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Designing and Evaluating Educational Activities fostering Competences

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Purpose and Content

- Competence definition; Competence learning
- Teaching approaches fostering competences
- Processes and **strategies** of designing a competence based learning (CBL) scenario
- Hands-on **examples of scenarios**
- Evaluating educational activities
- TRANSit project presentation



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Competence

- A competence is the ability to apply a synthesis of **knowledge**, **skills** and **attitudes** in a particular situation and with a particular quality.



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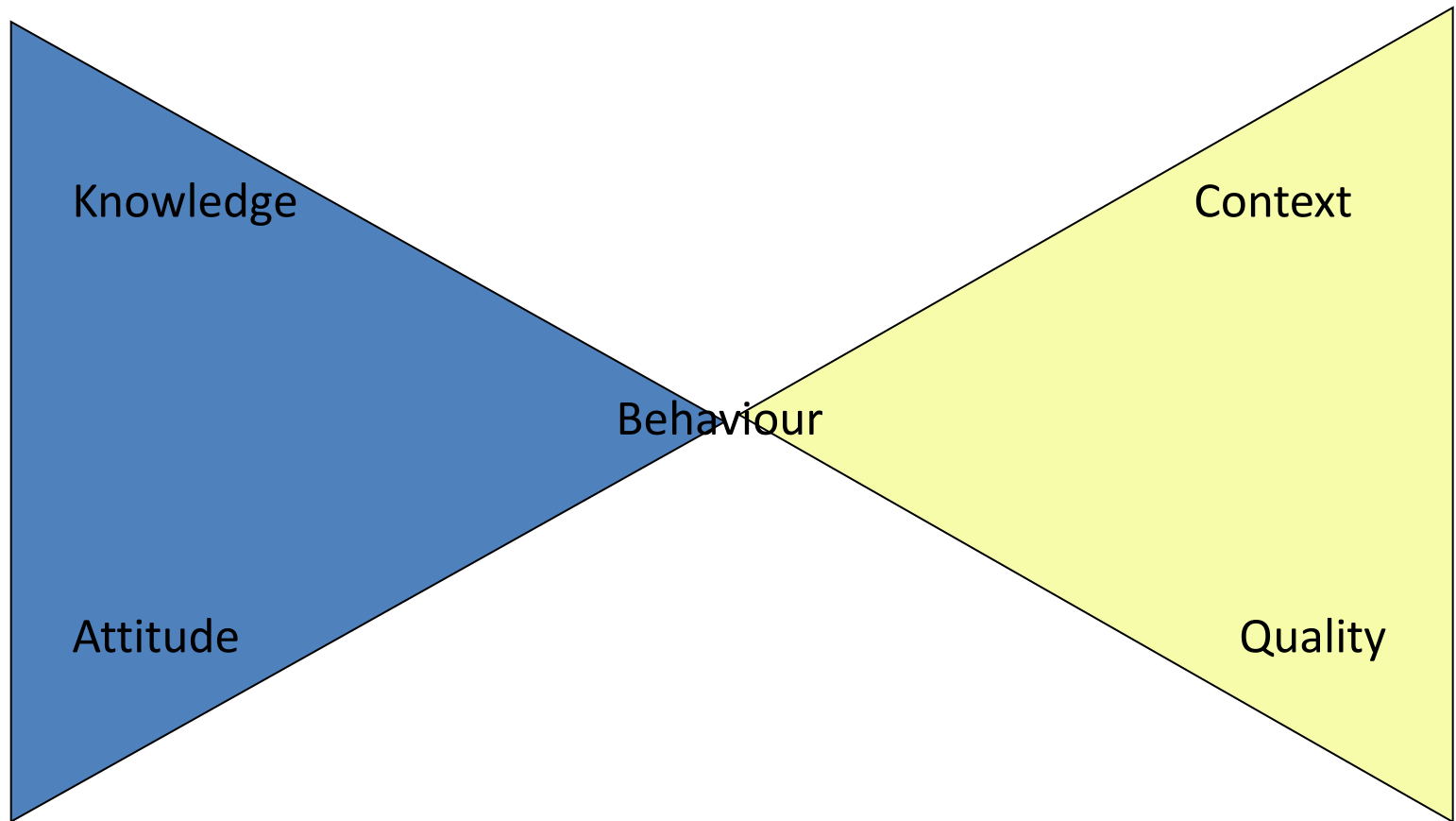


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Two triangles



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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



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Competence learning is:

- Active learning
- In realistic settings
- Together with others
- Increasingly self sufficient
- **Aimed at actual performance!!**
- Aimed at learning to learn



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Teaching Approaches

- Methodologies used to implement competence oriented education:
 - Project based learning
 - The storyline approach
 - 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>



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What is project-based learning?



Project Based Learning: Explained.

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



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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



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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**



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Learning Activity

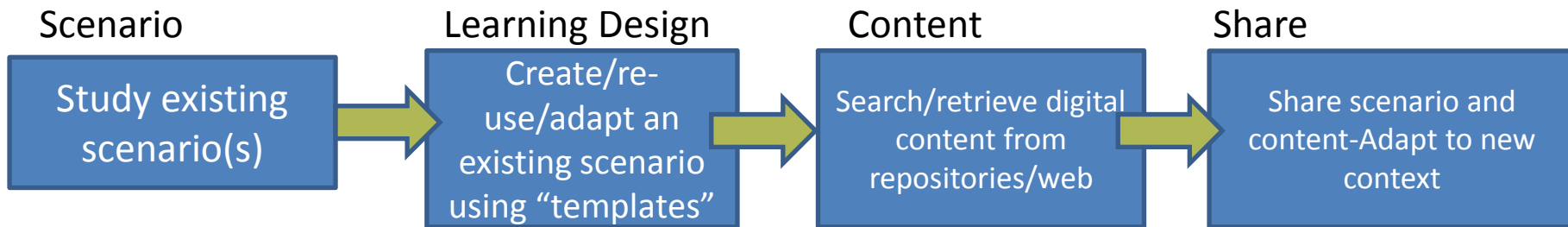
- A learning activity is an interaction between a **learner** or learners with the **environment, resources, tools** and instruments that is carried out in response to a task with an intended learning outcome.
- It suggests the adoption of a **pedagogical approach** for designing the learning activity



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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.

