TraIning teachers in competence based education – the TRANSIt case

Katerina Riviou

Ellinogermaniki Agogi, Greece

www.ea.gr

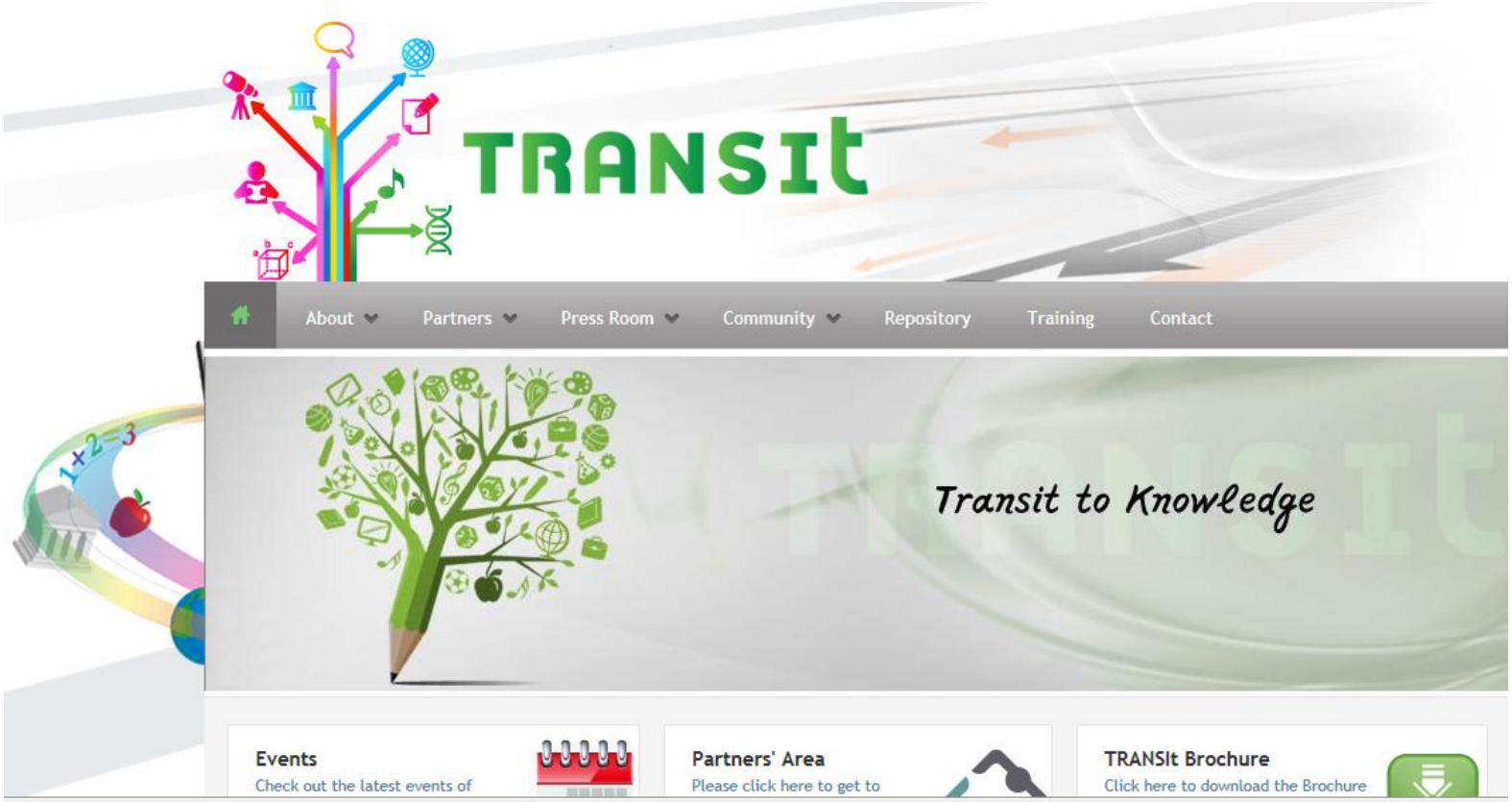
KEYS Conference 2014,
18.10.2014, Istanbul

Purpose and Content

- Project description (objectives, target groups)
- Competence definition; Competence learning
- **Teaching approaches** fostering competences
- Processes and **strategies** of designing a competence based learning (CBL) scenario
- Hands-on **examples of scenarios**
- Outcomes/upcoming events

The project website

www.transit-project.eu



Motivation

- Key competence acquisition (KCA) is one of the long term objectives of the updated strategic framework for European cooperation (Official Journal of the European Union, 2009).

- The concept of key competence originated with the adoption of the **Lisbon Strategy** in 2000 and it resulted in the **European Reference Framework** (European Commission, 2006).

- **Key competences** in the EU framework are those that ‘all individuals need for personal fulfillment and development, active citizenship, social inclusion and employment’.

Motivation

- Most of the EU Member States are beginning to implement policies that move their school systems from being predominantly subject-oriented towards curricula which include competences

- Yet, these developments do not necessarily result in significant, widespread changes in practice: the difficulty is translating these policies into practice.

OPEN DISCOVERY SPACE

TRANSIT

Professional development recently undertaken by teachers, by type and intensity

Participation rates and average number of days for each type of professional development reported to be undertaken by lower secondary education teachers in the 12 months prior to the survey

	Percentage of teachers who participated in the following professional development activities in the 12 months prior to the survey	Average number of days of participation among those who participated
Courses/workshops	71%	8
Education conferences or seminars where teachers and/or researchers present their research results and discuss educational issues	44%	4
Observation visits to other schools	19%	3
In-service training courses in business premises, public organisations or non-governmental organisations	14%	7
Observation visits to business premises, public organisations or non-governmental organisations	13%	3
Participation in a network of teachers formed specifically for the professional development of teachers	37%	
Individual or collaborative research on a topic of interest to the teacher	31%	
Mentoring and/or peer observation and coaching, as part of a formal school arrangement	29%	
Qualification programme (e.g. a degree programme)	18%	

Items are ranked in descending order for each block, based on the percentage of teachers who report having participated in professional development activities in the 12 months prior to the survey.

Source: OECD, TALIS 2013 Database, Tables 4.9 and 4.9.Web.

StatLink http://dx.doi.org/10.1787/888933041554

ΕΛΛΗΝΟΓΕΡΜΑΝΙΚΗ ΑΓΩΓΗ

Main Objectives

- to help teachers acquire and reinforce such skills and knowledge so that they can design **cross-curricular** activities that support the key competencies acquisition (**KCA)** of their students.

- to support teachers in the process of **assessing competences** with the use of authentic means (rubrics, eportfolios).

- to **raise the awareness** of the **administrative** staff of schools in order to support teachers in bridging the gap between policy and practice (e.g. curricular reforms in order to support cross-curricular competence driven activities).

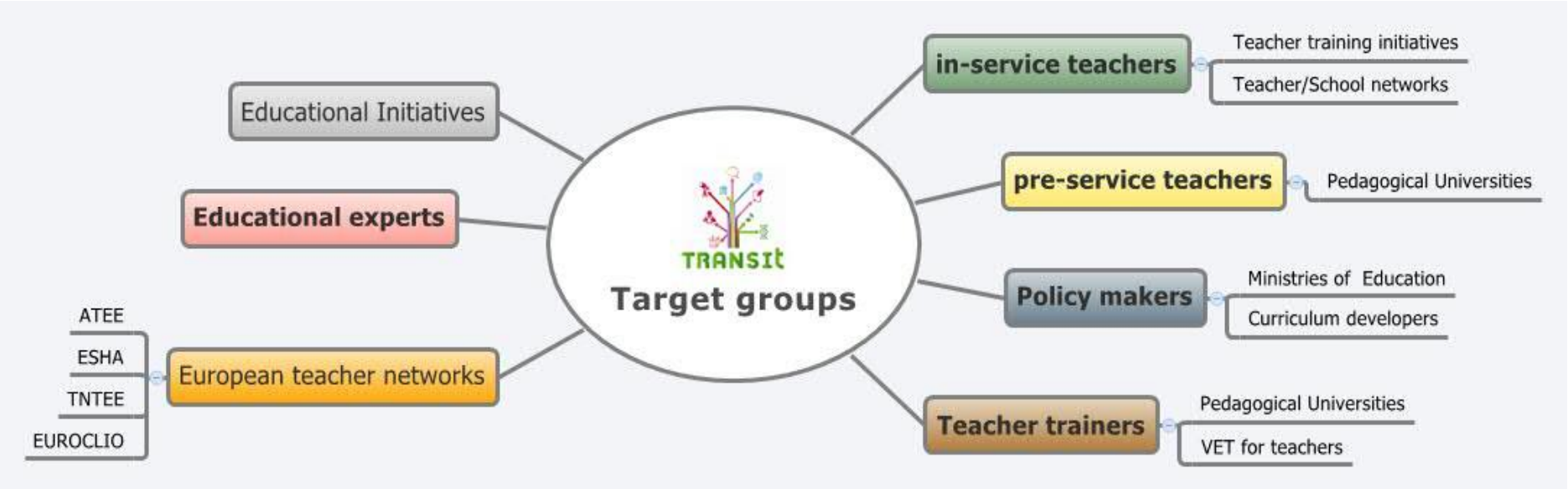
- It is also aimed at **teachers' collaboration** with colleagues, in order ultimately to become innovation leaders in their institutions.

