



CHANGING HORIZONS in GEOGRAPHY EDUCATION
POLAND, TORUŃ, SEPTEMBER 2-5, 2005

***E-Learning and E-Teaching:
an opportunity to match different
learning and teaching styles***

**Fred Toppen
Utrecht University
September 3, 2005**



Contents

- Introduction
- “Teaching with Technology” model
- Students & Learning styles
- Teachers & Teaching styles
- The GIMA case
 - GIMA explained
 - Didactic approach
- Lessons to be learned
- Concluding remarks



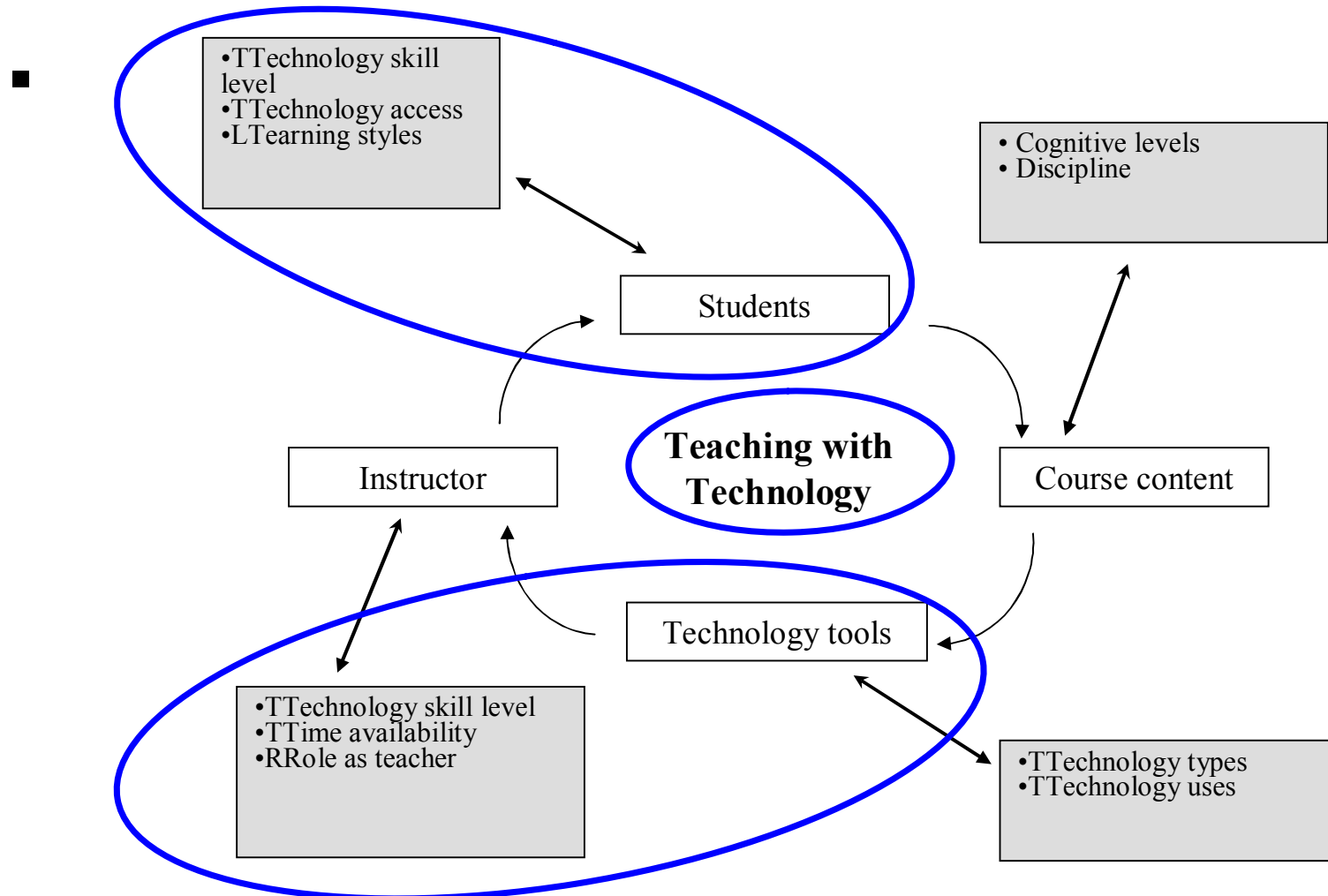
Introduction

- Classroom and innovation
- Technical innovation to promote learning and teaching
- Innovation and learning and teaching styles
- Focus on Internet / on-line learning



“Teaching with Technology” model

(Zhu & Kaplan, 2002)





Students, learning styles and e-learning

- Technology skills level
- Technology access
 - Digital divide
- Learning styles
 - *“students will profit most from learning if it fit best their style of gathering knowledge and gaining insight”*
 - face-to-face or on-line
 - co-operation or individual learning
 - active – passive learning
 - self discipline?
- Do we use knowledge about student learning styles?