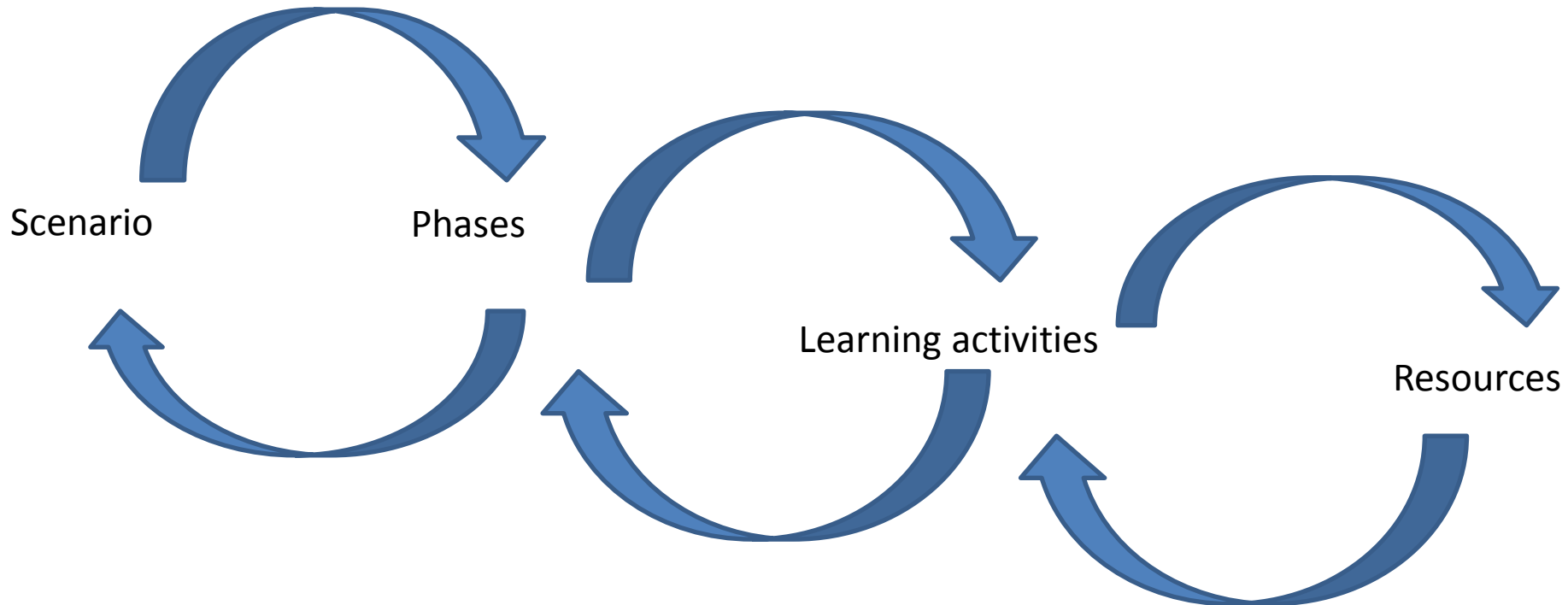


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Scenario Design & Implementation at Different Granularity Levels





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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



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Project-based learning template

Phase 1
Definition of the Project Goal

Phase 2
Planning the Project

Phase 3
Doing the Project Work

Phase 4
Presentation of the Outcomes

Phase 5
Assessing the Project Work

Organize Into Groups

Presentation of the New Question / Problem

Discussion

Discussion among Group Participants

Collection of Information

Synthesis of Information

Create Project

Project Outcomes Presentation

Discussion / Feedback

Summative Assessment



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Storyline approach template

Download Edit

Information **Description** Phases & Activities

Title Storyline approach

Author(s) **Name:** Katerina Riviou **Organization:** Ellinogermaniki Agogi

Storyline template includes several steps. Indicatively:

- teacher presents a story that is relevant, appealing (based on previous knowledge)
- teacher poses key questions linked with the different episodes of the storyline
- teacher discusses intended outcomes, quality and success criteria and assessment tools (e-portfolio tool/storyline folder).
- teacher splits groups and form heterogeneous
- students collaborate in teams
- teacher supports the synthesis process by asking relations to each other.
- students collect information, they synthesize/co
- students present final storyline/ assignment

Description/ main idea

You can finish this description by including the resou

Home | ODS Toolbox | Storyline approach



Storyline approach

★ Rate this Μοιράσου το

Difficulty Level: All

Short characterization of the teaching approach

The storyline approach is a method for active learning, adapted education which was developed by Steve Bell, Sallie Harkness and Fred Rendell at Jordanhill College of Education in Glasgow, Scotland. Learning is guided by the prior knowledge and experience of individual learners, and learners construct their own meaning through action and experience. The storyline approach provides a structure for planning classroom experience based on the knowledge, skills and attitudes which the teacher intends pupils to acquire. The method is sequential, ensuring progression as the chosen topic unfolds. The method creates a context for learning with the active involvement of the pupils. It provides tasks which arise from the context, and which the child sees as significant and meaningful within it, and gives the child opportunities to develop understanding and



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Examples of scenarios



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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: “[F1 in schools-3D Printing](#)”

[Download as pdf](#)

- **F1 in schools-3D Printing**
 - Μηχανική - Αεροδυναμική
 - Παρουσίαση-εκμάθηση του Autodesk Inventor
 - ΕΡΓΑΛΕΙΑ Autodesk Inventor
 - ΣΧΕΔΙΑΣΗ ΕΝΟΣ ΑΜΑΞΙΔΙΟΥ- Α' ΦΑΣΗ
 - ΣΧΕΔΙΑΣΗ ΕΝΟΣ ΑΜΑΞΙΔΙΟΥ- Β' ΦΑΣΗ
 - Σχεδίαση parts του F1 αμαξιδίου στο Autodesk Inventor
 - ΣΧΕΔΙΑΣΜΟΣ ΣΤΟΝ Η/Υ
 - Εκτύπωση στον 3D Printer
 - ΑΡΧΕΙΑ ΠΡΟΣ ΕΚΤΥΠΩΣΗ

