group mode
│   ├─ No groups
│   ├─ Separate groups
│   └─ Visible groups
└─ Visible to students
    ├─ Show
    └─ Hide
```

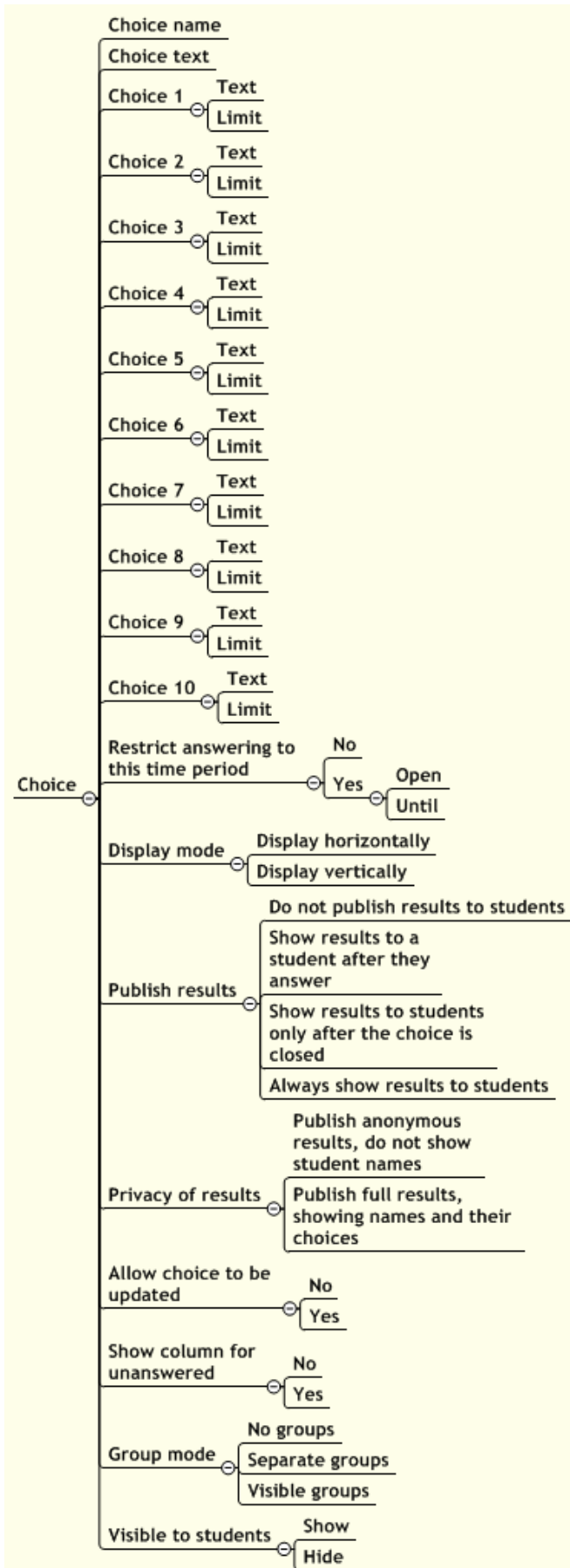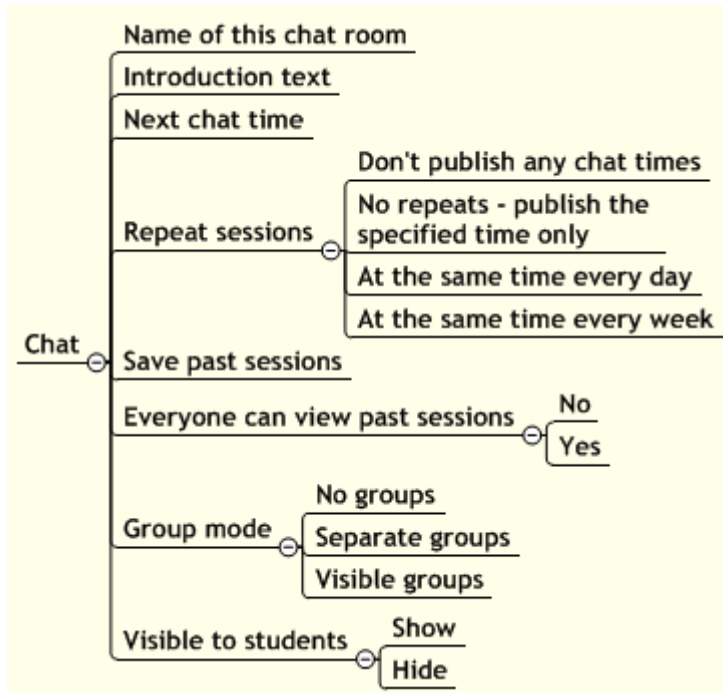## *14.30-15.00 - Realisation phase*

The realisation phase follows the design phase. Now, the real construction of the course (finally) can start. It consists of programming course activities as well as creating or purchasing content materials and all kinds of components like pictures, animations, and video fragments. Finally, all these pieces have to be fit together in the course.This has to be tested, both by the developers and by other people, e.g. a sample of the intended audience.