Key competences

1. Communication in mother tongue;
2. Communication in foreign languages;
3. Mathematical competence and basic competences in science and technology;
4. Digital competence;
5. Learning to learn;
6. Social and civic competences;
7. Sense of initiative and entrepreneurship; and
8. Cultural awareness and expression

Key competences for Lifelong Learning, European Reference Framework, 2006

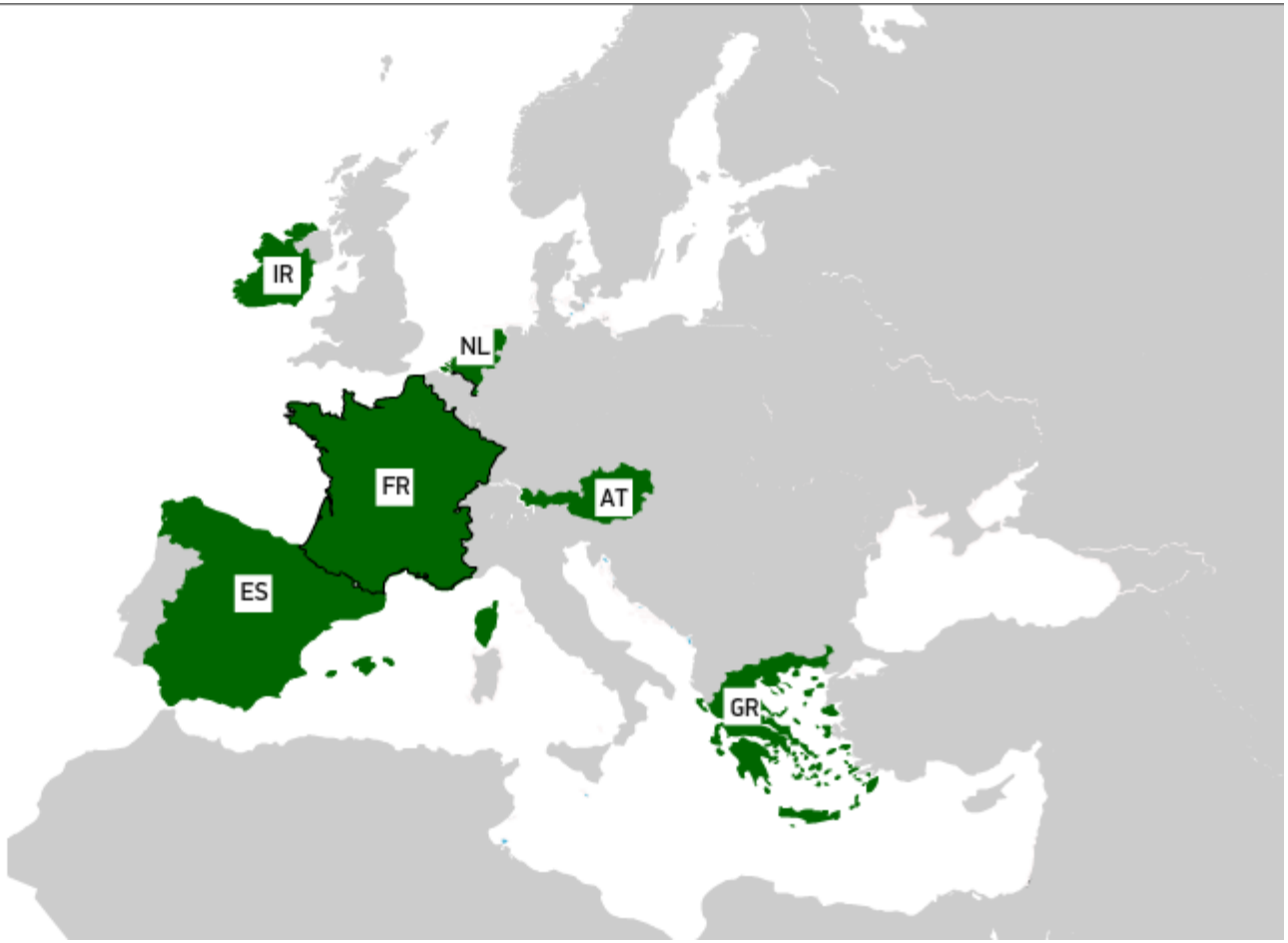
Target groups



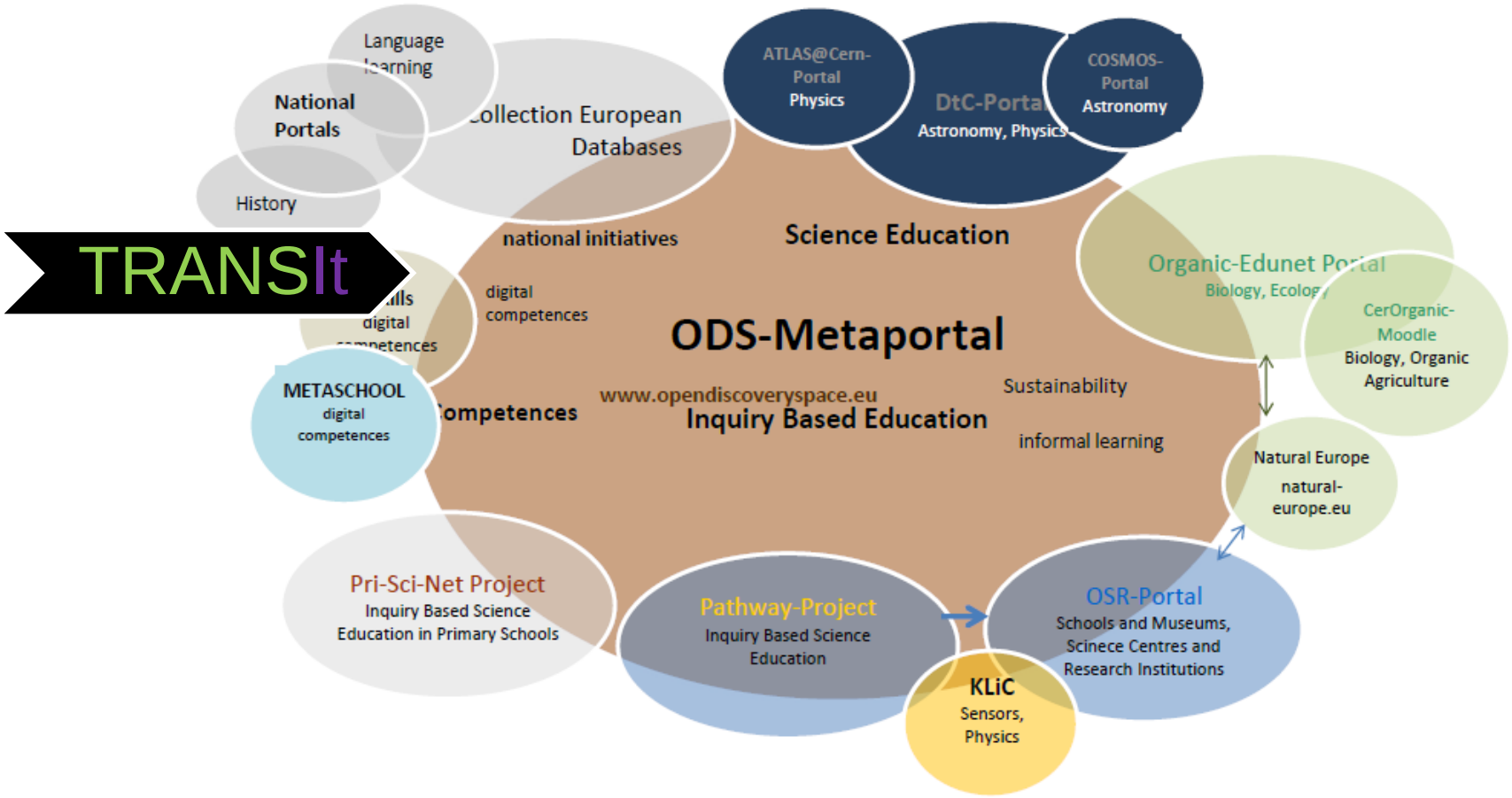
TRANSIt consortium

Partners of TRANSIT Project

click on every country for more details on each partner



Project relationships and synergies



ΕΛΛΗΝΟΓΕΡΜΑΝΙΚΗ ΑΓΩΓΗ

TRANSIt/ODS approach

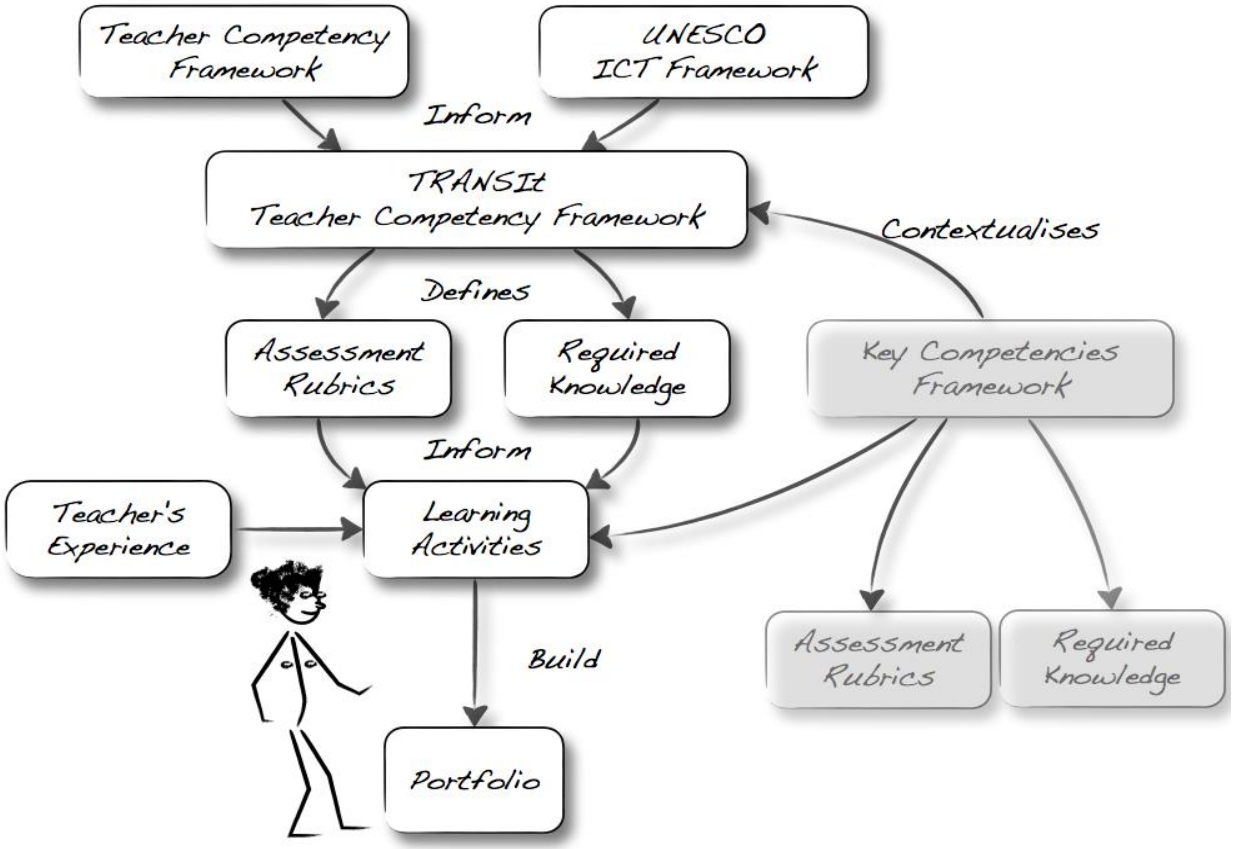
- ***TRANSIt*** *Approach:* teachers training on the didactics and e-assessment of key competences
- ***Open Discovery Space*** tries to engage teachers, parents, content designers, policy makers in numerous meaningful online communities who create, share, discuss and rate resources, ideas and experiences.