LEARNING SCENARIO: F1 IN SCHOOLS-3D PRINTING

| | |
|-------------------------------------|---|
| Title | 🇬🇷 F1 in schools-3D Printing |
| Author(s) | Name: Sotiris Sotiropoulos Organization: Ellinogermaniki Agogi Role: Teacher |
| Short description/ main idea | 🇬🇷 Στα πλαίσια του F1 in Schools Project, οι μαθητές καλούνται να κατασκευάσουν κάποια από τα μέρη του αμαξιδίου τους (αεροτομές, τροχούς, άξονες) από υλικά τέτοια ώστε να είναι ανθεκτικά σε υψηλές πιέσεις και μεγάλες ταχύτητες για να επιτύχουν τους καλύτερους χρόνους στην πίστα που διαγωνίζονται. Οι κατασκευές αυτές γίνονται με τη βοήθεια ενός 3D Printer. |
| Learning objectives | <p>Cognitive - Knowledge: Procedural</p> <p>Cognitive - Process: To think critically and creatively</p> <p>Affective: To form and follow a system of values</p> <p>Psychomotor: To adapt and perform creatively</p> |
| | <p>🇬🇷</p> <p>Phase 1: Μηχανική - Αεροδυναμική</p> <p>Description of phase: Οι μαθητές μέσω του Διαγωνισμού F1 in Schools γίνονται Μηχανικοί Σχεδιασμού καθώς καλούνται να δημιουργήσουν ένα αμαξιδίο F1 σε κλίμακα ακολουθώντας τους νόμους της Φυσικής για την αεροδυναμική αλλά και αυστηρούς κανόνες που περιορίζουν το σχεδιασμό του μονοθεσίου όπως συμβαίνει και στην Formula 1. Παιγ</p> |



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Examples of Scenarios: "Making Bridges"

<http://learn.ced.tuc.gr/octopus1/view/?t=d07cc744-96e3-4174-9974-bb080bc4e2b8>



Quick search for a pathway (template) to open...

File

Pathway Structure

Learning activity 1: Organize into groups

Resources

Making Bridges

Phase 1: Definition of the Project Goal

Learning activity 1: Organize into...

Learning activity 2 : Presentation...

Learning activity 3 : Discussion

Assessment Design

Rubric making and discussion

Phase 2: Planning the Project

Learning activity 4 : Discussion o...

Phase 3: Doing the Project Work

Learning activity 5 : Brainstormin...

Learning activity 6 : Wikis & Synt...

Learning activity 7: Using applet ...

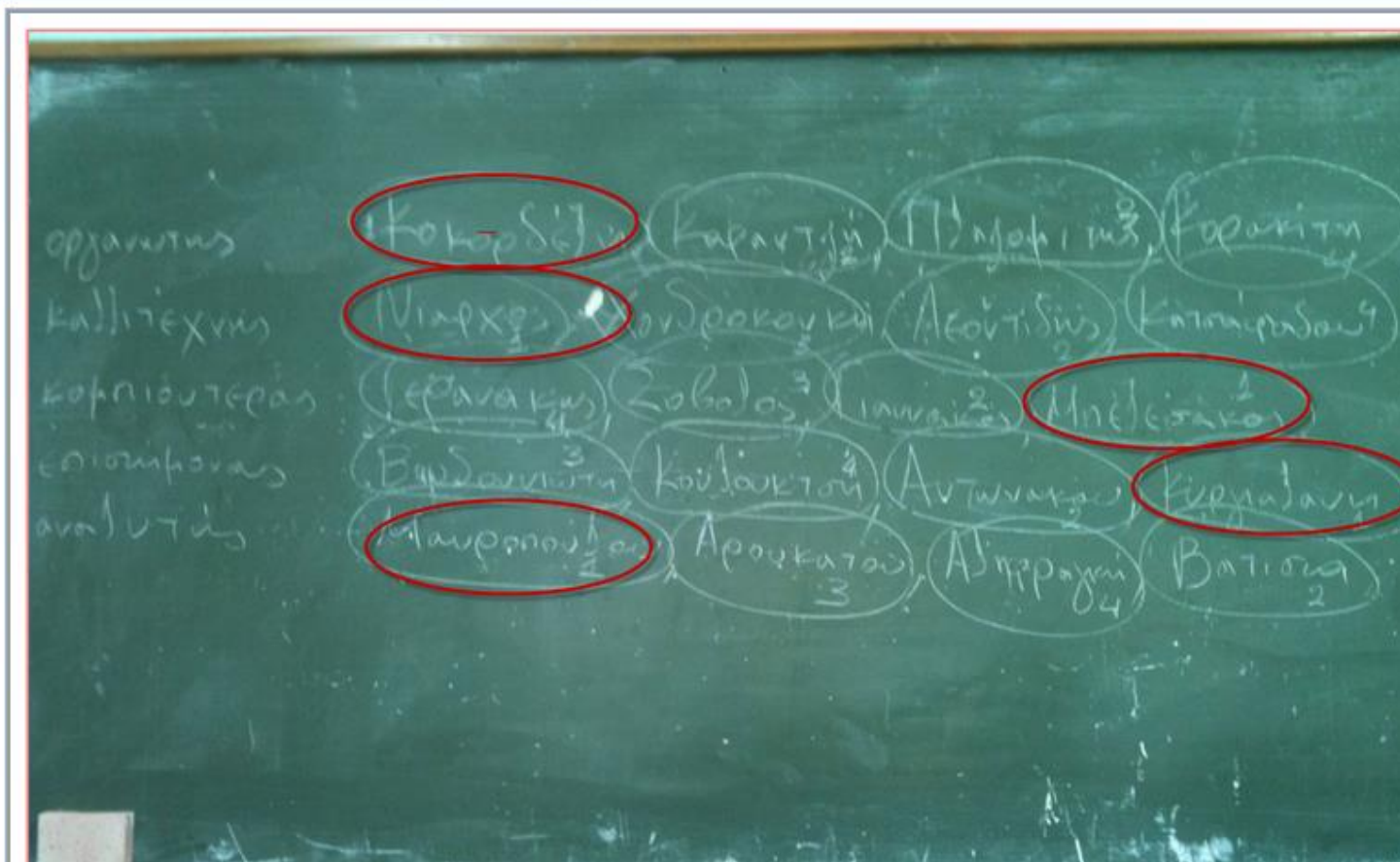
Phase 4: Presentation of the Outco...

Learning activity 8 : Project Outc...

Learning activity 9 : Discussion / ...

Phase 5: Assessing the Project Work

Learning activity 10 : Summative ...





