



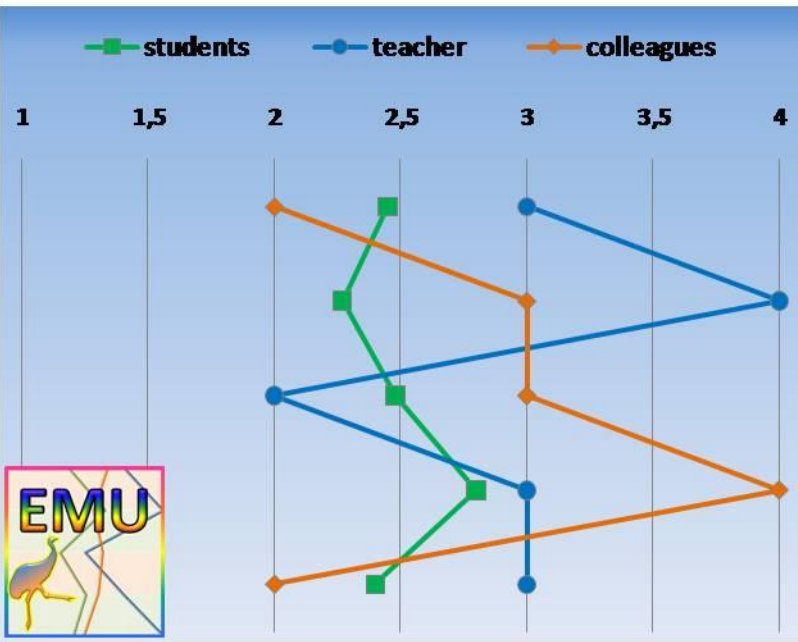
eapril

European Association for Practitioner Research on Improving Learning in education and professional practice



EAPRIL 2011 Conference

Different views of instruction



**Diagnosis of classroom instruction:**  
**A new tool for evidence-based improvement of teaching and learning**

Giang Pham  
 Andreas Helmke, Tuyet Helmke, Friedrich-Wilhelm Schrader  
 University of Koblenz-Landau, Germany





# Outline



## + Introduction and overview (10')

- Why EMU?
- Aims
- Evidence-based diagnosis of classroom instruction

## + EMU instruments (15')

- Brochure
- Questionnaires
- Software
- Presentation
- Video for training

## + Getting started: (35')

- Watch a video clip of an English lesson (15')
- Rate the classroom instruction using EMU items (10')
- Discuss in small group
  - Exchanging explanations for your judgment where you have most diverse ratings (10')

## + Discussion in plenum (20')

- Results of your teamwork
- Comparison of results from different perspectives

## + Prospect (5')





# Project framework

## + EMU – Evidence-based methods of diagnosis of classroom instruction<sup>1</sup>

*1: A nationwide project for improving teachers' diagnostic competencies, funded by the Standing Conference of the German Ministers of Education and Cultural Affairs.*

## + Authors:

- Prof. Dr. Andreas Helmke (team leader)
- Dr. Friedrich-Wilhelm Schrader
- Dr. Tuyet Helmke
- Gerlinde Lenske, Giang Pham, Anna-K. Praetorius
- Manuel Ade-Thurow





# WHY EMU?



# Why did we develop this program?

- ✚ Teaching is complex: Doyle, 2006
    - multidimensionality
    - simultaneity
    - immediacy
    - unpredictability
    - publicness
    - history
  
  - ✚ Self-assessment of instructional quality is difficult:
    - Nature of classroom environment: invisible processes, activities
    - Self-reflection, self-monitoring: metacognition required
- ➔ easily distorted observation by teachers