In the case of asynchronous learning, the course activities and content documents are the only links between the distant learner and the institute. It is therefore very important that course materials are visually appealing and attractive.

The workbook offers a logbook form.

Assets

Assets are the multimedia used in our course materials:

- sounds
- graphics and animations
- pictures
- video clips
- etc.

All these assets have to be created or acquired.

Two documents could be of great value: a Style Guide or Art Bible, and the Master Asset List. The first document could be a guide at institutional level describing the rules and policies for online course development (and delivery). It includes samples of any artwork used in courses. When the document focuses on artwork, it is also called the Art Bible, the reference book you use (and may have made yourself) for all asset production or acquisition. One topic to be dealt with in these documents is the standard naming convention for all assets.

The Master Assets List contains an exhaustive list of all the art work and other assets you will include in your course. It is recommended to develop such a list in Excel as a spreadsheet can be sorted easily on various fields. Relevant fields are:

- ID-# - a sequence number, just as unique identifier, especially useful in database applications,
- name - name according to the standard naming convention,
- caption - short title,
- format - file type and other relevant technical details,
- size - file size,
- author/source - author or source of the asset,
- creation date,
- version,
- used - location(s) in the course where this asset will be used,
- status - e.g. ordered, draft, final.

Sources

JISC Catalogue
Further Education Collections Catalogue

MIT Open Courseware

Exercise: Wiki design

Procedure
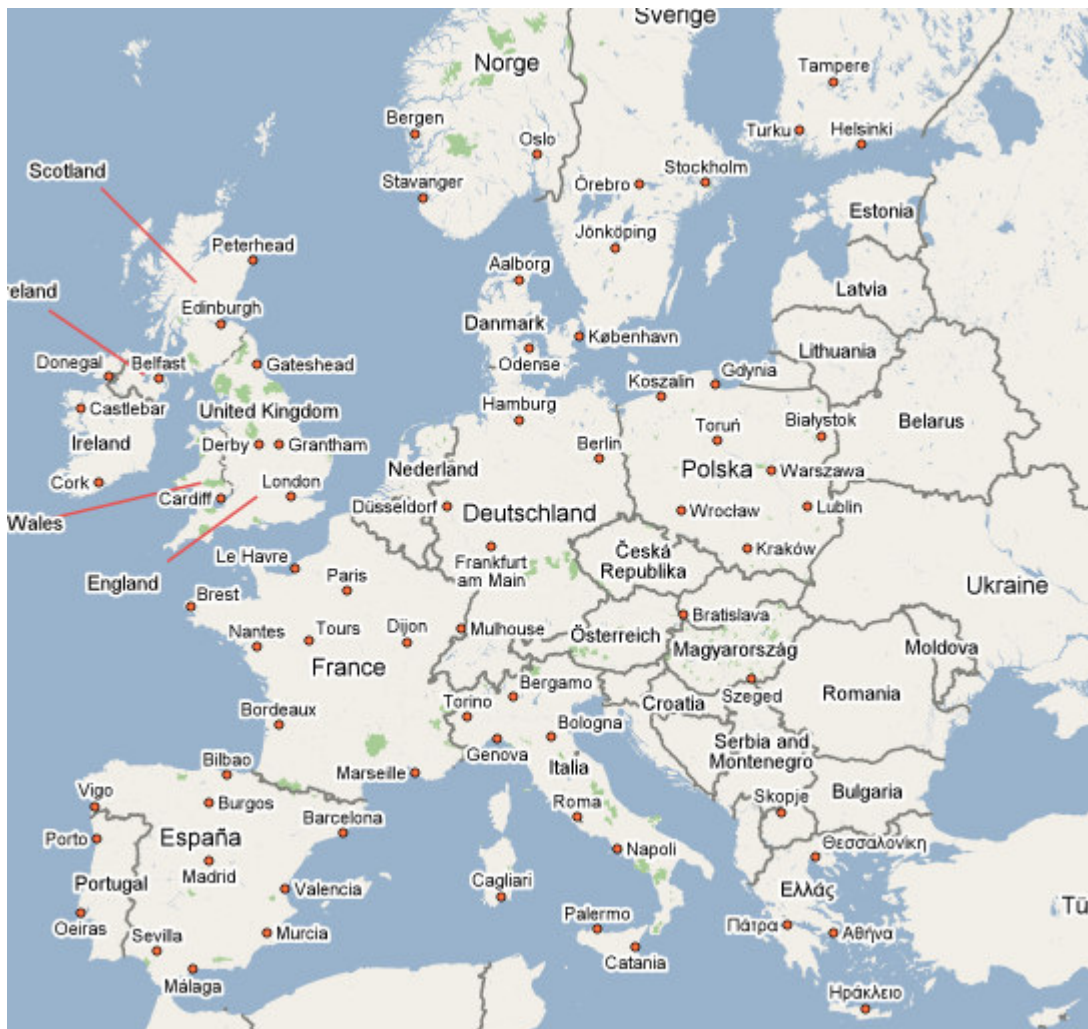
