





ORGANIZING EDUCATIONAL RELATIONS IN A HYBRID INTERNATIONAL NETWORK. LEARNING THEORETICAL CONSIDERATIONS AND EMPIRICAL INSIGHTS FROM LEARNING-TECHNICAL DESIGN.

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Agenda

Part 1: Learning theoretical considerations

- 1. Forms of Virtual / Hybrid Cooperation in Comparison
- 2. Specific cases in Comparison
- 3. The Case of the CONTESSA Cooperation Network

Part 2: The Development and Implementation of an E-Learning Course

- 1. Development and Implementation of the CONTESSA E-Learning Course
- 2. A Usability Study in Cambodia and Sri Lanka
- 3. Invitation to the CONTESSA final conference in Germany
- 4. Q&A











ORGANIZING EDUCATIONAL RELATIONS IN A HYBRID INTERNATIONAL NETWORK.

Part 1: Learning Theoretical Considerations.

Organizational models in virtual teaching cooperation.

Documentation and evaluation of the didactic learning scenarios within collaborative projects

Forms of Virtual / Hybrid Cooperation in Comparison

Virtual Teaching Environments in Education							
	Project 1	Project 2	Project 3	Project 4	Project 5		
Location	National versus International						
Type of cooperation	virtual project	virtual project	virtual project	virtual project	virtual project		
Length of project	temporary	temporary	temporary	temporary	temporary		
Type of Project	domain	domain	domain	method-specific	method-specific		
Mission	creation of a multilingual teaching and learning environment	development of a double master's degree in "International Management"	use of a Building Information Modeling for civil engineering courses	standardization of study modules, development of e-mentor program for the lecturers	development of a virtual personal-oriented case study seminar based on a manual		
Range of involvement	across different types of universities	across different types of universities	across different types of universities and degrees in Saxony	in a specific institute of a university	between two different departments and types of universities		
Methodology	in steps, share of study material	exchange semester	splitted in three sub- projects, teamwork	setting the base for creating an e-mentor program	evaluation of virtual case study seminars		
Membership	international	international	local	local	local, mixed		
Network configuration	closed	closed	open, external	open	open		
Networking	business trips, workshops, theme days, conferences, exchange programs	business trips, workshops	meetings, trainings	*reference about international cooperations	* no reference		
Use of IT	connectivity, knowledge sharing (OPAL)	connectivity, knowledge share (OPAL)	connectivity, sharing embedded knowledge (OPAL, BLoK) / shared infrastructure (BIM)	knowledge share/exchange (OPAL)	connectivity, knowledge share (ELGG)		





Evaluation of didactic learning scenarios of a collaborative project

E-Learning initiatives based upon VLEs

Main Topics:

- Creation of solutions for an effective cooperation with international partners
- Qualification of educational personal in order to strengthen their digital competences
- Support by the creation of preparatory courses and online self-assessments using and creating OER material

"Virtual Teaching Cooperation"

Criteria:

- Didactics of collaborative teaching and learning
- Cross-university teaching networking
- Different types of universities







Specific cases in Comparison

Virtual Teaching Cooperations in Higher Education							
	Project 1	Project 2	Project 3	Project 4	Project 5		
Mission	creation of a multilingual teaching and learning environment	development of a double master's degree in "International Management"	use of a Building Information Modeling for civil engineering courses	standardization of study modules, development of e-mentor program for the lecturers	development of a virtual personal-oriented case study seminar based on a manual		
Range of involvement	across different types of universities	across different types of universities	across different types of universities and degrees in Saxony	in a specific institut of a university	between two different departments and types of universities		
Methodology	in steps, share of study material	exchange semester	splitted in three sub- projects, teamwork	setting the base for creating an e-mentor program	evaluation of virtual case study seminars		
Membership	international	international	local	local	local, mixed		
Network configuration	closed	closed	open, external	open	open		
Networking	business trips, workshops, theme days, conferences, exchange programs	business trips, workshops	meetings, trainings	*reference about international cooperations	* no reference		
Use of IT	connectivity, knowledge share (VLE)	connectivity, knowledge share (VLE)	connectivity, sharing embedded knowledge (VLE + Online Record Book) / shared infrastructure (BIM)	knowledge share/exchange (VLE)	connectivity, knowledge share (Data Management Platform)		





Overview as generic comparison

Virtual Teaching Environments in Education							
	Project 1	Project 2	Project 3	Project 4	Project 5		
Type of cooperation	virtual project	virtual project	virtual project	virtual project	virtual project		
Length of project	temporary	temporary	temporary	Temporary	temporary		
Type of Project	domain	domain	domain	E-didactic method-specific	E-didactic method-specific		

What about CONTESSA?

