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AG 46 *Individualised mobility as cultural resource: harnessing the 'mobile complex' for participatory learning*

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**Mobile responsive contexts of development
and learning; report of field projects on m-
learning**

Our plan?

Bachmair: Framing the question of user generated contexts and responsible contexts of development: Vygotsky; Laurillard; feature elements of mobile learning; an example of an at-risk learner

Risch: School example; episodes of situated learning in an instructional unit of a Gymnasium: *construction and measuring circles and angles*

Zils: School example; episodes of situated learning in an instructional unit of a Gymnasium: *German literature in the Age of Enlightenment*

(1) Ben Bachmair

Framing the question of user generated contexts and responsible contexts of development

- Lew Vygotsky: zone of proximal development
- Diana Laurillard: conversational analysis of informal and formal learning
- Feature elements of mobile learning (Strukturelemente mobilen Lernens)
- Example of an at-risk learner: Web 2.0-expert, conversational bridges

Vygotsky, L. (1978 / 1930) *Mind in society. The development of higher psychological processes*. Edited by M. Cole et al., Cambridge, MA. Harvard University Press, p. 86

... zone of proximal development.

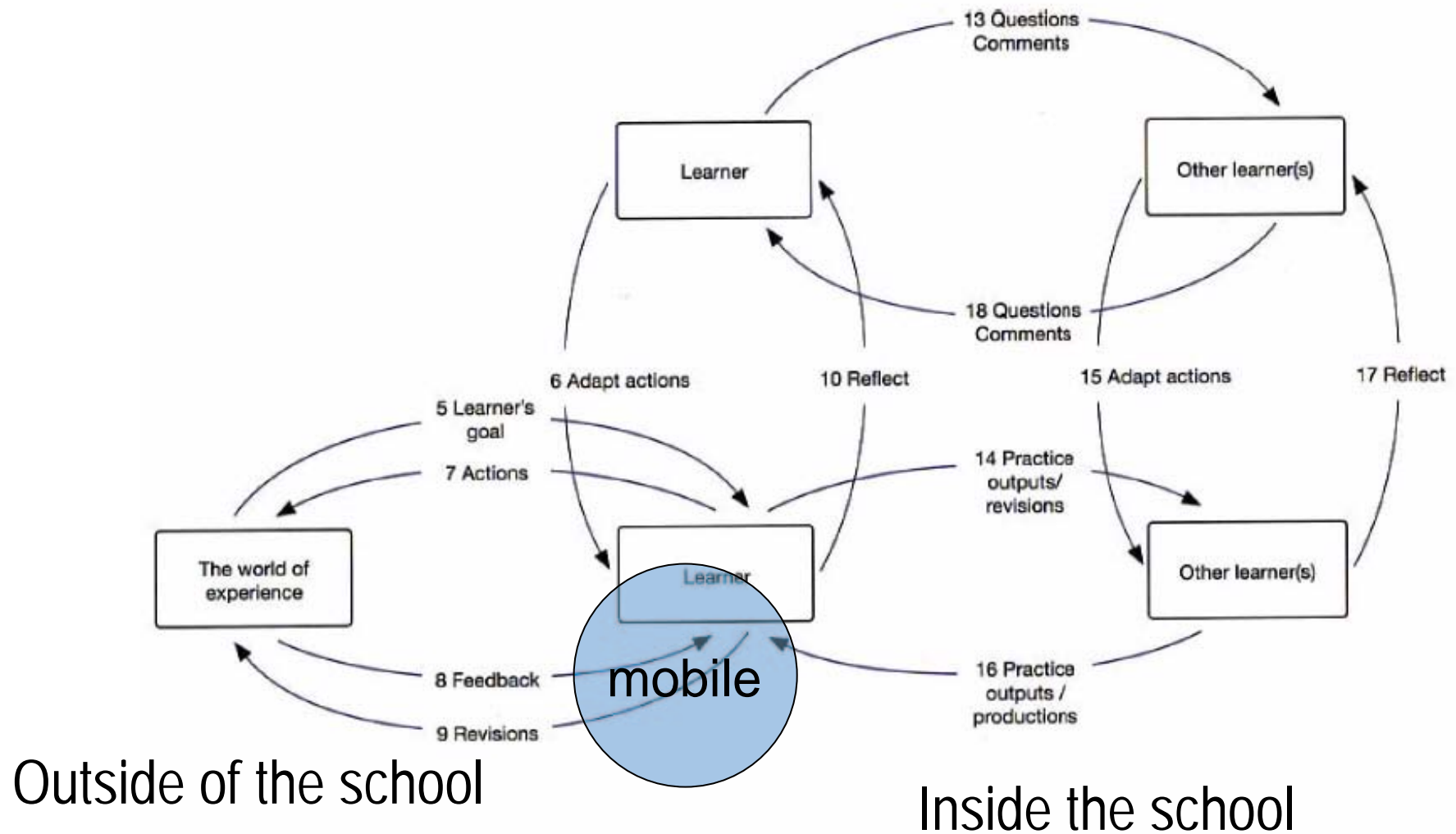
It is the distance between the actual developmental level as determined by independent problem solving and the level of development as determined through problem solving under adult guidance or in collaboration with more capable peers.