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Guidelines

- Think about a learning scenario (use existing scenarios as guides/support)
- Think about an **educational approach** that you will adopt for your scenario
- Think how your scenario is related to the **curriculum**
- Think of **learning activities** that students will be engaged in
- Think the **content** that your scenario needs to be enriched with
- Think of **learning outcomes** and how these are related to the **learning activities, resources**, and the competences of your students
- Use the provided **template(s)** to design your learning scenario or develop it from scratch



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Describing scenarios using the PBL template

- Register in the Community «Training teachers in competence based education: TRANSIt»
<http://portal.opendiscoveryspace.eu/beta/el/community/training-teachers-competence-based-educationtransit-73929>
 - Start designing your scenario choosing «**Learning Scenarios**» and selecting the PBL template
 - Have access to the user generated scenarios regarding a combination of fields/subject domains such as Social Sciences, Entrepreneurship, Arts, Maths, ICT
- <http://portal.opendiscoveryspace.eu/el/educational-scenarios/73929>



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PBL: What?

- Topics could come from 4 domains:
 - Social sciences
 - Science, Maths, Technology
 - Arts, Civilisation
 - Environment, and Sustainability



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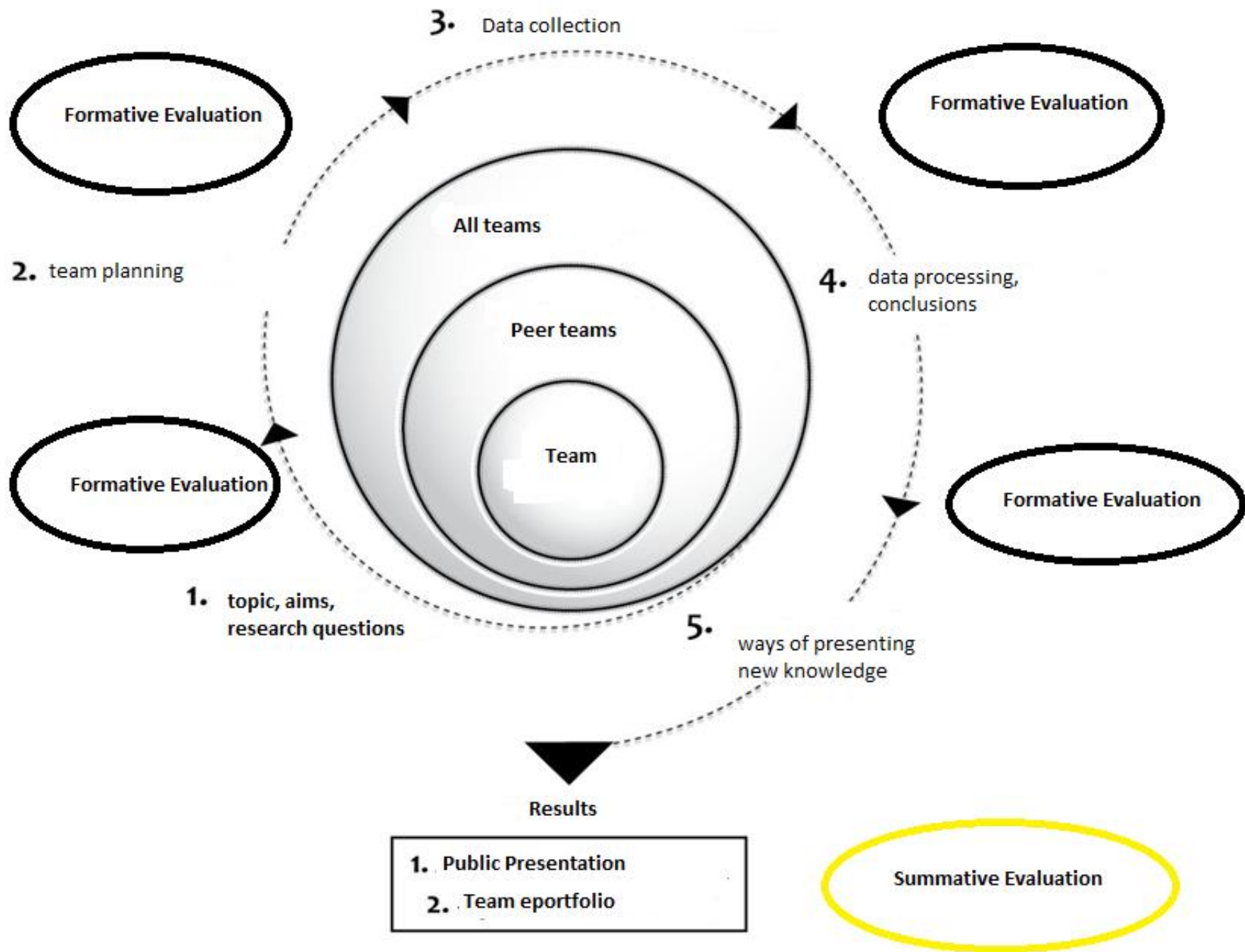


Final outcomes/results

- Project report
 - Written report which will present the topic, the goals, procedures for collecting and processing data, conclusions and reflection of the group about the way of collaboration
- Artifact
 - collage, poster, film, event, hand-crafts etc.
- Actions of intervention
 - organisation of events, letters, flyers, etc.



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Rubrics

- Planning process and implementation **30%**
- Contents of the project report **30%**
- Language and structure of the project report **20%**
- Public presentation of the project results **30%**

6grade scale

6th scale: Very Poor (Grade 1-5)

5th scale: below average (grade 6-9)

4th scale: Moderate (grade 10-13)

3rd scale: Good (Grade 14-16)

2nd scale: Very Good (Grade 17-18)

1st scale: Excellent (Grade 19-20)



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Student(s) names:

.....

Topic:

.....

Evaluation of the content of the report (30%)

| | Very Poor | Below average | Moderate | Good | Very Good | Excellent |
|---|-----------|---------------|----------|------|-----------|-----------|
| Possession of specific knowledge on the subject being successfully used. | | | | | | |
| Understanding of concepts, generalizations, principles and theories. | | | | | | |
| Approach to research data in order to define the position of the group on questions through analyzing, correlation and reasoning. | | | | | | |
| Formulate in a logical and coherent manner the position of the group answering questions, based on collected data. | | | | | | |
| Exploiting inference research posts for configuration of documented answers to questions. | | | | | | |
| Advocacy of group conclusions against alternative positions and opposing views and critical commentary. | | | | | | |
| Correlation of topic and conclusions with situations, problems and issues of real life. | | | | | | |
| Critical self-reflection of individual, group options and roles. | | | | | | |



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TRANSIt project presentation



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The project site

www.transit-project.eu



TRANSIT



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Transit to Knowledge

Events

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Partners' Area

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TRANSIT Brochure

Click here to download the Brochure



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TRANSit 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, such as e-portfolios & rubrics.
- 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.



