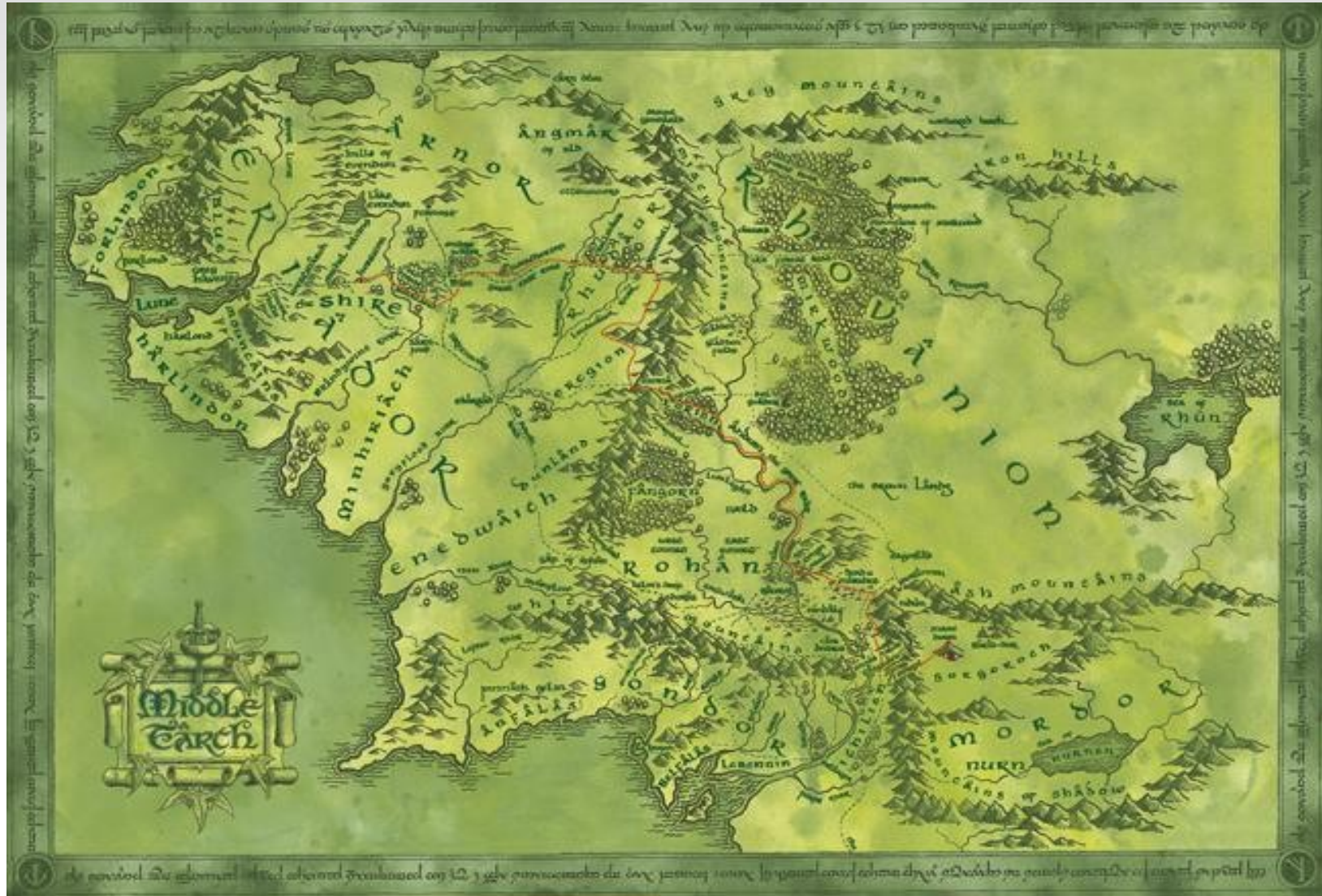


Upgrading Moodle from 1.9 to 2.3: Our Journey



Koen Roggemans

To upgrade or not to upgrade

Moodle 1.9



Moodle 2.3



Hardware considerations

Jmeter

The screenshot displays the Apache JMeter graphical user interface. The top menu bar includes 'File', 'Edit', 'Run', 'Options', and 'Help'. The left sidebar shows a test plan tree for 'ForumAddNewTopic'. The 'StudentFormAddNewTopics' element is selected and highlighted. Below it, the tree includes 'User Defined Variables', 'HTTP Cookie Manager', two HTTP sampler elements with URLs like '\${path}/login/index.php' and associated 'regex_sesskey' and 'View Results Tree' elements, several empty HTTP sampler elements, and two more HTTP sampler elements with URLs like '\${path}/course/view.php' and '\${path}/mod/forum/index.php'. The right sidebar shows the configuration for the selected 'Thread Group'. The 'Name' field is set to 'StudentFormAddNewTopics'. The 'Comments' field is empty. Under 'Action to be taken after a Sampler error', the 'Continue' radio button is selected. Under 'Thread Properties', 'Number of Threads (users)' is set to 20, 'Ramp-Up Period (in seconds)' is set to 10, 'Loop Count' is set to 1 with the 'Forever' checkbox unchecked, and the 'Scheduler' checkbox is also unchecked.