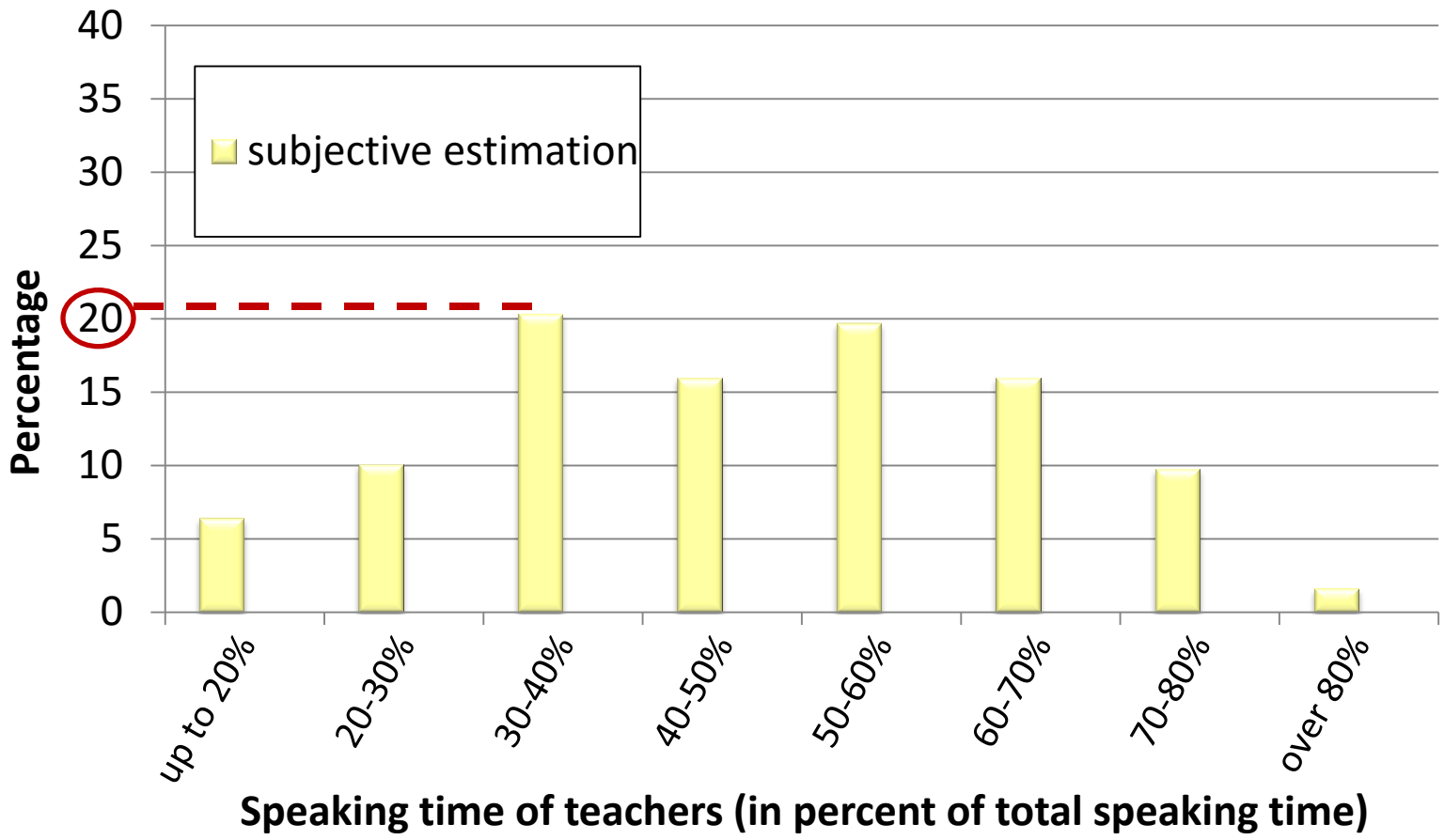




# Research findings: estimation



## Teachers rate their own speaking time



(DESI, Helmke et al., 2008)