(Source: Google Maps)

- Design your first wiki. Take an empty page. Use little stickers (or draw rectangles) to represent wiki pages; use pencil lines to represent page links.

- The wiki is intended to represent some knowledge domain.

- Suggestions:

  - The wiki offers a walk through a visual representation of the knowledge domain of a course.

  - The wiki describes the countries of Europe. Each country has its own page. The pages of neighbour countries are linked. Try to travel from Estonia through all countries and back while visiting each country only once.

  - The wiki describes the stakeholders of a certain topic, e.g. the stakeholders regarding educational innovation (with ICT) at UoG. All stakeholders have their own pages. Give them a short description and use links to other stakeholders when appropriate.

  - The wiki describes the rooms of a building you know well (your house?). Each room has its own page. The pages of rooms connected by doors are linked. Once you have constructed this building, another person could try to te-engineer the undelying map.

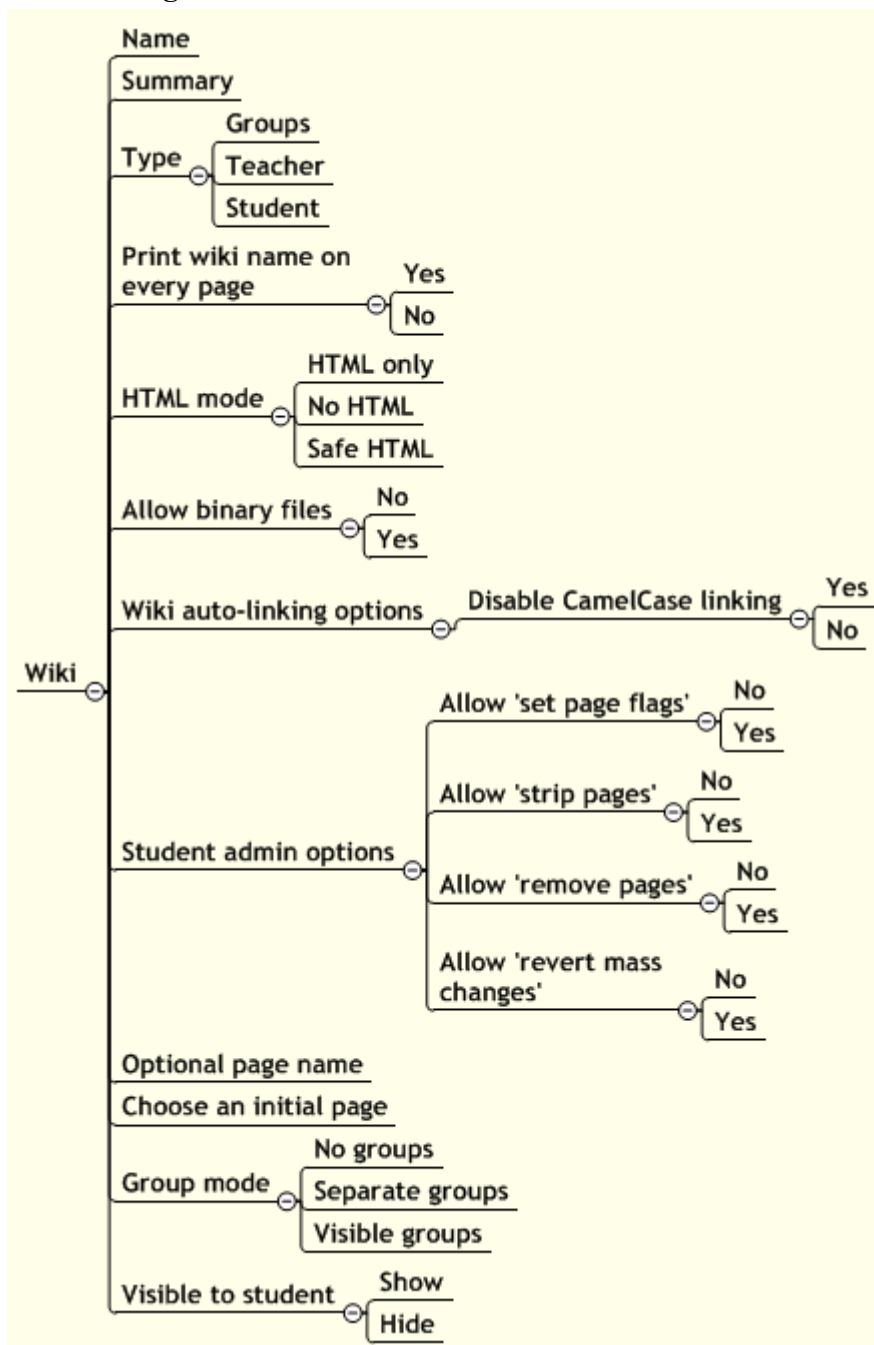 - The wiki describes a 2D or 3D matrix. Each cell has its own page. Navigating is possible through adjacent cells/pages in all directions.

- Review your course story board and mark all the places where you want to include a wiki with a small round sticker, marked W.

- Fill in the specifications for your first wiki.

For more information, see the Moodle Sample courses, the Moodle documentation, the Moodle book.

Design form

Use this page to design your wiki. Try to make the scheme as clear as possible. Avoid crossing lines when possible.

Wiki Settings

Wiki
- Name
- Summary
- Type
  - Groups
  - Teacher
  - Student
- Print wiki name on every page
  - Yes
  - No
- HTML mode
  - HTML only
  - No HTML