Vygotsky saw a conflict between the dominant school curriculum and learning as a developmental process of children.

A didactic solution was to stabilise the developmental context of a learner within the school (Bruner: Scaffolding)

What could the actual didactic reaction to Vygotsky be in a culture which provides user-generated contexts?

The situation of learning as conversation inside and outside the school



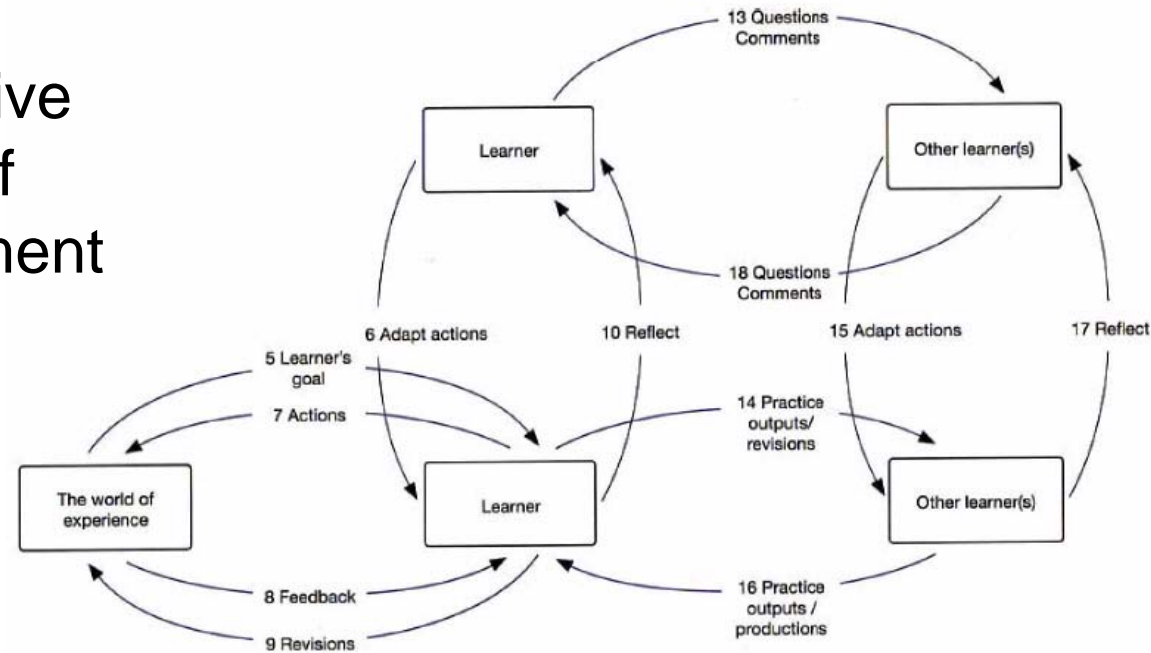
A didactic set with an inversion of formal and informal / inside and outside the school

Inside the school: voluntary workshop for personal writing of texts within the youth culture --- no curricular constraints

Outside the school: web 2.0 expert as amateur teacher in peer-to-peer learning – multimedia course in a community school

This didactic set offers a context, which spans over different context and practices of learning and media

Responsive context of development



Outside the school: Amateur expert for multimedia as peer-to-peer teacher, Web 2.0, conflicts with society, straight forward learning; Community School (VHS); at-risk-behaviour, camcorder instead of the participants' mobiles

