


Communication Tools in E-learning: Experiences in Academic Surveying Education

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Content

- Introduction
- Communication in Teaching & 
- Investigation on Virtual Communication
 - Sources of Investigation
 - Lessons Learnt
- Conclusions

Teaching at BOKU - Figures

- 7200 Students
- 500 + 400 Scientific Staff
- **Study Areas:**
 - Agriculture
 - Forestry
 - Land & Water Management
 - Landscape Architecture
 - Bio- & Food Technology
- **Study Programs**
 - 9 Bachelor Study Programs
 - 23 Master Study Programs



Teaching at IVFL

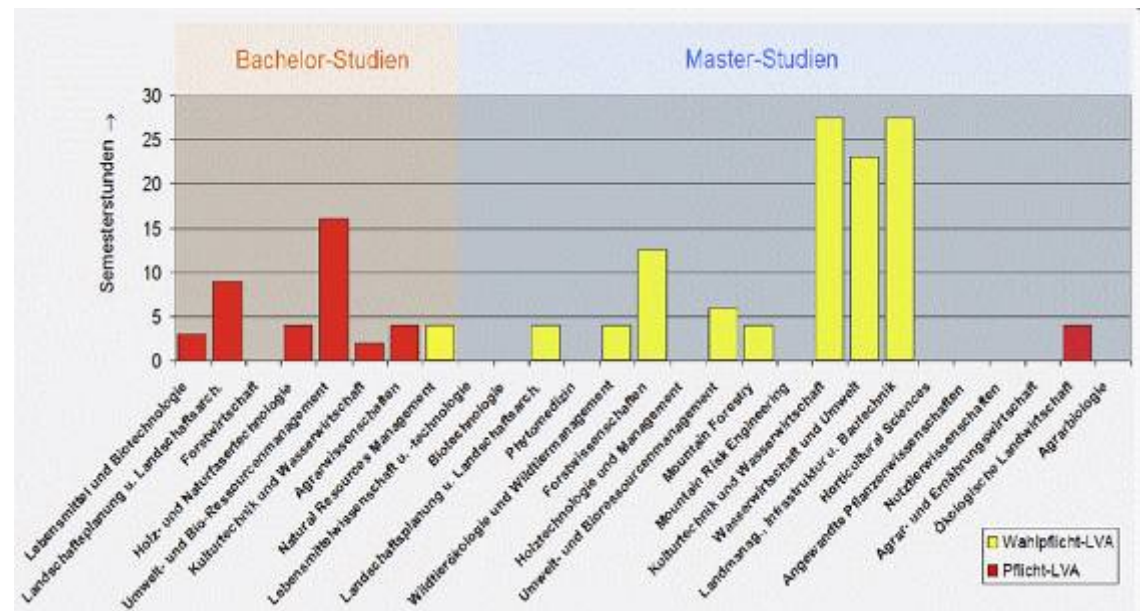
Teaching and Research Fields:

- Surveying & Land Administration
- Photogrammetry & Photo Interpretation
- Remote Sensing & Image Processing
- Geoinformation



Figures for Teaching

- 7 Staff members & 4 external lecturers
- 35 courses / 140 SWH
- ~ 450 students / year

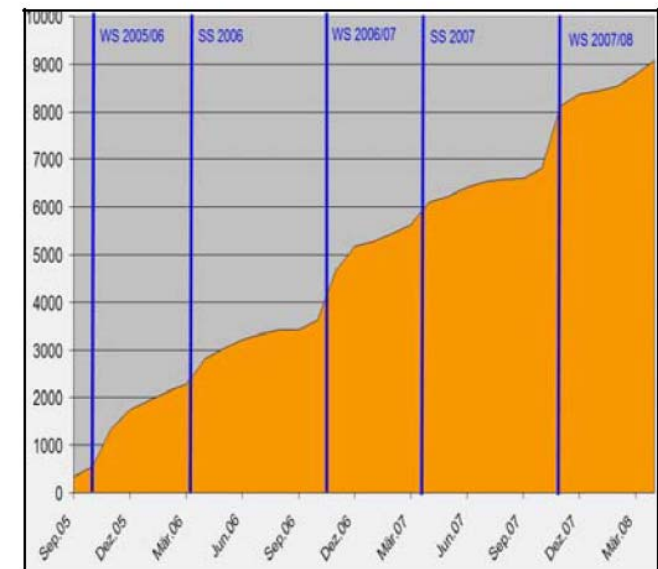


E-Learning at BOKU

- Since 2005: 
- E-learning platform: 
(**M**odular **O**bject-**O**riented **D**ynamic **L**earning **E**nvironment)
→ Open Source Software (<http://moodle.org>)



