



Defining the Quality Criteria and the requirements for a well-fitting tutorial support

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dwh
simulation services



29-Nov-15

Overview

- Blended Learning at Vienna University of Technology
- Blended Learning at dwh simulation-services
- Results of Survey for Quality Criteria in Tutorial Support

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Vienna University of Technology



- since 1814
- 4.500 staff
- 28.000 students
- around 5.400 students every year

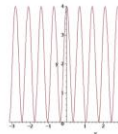
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Standard learning quality


TECHNISCHE
UNIVERSITÄT
WIEN



$$\frac{\pi}{2} \cdot \int_0^{2\pi} e^{-i\omega t} \cdot \sin x \, dx$$

$$\vec{a} \times \vec{b} = \begin{pmatrix} a_2 b_3 - a_3 b_2 \\ a_3 b_1 - a_1 b_3 \\ a_1 b_2 - a_2 b_1 \end{pmatrix}$$

GKMATH
Grundkurs Mathematik

AKMATH
Auffrischkurs Mathematik

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Standard learning quality

eLearning Tools

- Moodle



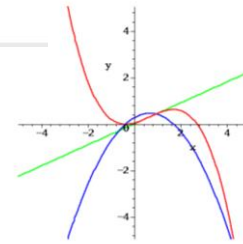
3. Übung: 11. - 13.11.2013

3. Übung

Unter den folgenden Links finden Sie Übungsbeispiele zu den Themen des 3. Üb. unter anderem **Integrale über Flächen und Körper**

- Flächenintegrale
- Körperintegrale
- Beispiele zu Satz von Gauß und Stokes

- Maple T.A.



Wählen Sie die Farben, die den Kurven/Graphen die richtigen Begriffe zuordnen.

- Ableitung Tangente Polynom
 1. blau 2. grün 3. rot

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bLearning Courses

- Various courses for different mathematical levels
- Combination of lectures, exercises and elearning
- Merging administration to one platform
- Training events for tutors
- Integrating elearning tool into exercise hours

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bLearning Results and Feedback

- Questionnaire Results
 - 4,02 can give an Overview of the topic
 - 3,67 can work with an example of the course
 - 3,7 use the learned methods
 - 3,6 know which method for which problem
- Less learning before tests due to homework arrangement
- Immediate feedback due to self-assessment
- Practise tool for exam
- Time for questions before tests
- Constantly learning due to regular practice with preparation

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- Mathematical Modelling and Simulation for Decision Making



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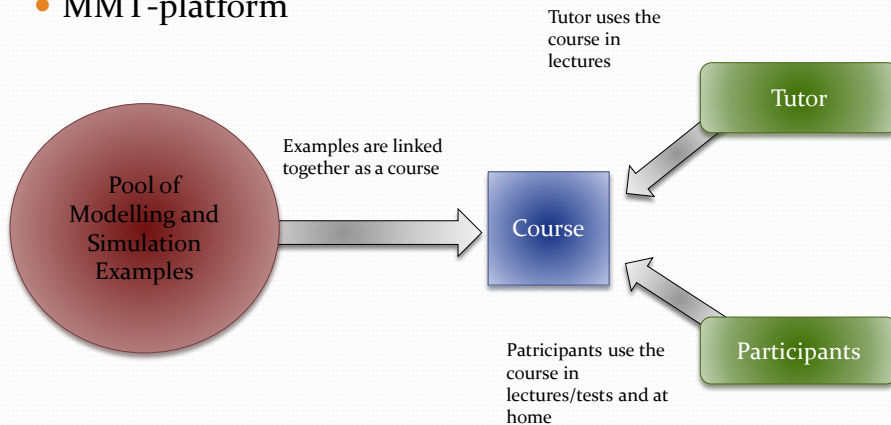
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eLearning Tools

- MMT-platform



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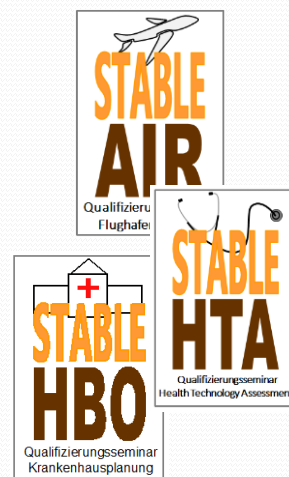
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bLearning Courses

- Stable Seminars
- Blended Learning Seminars for decision makers:
 - „How can modelling and simulation be used in their research field“
- Three different courses (AIR, HBO, HTA)