Main activities

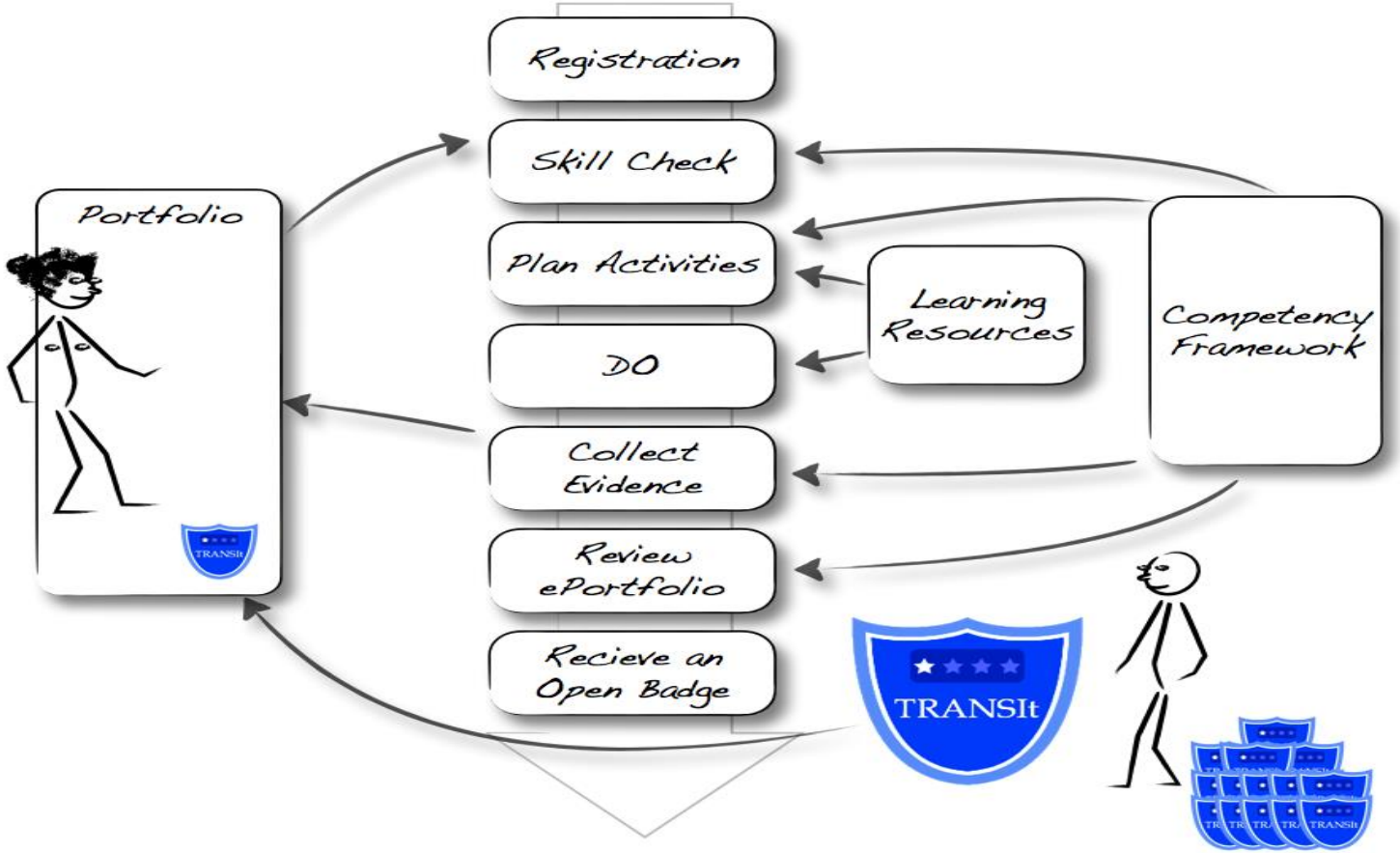
Developing the training framework

- The TRANSIt training framework is based on:
  - Level 1. **Raising awareness** of administrative school staff on topics related to competency-based education
  - Level 2. Identification and sharing of **informed practices**
  - Level 3. **Design** of cross-curricular competence driven activities and e-portfolio assessment of key competences
- The development of the proposed training framework rests on a **user-centred approach** and **participatory design** through the systematic analysis of the target groups' needs.

Framework


Teacher Competency Framework
UNESCO ICT Framework
Inform
TRANSIt Teacher Competency Framework
Contextualises
Defines
Assessment Rubrics
Required Knowledge
Key Competencies Framework
Inform
Teacher's Experience
Learning Activities
Build
Assessment Rubrics
Required Knowledge
Portfolio

Process


Registration
Skill Check
Plan Activities
DO
Collect Evidence
Review ePortfolio
Recieve an Open Badge
Portfolio
Learning Resources
Competency Framework
TRANSIt

Facilitate Student Learning	Engage students in purposeful and appropriate learning experiences	Cater for diverse student learning styles and needs through consistent application of a wide range of teaching strategies	Use exemplary teaching strategy and techniques that meet the needs of individual students, groups and/or classes of students in a highly responsive and inclusive manner
Assess and Report Student Learning Outcomes	Monitor, assess, record and report student learning outcomes	Apply comprehensive systems of assessment and reporting in relation to student attainment of learning outcomes	Consistently use exemplary assessment and reporting strategy that are highly responsive and inclusive
Engage in Continuing Professional Development	Reflect critically on professional experiences in order to enhance professional effectiveness	Contribute to the development of a learning community	Engage in a variety of learning activity that promote critical self reflection and the development of a learning community
Contribute to Curriculum Policy, Innovation and Change	Participate in curriculum policy and program teamwork	Provide support for curriculum policy or other program teams	Provide leadership in the school by assuming a key role in school development processes including curriculum planning and policy formulation
Establish Partnerships	Establish partnerships with students, colleagues, parents and other caregivers	Support student learning through partnerships and teamwork with members of the school community	Facilitate teamwork within the school community

Competency and Training Framework

- Competency standards focus on application of knowledge and skills underpinned by professional values. In TRANSIt framework there is a qualitative scale for every competence.
- Framework links stages of Competency:
  - Stage 1 (e.g. Classroom)
  - Stage 2 (e.g. Teacher collaboration)
  - Stage 3 (e.g. Institution/national initiative)

TRANSIt Learning Outcomes/Modules

Design

•Derive Learning Objectives from a Key Competency Framework

•Design a Lesson Plan/Learning Scenario/Programme for KCA

•Derive Assessment Plan from Learning Objectives

•Plan Monitoring and Reporting

Prepare

•Prepare Learning Environment for KCA

•Identify /Select / Adapt / Develop Learning Material and Technologies enhancing Learning and Assessment

Run

•Run a Lesson Plan/Scenario/Programme for KCA

•Use Digital Technologies to Support Learning and Assessment

•Monitor and Assess Learning to Inform Further Learning

Review

•Review a Lesson Plan/Scenario/Programme for KCA

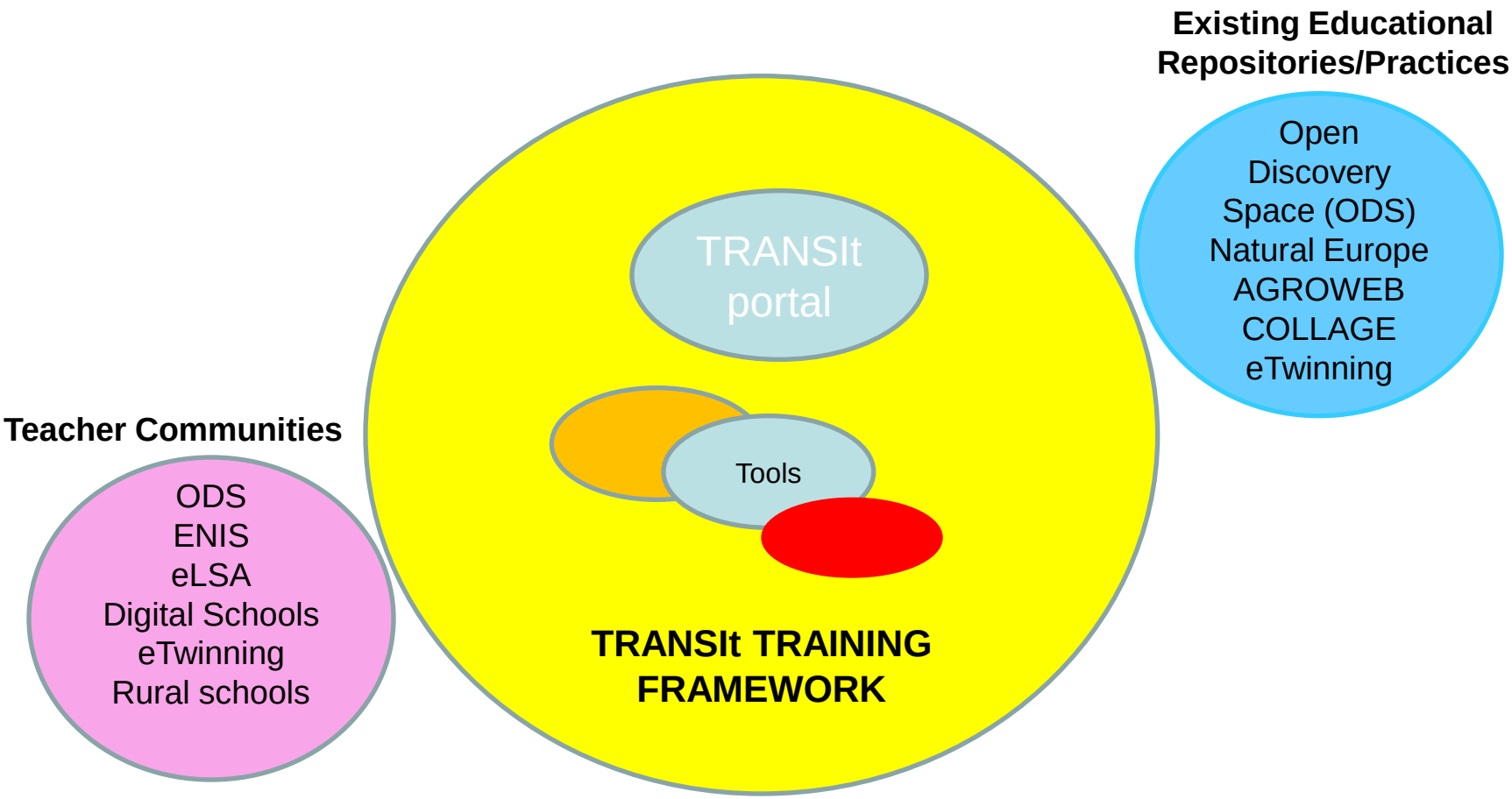
Assessment

- e-Portfolio construction
- Self-reflection
- Surveys
- Quizzes
- Feedback from TRANSIt Tutor
- Peer reviews

Involvement of a wide range of stakeholders

- The TRANSIt consortium aims to involve teachers from 2 kinds of schools:
  - **innovative** schools in Europe (ENIS (Austria), Digital Schools (Ireland), eTwinning Schools, as well as
  - small **rural** schools, members of the European Network of Rural Schools (Rural Wings)

- The involvement of such networks of schools will allow for research and evaluation of different attitudes and implementations of competences in education providing ways for **intercultural** dialogue.