Inside the school:
At-risk-learners; experimental and associative approach to language and poems; exchange of software-expertise, mainly internet, secondly mobiles

Mobile phones in classes for Math: Construction and measuring circles and globes

Learning within responsive contexts

Maren Risch



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The institutional frame

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**17 media educators (ME) working
on location in schools**

Project Timetable: 3 Phases of MyMobile

Phase 1: Development and review of school lessons

Sept. 2009 – June 2010

6 schools, different types (primary, secondary etc.)

currently 2 secondary schools, later 2 primary schools

Phase 2: Evaluation and reporting

June 2010 - Dec. 2010

Project documentation as book

Website: techniques and concepts of mobile learning

Phase 3: Transfer

from September 2010

Orientation course at schools, Teach the Teachers Program,
International exchange

Basic information:

- School: Elisabeth Langgässer Gymnasium, Alzey
- Time frame: 4 weeks, 4 lessons a week
- Curriculum: Math, 6th german form
- 28 students, 12 years old

- Equipment: classroom with blackboard,
interactive whiteboard, PC, internet connection
10 mobile phones (Nokia N85)

„Mobile between Globe and Google“

Learning Objects:

- Characteristics of circle and globe
- Estimating, Drawing and
- Measuring of Angles

Main functions of the mobile

- relation to everyday life
- investigation



Learning Design:

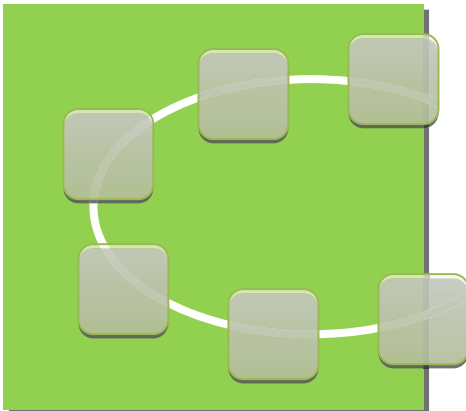
Teacher guided instruction with media-based episodes of students' activities (situated learning).

Metaphor:

Teacher guides along the learning road to the defined learning outcome

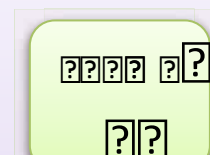
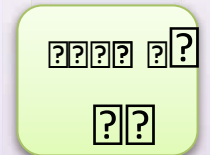
learning outcome

Students „deal“ with the learning objects on „market squares“ of *situated learning*.



The episodes of situated learning with mobiles: market squares

Teacher guided instruction: learning road



From Circle
to Globe

responsive
context

Check up:
Angles and
persepectives

responsive
context

Episodes from the teacher guided lesson:

S 1) Circle + Globe: save Math rules on mobile

S 2) From Circle to Globe
Focal point: responsive context

S 3) Photo-Safari: Everyday between Zero and 360 Degrees

S 4) On the schoolyard and around the world

S 5) Angle: between set square and video quiz / talk show

S 6) Check up: angles and the change of perspectives
Focal point: responsive context