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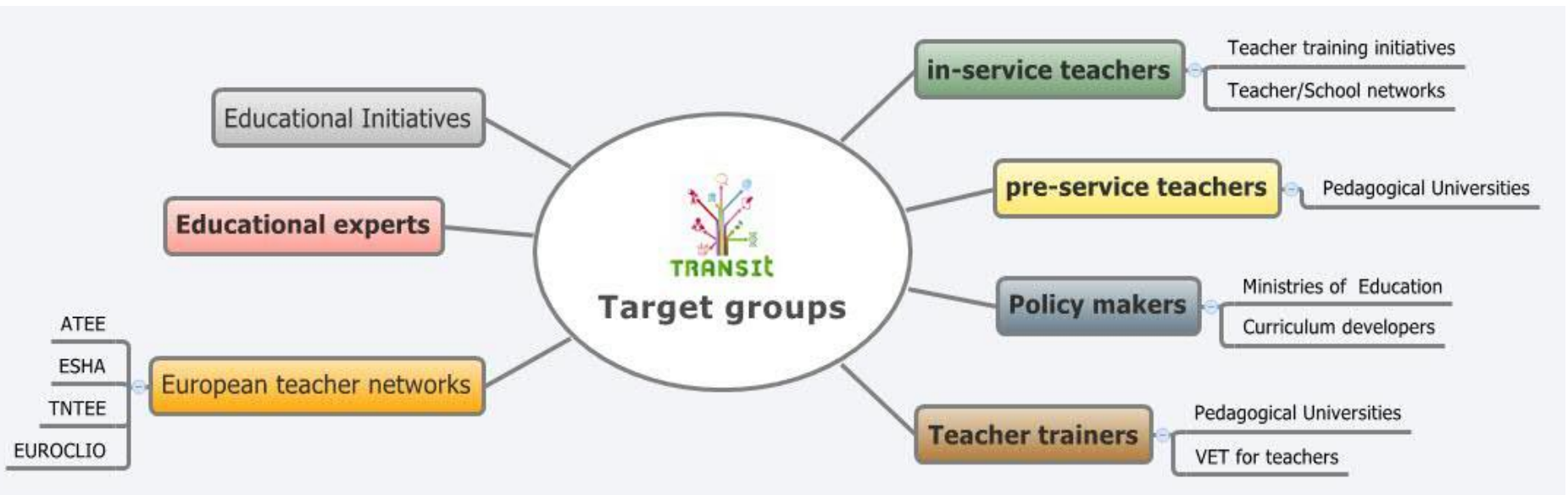


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Target groups





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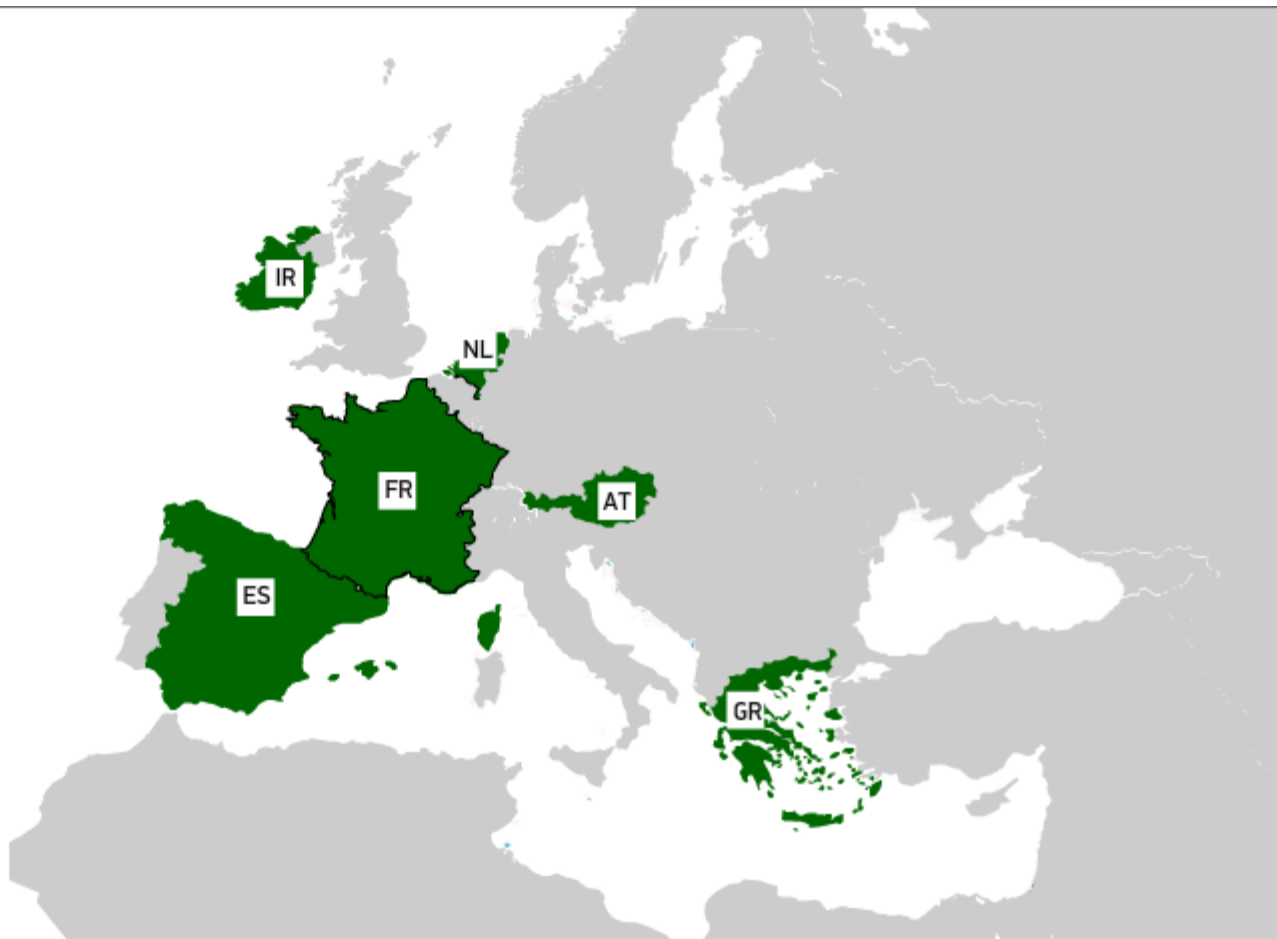
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TRANSit consortium