- > We have started as (non-permanent) project.
- ➤ But we became a multi-local multi-national, multi-lingual, permanent, hybrid cooperation i.e. a permanent network.
- > Yet, even if we have started jointly online with a shared platform and jointly developed material
- > ... we continue by implementing the network offers on a local basis (i.e. rather independently) within physical contexts, i.e. in a hybrid way.











ORGANIZING EDUCATIONAL RELATIONS IN A HYBRID INTERNATIONAL NETWORK.

Part 2: The Development and Implementation of an E-Learning Course.

A Usability Study in Cambodia and Sri Lanka

CONTESSA Online Modules Courseware

OBJECTIVES

- ✓ To deliver of twenty-first century, student centered teaching and learning principles to pre- and in-service teachers in Cambodia and Sri Lanka
- ✓ To determine the learning experiences of teachers and students in COMC;
- ✓ To determine aspects which are required to be preserved in COMC;
- ✓ To determine aspects which need to be improved in COMC along with the following steps necessary to do so;
- ✓ To prepare a final questionnaire for students to determine their learning experience and motivation in COMC

COURSEWARE DESIGN

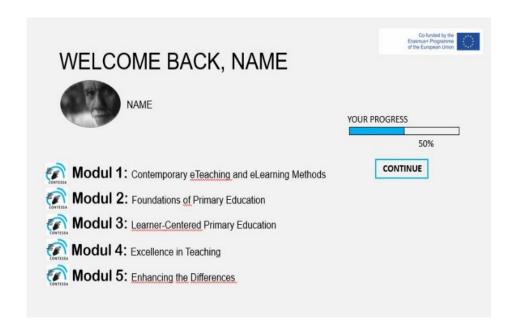
- ✓ Accessibility of the content to ALL → inclusive pedagogy
- ✓ Free public access to the course and materials (online and offline)
- ✓ SCORM compatible format
- ✓ Cultural-inclusive and gender-sensible
- ✓ Contemporary pedagogical approaches for content development

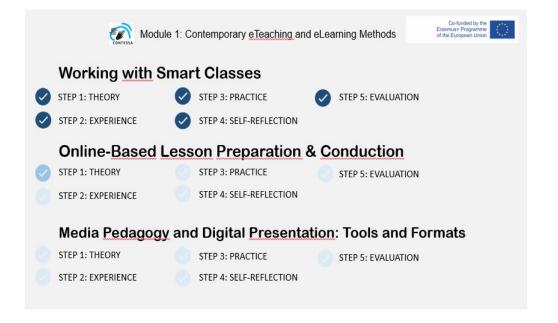




Courseware Development

Storyboard development: focused on structure, functionality and navigation \rightarrow communication function





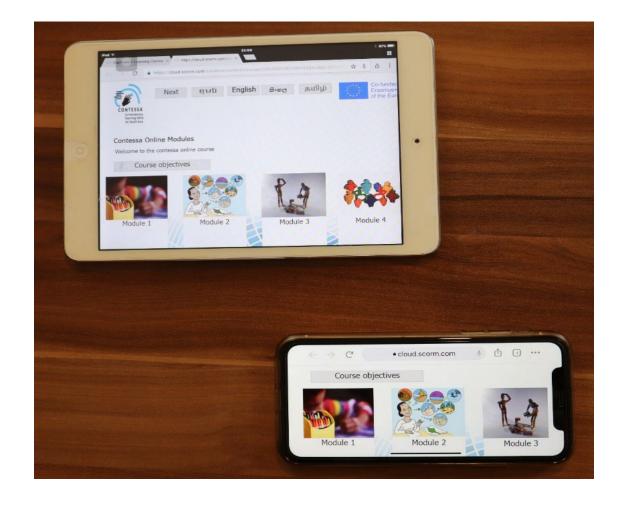




Courseware Development

Prototyping:

- 1. responsive design using modern authoring tools/software
- 2. Multilanguage interface
- 3. Minimalistic design
- 4. Online and offline materials
- 5. Interactive study materials