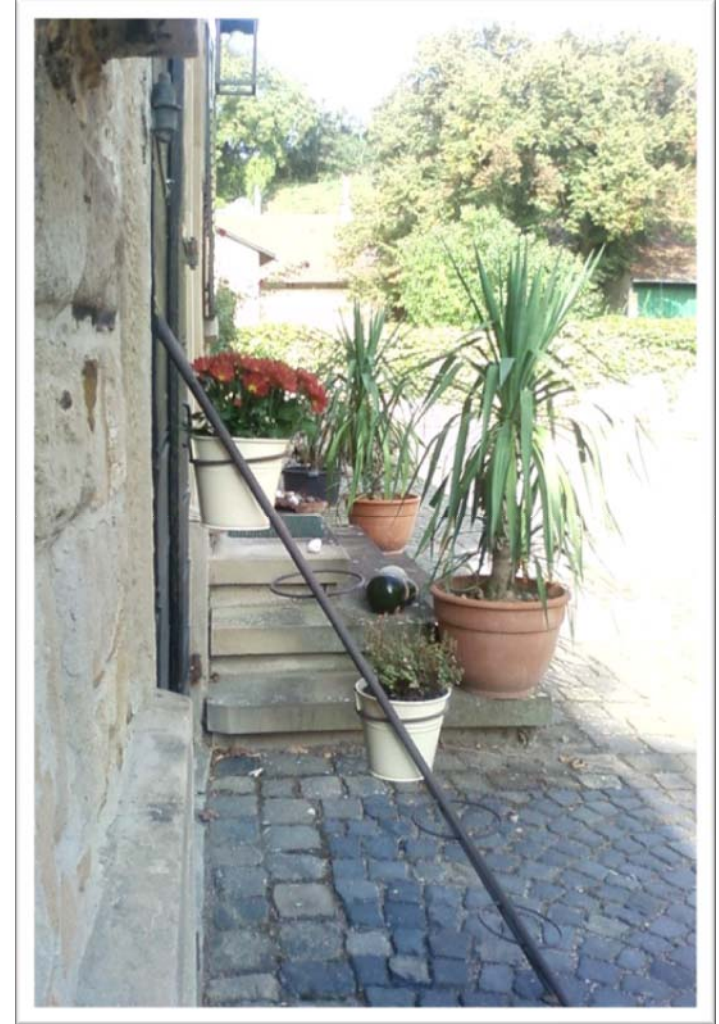
Square 2: From Circle to Globe

Learning object: Circle, Angles

Methode & mobile: homework, taking pictures of angles at home

Focal point: responsive context

S2: Homework: Angles in Everyday Life (students work)



S2: Homework of Jan: a still from his mobile video



The homework was to take pictures of angles. This served as an introduction to the theme.

This task also shows that there could be unclear representations of angles produced in the photographs.

For example: self-made angle video shows unclear pictures and also the preferences of the young student (Wii games, Pokemon Song).

The discussion of unclear angles is represented in a Square 6 (Angles and the Change of Perspectives).

S2: Jan's description of „My Diashow“

Jan-Christopher

My Diashow

Wenn das Handy an ist, gehe im Menü auf Unterhaltung.
(Geht alles vielleicht nicht bei jedem Handy) Dann gehe auf
Video DJ™. Jetzt kannst du dabei beliebig bei Einfügen
gehen und Bilder, Videos, oder aufgenommene Sounds einfügen.
Jetzt kannst du beliebig anfangen. Wenn du fertig bist, ~~ste~~ speichere
~~das~~ deine Diashow. Du kannst dann im Menü auf Datei-Manager
gehen und ~~das~~ die Diashow ist da, bei Videos.

Viel Glück!

Music: Pokemonmusik der 1. Pokemonstaffel

Square 6:

Check up - angles and the change of perspectives

Learning object: angles, perspectives

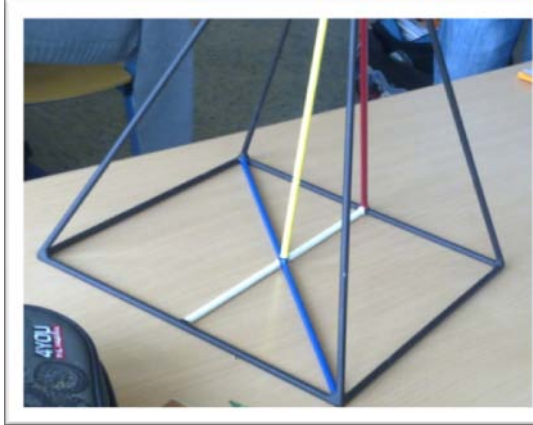
Methode & mobile: photos, bluetooth and whiteboard,
digital set square (Geodreieck)