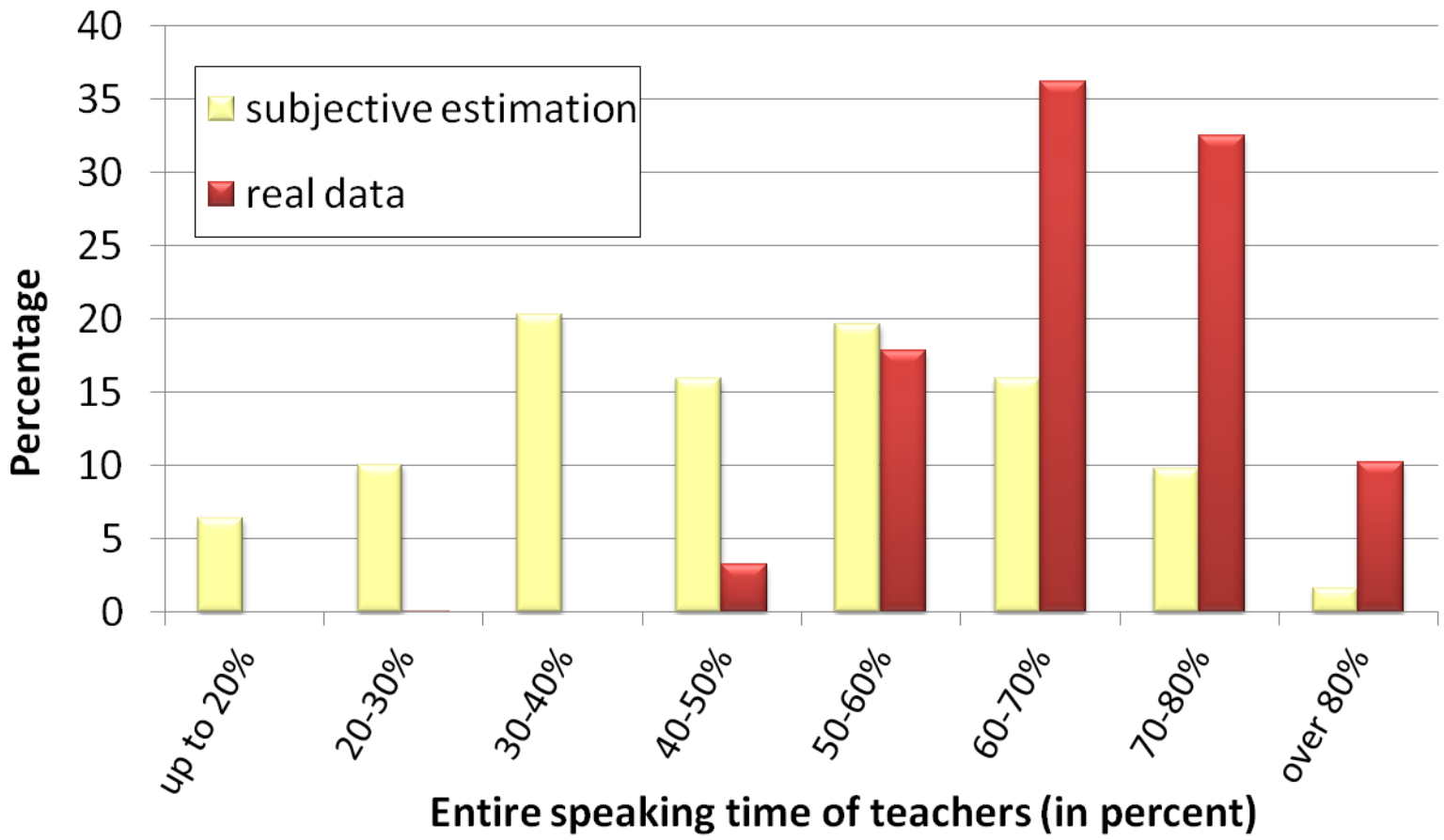




# Research findings: estimation



Teachers underestimate their own speaking time substantially



(DESI, Helmke et al., 2008)





# Why EMU?

- ✚ Without a realistic self-assessment, no valid basis for improving teaching quality
  
- ✚ Teachers need to be aware of their personal strengths and weaknesses:
  - Only self-image: not reliable
  - Necessity of external view via evidence-based process
  - Constructively dealing with different views:
    - self-reflexion
    - constructive discussion and inspiration







# AIMS AND DESIGN OF EMU





# Aims of EMU



## EMU = practical tool for teachers

- ✚ to get a differentiated, data-based feedback of their own classroom instruction in order to improve teaching quality
- ✚ to make aware of own subjective theories and blind spots
- ✚ to sensitize for classroom heterogeneity
- ✚ to help interpret the results and plan further steps for teaching improvement by means of cooperative effort

## EMU = practical tool for schools

- ✚ to foster a cooperative work culture
- ✚ to help deprivatize teaching culture



# Whom is the program designed for?

## + Teachers in schools

- Program for using in schools with 3 perspectives:
  - Teacher
  - Visiting colleague(s) (invited by teacher)
  - Students (anonym)
  - Colleagues (“virtual visiting”)

## + Teacher trainees in pre-service training

## + Teachers in in-service training

- Usable for 2 perspectives: I vs. "Group"
- Usable for own vs. others' instruction (video)





# Features of EMU



- self-explanatory: for every teacher
- modular design: to meet individual needs
- for free