Existing Educational Repositories/Practices
Open Discovery Space (ODS)
Natural Europe
AGROWEB
COLLAGE
eTwinning
TRANSIt portal
Tools
TRANSIt TRAINING FRAMEWORK
Teacher Communities
ODS
ENIS
eLSA
Digital Schools
eTwinning
Rural schools

Teaching Approaches

- Methodologies used to implement competence oriented education:
  - Project based learning
  - Guided discovery
  - Action learning
  - Problem based learning
  - Co-operative learning
- Available descriptions & templates here:

Glossary of teaching approaches, *http://portal.opendiscoveryspace.eu/tr-activity/22-glossary-teaching-approaches-669764*

What is project-based learning?

Project Based Learning: Explained.

http://www.youtube.com/watch?v=LMCZvGesRz8

Project-based learning

- An educational scenario achieved with a project-based learning approach (**PBL)**:
  - involves students in group activities associated with issues from the real world
  - students:
    - Construct the **knowledge**,
    - Associate knowledge with **authentic activities**,
    - Foster **critical thinking**,
    - They **collaborate**,
    - Foster the individual **talents** and **abilities** of team members

Designing a competence based learning (CBL) scenario: definition & rationale

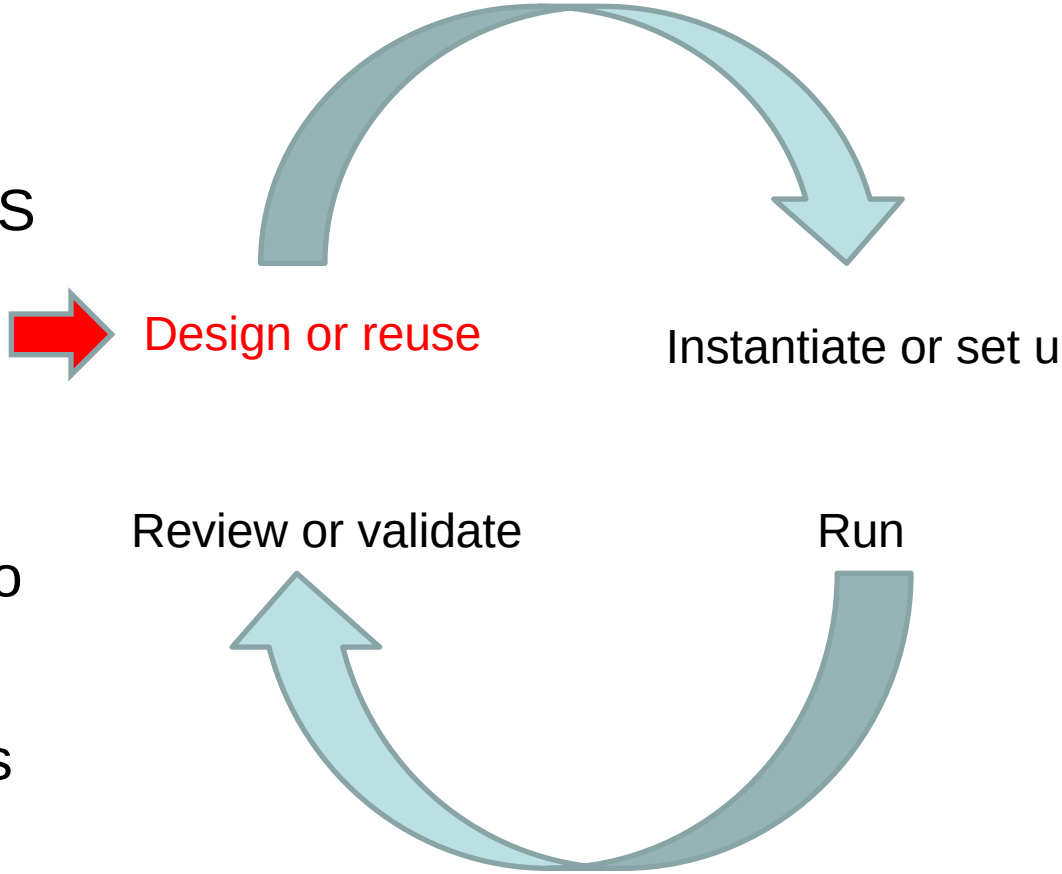
- A learning scenario describes **educational activities** in real life situations
- A scenario is a story about **people** and their activities
- Scenarios are used mainly as case studies of **effective practice**
- Scenarios refer to **learning goals** within a topic and they are characterized by learning activities and use of **resources**

Learning Activity

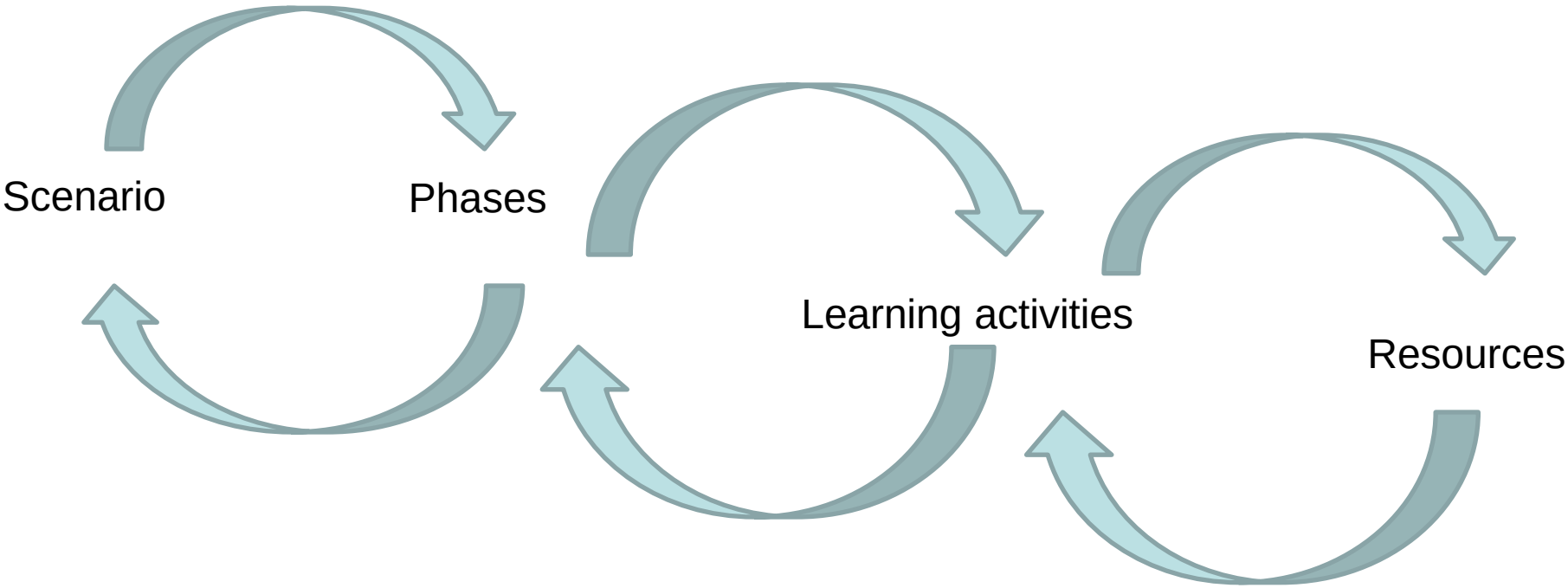
- A learning activity is an interaction between a **learner** or learners with the **environment, resources, tools** and instruments that is carried out in response to a task with an intended learning outcome.
- It suggests the adoption of a **pedagogical approach** for designing the learning activity

Design practices

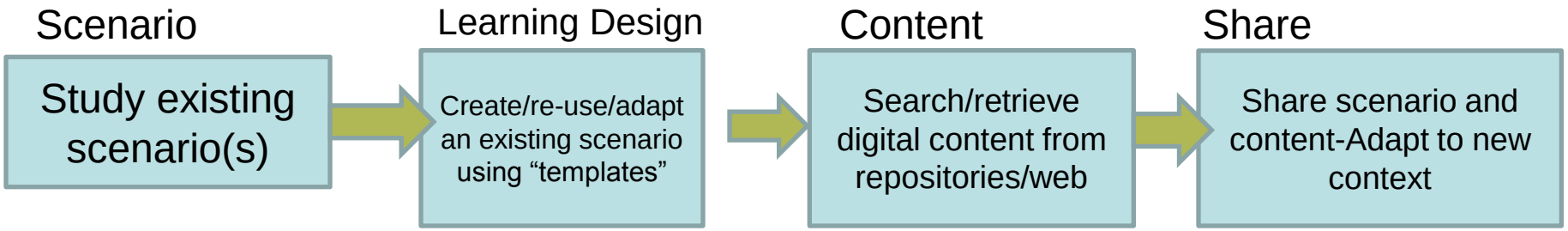
- **Design:** planning, designing or conceiving an outline for a learning experience. Our designs are supported by ODS **scenarios templates**
- **Instantiation:** setting up a specific *context* in which to deliver the design
- **Realisation:** The process of making the design available to real learners
- **Review:** The process of refining the design once it has been delivered



