ACTTEA:

Supporting student teachers’ action-oriented knowledge construction (EU 2012-2015)

http://acttea.ut.ee/

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• The procedure of video-guided supervision

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- Finland, Estonia, Spain and the Netherlands
ACTTEA FACTS

- **Funded by**: Commission of the European Union Lifelong Learning Programme, Comenius multilateral project.
- **Duration**: November 2012 – October 2015 (3 years)
- **Budget**: 286 594 EUR (including 75% financing by European Union)

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• “Teacher education programmes... need to be of high quality, relevant to needs and based on a well-balanced combination of solid academic research and extensive practical experience...

• Newly qualified teachers can have difficulty in adjusting to real school situations and applying what they have learned during initial teacher education...a substantial number of them ultimately abandon their teaching careers, at a high cost both to themselves and to society” (Council conclusions..., 2009, p.7).

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AIMS OF THE PROJECT

• The research interest is in the interaction between student teacher learning and pedagogical practices in TE

• The specific focus is on student teachers in developing knowledge based on their practical experiences.
  • Student teachers will be supported to find the most effective strategies, rules or principles for practice
  • More particularly, this project focuses on supporting student teachers in developing knowledge based on their practical experiences.
  • The procedures for illuminating student teachers’ reflection in action are needed to reveal the effective strategies, rules or principles for practice i.e. practical knowledge or action-oriented knowledge (Mena Marcos, 2011)

• The aim is to increase the relevance and meaningfulness of the initial teacher education, so that beginning teachers would be better prepared for a real life work situation.

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## The phases and WP’s of ACTTEA

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The concept of teacher reflection – what it implies?

• Active, persistent, and careful consideration of any belief or form of knowledge (Dewey, 1933)
• Rigorous, intellectual, and emotional enterprise that takes time (Dewey, 1933)
• Meaning-making process that that moves a learner from one experience into next with a deeper understanding of its’ relationships (Rodgers, 2002)
• All kinds of reflection: reflection in, and on, and for action → tool in continuous construction of teacher’s knowledge (Fenstermacher, 1998; Eraut, 1995; Mena Marcos, 2011)
• Teaching practice: beliefs about self, classroom teaching, and pupils’ learning are integral part of a teacher’s personal epistemology (Baxter Magolda, 2004)
Tillema (2000): reflection after practice makes better results in learning to teach

Characteristics of the hot – cool systems of teacher reflection (Metcalfe & Mischel, 1999)

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<th>Cool system</th>
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<td>Largely cognitive</td>
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<tr>
<td>Often implicit</td>
<td>Often explicit</td>
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<tr>
<td>Routines; reflexive</td>
<td>Reflective</td>
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<tr>
<td>Simple</td>
<td>Complex</td>
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<tr>
<td>Fast</td>
<td>Slow</td>
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<td>Interpretations develop early</td>
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The problem is how to extract meanings from experiences

Teacher reflection tends to reinforce existing beliefs rather than challenge assumptions

We believe that being reflective has a sort of transformative power → being reflective as "methodological virtue" or "superior insight" (Lynch, 2000)

Reflective analysis does not come naturally

The role of guidance – to test the habits of thinking and action

Learning in/from teaching practice contributes effectively to establishment of professional knowledge

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A practical model to foster teachers’ competencies in reflecting on teaching and thereby their professional development

Theoretical framework
- Deweyean perspective
  - personal intentions
  - interaction, spoken discourse
  - time, prolonged reflection

Practical elements
- critical incidents
- stimulated recall interview
- Reflection alone or with peers and supervisors
- Written reflective writings

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THE PROCEDURE OF VIDEO-GUIDED SUPERVISION DURING TEACHING PRACTICE IN TE (ACTTEA 2012-2015)

1. VIDEOTAPPED LESSON
   - Classroom events

2. VIDEOTAPING
   - Done by student teacher at classroom
     - Focus on teacher’s action

3. INDEPENDENT REFLECTION
   - max 2 days
   - What happens during the lesson?
   - What are the most important incidents (2) for you during the lesson? Why?

4. 2 CRITICAL INCIDENTS:
   - Positive, empowering
   - Challenging, difficult

5. Classroom events chosen by the student teacher according to her/his aims for teaching practice

6. A) INDEPENDENT REFLECTION or B) PEER REFLECTION
   - max 1 week
   - What is happening in this incident?
   - Why do you think this is happening?
   - Relating the incident to theory
   - What have you learnt from this process so far?
   - How do you intend to implement these insights in your future teaching?

7. WRITTEN REFLECTION IN POFO/REPORT
   - At the end
   - What is happening in this incident?
   - Why do you think this is happening?
   - Relating the incident to theory
   - What have you learnt from this process so far?
   - How do you intend to implement these insights in your future teaching?
QUESTIONS FOR GUIDED REFLECTION IN II AND III PHASE

- What is happening?
  - What can you see/hear yourself doing?
  - What can you see/hear the students doing?
  - Is there a relationship between what you are doing and what students are doing?