# Evidence-based diagnosis of classroom instruction

- ✚ Diagnosis: “dia-” + “-gnosis”
  - Meaning: “to know thoroughly”
  
- ✚ **Evidence-based diagnosis of instruction:**
  - research-based indicators
  - tested instruments





# EMU INSTRUMENTS





# EMU instruments



- + Brochure
- + Questionnaires
- + Software
- + Powerpoint-presentation for using in schools, seminars, trainings
- + Video for training

➔ [www.unterrichtsdiagnostik.info](http://www.unterrichtsdiagnostik.info)





# EMU-Brochure

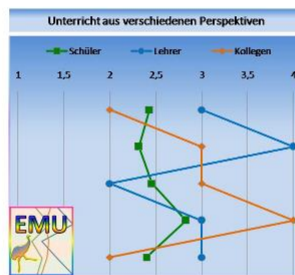


- + A brochure (10 pp.) and many helpful links
  - for self-organizing the program in classroom, seminar, training
  - for interpreting the results
  - for further steps towards a reflective practitioner

## EMU

Evidenzbasierte Methoden der Unterrichtsdiagnostik und -entwicklung

Version 3.1 (17.10.2011)



EMU ist ein Akronym für *Evidenzbasierte Methoden der Unterrichtsdiagnostik und -entwicklung*. Es handelt sich dabei um ein Programm, das wir im Rahmen des Projektes [UdiKom](http://UdiKom) im Auftrag der Kultusministerkonferenz entwickelt haben und das seit der Freischaltung im Januar 2011 bereits vielfach eingesetzt wurde. Weil bei EMU sicher jeder an die gleichnamige [Vogelart](http://Vogelart) denkt, haben wir dieses possierliche Tier in unser Logo aufgenommen.



Das auf der Website [www.unterrichtsdiagnostik.de](http://www.unterrichtsdiagnostik.de) (oder [www.unterrichtsdiagnostik.info](http://www.unterrichtsdiagnostik.info)) verfügbare Material umfasst







# EMU-questionnaires



- ✚ Questionnaires for students, teacher and colleagues with equivalent items
  - One concrete lesson
  - Important quality dimensions of classroom instruction (empirically confirmed):
    - Classroom management
    - Learning climate
    - Clarity and structuring
    - Activation
  - Perceived lesson outcomes
  - Additional dimensions
  
- ✚ Wild card zone for using other instruments or developing own items





# EMU-questionnaires



- ✚ Hattie (2009): A metaanalysis of over 800 meta-analyses relating to achievement
  - *"If the teacher`s lens can be changed to seeing learning **through the eyes of students**, this would be an excellent beginning"* (S. 252).
  
- ✚ Formulation of items: from each student`s perspective. Example:
  - Student item: „When the teacher asked a question, **I** had enough time to reflect“
  - Teacher item: „When I asked a question, the students had enough time to reflect“
  - Colleague item: „When the teacher asked a question, the students had enough time to reflect“





# Wild card areas



- ✚ Additional dimensions (available for use):
  - Dealing with heterogeneity
  - Teacher language
  - Cognitive activation
  - Quality of cooperative learning
  - Teachers' health (project EMUplus)
  - ...
  
- ✚ Using other instruments: individual needs
  - Other questionnaires
  - Instruments from external evaluation agencies
  - Self-developed items





# EMU-software



A software for

- data entry
- visualizing results
- links to helpful tips for interpretation, planning actions

Data entry	First measurement	Second measurement	Both measurements
Students	<a href="#">Click here</a>	<a href="#">Click here</a>	
Teacher/Colleguage	<a href="#">Click here</a>	<a href="#">Click here</a>	
Results	First measurement	Second measurement	Both measurements
Basic dimensions	<a href="#">Click here</a>	<a href="#">Click here</a>	<a href="#">Click here</a>
Wild card items	<a href="#">Click here</a>	<a href="#">Click here</a>	<a href="#">Click here</a>