Scenario Design & Implementation at Different Granularity Levels



4 steps of designing a learning scenario



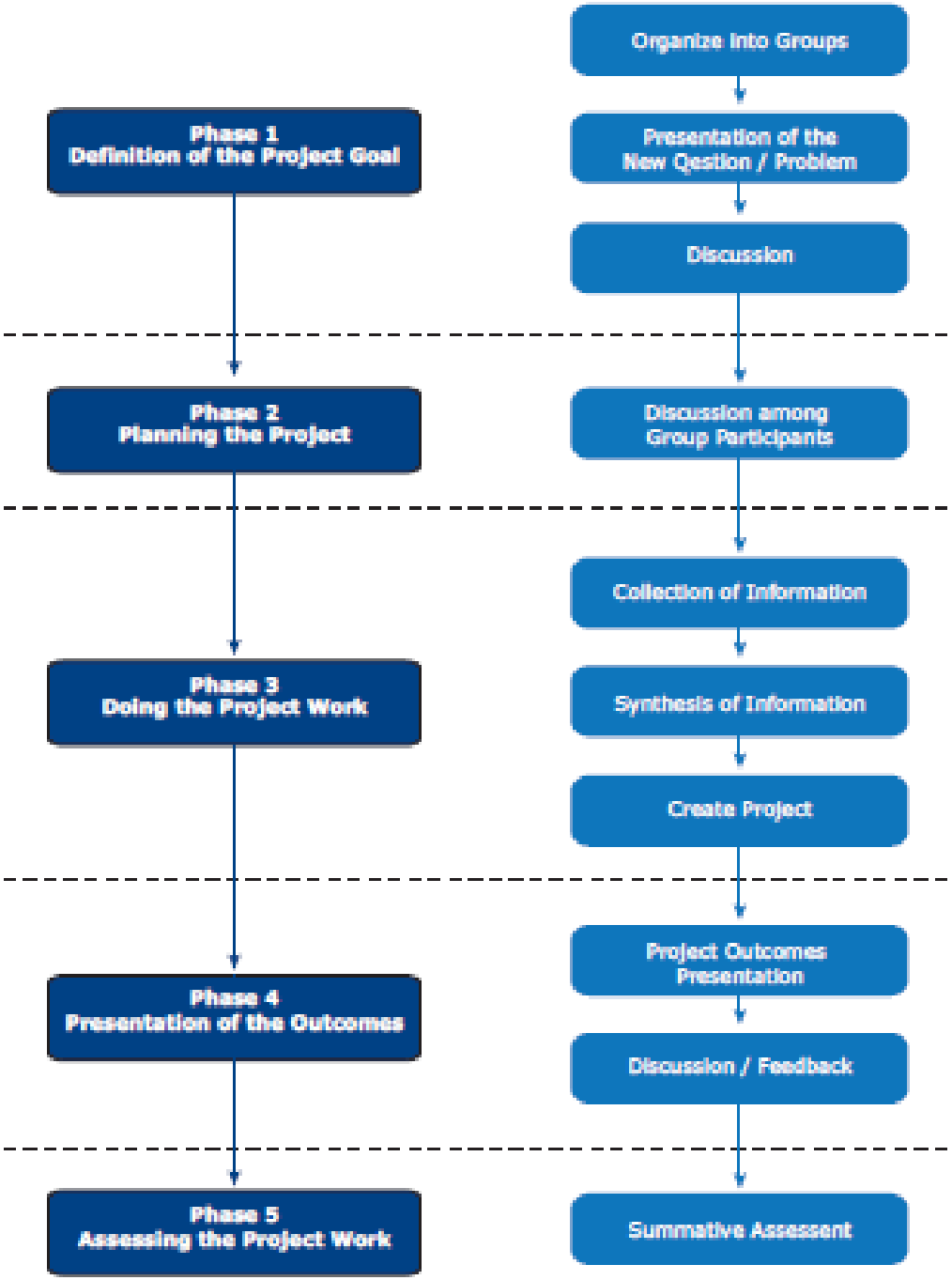
- **1st Step:** Study existing scenarios and select activities/ resources to use or re-use the whole scenario or create a scenario ab initio
- **2nd Step:** Describe and adjust the learning scenario using the available “templates”
- **3rd Step:** Organise, search and enrich the learning scenario with content
- **4th step:** Share your scenario and adapt it for use in other contexts.

The TRANSIt/Open Discovery Space Approach to Designing Learning Scenarios

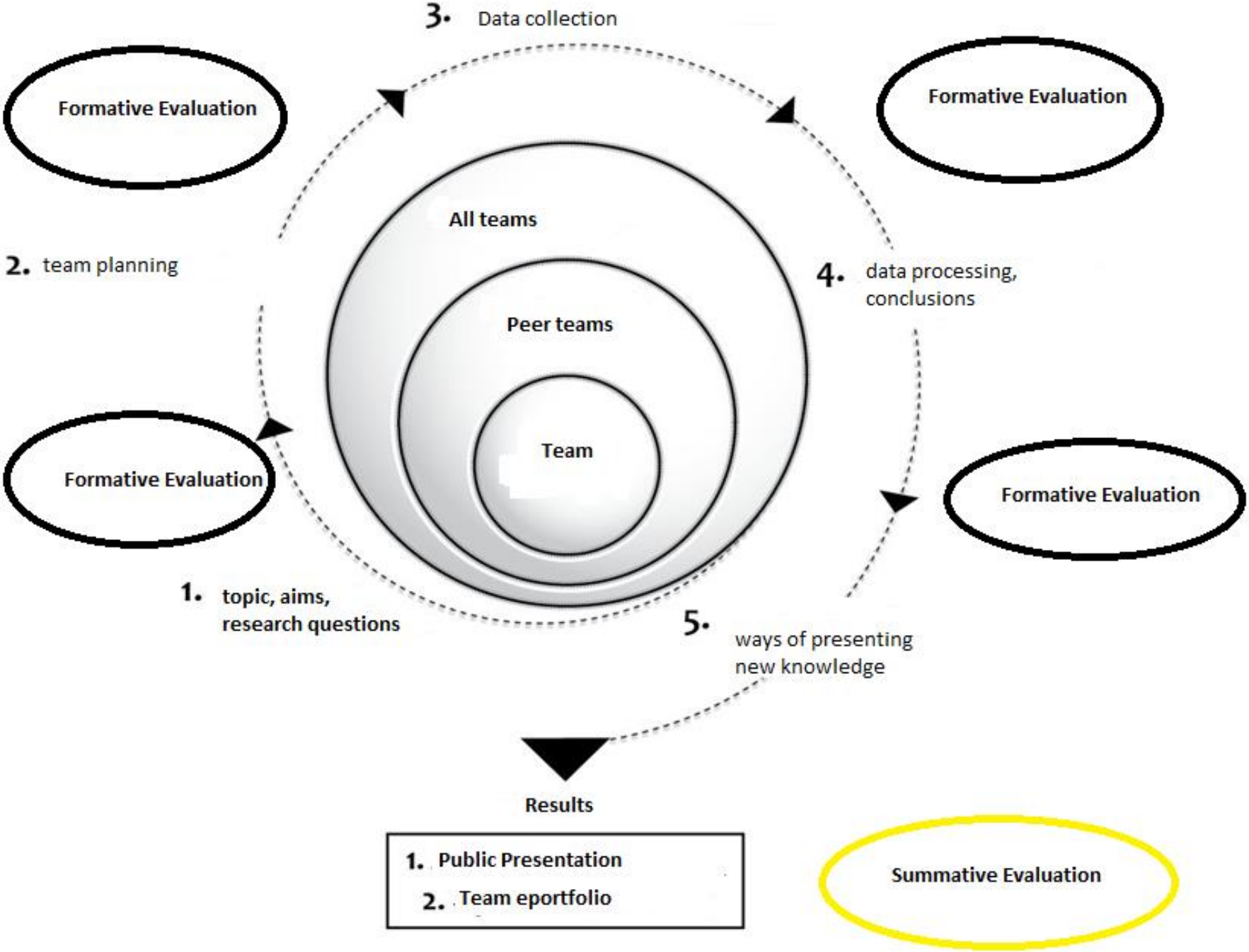
- Provide exemplar **templates** or **descriptions** which can be shared, re-used and adapted to different contexts

OPEN DISCOVERY SPACE

Project-based learning template



ΕΛΛΗΝΟΓΕΡΜΑΝΙΚΗ ΑΓΩΓΗ


3. Data collection
Formative Evaluation
Formative Evaluation
All teams
2. team planning
4. data processing, conclusions
Peer teams
Team
Formative Evaluation
Formative Evaluation
1. topic, aims, research questions
5. ways of presenting new knowledge
Results
1. Public Presentation
2. Team eportfolio
Summative Evaluation

Supporting the creation of user-generated scenarios

Examples of Scenarios: “3d printing of a minoic vase”

Information | Description | Phases & Activities

- **Definition of the Project Goal**
  - Organize into groups
  - Introduction to 3D printing
  - Presentation of the new question /problem
  - Discussion
- **Planning the Project**
  - Discussion on project phases among Group Participants
  - Assessment Design
- **Doing the Project Work**
  - Collection of Information & Brainstorming/Mindmapping
  - ePortfolios & Synthesis of Information
  - Create project
- **Presentation of the Outcomes**
  - Project Outcomes Presentation
  - Discussion/Feedback
- **Assessing the Project Work**
  - Summative Assessment

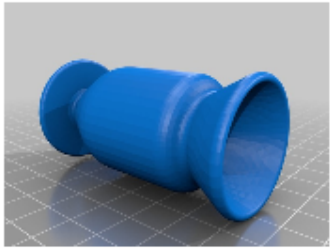
Introduction to 3D printing

Εισαγωγή στην τριδιάστατη (3d) εκτύπωση

Description

Introduction to (open source) 3D printing

Εισαγωγή στη 3d σχεδίαση



Multilingual Scenarios

Thingiverse is a design community for discovering, making, and sharing 3D printable things. everyone should be encouraged to create and remix 3D things. In the spirit of maintaining an open platform, all designs are encouraged to be licensed under a Creative Commons license, meaning that anyone can use or alter any design.

Resources

Educational objects (as url):

1. "3d vase tutorial" on YouTube

Introduction to 3D printing

Εισαγωγή στην τριδιάστατη (3d) εκτύπωση

ple things. everyone should be encouraged to create and remix 3D things. In the spirit of maintaining an open platform, all designs are encouraged to be licensed under a Creative Commons license, meaning that anyone can use or alter any design.

Resources

Educational objects (as url):

1. "3d vase tutorial" on YouTube

Examples of Scenarios: “3d printing of a minoic vase”

- Ιστορία Γ' Δημοτικού, Βιβλίο μαθητή, Ενότητα 9: **Ο Μινωικός Πολιτισμός, εν. 5 Η τέχνη των Μινωιτών** (σελ. 127)
- Ιστορία Γ' Δημοτικού, **Τετράδιο Εργασιών** (σελ. 50)
- Μαθηματικά Στ' Δημοτικού, **Θεματική Ενότητα 3, Λόγοι-Αναλογίες**

Η σχεδίαση θα γίνει με χρήση λογισμικού 3d σχεδίασης (π.χ. **Tinkercad**, **123D Make της Autodesk**, **Inkscape**, **Sketchup**) & με τη χρήση 3d Printer.

