

Specificities in using the free LMS software Moodle in MSc programmes (A Brief for Lecturers)

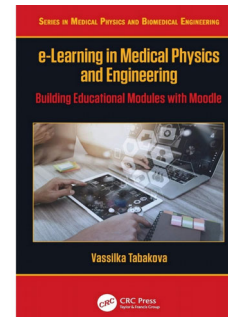
Prof Slavik Tabakov and Dr Vassilka Tabakova



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Very important for building educational modules:

Step by step guidance



KINDLE version, examples in colour

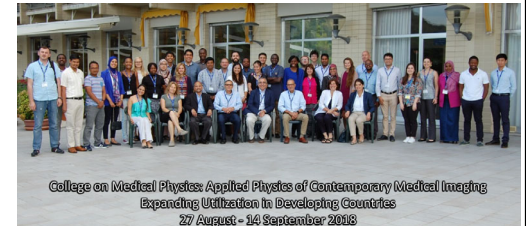
e-Learning in Medical Physics and Engineering, overview

Pioneers of e-Learning in Medical Physics and many free sources

The major part of the book deals with building an MSc programme in Medical Physics on the Moodle Virtual Learning Environment (VLE) step by step:

Role-Specific Functions on the VLE:
Moodle Teacher, Manager, Student

Cost and other considerations on choosing a server and type of VLE



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WHY e-Learning:

Challenges – almost tripling medical physicists worldwide

How to achieve this goal – e-learning

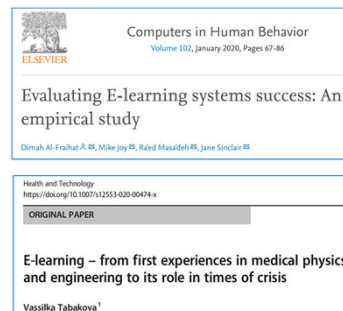
Its role is further highlighted by extraordinary situations – eventualities like the pandemic

Prerequisites:

Good quality material pre-e-learning, good structuring

Availability of technical support

Desire to implement eLearning



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ELEMENTS OF A TYPICAL MSc COURSE DELIVERY – EXAMPLES ON USING MOODLE

- Preparing the course programme (lectures and labs) – using sequence that build good learning curve
- Preparing the lectures and the Lecture Notes for students
- Preparing suitable labs and practicals with possibility for online examples
- Question and Answers sessions with the lecturer
- Coursework and other assignments and their assessment
- Marking and feedback to students
- Preparation of Exam papers and their assessment
- How to obtain MOODLE

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EMERALD
English (en)
2020

IIR Medical Imaging Physics and Practice

Home
My courses
Imaging 2 (8)
Lectures
Lectures IR 2019-20

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Lectures IIR 2019-20

- Do1 Intro IIM and PET 1.2 PM.pdf
 - Do1 MIT SMI SNR NPS INFO DQE image quality asses ST.pdf
 - Do1 Scatter filtering spectroscopy and X-ray equipment ST.pdf
 - Do1 spect_diagrams LL.pdf
 - Do1 2-Single Photon Imaging I and II-2 SPECT Reconstruction LL.pdf
 - Do2 Monomography X-ray AL.pdf
 - Do2 MultisliceCT- basics MA.pdf
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 - Do2 PETdataAnalysis I20.pdf
 - Do2 QC- low LL.pdf
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 - Do4 4-Dray CT practical ST.pdf
 - Do4 Clincon, low PM.pdf
 - Do4 ClinApplication-Single photon GG.pdf
 - Do4 Clinical_PET_15_top

Administration

- Folder administration
 - Edit settings
 - Locally assigned roles
 - Permissions
 - Check permissions
 - Filters
 - Competency breakdowns
 - Logs
 - Backup
 - Restore

Download folder

Edit

[Archive Lectures \(Hidden\)](#)

Jump to...

