



Next Generation  
Teaching, Education  
and Learning for Life

# 21st century classroom teaching and learning

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# Project

- EU framework program 7
- Focusing on formative assessment, development of 21st century skills (e.g. learning and thinking skills) and the use of ICT
- Advanced technology

# Who

- EU-project with 12 partners from 7 different countries
- Started in September 2010 and lasts until 2014

Partners: JOANNEUM RESEARCH (Coordinator) (Austria), UNI RESEARCH AS (Norway), Institut für Wissensmedien - Knowledge Media Research Center (Germany). Technische Universität Graz (Austria), Copenhagen Business School (Denmark), University of Birmingham (GB), London Knowledge Lab (GB), eXact learning solutions S.p.A. (Italy), Verein Offenes Lernen – Sektion talkademy (Austria), BOC Asset Management GmbH (Austria), BOC Information Technologies Consulting Sp. z o.o. (Poland), MTO Psychologische Forschung und Beratung GmbH (Germany)

# What

- The teacher has two main pedagogical tasks: to diagnose their students' learning progress and to make decisions concerning the next steps in students' learning.  
**Key NEXT-TELL question:** How can ICT be put to use by teachers to support (and innovate) formative assessment and planning for learning in the ICT rich classroom?
- An environment that supports teachers and students in the use of various sources for information gathering in both the classroom and at home, as well as for the teacher in educational decision making
- Examine how formative assessment can be supported through the use of information and communication technology (ICT)

21st Century Classroom Learning

NEXT-TELL



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## To ...

- ... find innovative technology systems, which can be used by teachers for continuity in, and collaboration for, formative assessment
- ... assist teachers in precise and quick decisions to encourage and promote learning
- ... identify the infrastructure that can provide better teaching, diagnosis, workflow and productivity
- ... strengthen the culture for learning, collaboration and communication between students, teachers, parents and school management
- ... strengthen teachers' assessment competences and enable them to facilitate the practice of adaptive teaching through assessment
- ... encourage documentation of assessment
- ... encourage student participation



Participation in the project, will enable teachers and students to collaborate with teachers and students in several European countries

# Stage 1

- Baseline studies: Interviews/workshops with teachers aimed at collecting information about practices and needs related to formative assessment (researcher driven)
- Methodology and tool development based on teacher input

# 8 Work packages

- WP1: Project Management
- **WP2: ECAAD Method Development and Tooling**
- WP3: Capturing Student Learning Activities
- WP4: Modelling Student Learning
- WP5: Teachers Learning and Strategic Planning (TISL)
- WP6: Pilot Studies and Evaluation
- WP7: Training
- WP8: Dissemination and Exploitation