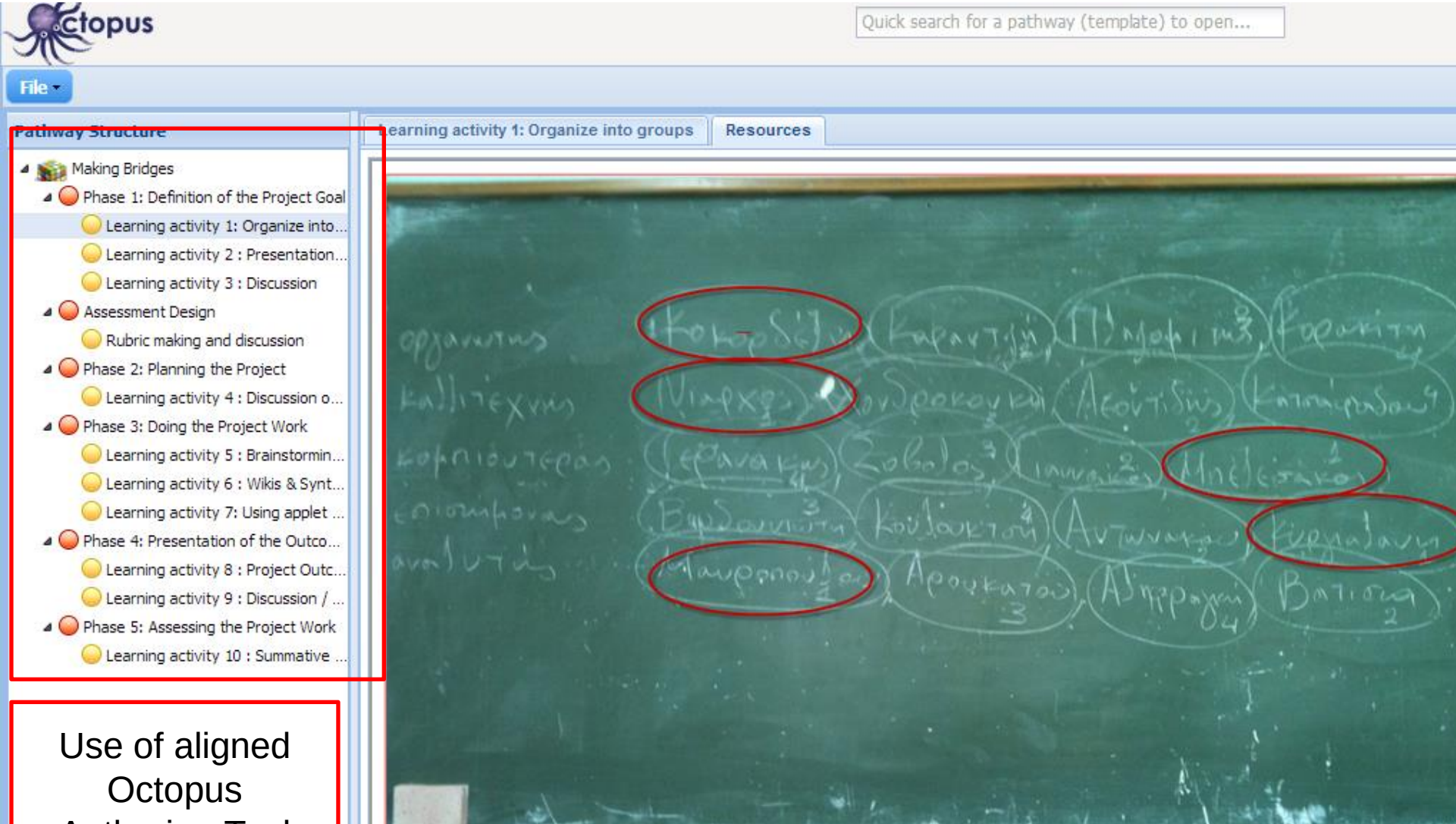
Η εργασία μπορεί να συνδυαστεί με εκπαιδευτικές επίσκεψεις:

- στο ανάκτορο της Κνωσού,
- στο **Αρχαιολογικό Μουσείο Ηρακλείου**,
- στο **Μουσείο Αφής**

Linkage with the National Curriculum

Numerous Resources

Examples of Scenarios: “Making Bridges”



Use of aligned Octopus Authoring Tool

Examples of Scenarios: “Introduction to Braille”

Information | Description | Phases & Activities

- **Introduction**
  - Introduction/ Presentation of the Activities
  - Discussion
- **Application**
  - Guided Practice
  - Individual Practice
- **Assessment**
  - Assessment

Guided Practice

Description

The student(s) will work/practice with the help of the teacher. With a leaf embossed stuc position of the letters in foil. All student(s) work with a leaf with only 6 points (in braille).

Then the teacher says letters and students play games where they place small balls in the co goal is to know the position of the letters in braille sheet). The teacher checks and provides c feedback whenever needed.

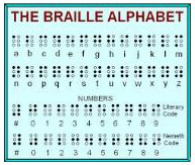
- Collaborative Design
- Linkage with National Curricula
- Multilinguality

Gomes **Organization**: Escola F. F. Lopes **Role**: Teacher
viou **Organization**: EA **Role**: Researcher

ıtervention is for students to develop their competencies/skills in reading Braille. learning braille. To do so, they will get to see the location of points in a braille sheet and ll balls in order to form the letters. Then they will feel the keys corresponding to the machine. Finally, they will write letters in Braille and read them. The approach will be consideration the disabilities of students, their needs and skills.

Activities are related with the Curriculum of Special Education (Greece) - **Αναλυτικό Πρόγραμμα Ειδικής Αγωγής**

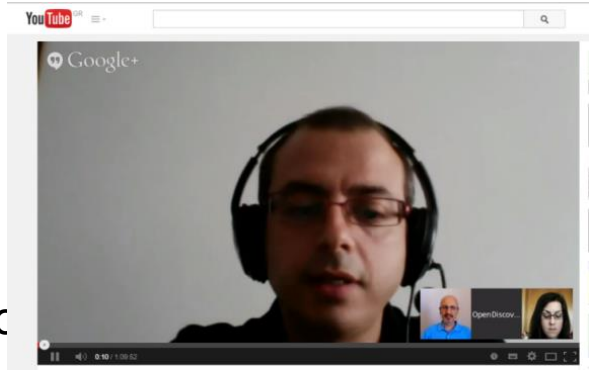
Description/ main idea



ΕΛΛΗΝΟΓΕΡΜΑΝΙΚΗ ΑΓΩΓΗ

Events as community support mechanisms

- *Face to face training events*
  - 5-days training courses (summer, winter schools)
  - face to face training workshops that took place in Athens and Patras, Crete i
- *Online training events*
  - Webinar entitled “Evaluation and ICT integration in pro based learning”
  - Webinar entitled “This year I will be implementing projects with my students – what do I need to know?”
  - Webinar entitled “Exploitation of Maraha eportfolio tool in projects”
- *Contest: CBL Scenario Design*

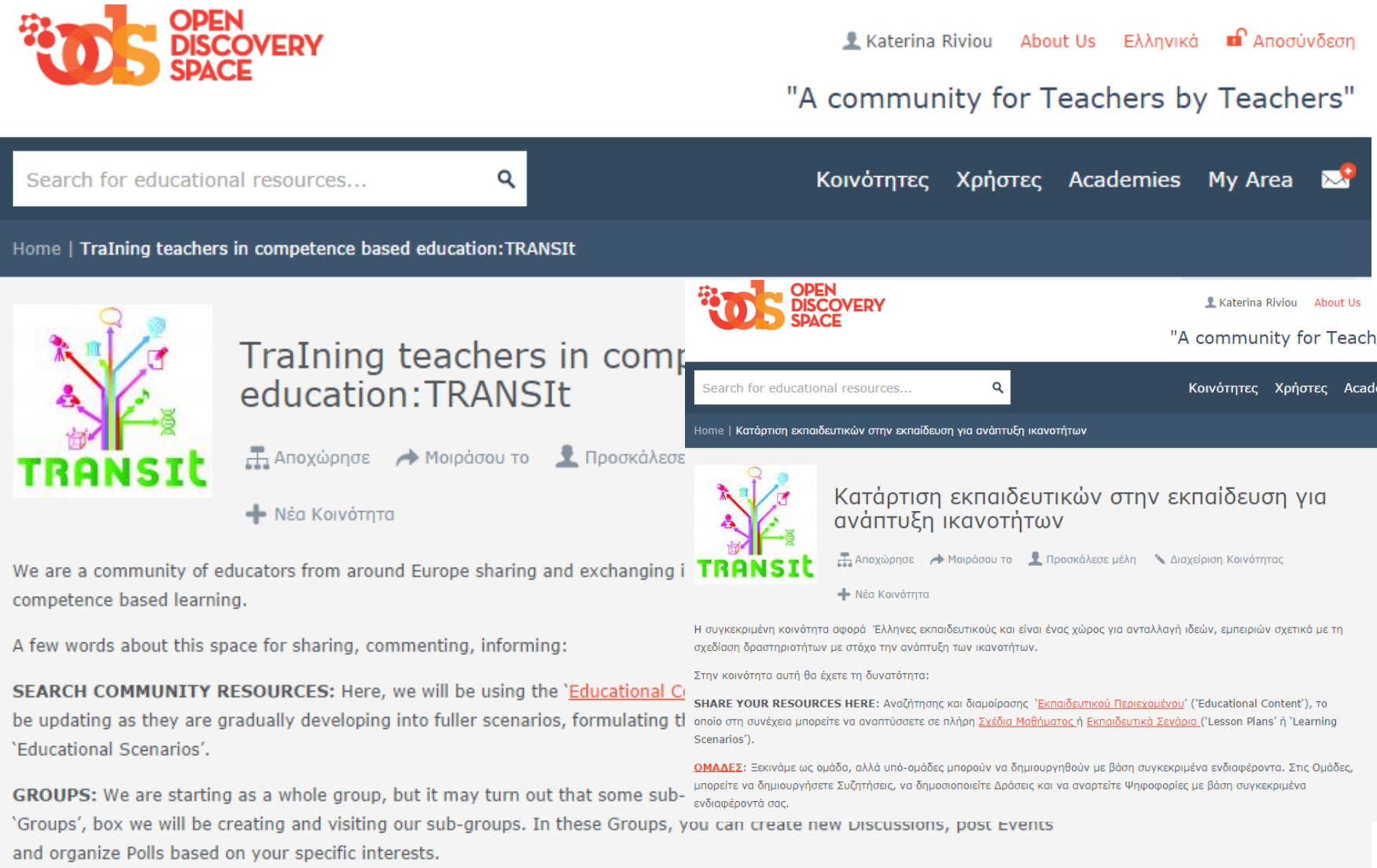


TRANSIt Main Outcomes

Needs analysis survey (Greece)