- Figures of BOKUlearn (04/08):
 - Users (total): 8773
 - Lecturers: 217
 - Courses: 470
 - Accesses (02/08): 3,880,790
 - Traffic in GByte (02/08): 117.24



Communication

- **Communication** is the process that allows organisms to exchange information by several methods
- **Communication** is a comprehensive issue in knowledge transfer
- **Communication** can be performed by
 - Written means
 - Auditory means
 - Physical means

Aspects of Communication (in E-learning)

Direction

- unidirectional
- bidirectional
- Multidirectional

Relation

- 1 : 1
- 1 : n / n : 1
- n : m

Response Time

- synchronous
- asynchronous

Content

- organisational
- technical
- informal

Media

- text
- illustrations
- audio
- video

Number of Channels

- verbal
- nonverbal

Level of activity

- active
- passive

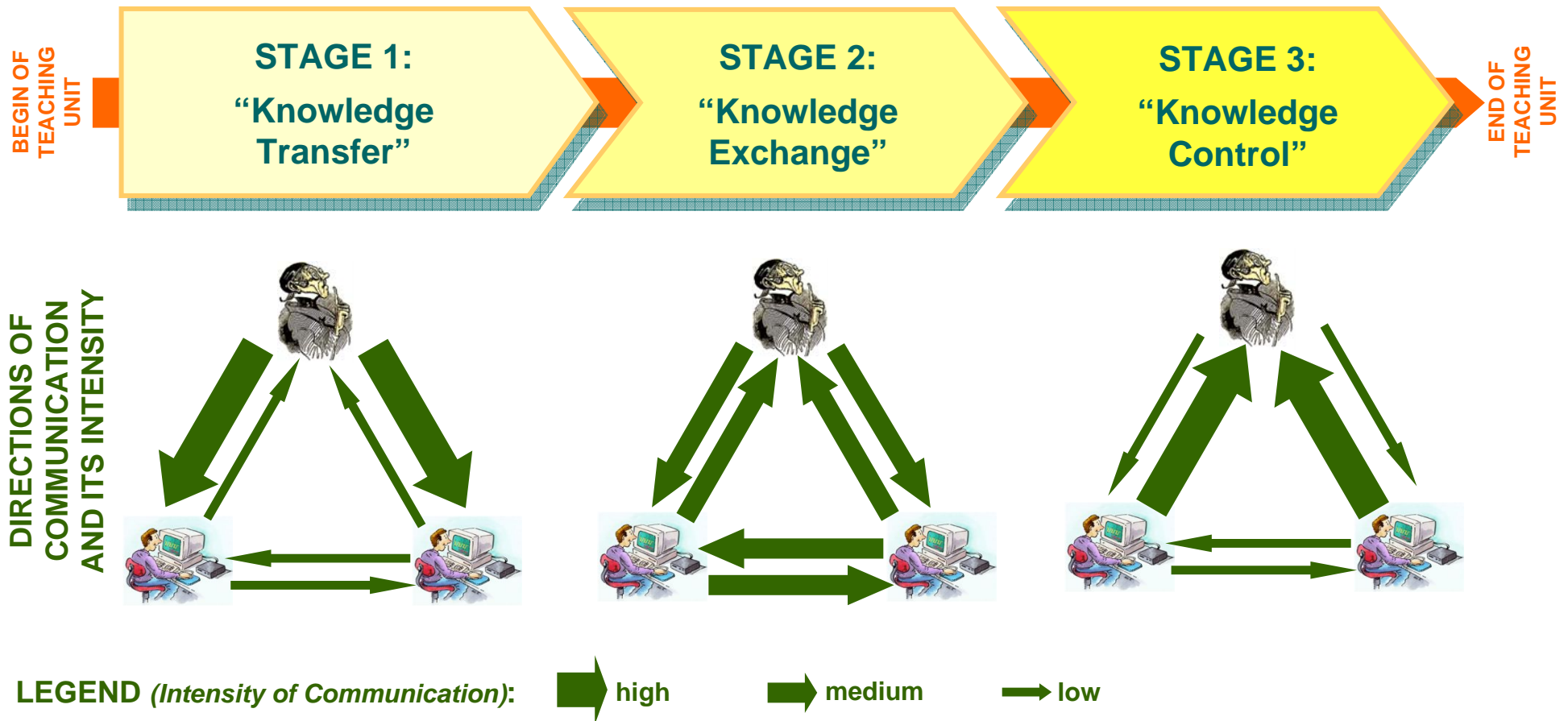
Roles of Participants

- System Administrator
- Teacher
- Student


Site of Access