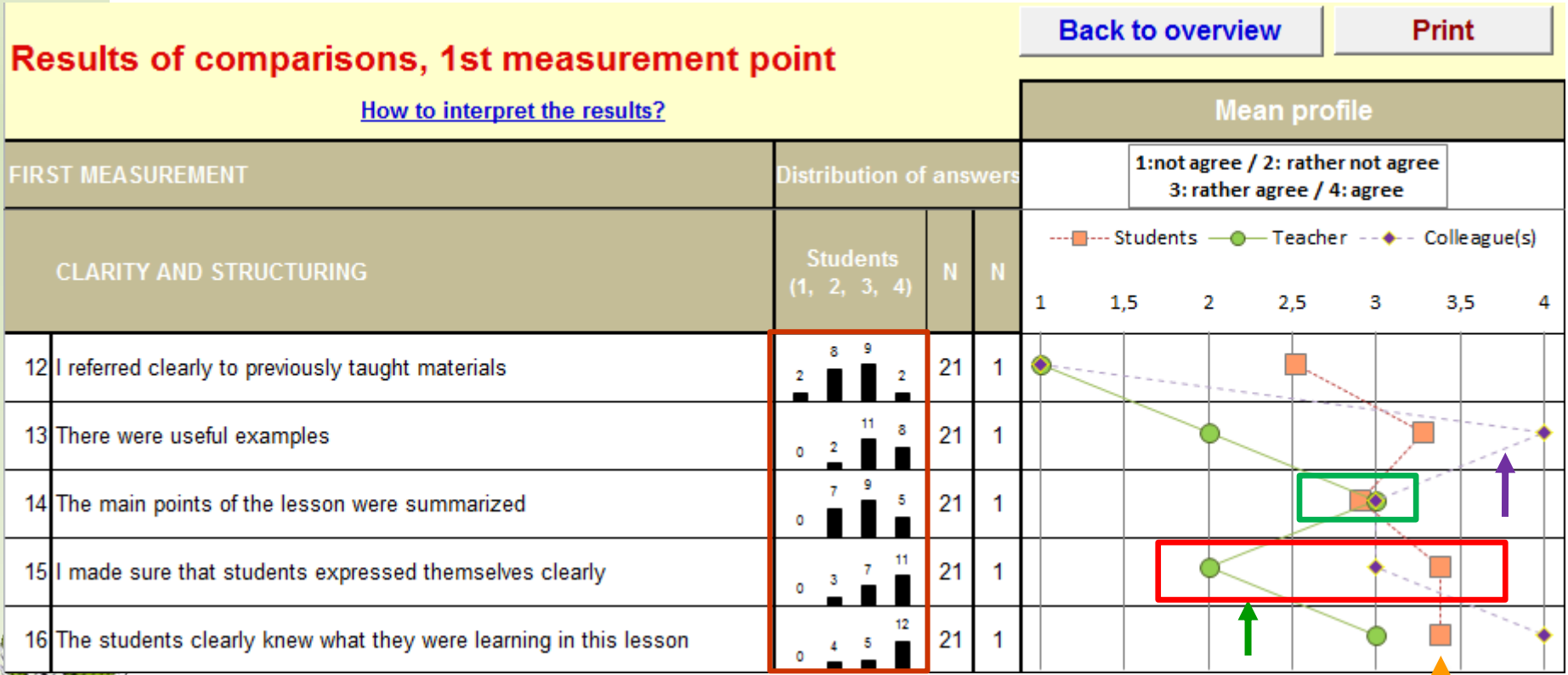




# EMU-software



- ✦ A software for
  - data entry
  - visualizing results
  - links to helpful tips for interpretation, planning actions