[illegible]

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Animated Gif images – University of Colorado

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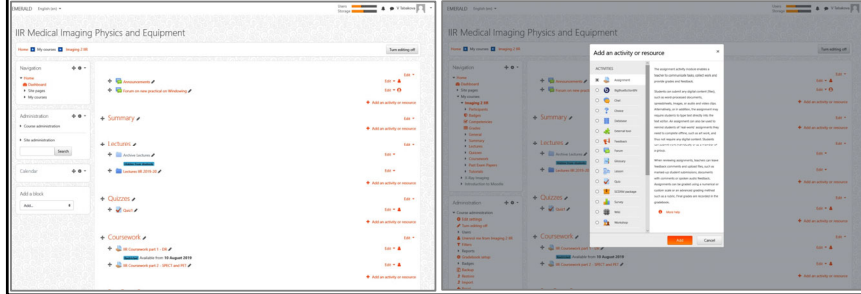
Coursework and Assessment on VLE

In the current climate this is a very topical issue

ORGANISING ASSESSMENT

Example – organising coursework. This can be applied for any unseen assessment: with the function editing selected – the organiser of the Programme can add an activity

Adding an assessment



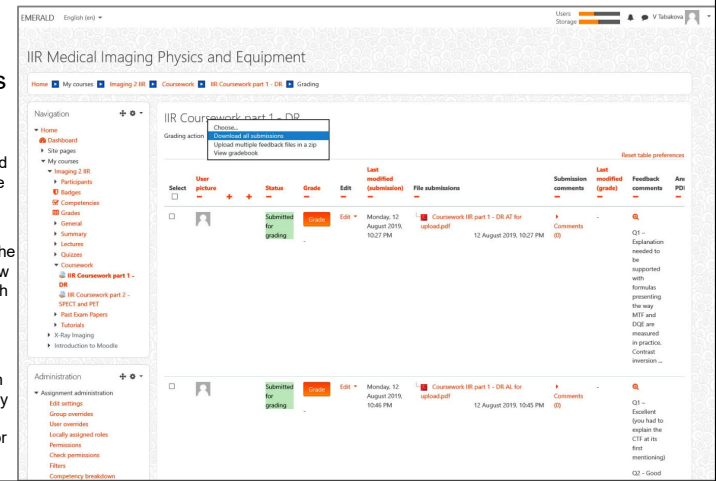
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Viewing submitted assessments

In the example the assignments have already been graded and comments have been given.

Before performing the assessment the view would be similar with the corresponding boxes empty.

They can be filled in either online (directly by clicking the respective button) or off-line



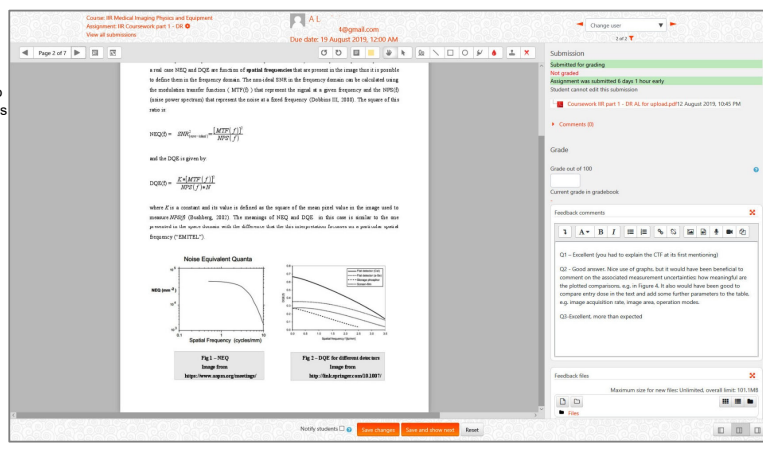
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On-line grading

There are two relevant boxes to fill in:

-Numeric grade

-Feedback



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Online grading

At first sight not so time consuming BUT have to be careful about entering the correct information for each student, as results can be viewed immediately

ALWAYS check if you can delay the platform sending information to students. There should be a 'visible' option box next to the SAVE button (for example: make visible to students)

Off-line grading

More time-consuming for assessor

Less risk of making mistakes

Avoiding time pressures

My own Spreadsheet for marking:

	A	B	C	D	E	F	G	H
1			1_Det marks	1_Det 10 Sum	Comm	2_Electr marks	2_Electr 5 Sum	Comm
2		X00c8e1d4_1	2 1 1 1	5			1	needs much more
3		X0cfa0753_1	3 1 5 1 5 1 5	7.5	compar needs to include indic figures		3	needs more
4		X0e32e8b5_1	3 1 5 1 5 1 5	7.5			4	
5		X1370420d_1	4 1 5 1 5 1 5	8.5				

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EXAMS

Exams during e-Learning

Oral exams via ZOOM

Unseen written exam at home (students submit a Word file)

Exam at student's home:

Prepare Questions as Tasks (HOT questions)

Collect Word files from students (password)

Expect more than double assessment time

How long are the exams?

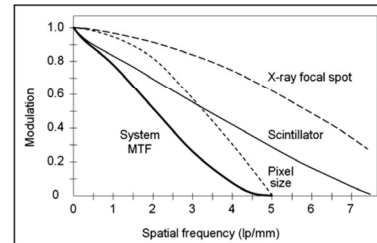
University decision (more hours, up to 24)

If HOT questions - good spread of marks

Invigilation by webcam - needs permit to 'enter' students' homes with their own video camera, OR having "open book" exam with no invigilation

Example of Higher Order of Thinking (HOT) Task:

Define Modulation Transfer Function. Explain the formation of the System MTF on the diagram below. What reduction of contrast will be displayed by the system described on the diagram for 4 lp/mm? Support your result with a simple calculation (do not take the composite MTF of the system directly from the diagram). [5 marks]



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Starting from scratch

Installing VLE on own server. in the case of Moodle – completely free

Considerations: upfront cost of server

IT personnel

maintenance

Limited budget and no server – in the case of Moodle –

MoodleCloud

limitation on number of participants and file size if stored

options Starter, 120 £ per year, 50 users very limited space (1 GB); then come various levels – mini, small, medium, large varying (large is about 1600 £ per year and 750 users, space is 50GB)

A free trial

Using an authorised VLE partner (i.e. certified Moodle partners)



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Choosing a VLE - Questions to ask:

Sophisticated enough to answer high requirements for a complex subject taught at university level

Intuitive, easy to learn by all parties – you don't need a steep learning curve time consuming

Finances

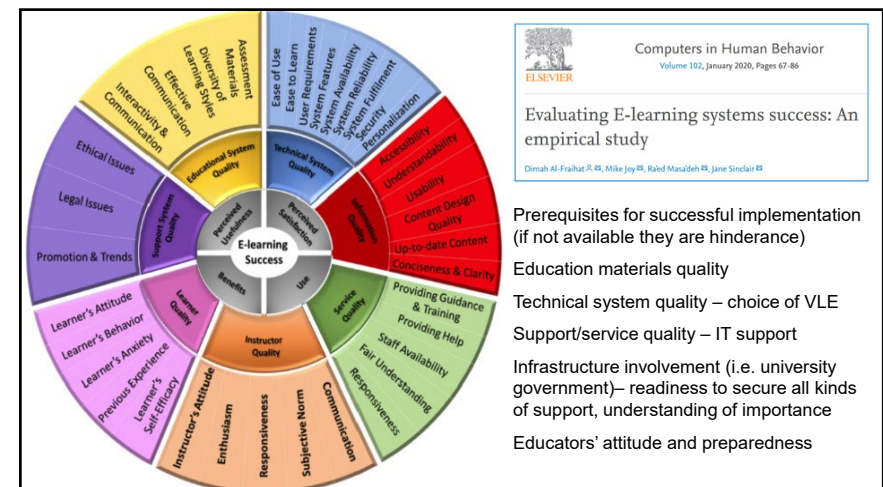
Gives freedom to tailor to one's own requirements

Suitable for specificity of subject and level of teaching (i.e. flexible for MSc/BSc; images)

Most popular in higher education in our profession today are Moodle and Blackboard



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More details about the different options including the recommended path for each case can be found in >
(the Kindle e-book includes all diagrams in colour!)

For any questions – please contact :
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