Partners of TRANSIT Project

click on every country for more details
on each partner



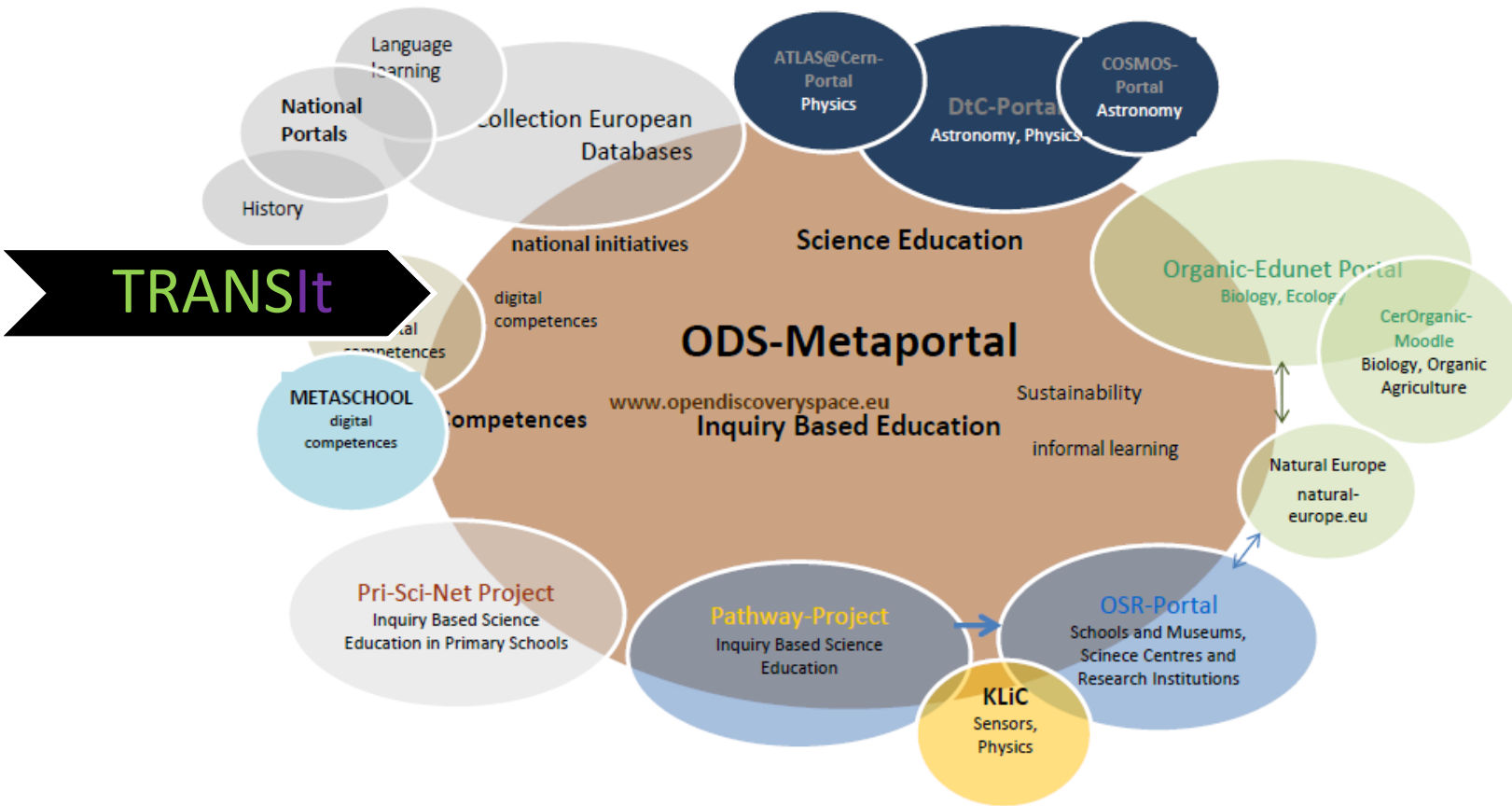


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Project relationships and synergies





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Main activities



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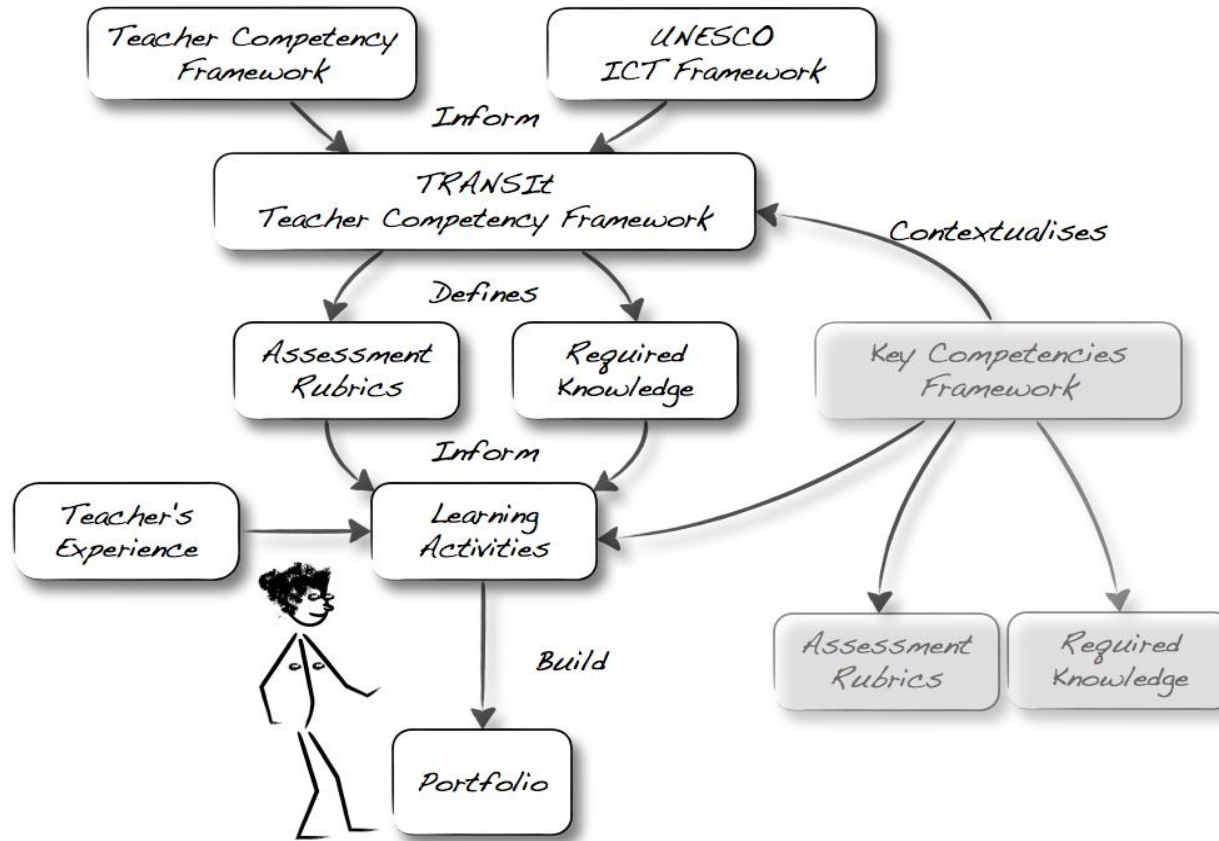