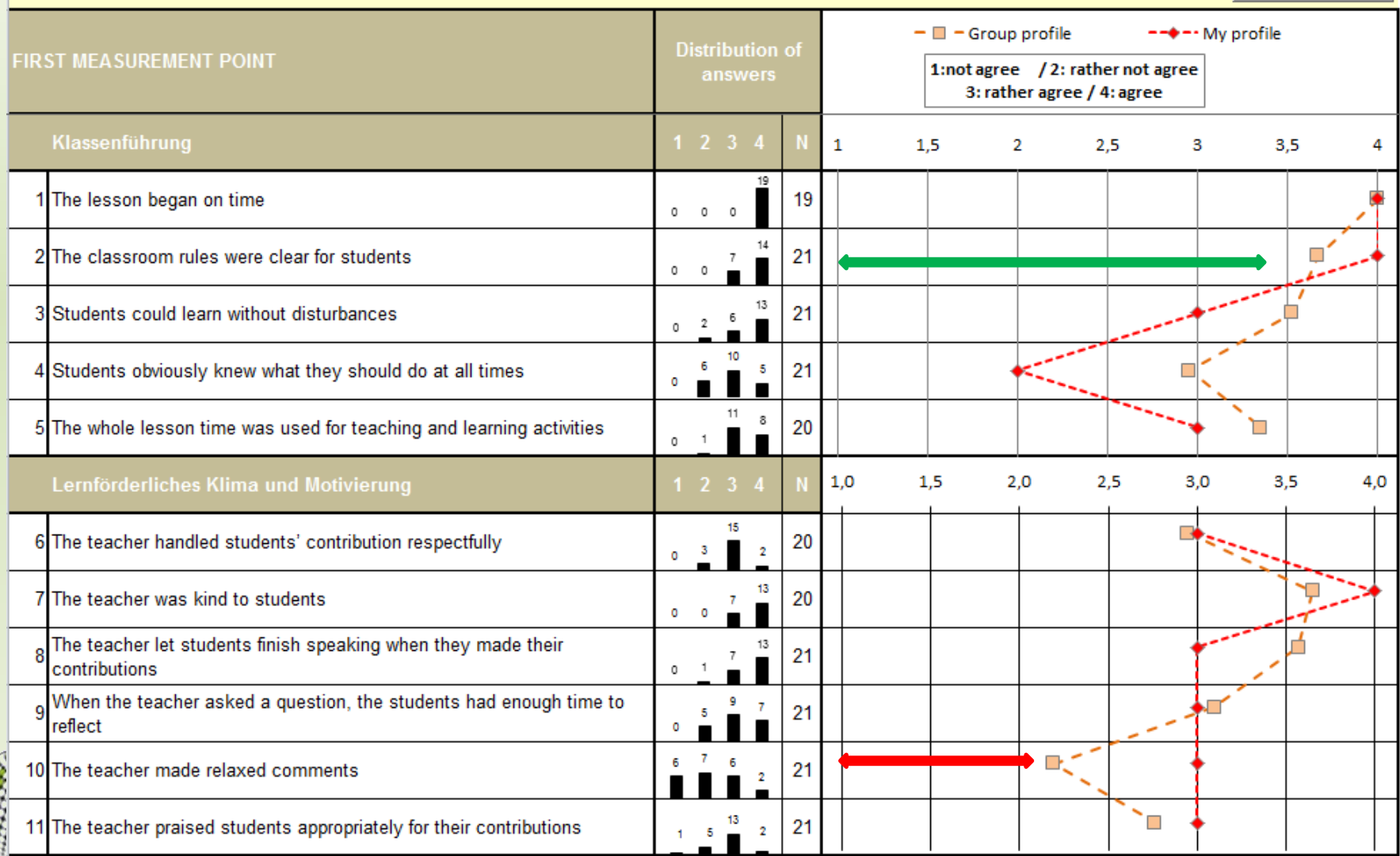
# Individual profile vs. group profile

## Where do I agree with, where do I differ from others? Why?



My ID: BG

Print





# Central question for discussion



+ Links to helpful tips for interpretation, planning actions. Examples:

- Profile: strenghts and weaknesses
  - Distribution of answers: consensus and dissent
  - Explanations for dissent?
    - ➔ Explain rating by observable behaviour!
  - Subject-related consideration
- 
- ➔ Prepare main theme for feedback discussion
  - ➔ Documentation of feedback discussion
  - ➔ Develop aims definition, plan interventions
  - ➔ Second measurement point





# GETTING STARTED







# Do It Yourself



- ✚ Watch a video clip of an authentic English lesson (15')



- ✚ Rate classroom instruction using EMU items (10')
- ✚ Discuss in small group
  - Exchanging explanations for your judgment where you have most diverse ratings (10')





# Discussion

- + Does your group have rather consensus or dissent?
  - Where do you have most dissent opinions?
  - Why?
  
- + Was was your discussion about?