Usability Testing - Theory

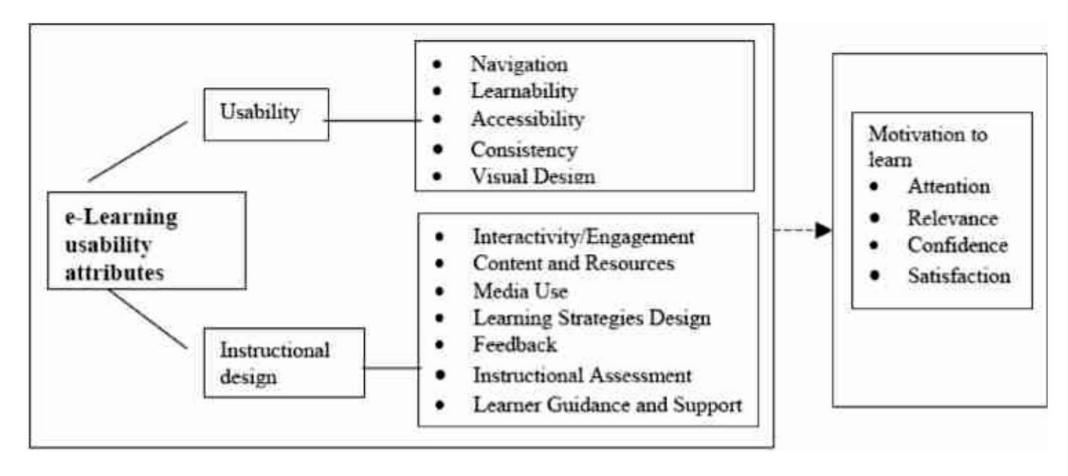


Figure: Theoretical framework for e-learning usability employing motivation to learn (cf. Zaharias & Poylymenakou, 2009, p. 80).





Usability Testing

Pre-test: with international students (N=5) and Austrian students (N=53) → Usability testing survey

- Overall, the modules were rated as interesting, stimulating, attractive, novel, enjoyable, and valuable to the learning process
- > examples should be comprehensible and should serve to make the theoretical texts understandable, but they should also be adaptable to the participants' practice
- > the linguistic complexity of the texts as well as their volume should be revised
- visual set-up should be fixed
- Participants would like to see large screen formats better adapted and utilized. At the same time, it is important that the entire navigation can be easily hidden and displayed when using small screen devices (e.g. smartphones).





Usability Testing

Pilot test

- with the lectures in Cambodia and Sri Lanka (N=32) (Khmer and English Modules)
- Positive impressions: self-reflection(-assesments), module sequencing, multimedia elements, interactivity, navigation
- ➤ Usability problems: learner (technical) support instruction, spell-check and text structure, lengthy content, need for more new interactive (assessment) methods/elements

NEXT STEP: Final test

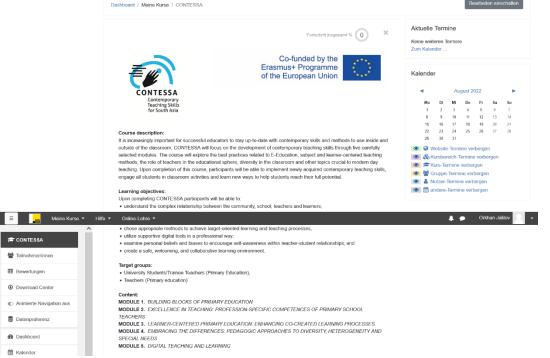
- with students of Cambodia and Sri Lanka
- Usability testing must be conducted after using of courseware.



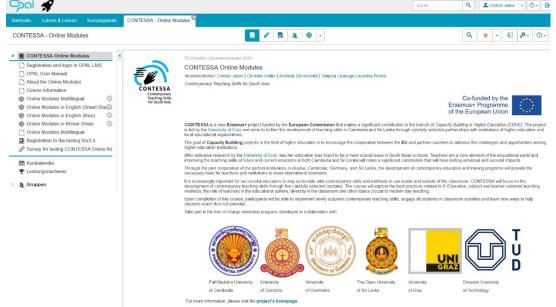


Courseware Delivery

Moodle LMS



OPAL LMS







Further Development

- > Improvement of content and audio-visual elements of modules
- Revision of the linguistic complexity and length of texts including graphic elements accompanied by real-life examples
- Clearly definition of learning objectives and outcomes for each module
- Updating of the module content
- Updating of the interactive assessment methods and tools
- > Development and integration of the learner support and technical guidance with the visual aid media.





INVITATION

Do you share my perspective and support my approach?

- → What might be the specific meaning for developing talents for a social business in your branch?
- → Why not have a joint paper to be submitted in 2022?

Please be invited to discuss the most recent approaches now – or @ one of the global conferences @ TU Dresden around TVET talent development:

September 2022 in Vienna

- → 51st IGIP International Conference on Engineering Pedagogy
- → 25th International Conference on Interactive Collaborative Learning

October 2022 in Dresden

→ 25th GeNeMe Communities in New Media Conference









Did you follow a specific organizational model in order to define the mode cooperation in your project?

Did you experience difficulties in implementing your preferred mode of (inter-)organizational collaboration?





Thank you on behalf of the TU Dresden Contessa Team!

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