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Framework



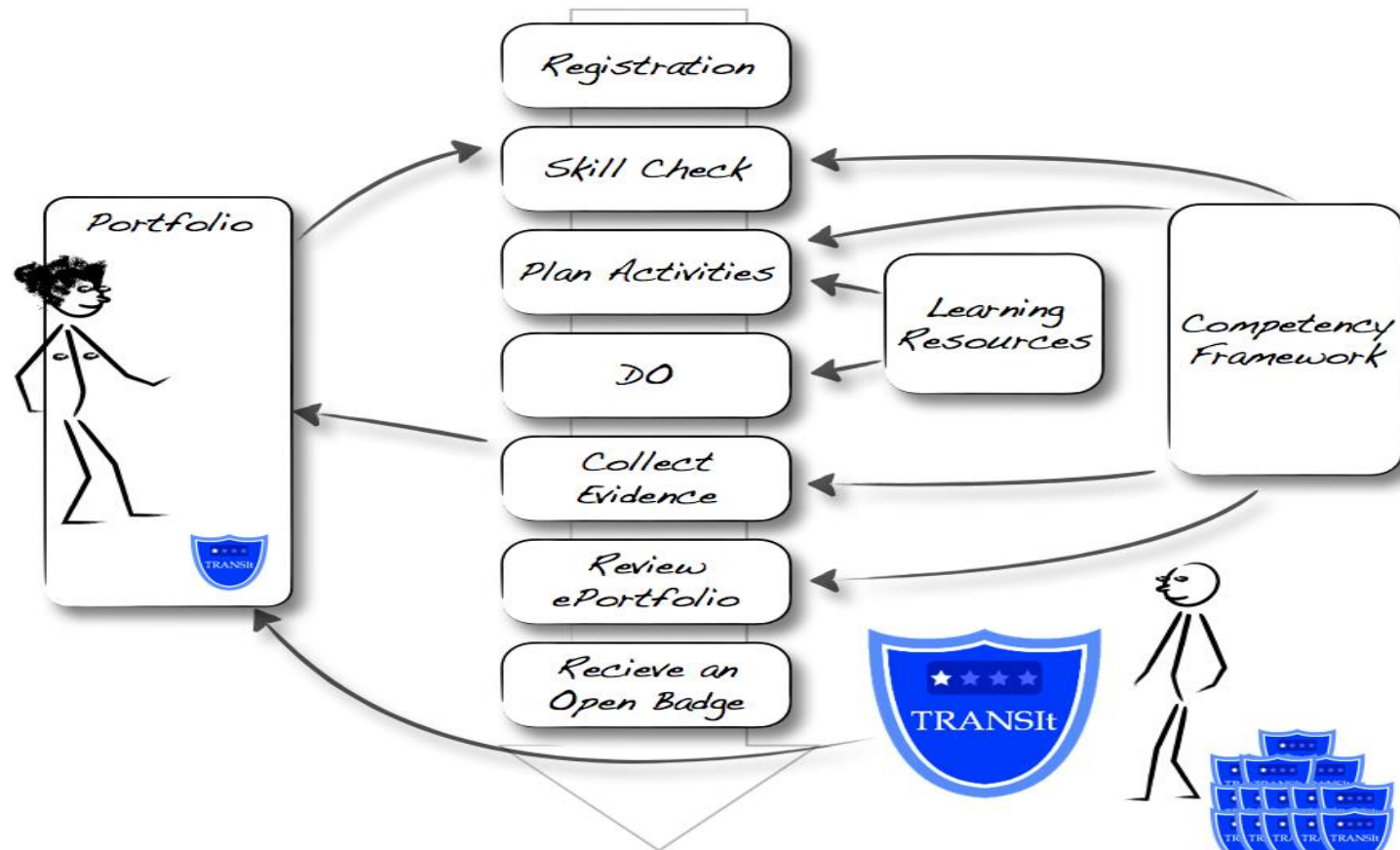


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Process



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



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TRANSit Learning Outcomes/Modules

Design

- Derive Learning Objectives from a Key Competency Framework
- Design a Lesson Plan/Learning Scenario/Programme for KCA
- Define 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



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Using ePortfolios in teaching Acquisition of Key Competencies.

You are logged in as Katerina Riviou (Log out)

[Home](#) > [Courses](#) > [Miscs](#) > [eP4KC](#)

Turn editing on

Course Modules



Chat with other participants



General Forum



Resources and Reading Material for the TRANSit Courses

Introduction to TRANSit Course

This course has been designed to help teachers to become proficient practitioners in outcome-based education. In particular it has been designed to support learners with the acquisition of Transversal Key Competencies.