- Why do you think this is happening?
  - Which student behavior is caused by your behavior?
  - Which behavior of yours is caused by the students’ behavior?
  - What makes the incident a critical incident for you?

- Relating the incident to theory.
  - Which teacher role does the incident relate to?
  - How does literature support your causal explanation under 2 (in case of a positive incident)?
  - What suggestions does literature offer towards solving your problem (in case of a negative incident)

- What have you learnt from this process so far?
  - How do you intend to implement these insights in your future teaching?

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PARTICIPANTS

- Student teachers (class teachers, subject teachers, special education teachers)
- School teachers supervising student teachers in their classes
- University supervisors

- Comparative data from all the contexts
- Video library to be used in TE

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PLANS FOR ANALYSIS OF VIDEO AND REFLECTION DATA

Data analyses framework stems from the theoretical background of the study.

- **context and content of action-oriented knowledge**: a coding scheme (e.g. Shulman, 1986; etc.) to examine the content of the student teachers' action-oriented knowledge (i.e., content knowledge; general pedagogical; curriculum; PCK; classroom management; educational contexts; educational ends).

- **type of action-oriented knowledge**: a coding scheme (Bronkhorst, 2013; Mena, 2011) to examine the kind of student teachers' action-oriented knowledge: rule of thumb; factual knowledge; procedural knowledge; own learning or identity; teaching performance; theory of practice.

- **level of reflection**

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STUDENT FEEDBACK AND RESEARCH RESULTS
EMPOWERING INCIDENTS

- Clear introduction of the lesson [N1äi1]
- Peaceful introduction of the lesson [N2äi1]
- Motivating the pupils in an engaging way [N8ma]
- Careful and detailed instructions [N7äi]
- Teaching specific content for pupils [N4äi1]
- Using the demonstration materials in teaching of an individual pupil [M1ma2]
- Play as a teaching method of the specific content [N5äi1]
- Activating teaching methods during the lesson [N6äi1]
- Maintaining a safe atmosphere during pupils’ blackboard work [M1ma1]
- Pedagogical action as teacher [N3bg2]

CHALLENGING INCIDENTS

- Challenge of managing and teaching certain contents [N3, bg1]
- Confusion when teaching certain content [N4äi2]
- More thorough understanding of the contents of teaching [N8ma]
- Unclear instructions for the pupils [N5äi2]
- Explaining the tasks unclearly for the pupils [N6äi2]

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Student teachers’ peer reflection

• “We realized how important the preparations are for the successful lesson. The feeling of control relieved and made us feel more relaxed when we gave instructions for pupils and spoke spontaneously. Good atmosphere in the beginning continued during all the lesson and it could be observed also from the video both in our actions as well as pupils’ actions.” [N1N2äi]

• “I really make all the ”classical mistakes” in teaching of planetaric phenomena. First, I assume that pupils self-evidently know about the topic and evaluate them as learners. Some pupils’ gestures told me very quickly that the division of radiation on the Earth is not clear for them. I realized my evaluative comment myself on that moment as well. I awoke and tried to correct the influence that my comment could have on pupils’ self-esteem, and also teach the phenomenon in a more simple and repetitive manner.” [N3bg]

• ”When I demonstrate the phenomenon for the pupils, I seem to become enthusiastic about the situation. My presence shows that I am interested in the theme I am teaching and I remember that my positive body language also transferred to pupils. It is also partly seen from the video. When I teach, I aim at assuring the pupils through my gestures and body language that the topic being taught is interesting and worth enthusiasm and learning. [N3bg]

• It was extremely nice to notice a couple of pupils from the video, who normally never are willing or interested to participate to any activities together, were really engaged to the rhythm play. I believe that pupils enthusiasm towards the action was partly related to my will and enthusiasm to lead the play. [N5äi]

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We both highly value the child-centered pedagogy, and set it as one of the goals for our teaching practice. From the video we observed and got evidence for our feelings that we are really going to the right direction. We have discussed and reflected on our professional development and teacher identity, and it has been quite abstract, because we do not have any teaching experience. Now, after watching the video we know more about our personal characteristics as teachers and about the directions towards which we are willing to develop, learn and grow. [N1N2äi]

In the future I will clarify more thoroughly and better that where the pupils are actually going, and make use of pupils’ previous knowledge in teaching, so that they really understand and. I hope that I would learn to identify such themes that require more structured and teacher-centered pedagogy and separate them from those that could be done through project work etc. [N4äi]
Student teachers’ experiences of videoing

• "Although I felt that it could be quite annoying to watch myself from the video, I got a lot of such information about my own action and presence in the classroom, that is difficult to notice when you are in a teacher position in the classroom. (clear instructions, demonstration, use of blackboard, visibility for all the class)" [M1ma]

• "The videoing was much more useful and satisfying than I ever thought. It helped me to observe my aims and things that I value in my own teaching – the impact of my pedagogy to pupils as well as my role as a value educator. I was able to observe many other things from the video, like subject-specific vocabulary, questioning and reactions to the pupils’ answers. With the help of the videoing, I was able to revisit the details of the lesson, that I or my supervisor did not notice during the lesson." [N3bg]
“Videoing partly helped me to realise my weaknesses and strengths in my teaching. I thought that it would be quite painful to observe my own teaching, but I feel that it really helped me. It is really challenging to analyse your personal manners and action thoroughly without watching them from the video!” [N4äi]