File Edit Run Options Help

ForumAddNewTopic

- StudentFormAddNewTopics
 - User Defined Variables
 - HTTP Cookie Manager
 - `${path}/login/index.php`
 - regex_sesskey
 - View Results Tree
 - `${path}/login/index.php`
 - View Results Tree
 -
 - `${path}/course/view.php`
 -
 - `${path}/mod/forum/index.php`
 -
 - `${path}/mod/forum/view.php`
 -
 - `${path}/login/logout.php`

Thread Group

Name: StudentFormAddNewTopics

Comments:

Action to be taken after a Sampler error

☒ Continue

Thread Properties

Number of Threads (users): 20

Ramp-Up Period (in seconds): 10

Loop Count: ☐ Forever 1

☐ Scheduler

Hardware considerations: memory

Moodle 1.9

- 1.137143 secs
- RAM: 12.1MB
- RAM peak: 12.3MB
- Included 91 files

Moodle 2.2

- 0.726179 secs
- RAM: 29.3MB
- RAM peak: 29.5MB
- Included 676 files



Upgrade strategy

Pro step by step

- 1.9 → 2.0: File system upgrade
- 2.0 → 2.1: Question engine upgrade
- 2.1 → 2.2: Easy upgrade
- 2.2 → 2.3: Assignment upgrade



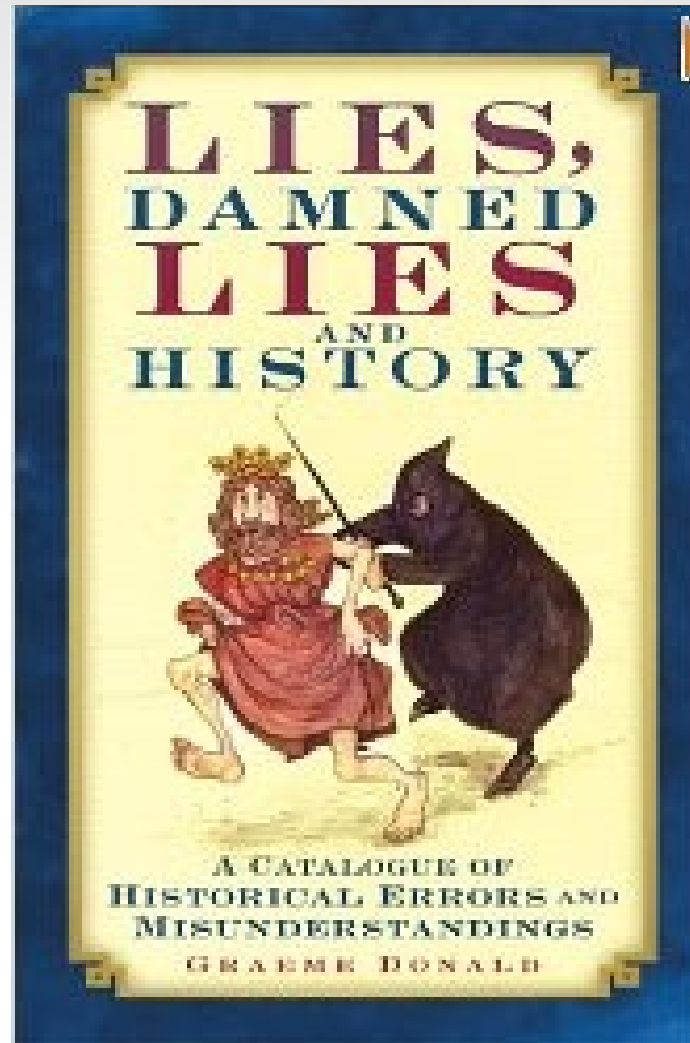
Upgrade strategy backup space

- Course files, database, Moodle code
 - 1.9 original
 - Upgraded version to 2.0
 - Upgraded version to 2.1
 - ...