Informal Communication

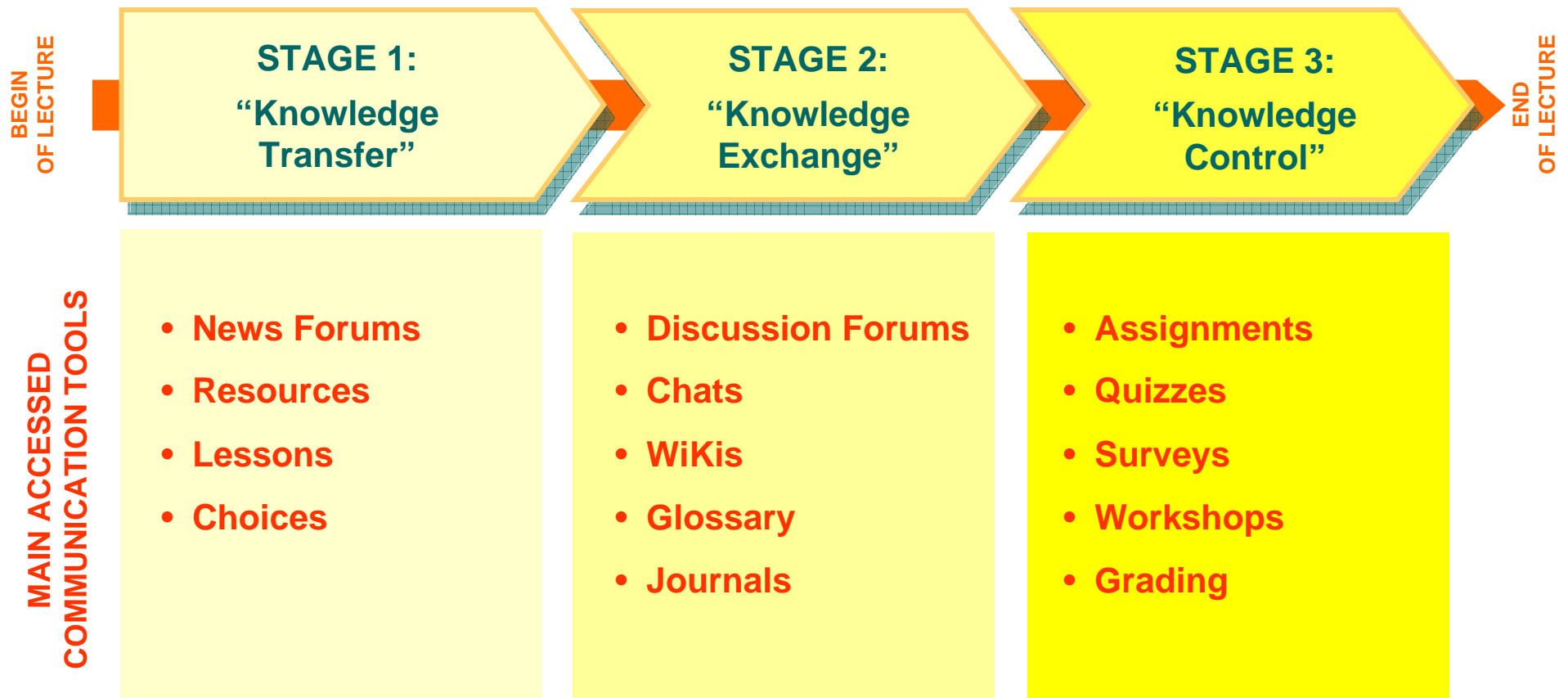
Communication in Academic Education



Characteristics of Communication Tools in moodle

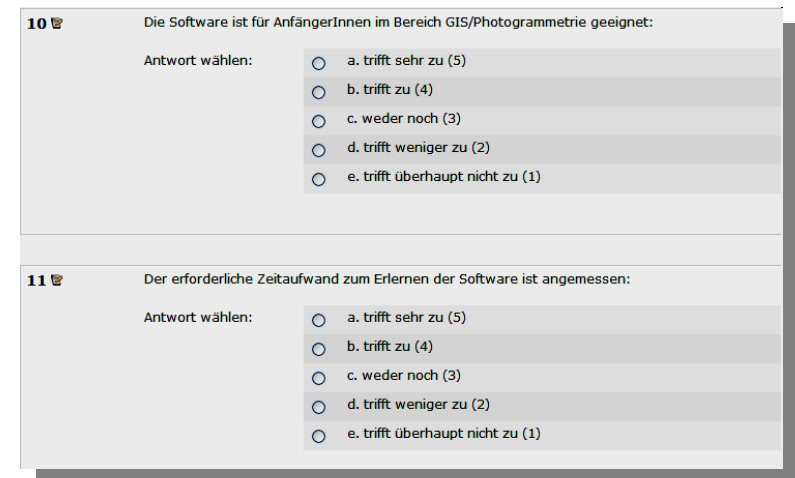
		Choices	Resources	Assignments	Chat	Forums	Glossary	Journals	Lessons	Quizzes	Surveys	Wikis	Workshop	
														
Time	synchron	[Red circle]												
	asynchron	[Red circle]												
Direction	unidirectional	[Red circle]												
	bidirectional	[Red circle]												
	multidirectional	[Red circle]												
Information Flow	Teacher - Student	[Red circle]												
	Student - Teacher	[Red circle]												
	Student - Student	[Red circle]												
Relation	1 : 1	[Red circle]												
	1 : n / n : 1	[Red circle]												
	n : m	[Red circle]												
Content	organisational	[Red circle]												
	technical	[Red circle]												
	informal	[Red circle]												
Materials	text	[Red circle]												
	images	[Red circle]												
	audio	[Red circle]												
	video	[Red circle]												
Access	everywhere	[Red circle]												
	computer lab	[Red circle]												

Realisation of Communication in



Investigation on Virtual Communication: Sources

- 2 courses supported by E-learning at IVFL
 - **Applied Photogrammetry** (3 SWH, master program, advanced studies, limited to 12 students, blended learning concept)
 - **Geoinformatics** (3 SWH, bachelor program, basics, unlimited, up to 250 students, lecture: conventional concept / face-to-face; exercises: distance learning concept)
- Student Survey (Opinion Poll)
 - Return quote: approx. 70 answers (25%)
- Personal interviews with students



10 Die Software ist für AnfängerInnen im Bereich GIS/Photogrammetrie geeignet:

Antwort wählen:

- a. trifft sehr zu (5)
- b. trifft zu (4)
- c. weder noch (3)
- d. trifft weniger zu (2)
- e. trifft überhaupt nicht zu (1)