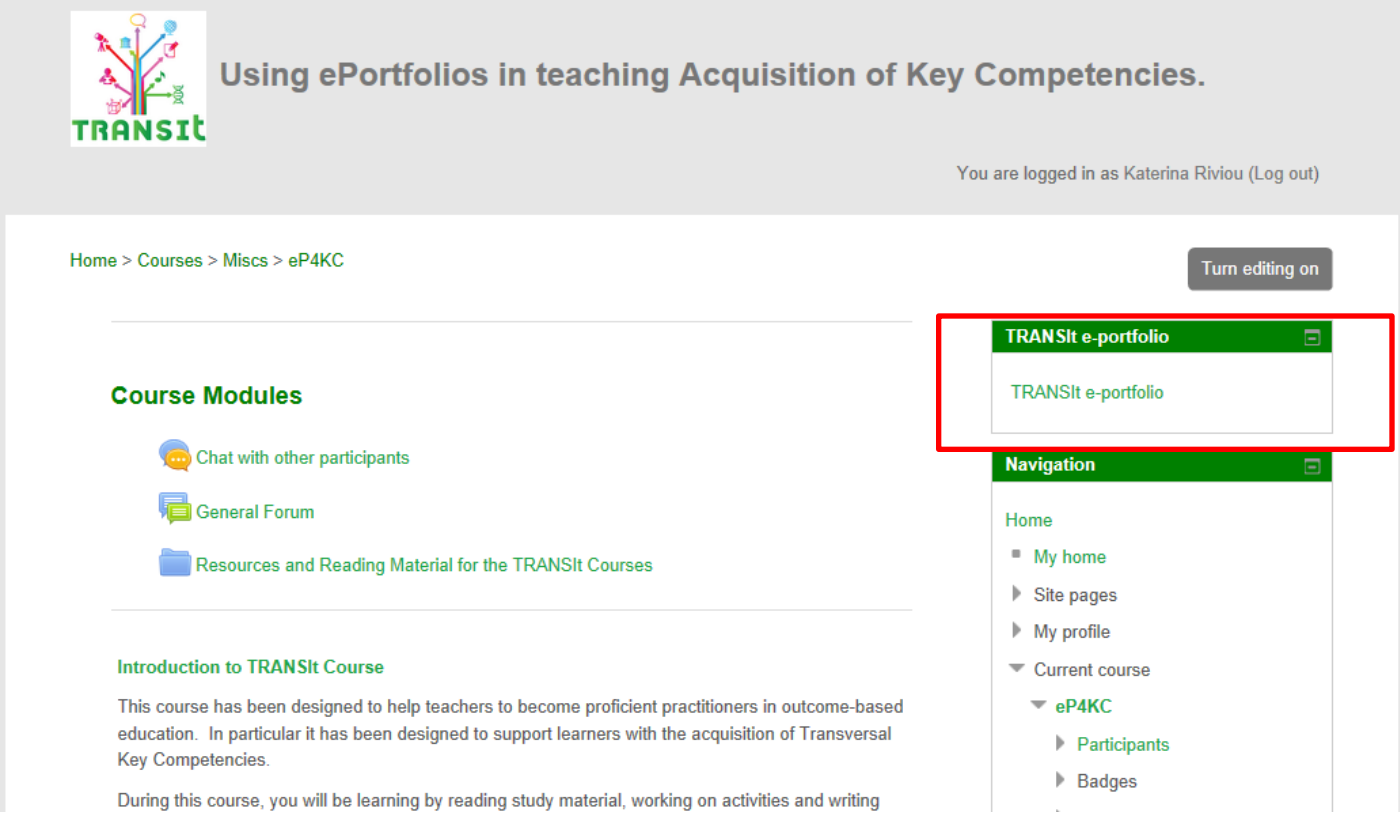
- June – July 2013, 648 responses were collected
- The questionnaire was aimed at identifying the **profiles** of the possible participants in TRANSIt training activities, the **current implementation** of competence-based didactics and assessment as well as participants **training needs**.
- The link for the survey was made available through the **etwinning** mailing list

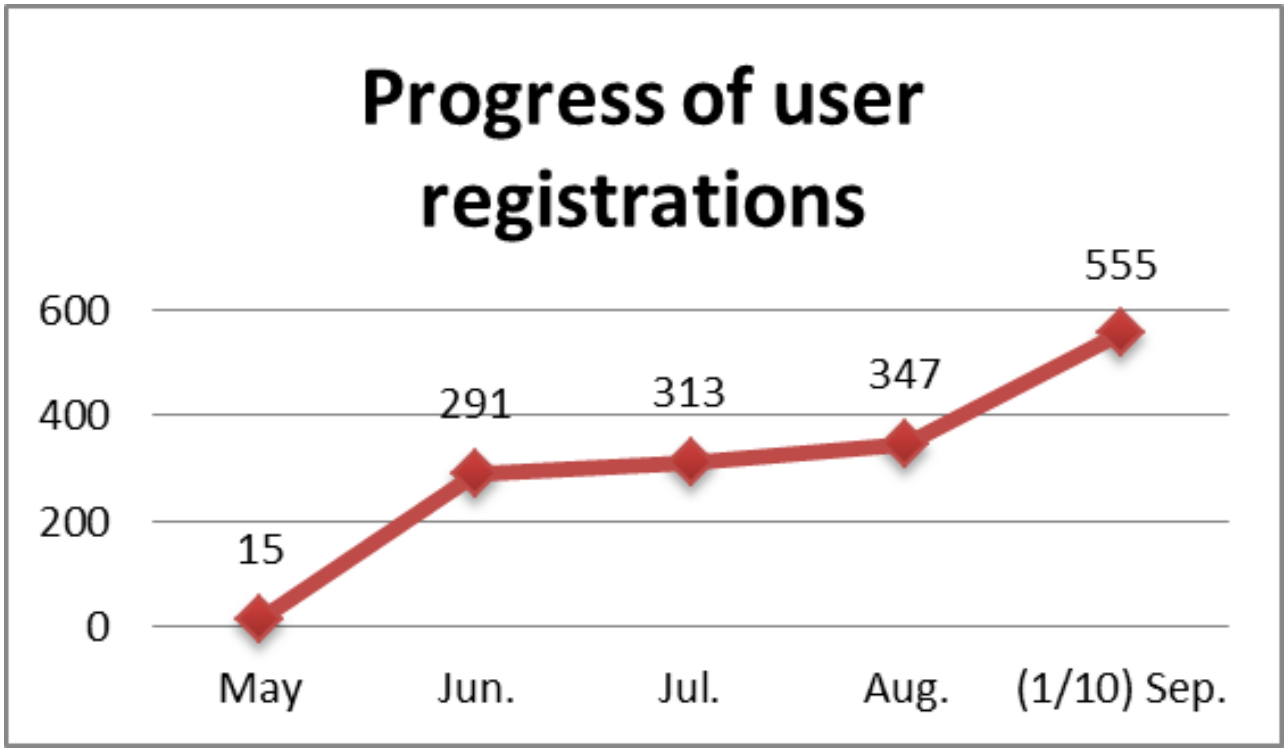
TRANSIt multilingual Communities on ODS portal, portal.opendiscoveryspace.eu/

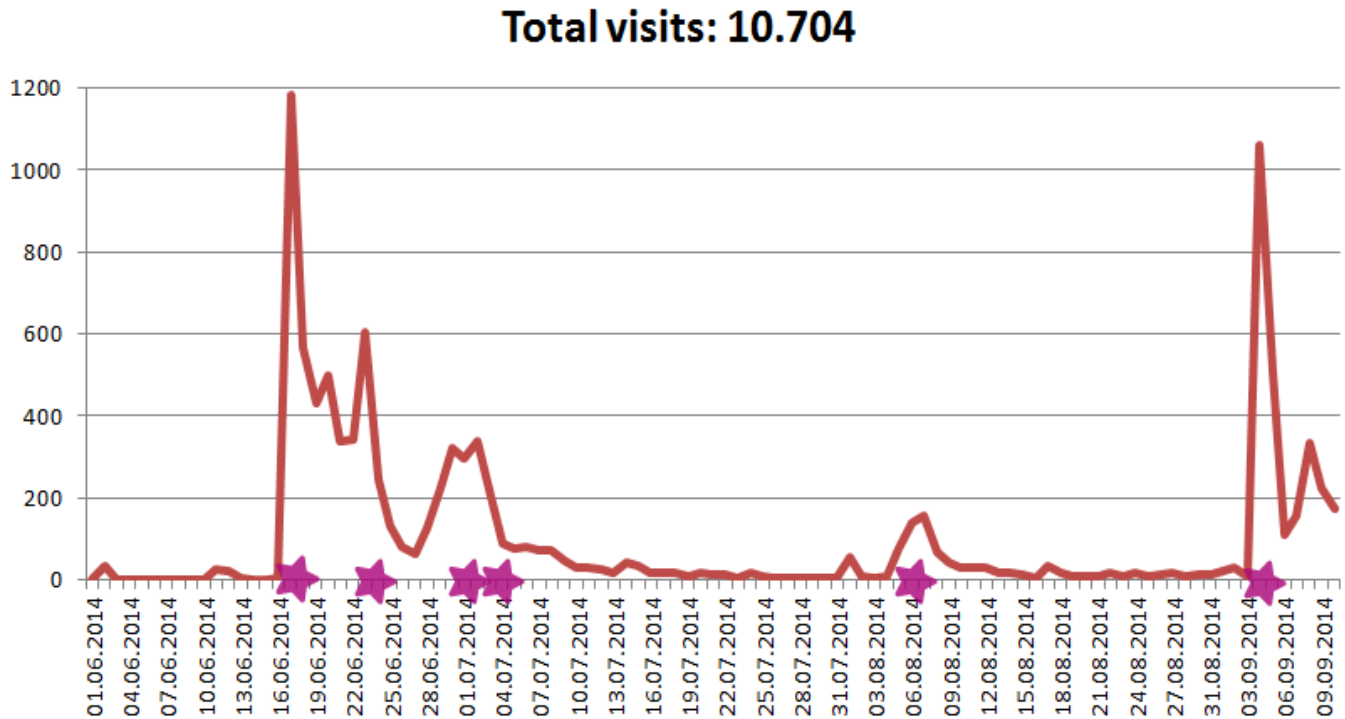


TRANSIt training environment (Moodle integrated with Mahara eportfolio tool)