Upgrade strategy

Historical errors



Consequences for teachers Sometimes lost



Consequences for teachers

File repository



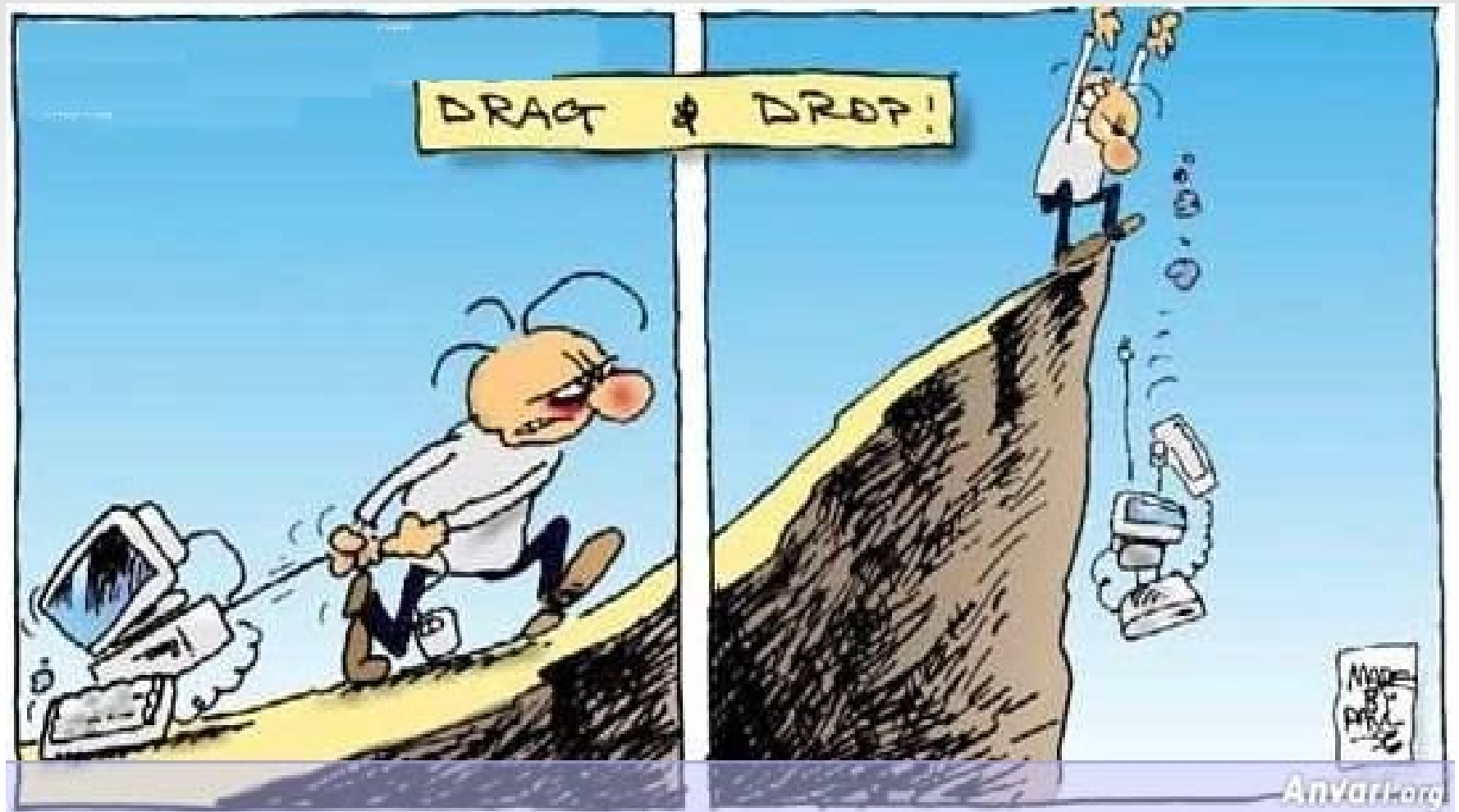
Consequences for teachers

Assignment interface

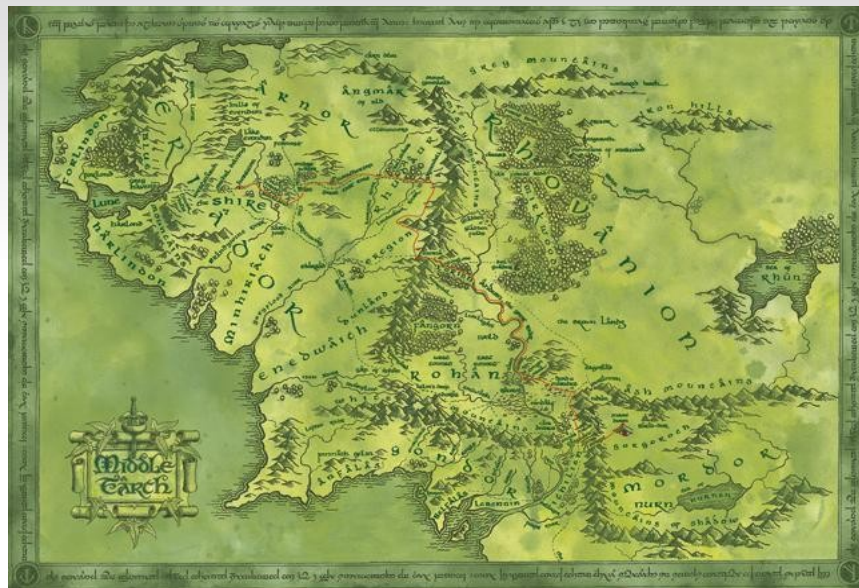
- Moodle 2.3: 1 module for all assignments
 - Online
 - Offline
 - Upload file
- New advanced grading methods
 - Rubric
 - Marking guide

Consequences for teachers

Drag and drop everywhere



Upgrading Moodle from 1.9 to 2.3: Our Journey



Koen Roggemans

Introducing:

Koen Roggemans – IT-manager – Translation coordinator – wearing hat of IT-manager for this presentation

Institution size:

140 staff

1500 students 12-18

Site size:

1700 accounts

400 users

60000 questions

6700 resources

DIY Moodle server:

Home hosted server

180 Gb files

1 Gb database

To upgrade or not to upgrade

Moodle 1.9



Moodle 2.3



Opinionated discussion, so my opinion

Yes

Moodle 1.9 was nice, but getting old

Moodle 2.x feels like new shoes: more shiny but little bit uncomfortable

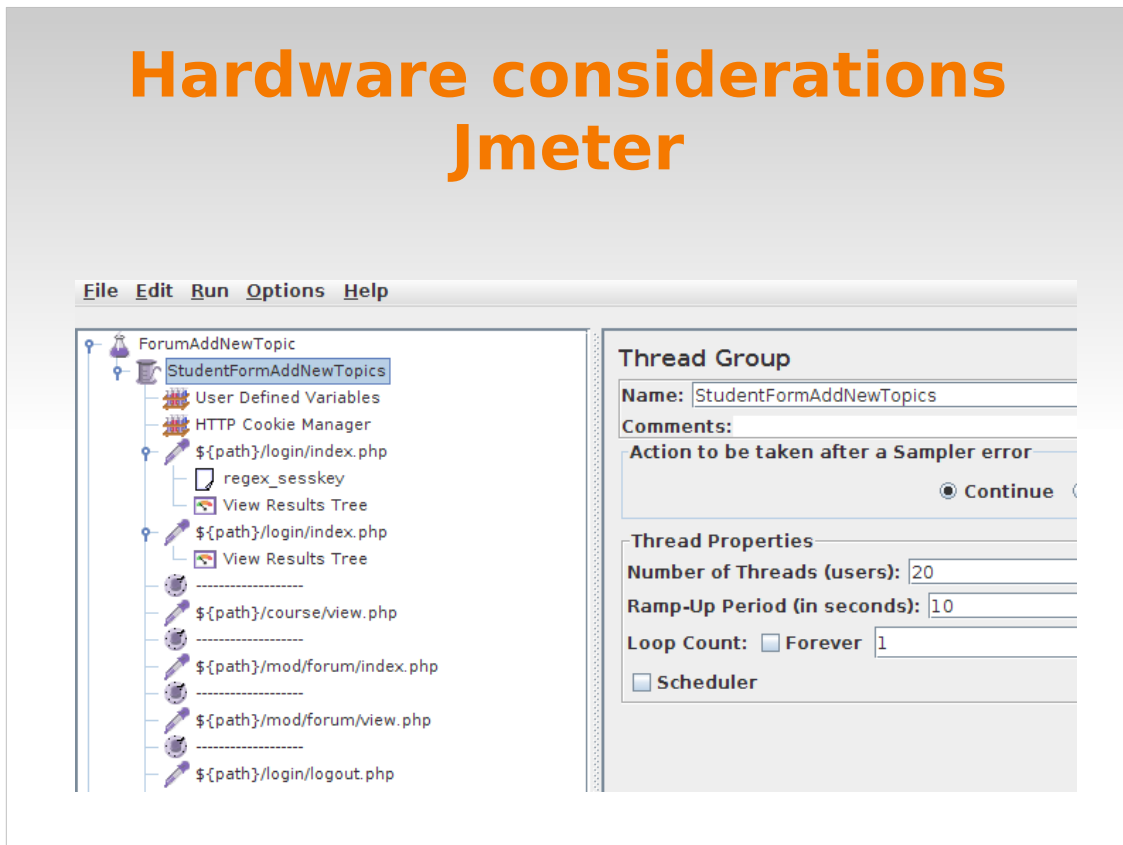
More objective reasons:

- 1.9 will be secure for a long time, but not indefinite

- New features

Upgrade path 1.6, 2.2 required versions for moving on gets longer

Hardware considerations Jmeter



Test hardware

Jmeter

On this slide:

20 users are going to login in 10 seconds, go to a course, go to a forum and add one post.

Compare 1.9 results with 2.x results

We had a new server for 2.x: tweek database, apache and the php accelerator

Shocking when 2.0 came out, but a lot better now – lots performance improvements in 2.1

Hardware considerations: memory

Moodle 1.9

- 1.137143 secs
- RAM: 12.1MB
- RAM peak: 12.3MB
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Moodle 2.2

- 0.726179 secs
- RAM: 29.3MB
- RAM peak: 29.5MB
- Included 676 files

2 typical pages compared.

Moodle 2.2 is more resource hungry: memory and disk. (Storage improvement in disk usage)

Both sites on nearly the same hardware.
1.9 on 8 GB, 2.2 on 16 GB

Original speed issues in 2.0 seem to be solved

Drag and drop problems (2.3) on large courses
priority problem at the moment

Upgrade strategy Pro step by step

- 1.9 → 2.0: File system upgrade
- 2.0 → 2.1: Question engine upgrade
- 2.1 → 2.2: Easy upgrade
- 2.2 → 2.3: Assignment upgrade



Step by step = debatable, but sometimes necessary
(1.6, 2.2)

Very time consuming upgrade – if it goes wrong, nice
to know where and not to have to start all over

Alternative:

Backup courses in 1.9

Fresh install of 2.1 or later

Restore courses

→ no blocks, no userdata

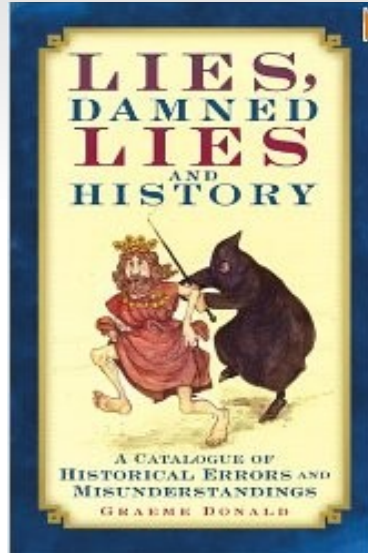
Upgrade strategy backup space

- Course files, database, Moodle code
 - 1.9 original
 - Upgraded version to 2.0
 - Upgraded version to 2.1
 - ...



Disadvantage of step by step:
Time consuming
lots of backups

Upgrade strategy Historical errors



The complete unknown and surprising part:

Problems and there sollutions (which is usually deleting the problems

Binaries in wikis from Moodle 1.4: delete the wiki's – no upgrade path

Quiz attempts in database without questions or answers: delete the attempts (data useless anyway)

Missing files in Moodle 2.0 courses after upgrade: files were not in 1.9 either: deleted without removing the link – shows why 2.0 filesystem was necessary

Consequences for teachers Sometimes lost



Where is ... is question that is heard often

BUT

Teachers had no extra training – they read help files and come to visit.

4 biggest consequences for teachers from my point of view: (see next 4 slides)

Consequences for teachers File repository



No course files was my worry nr 1

Course files don't exist anymore

Planned on installing OpenKM, but no time and budget

Hardly any teachers seem to mis the file area

I'm missing it for uploading very large files – php memory limit must allow for that (ours at 256MB).

Consequences for teachers Assignment interface

- Moodle 2.3: 1 module for all assignments
 - Online
 - Offline
 - Upload file
- New advanced grading methods
 - Rubric
 - Marking guide

- Complete modular rewrite
- 1 module for all assignments
 - Online
 - Offline
 - Upload file
- New advanced grading methods
 - Rubric
 - Marking guide

Consequences for teachers

Drag and drop everywhere



Teachers love drag and drop
Resources on coursepage
Files in upload zone
Subjects on course page