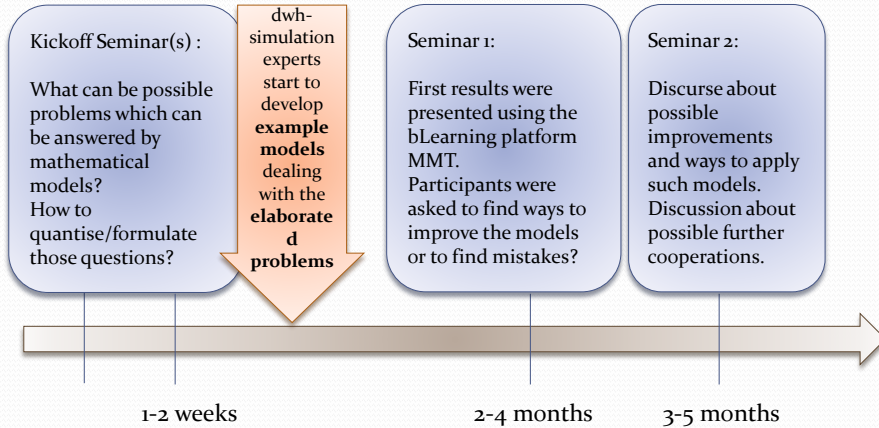
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Course Programme

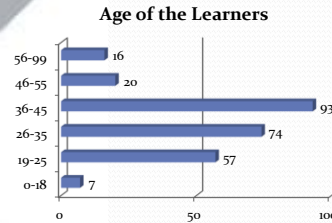


bLearning experience of dwh

- E and bLearning platform development, maintenance, and user management
- Lessons Learned from stable seminars:
 - Finding improvements or mistakes extremely motivates to work with a given bLearning tool
 - It is extremely important to work with a bLearning tool **during** F2F seminars – otherwise it will not be used (correctly).

Quality Criteria in Tutorial Support

- 14 closed questions
- 267 responses
- 45 % women
- 55% men
- 10 countries



Argentina	Austria	Czech Rep.	Germany	Greece	Italy	Romania	Serbia	Switzerland	Ukraine
1	102	1	10	57	71	7	6	2	2

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Question results

Communication

1. direct contact to instructor of the course in meaning of a hotline
(especially learners 26-45) 3.11
2. standards for instructor responses and availability 3.44
3. instructional activities for achieving learning objectives 3.52
4. Which communication tool Skype

Assignments/Homework

5. time structured assignments restricted availability Yes (55%)
6. regular summary of the taken lectures and exercises Yes (80%)
7. regular feedback progress in the course 3.28
8. How much time for an assignment no limit (42%)

Self-Learning

9. education material form (36-45 more text than others) interactive (60%)
10. Importance of stated educational goals 3.47
11. Multimedia educational materials 3.26
12. possibility of a self-evaluation (women don't care that much) Yes (78%)
13. visualization of your progress inside the course 3.25
14. anonymous effort comparison of all participants 2.87

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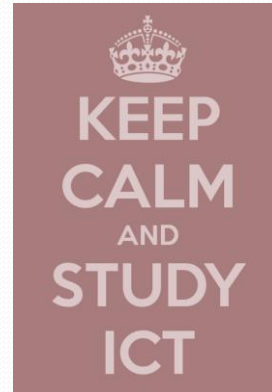
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Summary – Quality Criteria

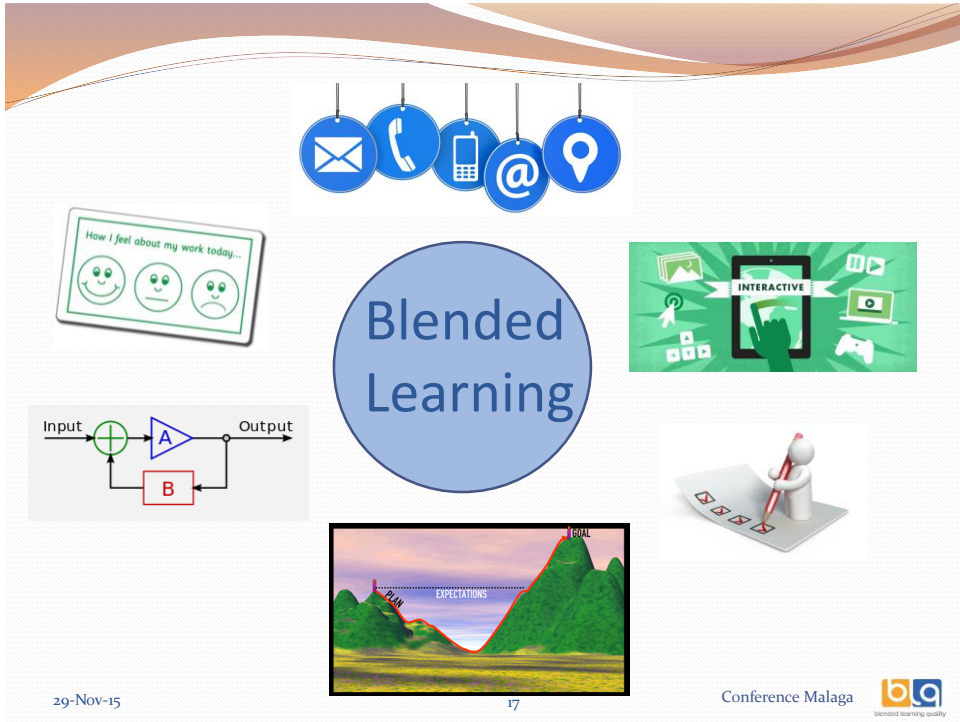
Technical issues:

- Lecture halls providing IT facilities - connect face-to-face and e-tool
- Access to the online part of the course should be guaranteed for all students
- Availability of IT support for students (Email, Forum, etc.)
- Introduction in online environments for students
- Be aware of ICT Knowledge



Summary – Quality Criteria

- **Direct contact** with defined availability to guarantee feedback in appropriate response time
- Offering educational materials in **interactive** and **multimedia** form
- Lectures are most effective using a **combination of instructional strategy** (discussion, group work, role play, games, etc.)
- Preparation of course in advance → formulate **educational goals** and learning objectives at course start → **match expectations** of learner and instructor (**learning contract**)
- Providing **self-assessment** tasks
- Visualization of learners progress in the course combined with a **regular feedback** of the instructor
- Materials, tasks and assignments **visible after** dealing with the topic but **accessible unlimited**
- Time-restricted assignments (2-3 weeks) might be useful for quizzes regarding certain course sections
- **Regular summary** of lectures and exercises (additional links, materials for further reading/learning)
- **Surveys** in order to adapt the course structure to changing conditions
- Instructors and tutors **trainings** before starting the course
- **Question time** before exams and tests
- Offer an additional course regarding **learning methods** independent from subject matters


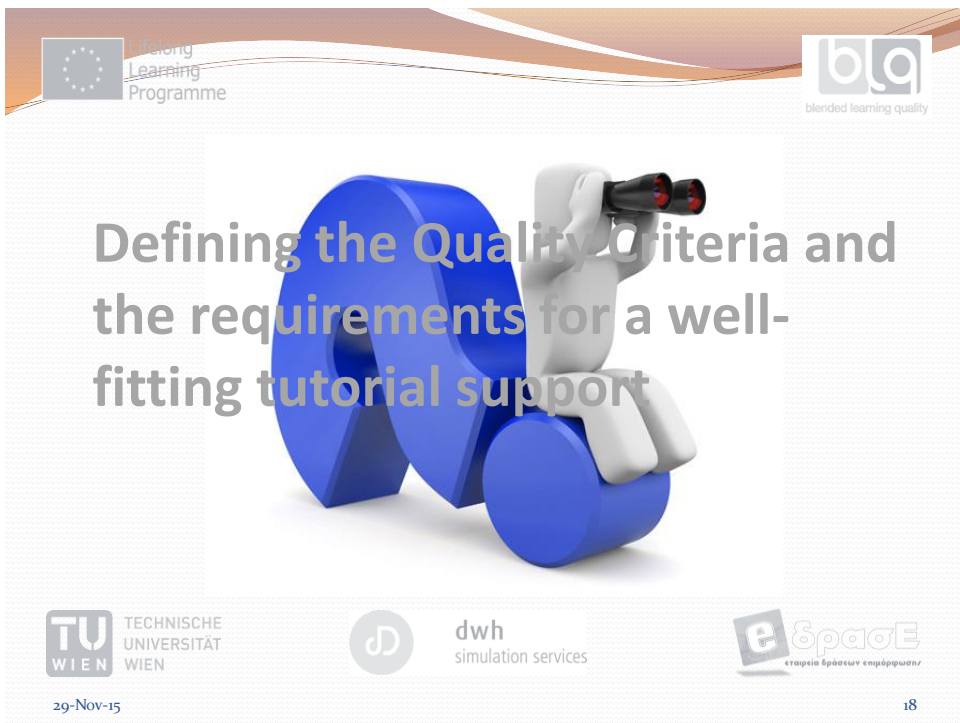


This slide features a central blue circle with the text "Blended Learning". Above it are five blue circular icons: an envelope, a telephone, a mobile phone, an @ symbol, and a location pin. To the left is a "How I feel about my work today..." survey graphic with three smiley faces. Below that is a feedback loop diagram with "Input", "Output", and blocks "A" and "B". To the right is a green "INTERACTIVE" graphic with various icons. Below that is a 3D figure with a red pen pointing to a checklist. At the bottom center is a landscape graphic with a red line labeled "PLAN" and "GOAL" and a dashed line labeled "EXPECTATIONS".

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This slide features a large 3D graphic of a white figure sitting on a blue chair and looking through binoculars. The text "Defining the Quality Criteria and the requirements for a well-fitting tutorial support" is overlaid on the image. In the top left corner is the "Lifelong Learning Programme" logo with the European Union flag. In the top right corner is the "blended learning quality" logo. At the bottom are logos for "TU WIEN TECHNISCHE UNIVERSITÄT WIEN", "dwh simulation services", and "eδραση εταιρεία έρευνας και εφαρμογών".

Defining the Quality Criteria and the requirements for a well-fitting tutorial support

Lifelong Learning Programme

blended learning quality

TU WIEN TECHNISCHE UNIVERSITÄT WIEN

dwh simulation services

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