Teachers, teaching styles and e-teaching

- Contents versus didactics
- IT skills of the instructor
 - Digital divide
- Lack of time
- Role of the teacher
- Quality of (IT) tools
- Quality of (Internet) contents

- Do we use knowledge on our teaching styles (reflection!)?



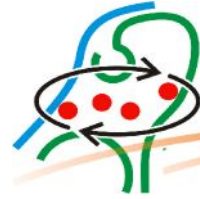
The GIMA case background



GIMA

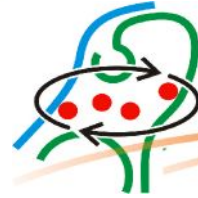
Geographical Information Management and Applications

- Bachelor-Master structure
 - Expected increase of student mobility: Students from other (and foreign) institutes
 - Strong demand for highly educated GI-skilled managers
 - Need for GI-education professionals (life long learning, next step in career)
- Target group: bachelor students, international students, professionals
- Provide knowledge on:
 - How to manage GI-information
 - How to apply GI-information (application fields)
 - How to use GI-technology (methods&techniques)



The GIMA case background

- Four participating (Dutch) universities
 - International Institute for Geo Information Science and Earth Observation (ITC), Enschede
 - Utrecht University (UU)
 - Wageningen University (WUR)
 - Technical University Delft (TUD)
- Part-time, full time option
- Distance aspect
- English
- 6 modules of 3 months (12 weeks) each
- Started in September 2003 (18 students)
- September 2005, 28 new students



The GIMA case

Didactic approach

- Blended learning
 - One week classroom learning
 - Ten weeks distance education
 - One week classroom learning
- Various supporting tools
 - Digital learning environment
 - Cd-Roms
 - Email
 - Video conferencing
- Tasks, group work, assessment



The GIMA case

Resulting scheme

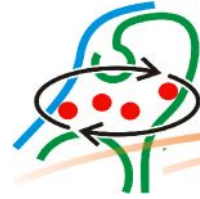
<i>Program</i>		<i>Period 1</i>	<i>Period 2</i>	<i>Period 3</i>
GIMA year 1 2003-2004	intro	module 1 basic M&T	module 2 basis applications	module 3 management in organizations
GIMA year 2 2004-2005		module 4 project management	module 5 advanced M&T	module 6 advanced applications
GIMA year 3 2005-2006	MScience thesis			



The GIMA case

Detailed programme

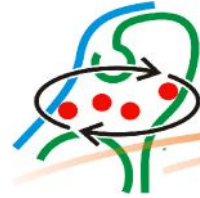
week	Task student	deliverable	Task staff
38	Prepare proposal	-	Answer questions email
39	Prepare proposal	Process report (PR) email	- Comments PR email - Distribution task 1: budgetting DLE
40	- Prepare proposal - Task 1	- Project proposal - Answer task 1 email	
41	Peer review project proposals	Comments to other groups DLE email	Comments on project proposals email



The GIMA case

Lessons learned: findings first years

- Based on student evaluation and discussion among staff
- Major findings (on type of learning & teaching)
 - No standard communication protocol
 - Co-operation important, but not easy
 - Interaction between group members low
 - Complaints on response time teacher
 - Chat session cumbersome
 - Progress students difficult to monitor and control
 - Not all students can adopt an active learning strategy



The GIMA case

Lessons learned: solutions

- Communication protocol: **awareness**
- Co-operation important: **make students aware of importance, problems and solutions**
- Interaction between group members low: **chat sessions**
- Response time teacher: **backup and suggest time slots**
- Chat session cumbersome: **smaller groups, better preparation**
- Progress students difficult to monitor and control: **process reports**
- Not all students can adopt an active learning strategy: **awareness, instruction**



Concluding remarks

- Main objective: keep group alive (learning as a social process) and allow for intensive (weekly) contact with staff
- Be accessible (as teacher / supervisor)
- Blended learning gives the opportunity for an ideal mix: both in terms of learning styles and teaching styles
- Guide both students and teachers in the use of IT tools (such as a DLE)
- Time: organize your self (but be aware that on-line teaching does not save time!)
- Use available knowledge elsewhere: It's there!