Focal point: responsive context

S 6: Check up - angles and the change of perspectives

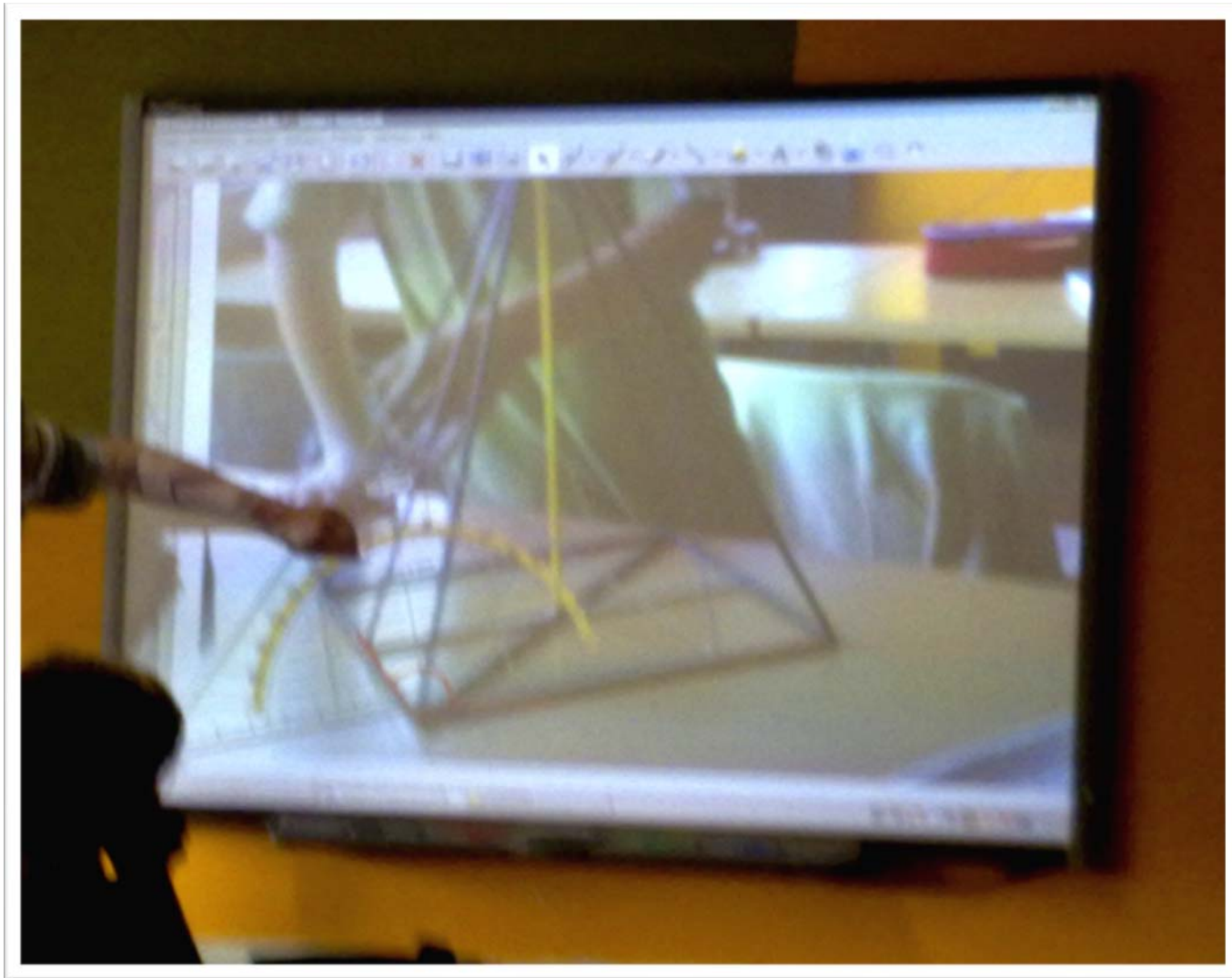


photo from square 2:

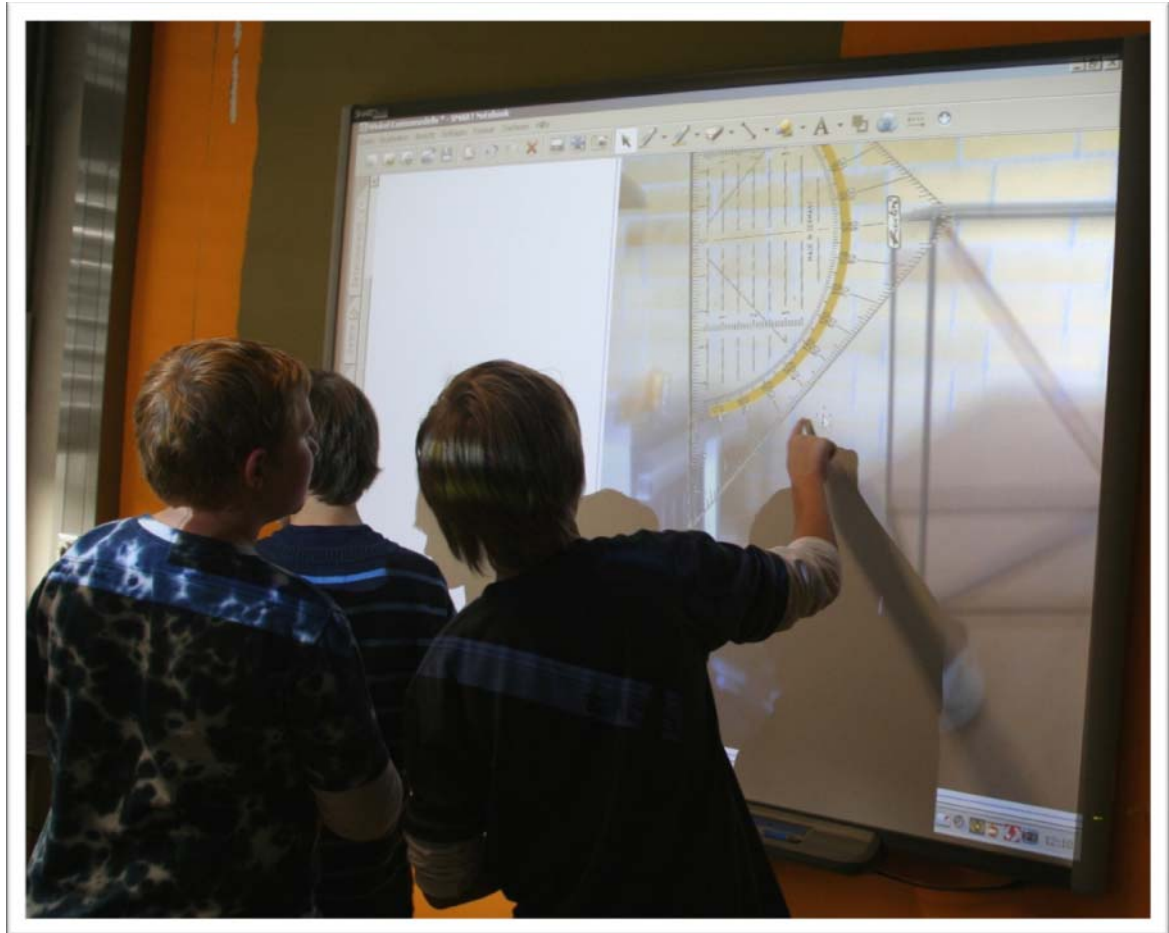


Response of the teacher

(teacher guided instruction after square 6, reaction to photo of square 2)