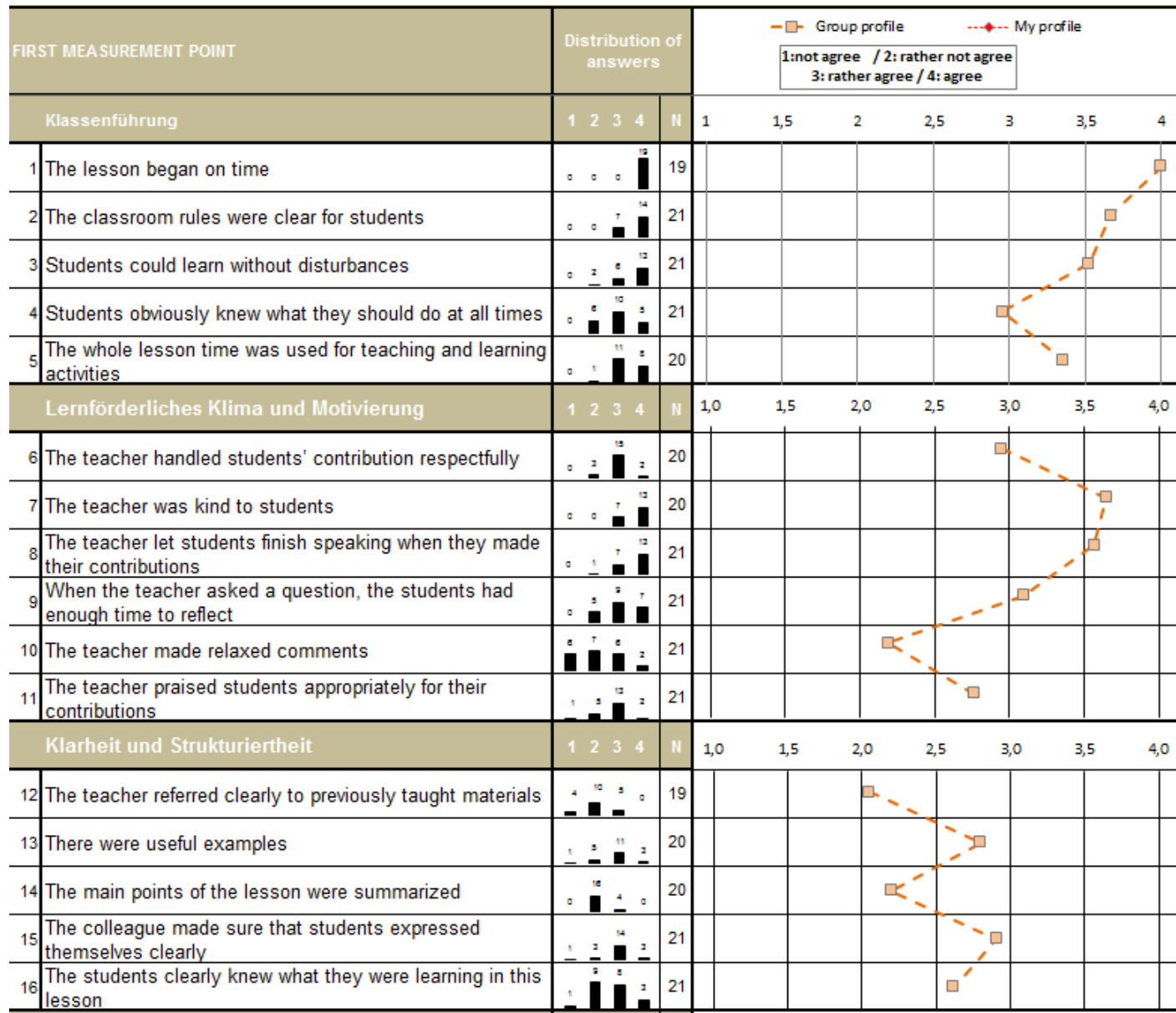
# Comparison: our ratings vs. teacher's and students' ratings



How to interpret the results?				Mean profile								
FIRST MEASUREMENT		Distribution of answers		1: not agree / 2: rather not agree / 3: rather agree / 4: agree								
CLASSROOM MANAGEMENT		Students (1, 2, 3, 4)	N	N								
1	The lesson began on time		21	1								
2	The classroom rules were clear for students		21	1								
3	Students could learn without disturbances		21	1								
4	Students obviously knew what they should do at all times		21	1								
5	The whole lesson time was used for teaching and learning activities		21	1								
LEARNING-FOSTERING ATMOSPHERE		Students (1, 2, 3, 4)	N	N								
6	I handled students' contributions respectfully		21	1								
7	I was kind to students		21	1								
8	I let students finish speaking when they made their contributions		21	1								
9	When I asked a question, the students had enough time to reflect		21	1								
10	The teacher made relaxed comments		21	1								
11	The teacher praised students appropriately for their contributions		21	1								
CLARITY AND STRUCTURING		Students (1, 2, 3, 4)	N	N								
12	I referred clearly to previously taught materials		21	1								
13	There were useful examples		21	1								
14	The main points of the lesson were summarized		21	1								
15	I made sure that students expressed themselves clearly		21	1								
16	The students clearly knew what they were learning in this lesson		21	1								