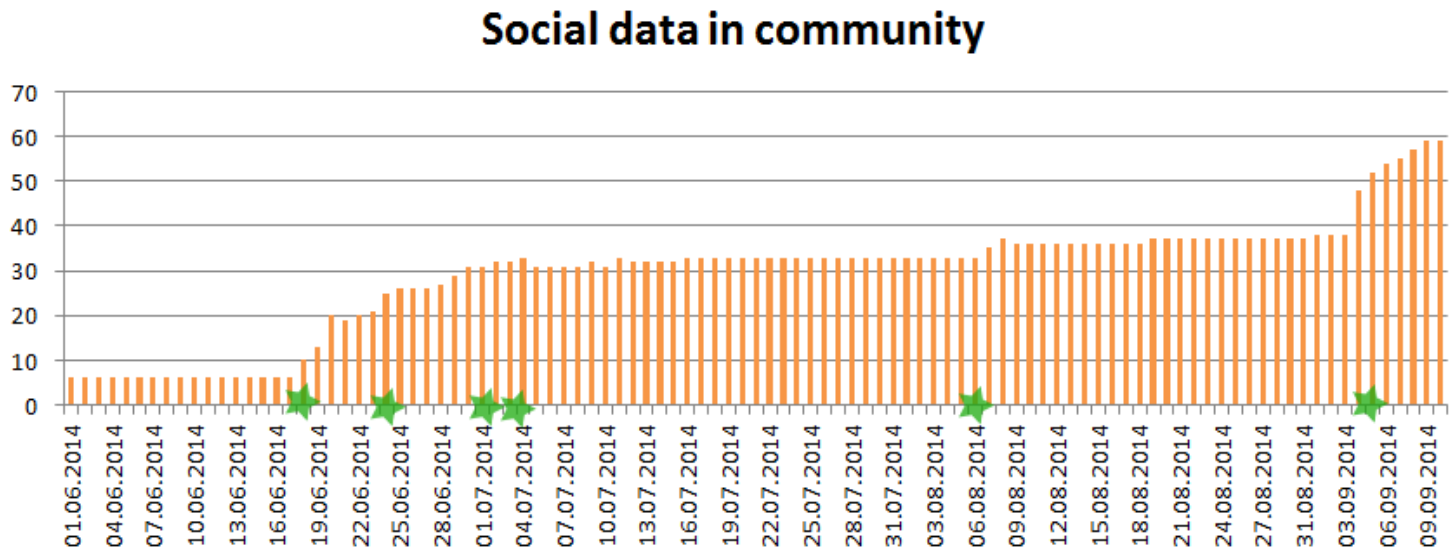
http://transit.cti.gr/moodle/

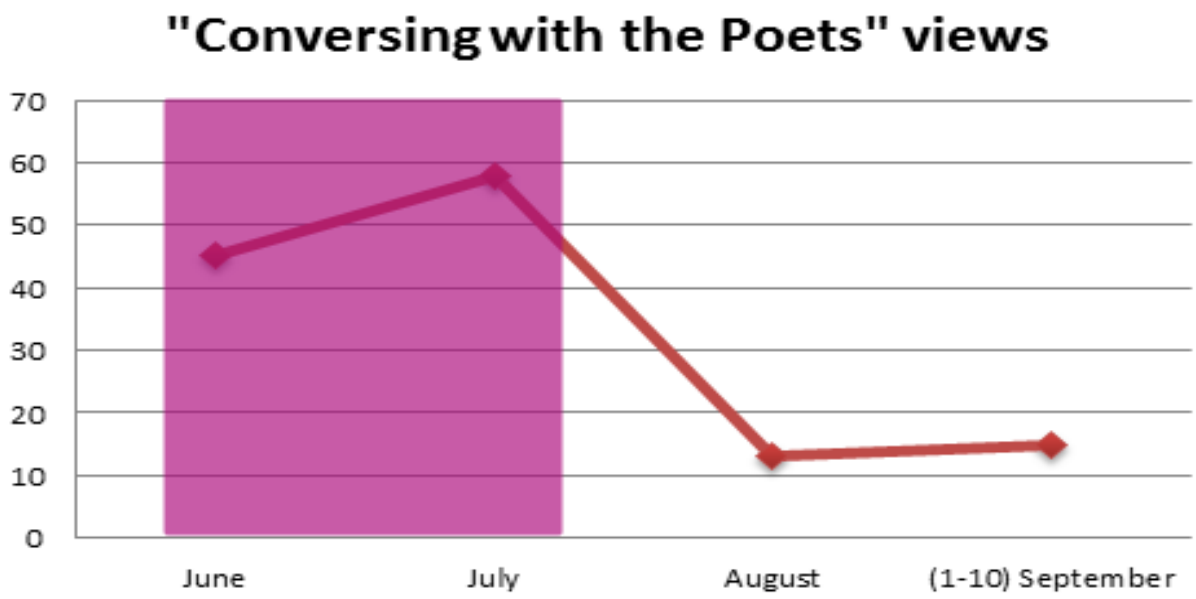



Progress of user registrations
600
400
200
0
15
291
313
347
555
May
Jun.
Jul.
Aug.
(1/10) Sep.


Total visits: 10.704
1200
1000
800
600
400
200
0
01.06.2014
04.06.2014
07.06.2014
10.06.2014
13.06.2014
16.06.2014
19.06.2014
22.06.2014
25.06.2014
28.06.2014
01.07.2014
04.07.2014
07.07.2014
10.07.2014
13.07.2014
16.07.2014
19.07.2014
22.07.2014
25.07.2014
28.07.2014
31.07.2014
03.08.2014
06.08.2014
09.08.2014
12.08.2014
15.08.2014
18.08.2014
21.08.2014
24.08.2014
27.08.2014
31.08.2014
03.09.2014
06.09.2014
09.09.2014

Social data in Greek TRANSIt Community




"Conversing with the Poets" views
70
60
50
40
30
20
10
0
June
July
August
(1-10) September

Evaluation Results

Item	Question	Mean value (webinar)	Mean value (pilot face to face workshops)	Summer School 2013
1	What is your opinion about the duration of the event?	4,29	4,54	4,42
2	How do you rate the overall organization?	4,43	4,45	4
3	How do you rate the design and program of the event?	4,42	4,36	3,83
4	How do you rate the venue?	-	4,66	3,92
5	How do you rate the quality of the distributed materials?	4,38	4,5	4
6	How do you rate the practical knowledge you gained from this workshop?	4,07	4,04	3,75
7	Please rate the trainer feedback on your questions.	4,35	4,52	4,25
8	Was the trainer effective in teaching?	4,48	4,36	4
9	How did the event meet your expectations?	4,29	4,54	3,92
10	What is your overall assessment of the event?	4,35	4,31	4,25

Data from interviews

- Awareness of Transversal Key Competences
- Professional skills and knowledge on didactics of Transversal Key Competences
- Professional skills and knowledge on e-assessment of Transversal Key Competences

Impact

- Satisfied about the **best practices/scenarios** demonstrated, as well as about the skills they developed

- Highlight the value of learning **how to share resources** and practices and collaborate with other teachers.

- All participants (100%) would recommend the events to colleagues

- **65%** claim that they will implement it in their classrooms the upcoming school year.

Events: TRANSIt Summer School @ Crete, July 2013

- The community "Training teachers in competence based education:TRANSIt @ the Crete Summer School 2013" has been created – Please join!

- The description of the activities/workshops that took place are accessible here

- Participants worked in teams & individually and designed competence-based cross-curricular educational scenarios (using the Octopus authoring tool) (Learning Scenarios area of the community)

- Most of the scenarios apply to Social Sciences, Arts, Entrepreneurship & a combination of other subject fields such as Mathematics, ICT

Events: TRANSIt Winter School@Vilnius, February 2014

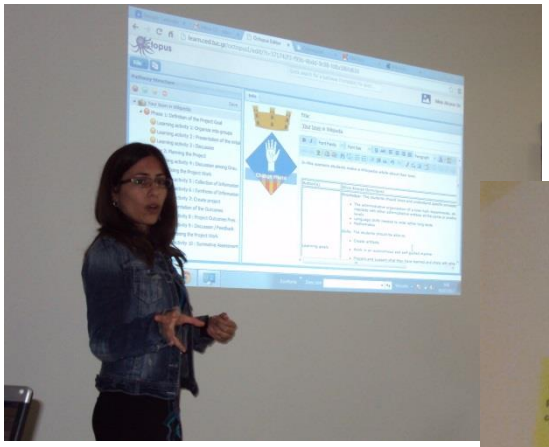
- In the context of the winter school, the community "Training teachers in competence based education: TRANSIt @ the Vilnius Winter School 2014" has been created
- The description of the activities/workshops that took place, as well as the presentations delivered are available here
- As a starting point, each participant has been invited to come to the course with an idea, or maybe an example of existing practice, called 'initial ideas'. These ideas have been uploaded as Educational Objects on the portal. During the winter school these initial ideas were developed further in Learning Scenarios, based on insights gained through a series of workshops.

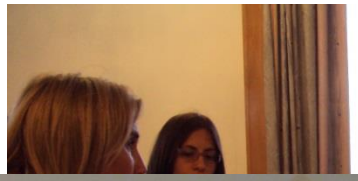
Events: Summer School@ Attica, July 2014

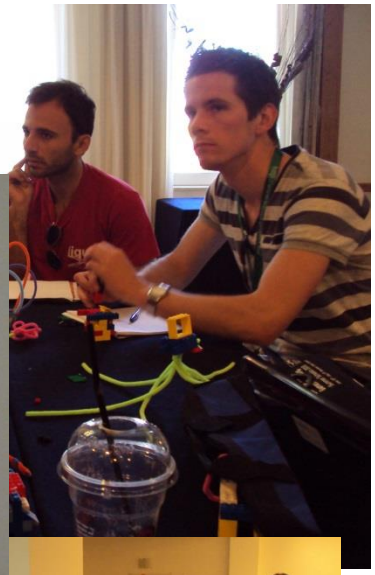
- In the context of the summer school, the community "ODS Summer School 2014" has been created
- More information is available here

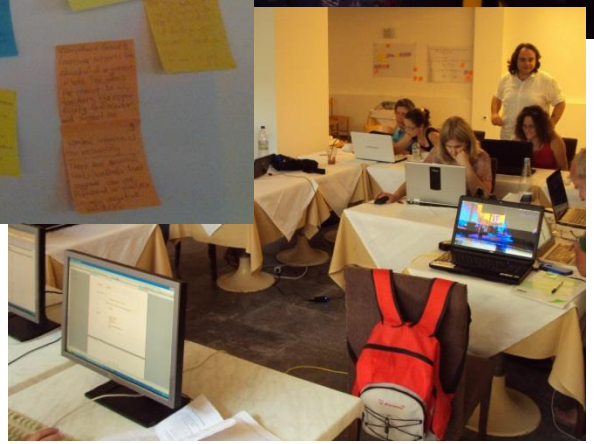
OPEN DISCOVERY SPACE

TRANSIT









ΕΛΛΗΝΟΓΕΡΜΑΝΙΚΗ ΑΓΩΓΗ

Upcoming Summer School

12-17 July 2015@Attica, Greece

ods.ea.gr

ODS School Development and Innovation Course

Click here to see the **Programme**

Click here to see the **Organizers**

Training Course on Entrepreneurial Skills Education

Click here to see the **Programme**

Click here to see the **Organizers**

Teacher Competences Fostering Inclusive Learning

Click here to see the **Programme**

Click here to see the **Organizers**

ΕΛΛΗΝΟΓΕΡΜΑΝΙΚΗ ΑΓΩΓΗ

TRANSIt Final Conference

www.transit-project.eu/conference

Join the TRANSIt community!

www.transit-project.eu

Upcoming Summer School 2015

ods.ea.gr/

TraIning teachers in competence based education:TRANSIt Community on ODS Portal

http://portal.opendiscoveryspace.eu/community/training-teachers-competence-based-educationtransit-73929

Moodle-Mahara Training Environment

transit.cti.gr/moodle/

ΕΛΛΗΝΟΓΕΡΜΑΝΙΚΗ ΑΓΩΓΗ

Thank you!

Katerina Riviou
kriviou@ea.gr