After S 6: teacher guided instruction, students' exercise

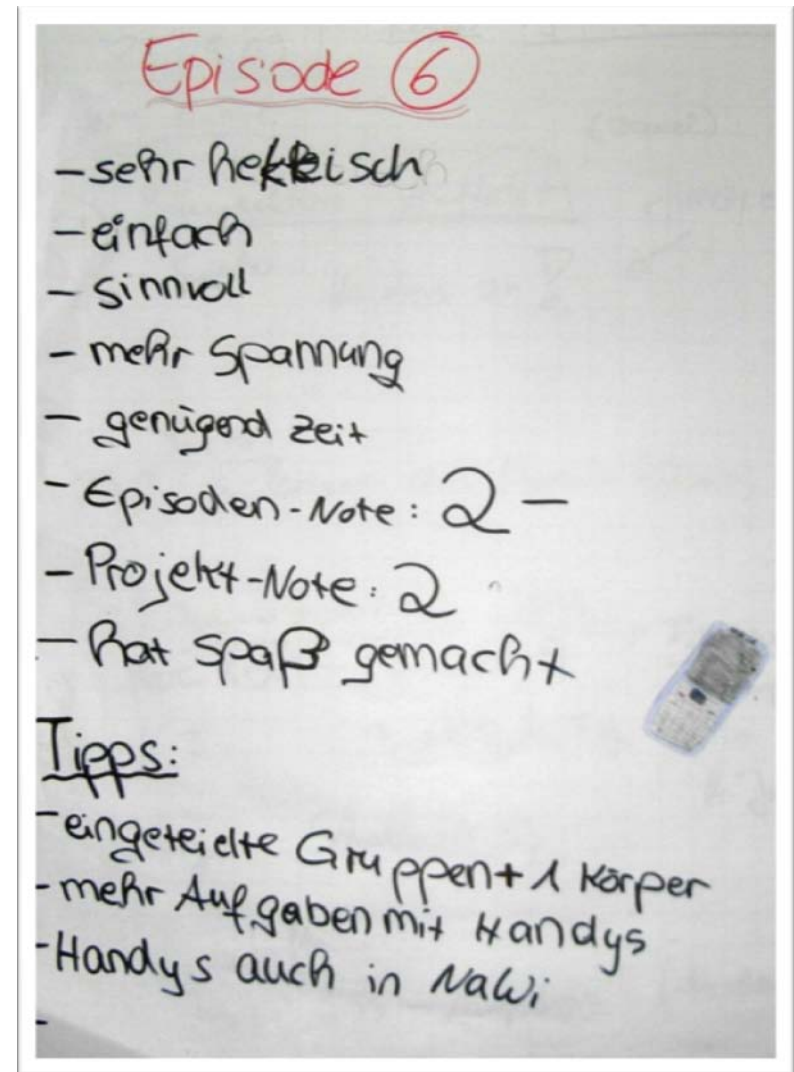


Feedback to Square 6

- very fast
- easy
- useful
- exciting
- enough time
- mark for the episode: 2-
- mark for the project: 2
- we had fun

hints:

- 1 group = 1 exemplar for pyramid space structures
- more tasks with the mobile
- mobile also in natural science



Mobile phones in classes for German: German literature in the age of enlightenment

Learning within responsive contexts



Daniel Zils

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Basic information:

- **School:** Thomas-Morus-Gymnasium, Daun, 19 students, 16-17 years old
- **Equipment:** classroom with blackboard, interactive whiteboard, PC, internet connection, 10 mobile phones (Nokia N85), students mobile phones
- **Time frame:** 6 weeks, 3 lessons a week
- **Curriculum:** German, 11th german form

Learning objects:

Genres and key texts of the age of enlightenment:



Readings of key texts:

Lessing: Nathan, der Weise

Kant: Was ist Aufklärung

Pfeffel: Über die Wahrheit



Analyzing epic genres:

Fables of Äsop



Writing:

Aphorisms

Learning objects: Leading ideas of the age of enlightenment

Transferring the leading ideas of the Enlightenment to today's everyday life



Aufklärung
Enlightenment



Wahrheit
Truth



Toleranz
tolerance

Main function of the mobile:

- relation to everyday life
- self expression of students



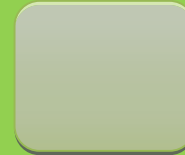
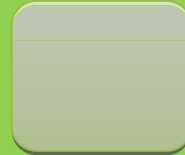
The episodes of situated learning with mobiles: market squares

Teacher guided instruction: learning road

Square
1

*Picture
storming*

responsive
context



Episodes from the teacher guided instruction:

Square 1: **Picture-Storming „Clearifying“**
Focal point: responsive contexts

Square 2: **Writing own aphorisms**

Square 3: **Structure images of key concepts**

Square 4: **Genre of Fables**

Square 5: **Enlightenment today**

Square 6: **Lessing's *Nathan, der Weise* and tolerance**



Square 1: Picture-Storming „Clearifying“

Learning Object: leading idea *Aufklärung*

Method & mobile: brainstorming,
picture storming: taking photos to make
visible what is *Aufklärung* today

Focal point: responsive context

S 1: Picture storming

1. On the blackboard brainstorming about the meaning of the concept *Aufklärung*
2. With the mobile a *picture storming*:
 - self selected small groups of students
 - in 15 mins each group has to take a series of photos
 - associative development of a story
 - short picture story about the concept of *Aufklärung*

Results:



S 1: Picture storming

3. On the interactive whiteboard:

- Students send the photos via bluetooth to the teachers mobile
- Teacher puts the photos on the interactive whiteboard
- Students of other groups discuss the photo stories



S 1: responsive context



- Issue: alcohol
- Research in the mode of the enlightenment



- Male group
- consideration in the mode of the enlightenment



- Show someone up
- Counterexample to the ideas of the enlightenment

Development: Appropriation of the concept of Aufklärung in a discursive mode (photo 1+2); emotional phantasies or experiences from the life world expressed in a male group

S 1: responsive context

Photo on the
interactive
Whiteboard in
the classroom
with all students
and the teacher.



The whole class laughs.

Development: public reaction, which does not support further expression of phantasies or experiences in respect to alcohol, no gender specific reaction.