It is important to get the possibility to see yourself as an outsider’s eyes, and it helps me to understand my strengths, and where I am really good. It also brings up those things that I would not notice otherwise. It also gives me the opportunity to return to the moment that has confused me for some reasons. [N7äi]
Student teachers’ suggestions to develop the procedure

- We experienced the videoing as an extremely effective method, that we really would like to use also in the future to support the reflection and development of our action. We think that it is not necessarily enough to get a video sample only from one lesson, but it would be really useful to get as many samples as possible from our own teaching. Then it would be possible to analyse own action from various different viewpoints and in different situations. [N1N2äi]

- I hope that we are able to use videoings also in our future practice periods. I would hope that videoing could be done in several lessons, so that I could watch teaching episodes from different days peacefully at home, and I could get a better impression about myself in a teacher’s role. [N5äi]

- I would have been willing to video several lessons and more such lessons where I teach all alone. It was not so well possible, because there were three student teachers in the same class. [N7äi]

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Guided reflection in practice
~ student teachers’ experiences and feedback

**Benefits**

- Positive attitudes
- Useful experience
- The use of video in remembering the lesson
- Interaction
- A way to develop pedagogical thinking and action also in the future

**Challenges**

- Too detailed planning
- Confusion caused by videoing
- The difficulties in expressing one’s thoughts and actions
- Limited possibilities to apply new understandings in practice

**Suggestions**

- More videoed lessons
- Occasional videoing
- Use of videos already in previous practice periods
- The possibilities to apply new understandings in practice

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LEARNING FROM THE TWO DATA SETS

- The 1\textsuperscript{st} data set:
  - Technically/Administratively: student teachers folders containing their data are not (yet) complete: mainly text-documents supporting reflective episodes are missing, video-episodes are not adequately edited.
  - Data content/quality: the chosen video episodes are focused (1-3 minutes) and reflective discussions are thorough (20-45 minutes)

- The 2\textsuperscript{nd} data set:
  - Technically/Administratively: student teachers folders containing their data are more complete and include (all the) needed/required data documents (both text-documents and video-documents)
  - Data content/quality: the chosen video episodes are less focused and reflective (peer) discussions are more incoherent compared to 1\textsuperscript{st} data set

- We need
  - Constant technical support
  - Supportive (mental) research contexts

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- Reflection in STR-interviews, reflective discussions and portfolios

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LEARNING FROM VARIOUS KINDS OF REFLECTION  
(Toom, Husu & Patrikainen, forthcoming)

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<th>Course of Reflection</th>
<th>Description and evaluation of prior knowledge (10%)</th>
<th>Learning from practice (46%)</th>
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<tr>
<td>Quality of Reflection</td>
<td>Learning from prior knowledge (20%)</td>
<td>Description and evaluation of practice (24%)</td>
</tr>
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DISCUSSION

- student teachers’ should
  - be provided with the broad abilities to reflect on the professional matters of teaching
  - be able to question their practices, identify social and cultural constraints and/or facilitators, and they are visioning their work into future
  - be able to construct their pedagogical agency as future professional teachers through the consideration of their teaching

- with the procedure, it is possible
  - to deeply perceive, analyze, and reflect on professional performance
  - to guide and differentiate reflective judgments
  - to develop professionally

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REFLECTIONS ON TEACHER LEARNING DURING TE

- How to develop teaching practices that are effective in enabling teachers to acquire knowledge and skills they need?

- The case ‘everywhere’: theory-practice problem(s) – i.e. how to construct multiple connections between
  - observations and generalizations
  - teaching and student/teacher learning

- How student teachers move from their simplistic explanations towards more sophisticated explanations of their actions
  - Teacher learning (in classrooms and in teacher education)
  - Teacher reflection (of action oriented knowledge of their practice)
  - Teacher agency (i.e. something has to be done in order to make an effect)
  - Teaching as knowledge work: requires knowledge that is specific to the work of teaching
  - Teacher knowledge became a major focus on research studies of teachers and teaching (replacing the focus of teach behaviour). (Shulman)

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PEDAGOGY TEACHING OF PRACTICE IN TEACHER EDUCATION (GROSSMAN, 2007)

- **Description of practice** – practice is viewed as it is (What can I see? What is under the surface? What do I interpret from practice? What can I learn?)

- **Analysis of practice** – practice is put into pieces (Which are the essential elements of practice? What do I observe and understand? What can I learn?)

- **Language of practice** – the wholeness and pieces of practice are discussed (Which concepts do I use? What are the elements of practice? What kind of structures of practice can I see? What can I learn?)

- **Evaluation of practice** – the elements and processes of practice are discussed (What is the most essential element of practice? Where should I focus in the wholeness? What can I learn? What can I apply in my own work as teacher?)
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