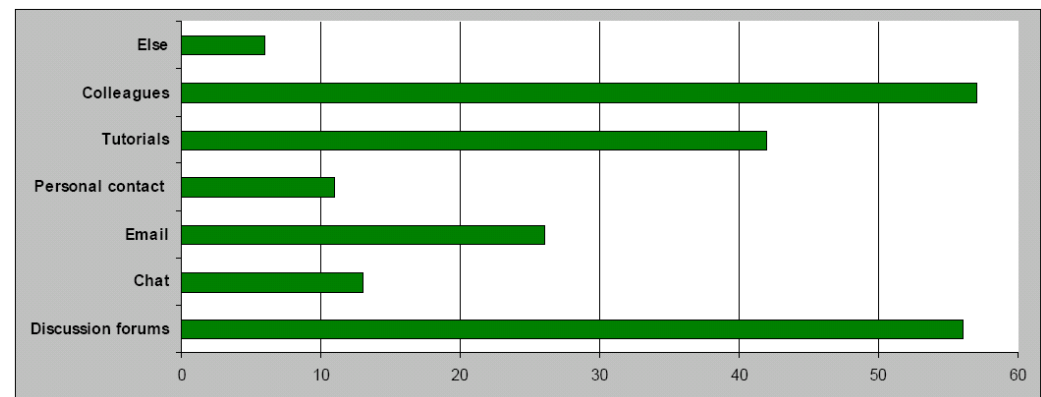
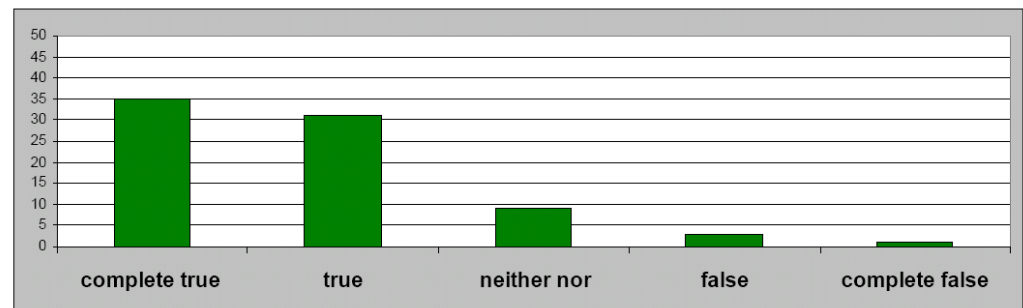
11 Der erforderliche Zeitaufwand zum Erlernen der Software ist angemessen:

Antwort wählen:

- a. trifft sehr zu (5)
- b. trifft zu (4)
- c. weder noch (3)
- d. trifft weniger zu (2)
- e. trifft überhaupt nicht zu (1)

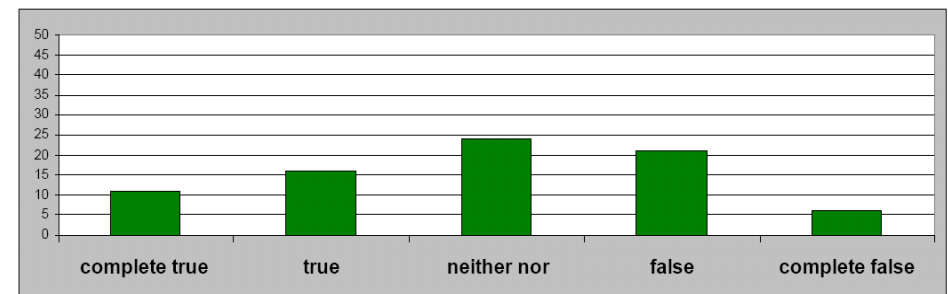
Results of Investigation (selected)

- **Students accept E-learning** →
- Access to E-learning platforms mainly from private computers
- Videos and animations appreciated by students
- **Informal communication** → essential for problem solving



Results of Investigation (selected) ... cont.

- Online Consulting hours accepted by students
- E-learning requires flexibility in time for lecturers
- Benefit of E-communication increases with number of students
- Questions posted on the E-learning platform are well-considered
- Acceptance of online-examinations (E-exams) and of results



Conclusions

- Communication is the information carrier in academic education
- Characteristics of communication is varying during a lecture
- E-learning platforms provide proper tools for various types of communication
- The use of E- communication tools has to be planned
- **Virtual (E-)communication cannot completely substitute personal communication**

What remains to be said



THANK YOU
for Your Attention

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