# ECAAD method

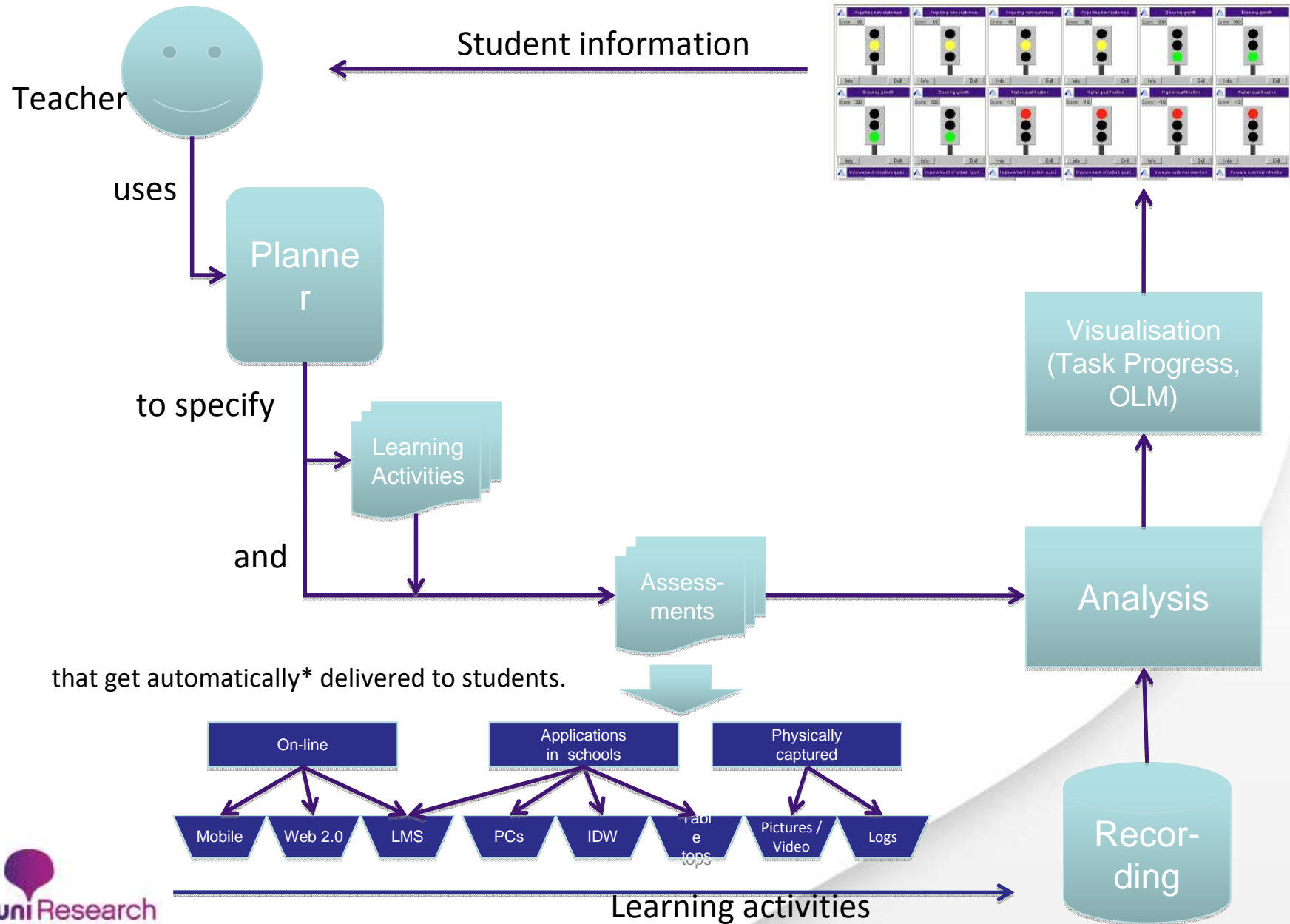
- Evidence Centered Activity and Appraisal Design aims at establishing three kinds of claims about students:
  - 1) Claims about students' proficiencies
  - 2) Claims about learning and development
  - 3) Claims about knowledge building



# ECAAD method and tools

- A methodology that will be developed and supported by software that allows, in a general manner, the establishment of links between observations of students and claims about relevant student characteristics (proficiencies/capacities of various kinds)

# Teacher support tools: overview



\*) When based on software

# Two main research areas in WP2

- **TESL (Teaching English as a Second Language)**
  - speaking scenario
  - writing scenario
- **STEM (Science, Technology, Engineering, Mathematics)**

# Speaking scenario



# Speaking scenario

- Integrated learning environment
  - Virtual world (Open Sim technology)
  - ePortfolio
  - Learning Management System (LMS)
- Evidence of "communicative competence"
  - Logs
  - Video
  - Audio
- Assessment
  - assignment of students' competence on the CEFR scale (observer based: teacher, peer-, self-ass.) in combination with other forms of assessment

# Writing scenario

- Learning environment
  - Shared document systems (e.g. Google docs)
  - ePortfolio
  - LMS
- Evidence
  - logs
  - documents
- Assessment
  - assignment of students' competence on the CEFR scale, both from an observer perspective (teacher, peer- & self-assessment) and automatically, in combination with other forms of assessment

# Automatic assessment of writing

- The tool will be available both for teachers and pupils for feedback on drafts and final documents.
- Data mining of *Corpus of young learners' English Texts*, Norwegian school children's texts (linked to the CEFR)
  - 500 10th grade texts (15/16 years old)
  - 500 7th grade texts (12/13 years old)
- Develop a tool that automatically
  - assigns pupils' texts to a CEFR level (A1, A2 etc) or an in-between level (A1/A2, A2/B1 etc.) – data mining / parsing
  - combined with feedback from an existing automatic assessment tool

## NEXT-TELL view

Research-based methods that produce data for understanding how students can become better learners **must** be based on their own experiences from school and home, as well as input from the teachers, parents and school leadership.



# Thank you!!