  - Safe HTML
- Allow binary files
  - No
  - Yes
- Wiki auto-linking options
  - Disable CamelCase linking
    - Yes
    - No
- Student admin options
  - Allow 'set page flags'
    - No
    - Yes
  - Allow 'strip pages'
    - No
    - Yes
  - Allow 'remove pages'
    - No
    - Yes
  - Allow 'revert mass changes'
    - No
    - Yes
- Optional page name
- Choose an initial page
- Group mode
  - No groups
  - Separate groups
  - Visible groups
- Visible to student
  - Show
  - Hide

Note, that "type" and "group mode" result in 3 * 3 9 different combinations.

There are three wiki types: Teacher, Groups, Student. In addition, like any activity, the wiki has the Moodle group modes: "No Groups" "Separate Groups" and "Visible Groups". This leads to the following matrix of nine possibilities:

	No Groups	**Separate Groups**	**Visible Groups**
Teacher	There is only one wiki which only the teacher can edit. Students can view the contents.	There is one wiki for every group which just the teacher can edit. Students can view the wiki of their group only.	There is one wiki for every group which just the teacher can edit. Students can view the wikis for all groups.
Groups	There is only one wiki. The teacher and all students can view and edit this wiki.	There is one wiki per group. Students can view and edit the wiki of their own group only.	There is one wiki per group. Students can change the wiki of their own group only. They can view the wikis for all groups.
Student	Every student has their own wiki which only they and their teacher can view and edit.	Every student has their own wiki, which only they and their teacher can edit. Students can view the wikis of other students in their group.	Every student has their own wiki, which only they and their teacher can edit. Students can view the wikis of all other students in the course.