# Comparison: our ratings vs. benchmark (specific reference group)



# Conditions for a successful discussion

- + Mutual trust
- + Collectively reflecting and interpreting
- + First: Let the data speak!
- + Knowledge and application of feedback rules
- + No preceptive role
- + Willingness to accept criticism
- + Considering "mistakes" as learning opportunities





# Potential and limitation



- Stimulus to consider, to reflect on own instruction to make progress

- ~~■ Not an instrument to measure the instruction quality~~

~~e.g.: „Your instructional quality is 2,87“~~

- ~~➤ exact calculation = measurement error~~





# Working perspectives

- ✚ Soon available: English version, Vietnamese version
- ✚ Continual enrichment and improvement
- ✚ Increasing use:
  - EMU website: ca. 30,000 visits, 8500 returning visits
  - EMU instruments: ca. 20,000 downloads since January 2011
  - Users from 39 countries





# Usage statistics

(11:12 a.m., 23.11.2011)



Piwik > Web Analytics Report x

← → ↻



[Dashboard](#) | [All Websites](#)

Dashboard **Visitors** Actions Referrers Goals

Overview Engagement **Locations & Provider** Settings Visitor Log Times

Date range: **2011**

## Country

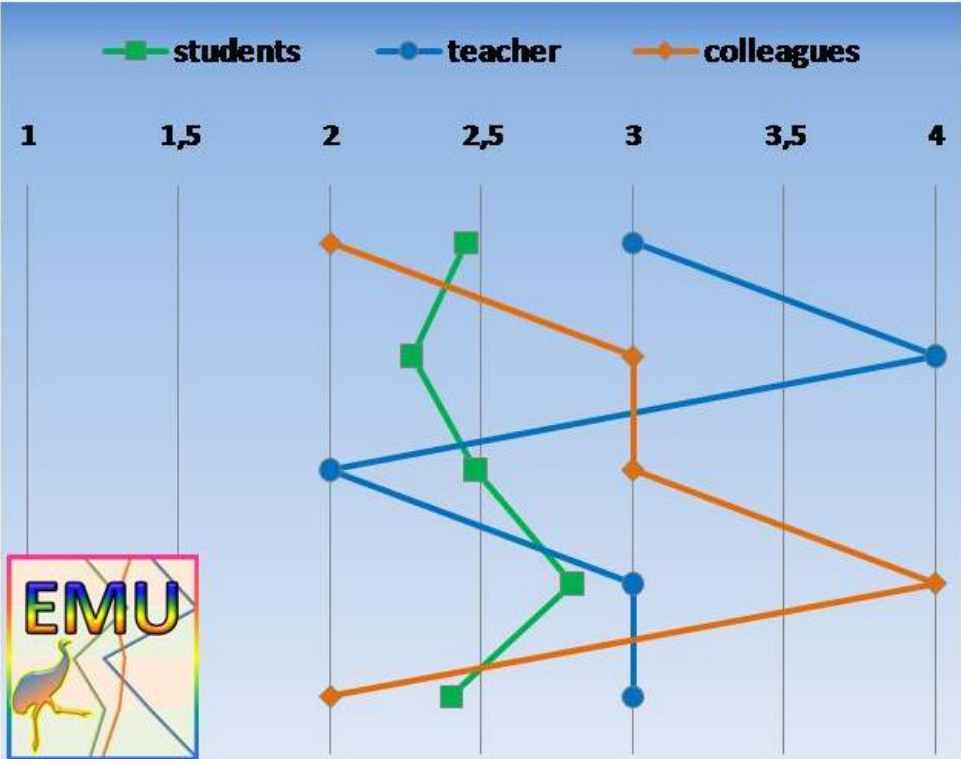
Country	Visits
Germany	25644
Switzerland	900
United States	692
Austria	372
Italy	100

1-5 of 40 [Next >](#)

**8628** returning visits







## Discussion

Whether and how can the program be used effectively in school and/or teacher education?



# Thank you for your attention!

More information at:

[www.unterrichtsdiagnostik.info](http://www.unterrichtsdiagnostik.info)

Email:

[unterrichtsdiagnostik@gmail.com](mailto:unterrichtsdiagnostik@gmail.com)