During this course, you will be learning by reading study material, working on activities and writing

TRANSit e-portfolio

TRANSit e-portfolio

Navigation

Home

- ▀ My home
- Site pages
- My profile
- ▾ Current course
 - ▾ eP4KC
 - Participants
 - Badges



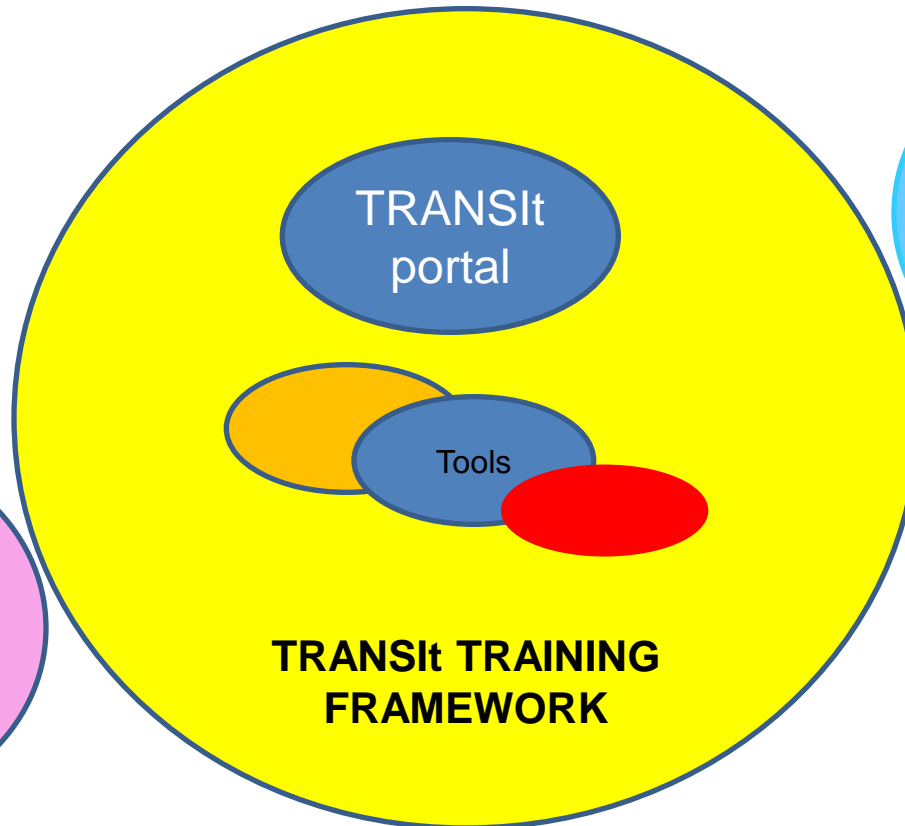
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Existing Educational Repositories/Practices

Open
Discovery
Space (ODS)
Natural Europe
AGROWEB
COLLAGE
eTwinning



Teacher Communities

ODS
ENIS
eLSA
Digital Schools
eTwinning
Rural schools



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Events: 1st 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 available [here](#)
- Participants worked in teams & individually and designed competence-based cross-curricular educational scenarios (using the Octopus authoring tool) ([Educational Scenarios area](#) of the community)



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Events: 2nd 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](#)
- Participants worked individually and/or in small teams and scenarios were uploaded in the TRANSIt workspace and are available in the [Learning Scenarios](#) area of the community.
- 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.

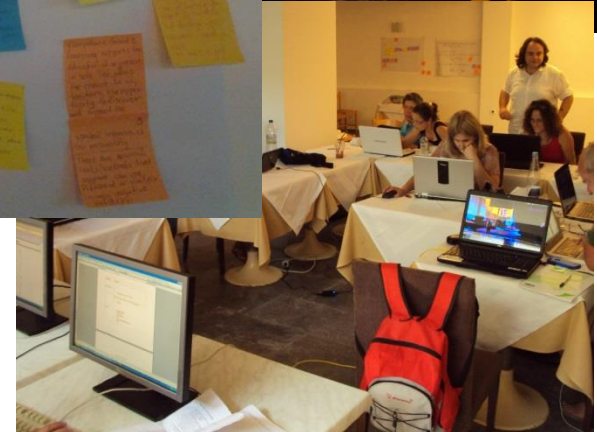
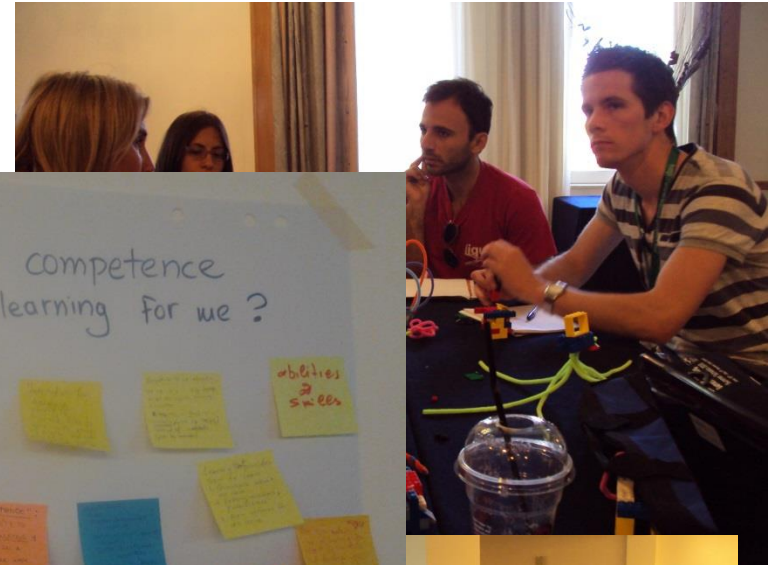
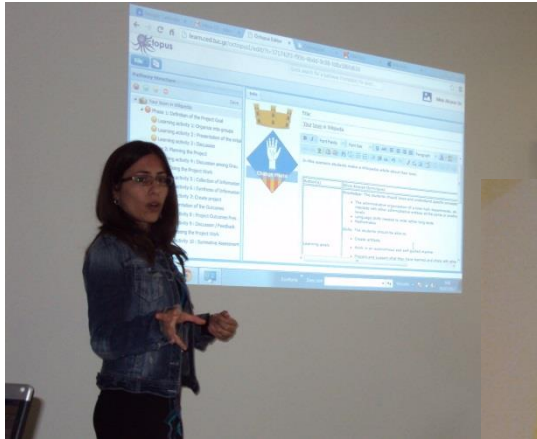


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Join the TRANSIt community!

www.transit-project.eu

[Training teachers in competence based education: TRANSIt on ODS portal](#)

Upcoming Summer School @Attica, July 2014

udlnet.ea.gr

Moodle-Mahara training environment

transit.cti.gr/moodle/



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TRANSversal key competences for lifelong learning: Training teachers in competence based education

www.transit-project.eu



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