Unless the group mode has been forced by the course settings, it can be set with the groups icons on the course home page after the wiki has been created.

15.00-15.30 - Implementation phase

The realisation phase ends with the creation of the master copy of the new course. Now it is time to really organise the effective and efficient use of the course. It has to be reproduced for use in other institutes and/or published for use by students. This phase ends when the course passes acceptance tests by the client organisation, by the intended users (staff) and by the organisational unit that will be responsible for the systems management.

The success or failure of an online course depends heavily on information and communication technology. In this phase the online course has to be transferred to the organisation that is going to exploit it. This requires technical documentation, an acceptance test and possibly training sessions.

The workbook offers a testplan/testlog form.

Course testing

Procedure

Once a course is almost finished, it has to be tested in various ways. The system test looks at the course as a technical product. The system test is followed by an acceptance test. Then the course is tested from the point of view of future users.

Testing is more than looking at the computer screen and trying out a few options. Testing is, or at least it should be, a systematic activity that has to be planned in advance, executed according to the plan and well documented.

The test plan / test log form is a tool for testing. In fact it is a double form. The left part is intended to specify the test plan: all activities that have to be carried out to test the course as well as the expected results. The right part is intended to log the test results. Each line in the test plan corresponds with the same line in the test log. The test log indicates that the test has been executed and describes its results. Eventually follow-up activities are necessary. They normally will be followed by a repetition of some of the earlier tests.

- Fill in the following test form. Describe the activities needed to test your course. Describe them in such a way that another person could execute the real testing.

Test Plan / Test Log Form

Client: Project: Acceptance Test / System Test

		testplan			testlog		
	date	who?	what?	how?	when OK?	date	who?	result?	OK?	follow-up?
int.										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

Scales

Background

Teachers can create new custom scales to be used in a course for any grading activities. The name of the scale should be a phrase that identifies it clearly: this will appear in scale- selection lists, as well as on context-sensitive help buttons.

The scale itself is defined by an ordered list of values, ranging from negative to positive, separated by commas. For example: Disappointing, Not good enough, Average, Good, Very good, Excellent!

Scales should also include a good description of what it means and how it is expected to be used. This description will appear in help pages for teachers and students.

Finally, there may be one or more "Standard" scales defined on your site by the system administrator. These will be available in all courses.

Procedure

- Specify a scale to be used for grading your students.

  - Name of the scale:

  - Values from negative to positive:

    -
    -
    -
    -
    -
    -
    -

  - Explanation:

15.30 - 16.00 - Short Break

16.00 - 18.00 - Computer lab

Logbook Form

#	Plan		Actual	
1	Register as a user of the Moodle system.			
2	Enrol as participant to the EUNIS Tutorial Online [EUNIS].			
3	[EUNIS] Explore online communication: Forum.			
4	[EUNIS] Explore online communication: Chat.			
5	[EUNIS] Enter your "wanted" issues in the Wanted Forum.			
6	[EUNIS] Make the fake assignment.			
7	[EUNIS] Have a look at your gradebook.			
8	[your course, settings] Enter the title, description and number of topics for your course.			
9	[your course, section 0] enter editing mode, add a general forum.			
10	[your course, section 0] add a general chat room.			

11	[your course, section 0] add a web page to your course called "Course Guide for Students" (with a dummy text as content).			
12	[your course, section x] create a title for topic section x			
13	[your course, section x] create a web page			
14	[your course, section x] create a forum			
15	[your course, section x] create a choice			
16	[your course, section x] create a new scale			
17	[your course, section x] create an assignment			
18	[EUNIS] contribute to the Wiki "going out in Tartu"			
19	[EUNIS] fill in the poll			
20	[EUNIS] add your comments to the Final Forum			

Afterthought

Main lessons for participants of the full training:

- When moving to online courses or online support for face-to-face courses, teachers should keep in mind that there is a clear difference between course development and course delivery.

- During course development, designing the course and realising the course are two different activities, maybe even different phases.

- Whatever support the computer will offer you, you have to plan and prepare your computer activities before.

- Going online is more than replacing your classroom with an Internet connection. It implies a new way of course development and a new way of course delivery.